Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.
eMethods
Flow Diagram of Sample Construction

Number of bookings from Jan 1, 2018 – Oct 13, 2018 = 102,249,484

Number of bookings with missing appointment information\(^1\) = 14,528

Number of bookings with data errors\(^2\) = 2,132,986

Number of duplicate bookings = 13,440,360

Number of bookings in medical specialties other than 15 classes of interest\(^3\) = 12,911,824

Number of incomplete bookings\(^4\) = 21,601,130

Number of bookings with booking/appointment dates that straddle intervention implementation = 4,468,725

Number of observations (completed appointments) = 47,679,931

Number of observations with missing control data = 3,054,254

Number of appointments for patient-classes with highest 1% (19 or more occurrences) in the study period = 5,136,992

Final number of observations in study sample, N = 39,488,685

Notes:
\(^1\) Missing booking dates, appointment dates, or appointment status
\(^2\) Data errors include bookings where booking dates were after appointment dates
\(^3\) Classes removed: emergency/urgent care, telephone clinics, home-based primary care, chaplain, social work
\(^4\) Incomplete bookings refer to bookings that resulted in appointment cancellations or no-shows.
**Ordinary Linear Regression Models**

We begin by describing Models 1 and 2 of our primary analysis of this paper, which are ordinary multivariable linear regressions. Mathematically, they are represented as follows:

**Model 1:**  
\[ W_i = \beta_0 + \beta_T T_i + \beta' X_i + \epsilon_i \]

**Model 2:**  
\[ W_i = \beta_0 + \beta_T T_i + \beta_B B_i + \beta_{TB} (T_i \times B_i) + \beta' X_i + \epsilon_i \]

In these expressions, scalar quantities are denoted in regular typeface, whereas vector quantities are denoted in boldface. The prime (‘) symbol represents vector transposition.

In both models, the symbol \( i \) is used to index all completed appointments, and the dependent variable, \( W_i \), refers to the waiting time of the \( i \)th completed appointment, which is defined as the number of days between the date that the appointment is booked (booking date) and the date that the appointment is completed (appointment date).

The error term \( \epsilon_i \) captures random noise that we assumed to be clustered at the clinic level, i.e., the level of the intervention variable. In other words, within all observations for a given clinic, arbitrary correlations were allowed in these terms. This noise model only assumed that these error terms were uncorrelated across different clinics. Allowing for this correlation typically leads to more conservative estimates (i.e., larger standard errors) than assuming that errors are independent across all observations.

The key independent variable in both models is the binary-valued intervention indicator, \( T_i \). This takes the value \( T_i = 0 \) if the appointment date of the \( i \)th completed appointment comes before the clinic (at which the appointment was made) adopted VEText. Conversely, this takes the value \( T_i = 1 \) if the appointment date of the \( i \)th completed appointment falls after the clinic had adopted VEText and the patient had received at least one VEText reminder.

Model 2 includes another independent variable \( B_i \), which refers to the number of incomplete bookings (i.e., were not completed due to cancellation or no-shows) associated with the completed appointment \( i \). To be included in this count, the incomplete booking had to be made by the same patient for that same appointment class, and had to have a booking date that was between the booking date and appointment date of the completed appointment \( i \).

Model 2 also contains an independent variable that is the interaction between the intervention indicator and the number of incomplete bookings, \( T_i \times B_i \). We include this interaction to assess the change in association between the number of incomplete bookings and waiting time that is, in turn, associated with the VEText intervention. This comes from the estimated regression coefficient \( \beta_{TB} \) because we can group terms as follows \( \beta_B B_i + \beta_{TB} (T_i \times B_i) = (\beta_B + \beta_{TB} T_i) B_i \), from which this interpretation of the coefficient \( \beta_{TB} \) should be more apparent.

In both models, the vector \( X_i \) represents the vector of controls associated with the \( i \)th completed appointment, which can be categorized into different sets of controls, listed in eTable 1. Full results for these regressions are reported in the first two columns of eTable 2.

**Instrumental Variable Regression Models**

As described in the main text, we implemented the instrumental variable (IV) regression models (Model 3 and Model 4) because individual clinics could choose when to adopt VEText, and this self-
selection of the independent variable can result in bias in ordinary regression models. IV regression models were developed as a means of correcting such bias if an appropriate instrument can be found. The IV regression approach that we used is standard statistical procedure that is described and formally justified in many statistical textbooks.1, 2 In what follows, we provide an overview of the approach as applied to our problem context.

The IV regression model specifications for Models 3 and 4 parallel those for Models 1 and 2 respectively. The key difference between the IV regressions and ordinary linear regressions is that each IV regression model involves estimating parameters for two sets of equations, which are respectively called the “selection equation(s)” and the “outcome equation”. Model 3 has one selection equation and one outcome equation. Model 4 also has one outcome equation, but because this outcome equation includes an interaction term that involves the intervention indicator, we require two selection equations.2, Chap 4.6.1 These are described below for each model.

