Protocol

This trial protocol has been provided by the authors to give readers additional information about their work.

Project Title: Accelerating Adoption of Group Clinics in the United Kingdom

Authors:

Soledad Giardili Monika Heller Sanjay Jain Amalia Miller Kamalini Ramdas

Duration

Duration: March 26, 2024 through Sep 15, 2024.

Enrollment period: March 26, 2024 until 31st March 2024 or until at least 3,939 participants

are recruited.

Principal Investigator

Kamalini Ramdas, Professor of Management Science & Operations, Deloitte Chair in Innovation & Entrepreneurship, London Business School

Co-investigators

Soledad Giardili, University of Edinburgh Monika Heller, University College London Sanjay Jain, University of Oxford Amalia Miller, University of Virginia

Abstract

There is a scarcity of high-quality care for many non-urgent conditions worldwide, including for a wide variety of chronic diseases and life stages such as pregnancy and menopause. Healthcare delivery innovation can result in more effective and efficient ways to see patients. The typical way for a patient to meet a clinician for non-urgent care is via a oneon-one appointment. In an alternative care delivery model, known as a "group clinic", 5-15 patients with the same underlying concerns meet with a clinician at once, and each receives one-on-one attention while the others listen in. The clinician saves time in a group clinic due to not having to repeat common advice. Despite reducing the clinician time per patient, patients get to spend more time (although not one-on-one) with the clinician, are exposed to more information both from the clinician and from their peers and may feel a sense of community. While group clinics have been shown to improve both clinician productivity and patients' behavioral and health outcomes, their uptake has been slow. Loss of privacy is a major concern. The primary objective of this research project is to examine ways to improve recruitment into group clinics. We will examine recruitment into group clinics for menopause. We will recruit women in the UK aged 45-60 via an online survey platform and ask them to choose between attending a 90-minute online group clinic with 5-10 other women their age and a menopause expert, a 20-minute online one-on-one appointment with a menopause expert, or neither, varying the amount and type of information that they receive about the group clinic in their invitation. To incentivize

respondents to reveal their true preferences, a randomly selected subset of respondents will have the opportunity to attend an appointment of their choice. Our primary outcomes are selection of each appointment type or none, the amount of decisional conflict experienced, and attendance of an appointment of their choice by those randomly selected to have this option.

Background There is a scarcity of high-quality care for many non-urgent conditions worldwide, including for a wide variety of chronic diseases and life stages such as pregnancy and menopause - and healthcare delivery innovation has revolved around finding more effective and efficient ways to see patients. The typical way for a patient to meet a clinician for non-urgent care is via a one-on-one appointment. In an alternative care delivery model, known as a "group clinic" (GC) or a "shared medical appointment", 5-15 patients with the same underlying concerns meet with a clinician at once, and each receives one-on-one attention while the others listen in (Jones et al. 2019). The clinician saves time in a group clinic due to not having to repeat common advice. Despite reducing the clinician time per patient, patients get to spend more time (although not one-on-one) with the clinician, are exposed to more information both from the clinician and from their peers and may feel a sense of community. While group clinics have been shown to improve both clinician productivity and patients' behavioral and health outcomes (Bronson and Maxwell 2004, Thacker et al. 2005, Edelman et al. 2015, Buell et al. 2024, Sonmez et al. 2023), their uptake has been slow (Ramdas and Darzi 2017, Jones et al. 2019). Loss of privacy is a major concern (Edelman et al. 2015, Sonmez et al. 2023).

Major Objectives The primary objective of this research project is to examine ways to improve recruitment into group clinics. We will examine recruitment into group clinics for menopause, a life stage that affects all women. Our trial setting is the UK, where a few GP surgeries are already offering menopause group clinics of the kind we will offer.

In support of our primary objective, we will recruit women in the UK aged 45-60 via an online survey platform and ask them to choose between attending a 90-minute online group clinic with 5-10 other women their age and a menopause expert, a 20-minute online one-on-one appointment with a menopause expert, or neither, varying the amount and type of information that they receive about the group clinic in their invitation, and its timing relative to the one-on-one appointment. To incentivize respondents to reveal their true preferences, a randomly selected subset of respondents will have the opportunity to attend the appointment of their choice. As primary outcomes, we will measure 1) selection of each appointment type or none when both are offered on the same date 6-8 weeks away or with the group clinic at a closer date, 2) the amount of decisional conflict that they faced in making these choices 3) attendance of an appointment of their choice by those randomly selected to have this option. The first two of these outcomes will be measured via an online survey (Survey 1), and the third by our implementation partner ELC Works. Secondary outcomes include measures of knowledge about menopause and its management (both in Survey 1 and in a second survey – Survey 2 – administered post attendance to respondents who attended an appointment), changes in preference for the group clinic for those who first chose the one-on-one appointment or none when the group clinic is offered at a sooner date (in Survey 1), satisfaction with the actual appointment for those who attended it (in Survey 2) and productivity across the two appointment types.