Model 3:  
\[ T_i = \alpha_0 + \alpha_2 Z_i + \alpha'X_i + \nu_i \]  
(Selection Equation)

\[ W_i = \beta_0 + \beta_1 T_i + \beta'X_i + \epsilon_i \]  
(Outcome Equation)

Model 4:  
\[ T_i = \alpha_0 + \alpha_2 Z_i + \alpha'X_i + \nu_i \]  
(Selection Equation 1)

\[ T_i \times B_i = \gamma_0 + \gamma_2 Z_i + \gamma'X_i + \eta_i \]  
(Selection Equation 2)

\[ W_i = \beta_0 + \beta_1 T_i + \beta_B B_i + \beta'X_i + \epsilon_i \]  
(Outcome Equation)

As with the ordinary linear regressions, the symbol \( i \) is used to index all completed appointments, and all other previously defined symbols retain their original definitions. We proceed to describe the new symbols introduced in these models.

The *instrumental variable* in both these models is represented by the binary-valued \( Z_i \). This was assigned the value \( Z_i = 1 \) if the appointment date of the completed appointment \( i \) was scheduled on the third week or later of the centrally determined rollout date for that clinic, and \( Z_i = 0 \) otherwise. This was because each wave of the rollout was designated to have two full weeks of implementation.

The error term \( \nu_i \) captures random noise in the first (and, in the case of Model 3, only) selection equation of each model. For Model 4, the error term \( \eta_i \) captures random noise in the second selection equation. Like the terms \( \epsilon_i \), both these error terms were assumed to be clustered at the clinic level.

From these models, the classical procedure for instrumental variable regression occurs in two steps.2, Chap 4.6.1 We first describe the procedure for Model 4. First, estimates of the coefficients of the selection equations \((\hat{\alpha}_0, \hat{\alpha}_Z, \hat{\alpha}_{Z \times B}, \hat{\alpha}')\) and \((\hat{\gamma}_0, \hat{\gamma}_Z, \hat{\gamma}_{Z \times B}, \hat{\gamma}')\) are generated using ordinary linear regression. Next, using these coefficients, and for each observation, the estimated intervention \( \hat{T}_i \) and the estimated intervention interaction term \( \hat{T}_i \times B_i \) are constructed using these estimated coefficients as follows:

\[ \hat{T}_i = \hat{\alpha}_0 + \hat{\alpha}_Z Z_i + \hat{\alpha}_{Z \times B} (Z_i \times B_i) + \hat{\alpha}'X_i \]

\[ \hat{T}_i \times B_i = \hat{\gamma}_0 + \hat{\gamma}_Z Z_i + \hat{\gamma}_{Z \times B} (Z_i \times B_i) + \hat{\gamma}'X_i \]
In the second step, the dependent variable \( W_i \) is regressed now using the estimated intervention variable and interaction term \( \hat{T}_i \) and \( T_i \times B_i \) in place of the actual intervention variable and interaction term \( T_i \) and \( T_i \times B_i \), with the other independent and control variables left unchanged. Through this process, the estimated coefficients from the second estimating equations of both models would then be properly adjusted for self-selection bias.

The procedure for Model 3 is analogous, except that there is only one selection equation. In the first step, only \((\hat{a}_0, \hat{a}_2, \hat{a})\) is estimated. This is then used to construct the estimated intervention variable \( \hat{T}_i \) in the second step.

Results for these regressions are reported in the rightmost two columns of eTable 2. In addition, eTable 3 presents the main results for these regressions as groups of control variables are progressively added into the model. Finally, for Model 4, which is the fully controlled model with incomplete bookings and interactions added as regressors, we report first-stage regression statistics as well as second-stage regression results in eTable 4, both in aggregate (first column) and by appointment groups (second to fifth column).

The first stage Kleibergen-Paap rk Lagrange Multiplier (LM) statistics indicate that the null hypothesis of underidentification should be rejected at the conventional 5% level, which provides evidence that the instrumental variable \( Z_i \) is indeed correlated with the treatment variable \( T_i \). Another validity threat to an IV regression can occur if this correlation between \( Z_i \) and \( T_i \) is non-zero, but weak (i.e., small in magnitude). Two statistical tests suggest that this is not the case in our setting: (a) The Kleibergen-Paap rk Wald F-statistics are substantially larger than the conventional rejection threshold of 10; and (b) the Cragg-Donald Wald F-statistics are also much larger than the Stock-Yogo critical values that conservatively assume a bias of 10%. Finally, with the exception of the Rehab group, the C-statistics indicate that the null hypothesis of treatment exogeneity should be rejected at the conventional 5% level. Intuitively, these results mean that it would be inappropriate to perform ordinary linear regression by simply including the treatment \( T_i \) as a regressor. This further substantiates our use of a two-stage IV regression.