Methodology We propose to conduct a 3-arm randomized control trial (RCT), to which women aged 45-60 will be invited via an online survey platform. Respondents will be randomized into three arms that differ in the content of an invitation to attend a menopause group clinic and will be asked to answer questions related to our primary and secondary outcomes.

Randomly selected patients will then be given the option to attend an appointment of their choice, after which they will respond to questions related to our primary and secondary outcomes. We will analyze the data collected using empirical research methods.

Below we describe the steps involved in each of three stages of our study.

Flow of the Experiment

Stage 1: Recruitment, Survey 1 and Selection for Stage 2:

Respondents will be recruited into the trial online through an online survey platform and will go through the steps below in Online Survey 1.

Respondents will be asked to create a unique anonymous ID that can be reproduced easily.

Respondents will be asked questions to elicit their current life stage (pre-menopause, undergoing menopause or post-menopause), their experience of menopause systems (using a validated questionnaire), their knowledge about menopause and its management, and how they usually obtain information about how to deal with their menopause.

Each respondent will be randomly assigned into one of three trial arms:

The control arm in which respondents receive a standard text invite to attend a menopause GC to be held 6-8 weeks from now.

Treatment arm 1 (peer group information arm) in which respondents receive the standard text message plus testimonials of peers who have attended a group clinic, covering aspects related to three topics: their interaction with others, knowledge gained and convenience of the group clinic.

Treatment arm 2 (expert information arm) in which respondents receive the standard text message plus clinicians' description of the benefits of a group clinic and behavioral nudges to attend.

In addition to the information about the group clinic, which varies by trial arm, respondents in all arms will be shown a textual description of what goes on in a 20-minute one-on-one appointment with a menopause expert. The length and style of this message will be similar to that of the standard text message invitation to a menopause group clinic in the control arm.

Respondents will be told that they will now be asked their preference over a group clinic, a one-on-one appointment or neither. They will also be told that because the clinic schedule is still somewhat uncertain, they may need to answer a few questions so that we can properly understand their preferences. They will be asked to answer all the questions truthfully to increase the chances of getting to attend an appointment of their choice and they will be informed a subset of randomly selected respondents will be offered the opportunity to attend an appointment of their choice, as long as a slot is available.

Respondents will be asked to choose among attending a 90-minute online group clinic with a menopause expert and 5-12 other women of their age or a 20-minute one-on-one with a menopause expert, both of which will be on the same date, 6-8 weeks away, or neither.

Respondents who choose to attend a group clinic from this choice set will be entered into the random draw for a group clinic appointment and continue with the survey.

Respondents who choose a one-on-one appointment from this choice set will be asked a set of questions to elicit how they trade off time to an appointment vs preference for attending a one-on-one appointment. They will be asked to choose between a one-on-one appointment that is 6-8 weeks away or a group clinic that is 5 or fewer weeks away. If they continue to choose a one-on-appointment they will be shown a series of choice sets wherein the time to the group appointment is decreased by one week at each step, with the time for the one-on-one appointment held constant at 6-8 weeks. If at any point they choose the group appointment over the one-on-one appointment, respondents enter the random draw for a group clinic and continue with the survey. If respondents choose the one-on-one appointment over the group clinic even if the group clinic were offered a 1 week or fewer they will be entered into the random draw for a one-on-one appointment and continue with the survey.

Respondents who choose neither option from this choice set will be first asked to indicate whether they would choose any (group or one-one-one) appointment if it were offered earlier than 6-8 weeks away (yes, no). If respondents indicate that they would not want an appointment even if it were closer, they will not be entered into a draw and continue with the survey. Participants who indicate that they would be interested in any earlier appointment will be informed that group clinics can sometimes be offered sooner. They will then be asked to choose between a group appointment at 5 or fewer weeks away or no appointment. If they continue to choose no appointment, they will be shown choice sets wherein the time to the group appointment will be decreased by week at each step. If at any step they choose the group appointment they will be entered into the random draw for a group appointment.

Respondents will be asked a set of questions to understand the extent of decisional conflict that they faced in making the above decisions.

Respondents will be asked why they chose to attend (or not attend) an online menopause group clinic.

Respondents will be asked a set of demographic questions about their education, job type and job title, income bracket, number of household members, number of seniors older than the respondent, marital status, number of children and grandchildren residing in the household and their ages, etc.

Respondents who have been randomly assigned to receive the opportunity to attend an online appointment of the type they prefer (to be conducted by our partner ELC Works) will be informed of this and a menopause score based on their symptoms.

Stage 2: Scheduling of Online Menopause Appointments and Survey 2

Selected respondents will pick the date and time for their group clinic or one-on-one appointment with a menopause expert from among offered time slots. Respondents will need to use their unique ID generated in step 2 of Stage 1 to book the online menopause appointment and will receive the Teams link to join the online appointment of their choice as well as automated reminders of their appointment.

Stage 3: Delivery of Online Menopause Appointments and Survey 2

Group Clinics:

As women log in to an online group clinic via Teams, they will need to share their unique participant ID generated during Survey 1 with the facilitator, via a private message within Teams to the facilitator

The facilitator will go over the consent process for entering the group clinic with women who log in and obtain their consent, and then the facilitator and the menopause expert conduct the group clinic.

The facilitator will then wrap up the group clinic and share a short online survey link (Survey 2) with attendees to elicit measures including their knowledge of menopause and its management, their satisfaction with the appointment, and how they would obtain information about how to deal with their menopause. Respondents will identify themselves with their unique ID generated in Survey 1, in this survey.

The Teams meeting will then be closed. Depending on the number of participants, the meeting will close at most 90 minutes from the start of the appointment.

One on One Appointments:

The participant will log in to an online one on one appointment via Teams. She will need to share her unique participant ID generated during Survey 1 with the same menopause expert who runs the group clinics.

The menopause expert will then deliver the one on one appointment.

The expert will then wrap up the appointment and share a short online survey link (Survey 2) with the attendee to measure her knowledge of menopause and its management, and her satisfaction with the appointment, and how she would obtain information about how to deal with her menopause. The respondent will need to identify herself with her unique ID in this survey.

The Teams meeting will then be closed. The meeting will close at most 20 minutes from the start of the appointment.

Dropouts: Any respondent who voluntarily drops out of the study will be dis-enrolled from the study. The fact that the respondent dropped out of the study will be recorded in the study data.

Measures and Sample Collection

Measures We will collect measures to examine the impact of 1) peer group information plus a standard text message invite, and 2) expert information plus a standard text message invite, over a standard text message invite, on our primary outcomes (selection of a group clinic, a one-on-one or neither appointment option, attendance of a group clinic or one-on-one if offered the opportunity, and decisional conflict), and to understand heterogeneous treatment effects. We will also collect measures to conduct our secondary analyses.

Primary outcomes:

From Survey 1:

Selection of a group clinic, a one-on-one, or neither, with variation in time to appointment, measured using 0-1 survey responses in Survey 1 at baseline.

Extent of decisional conflict experienced in selecting, measured using 0-1 survey responses in Survey 1 at baseline.

From our Partner ELC Works:

Attendance of a one-on-one appointment or a group clinic measured using a 0-1 variable by our implementation partner ELC works between baseline and endline.

Secondary outcomes:

From our Partner ELC Works:

Duration of each appointment measured using a watch by ELC works between baseline and endline.

Time spent by the menopause expert in each appointment measured using a watch by ELC works. between baseline and endline.

Reason for choosing to attend (or not attend) a group clinic measued via an open text response in Survey 1 at the baseline.

From Survey 2:

Satisfaction with the appointment (measured using 1-7 Likert Scale variables capturing extent to which doubts were addressed, perceived one-on-one time devoted by the clinician to the attendee, etc., in Survey 2 at endline).

From Surveys 1 and 2:

Knowledge of menopause symptoms (Measured using 0-1 variables in Surveys 1 and 2 at baseline and endline).

Knowledge of menopause management options (Measured using 0-1 variables in Surveys 1 and 2 at baseline and endline).

Channels through which respondents obtain information about menopause (Measured using 0-1 variables in Surveys 1 and 2 at baseline and endline).

Other variables:

From Survey 1:

Life stage (pre-menopause, menopause, post-menopause) measured using survey responses in Survey 1 at the baseline.

Severity of menopause symptoms measured using 0-3 Likert scale variables in Survey 1 at the baseline.

Reasons for choosing to attend (or not to attend) a group clinic.

Demographic variables measured using survey responses in Survey 1 at the baseline.

From our Partner ELC Works:

Number of patients in each group clinic appointment measured by counting by ELC Works between the baseline and the endline.

Sample Collection

Each participant will create a unique ID number during Survey 1. They will need to share this unique ID to schedule an actual appointment if given the opportunity to do so, and to attend the online appointment.

Surveys: Respondents in all three arms (control arm, treatment arm 1 and treatment arm 2) will first respond to an online survey (Survey 1). This survey will contain questions to assess their demographics, their life stage with regards to menopause, their knowledge of menopause symptoms and treatment, their preference for group clinic vs one-on-one appointment with a menopause expert or neither, etc. ELC works will collect some of our measures including attendance of an appointment and its duration. Respondents who attend an appointment will in addition be administered a survey (Survey 2) in which they will be asked questions about their knowledge of menopause symptoms and treatment, their satisfaction with their appointment, etc.

Inclusion/Exclusion Criteria:

Inclusion Criteria:

- 1. Should not have participated in the pretest survey for this project.
- 2. Female
- 3. Aged 45-60

Exclusion Criteria:

- 1. Participated in the pretest survey for this project.
- 2. Not female
- 3. Aged under 45 or over 60.

Risk & Benefits

Respondent Risks and Ethical Approval

We plan to obtain data in a de-identified form and believe that the study does not pose any direct or indirect risk to respondents' health. We do not plan to publish any data on individual patients.

- We have already received IRB approval through London Business School.
- *Project Risks* We do not foresee any major risks to completion of the project and obtaining insights as planned above.
- Benefits The direct benefits of this project include a better understanding of how the
 method of recruitment into group clinics impacts their uptake. This study will also
 directly benefit the participants who are randomly selected to receive a menopause
 appointment. Indirect benefits include increasing the knowledge of menopause
 among researchers and increasing its visibility.

Expected Outcome As described above, we believe that this study will enable us to examine the extent to which different recruitment strategies impact uptake of group clinics.

We expect that these insights will be published in top academic journals in economics or operations management and in top general interest or medical journals.

References:

Bronson, D.L. and R. A. Maxwell. NATIONWIDE, I.O., 2004. Shared medical appointments: increasing patient access without increasing physician hours. Cleveland Clinic journal of medicine, 71(5), p.369.

Buell, R.W., Ramdas, K., Sönmez, N., Srinivasan, K. and Venkatesh, R., 2024. Shared Service Delivery Can Increase Client Engagement: A Study of Shared Medical Appointments. Manufacturing & Service Operations Management, 26(1), pp.154-166.

Edelman, D., Gierisch, J.M., McDuffie, J.R., Oddone, E. and Williams, J.W., 2015. Shared medical appointments for patients with diabetes mellitus: a systematic review. Journal of general internal medicine, 30, pp.99-106.

Jones, T., Darzi, A., Egger, G., Ickovics, J., Noffsinger, E., Ramdas, K., Stevens, J., Sumego, M. and Birrell, F., 2019. A systems approach to embedding group consultations in the NHS. Future healthcare journal, 6(1), p.8.

Ramdas, K. and Darzi, A., 2017. Adopting innovations in care delivery-the case of shared medical appointments. New England Journal of Medicine, 376, pp.1105-1107.

Sönmez, Nazlı, Kavitha Srinivasan, Rengaraj Venkatesh, Ryan W. Buell, and Kamalini Ramdas. "Evidence from the first Shared Medical Appointments (SMAs) randomised controlled trial in India: SMAs increase the satisfaction, knowledge, and medication compliance of patients with glaucoma." PLOS Global Public Health 3, no. 7 (2023): e0001648.

Thacker, H.L., Maxwell, R., Saporito, J. and Bronson, D., 2005. Shared medical appointments: facilitating interdisciplinary care for midlife women. Journal of Women's Health, 14(9), pp.867-870.