Regression Models for Post-hoc Analyses

In post-hoc analyses, we sought to investigate whether the introduction of VEText was associated with changes in the average number of cancellations per completed appointment. As described in the main text, we conducted these analyses to assess whether VEText might be plausibly associated with a more tightly packed appointment schedule, which would be likely if VEText was found to be associated with fewer cancellations.

These analyses were also conducted as IV regressions and follow the same two-step procedure described above. Their specifications parallel that of Model 3 in our primary analysis, and can be written as follows:

\[
T_i = \alpha_0 + \alpha_Z Z_i + \alpha X_i + \nu_i \\
C_i = \beta_0 + \beta_T \hat{T}_i + \beta_X X_i + \epsilon_i
\]

The unit of observation remains the same as in Model 3. The key difference stems from the dependent variable and this is reflected by our choice of a different symbol. In our main analysis, the dependent variable was waiting time, which we had denoted by \( W_i \). In this post-hoc analysis, the dependent variable was the number of patient-cancelled bookings, which we denote by \( C_i \). We conducted this regression analysis on the full sample, and repeated this analysis, stratified by clinical...
group. As described in the main text, we also conducted additional analyses where we separately investigated modifications of the dependent variable to the number of patient-cancelled bookings within 7, 14, and 21 days respectively.

Full results of these analyses are reported in eTables 7-10. These results reveal that the introduction of VEText was associated with a decrease in the average number of cancelled bookings, and average number of bookings that were cancelled at short notice, within 7, 14, and 21 days. These directional associations were found for all clinical groups in aggregate as well as for each clinical group.

Sensitivity and Subgroup Analyses

We conducted a suite of sensitivity and subgroup analyses to assess the robustness of the results to different model specifications and across different strata of the data. These were all based on IV regression Model 4, both across all clinical groups in aggregate and further stratified by clinical groups. We describe each of these analyses below.

Sensitivity Analyses

Sensitivity Analysis 1: In this group of analyses, we explored whether our results were robust when the maximum allowable waiting time was cut off at 12 months, 9 months, 6 months, and 3 months, respectively. We performed this analysis because it was possible that some appointments that were made far in advance could be routine appointments for which changes in waiting time would be less clinically meaningful.

Sensitivity Analysis 2: In the main regression analyses of our paper, the calendar month of the appointment was coded as a categorical variable. In this sensitivity analysis, we investigated how sensitive our results were to this specification, by changing month to a continuous variable.

Sensitivity Analysis 3: The IV approach used in our main regression analyses is technically called the standard two-stage least squares (2SLS) estimator, because it models both selection and outcome stages as linear regression problems. Although this approach has several appealing statistical properties, it is somewhat inefficient for our present problem because it doesn’t exploit the fact that the treatment is binary-valued.

A known way to incorporate this information is by a simple modification of this setup that uses nonlinearly-fitted treatment probabilities to replace our original instrumental variables. To do this, we first construct a nonlinear regression model of the treatment on the instrument that exploits the binary nature of the data (such as a logistic or probit regression). For concreteness, we use the probit regression model specified below:

\[ p_i := \text{Prob}(T_i = 1) = \Phi(\delta_0 + \delta_Z Z_i + \delta_{Z \times B}(Z_i \times B_i) + \delta' X_i) \]

Where \( \Phi(\cdot) \) represents the cumulative distribution function of the standard normal distribution. Maximum likelihood estimation is then used to estimate the coefficients of this regression \((\hat{\delta}_0, \hat{\delta}_Z, \hat{\delta}_{Z \times B}, \hat{\delta})\), from which we can obtain the fitted probabilities of assignment to treatment:

\[ \hat{p}_i = \Phi(\hat{\delta}_0 + \hat{\delta}_Z Z_i + \hat{\delta}_{Z \times B}(Z_i \times B_i) + \hat{\delta}' X_i). \]
Having obtained these fitted probabilities, we then implement the same 2SLS in our original approach, with the exception we use these fitted probabilities $\hat{p}_i$ in place of our original instrument $Z_i$.

The results of these analyses are summarized in eTable 5, which shows that the main results were mostly directionally robust to these alternative modeling assumptions and structures.

**Subgroup Analyses**

**Subgroup Analysis 1:** We conducted age-stratified analysis by dividing the sample into two age groups (65 and below vs 66 and above).

**Subgroup Analysis 2:** We conducted race-stratified analysis by dividing the sample into two patient groups (white vs non-white).

**Subgroup Analysis 3:** We stratified appointments based on whether private insurance was used for each given appointment. Private insurance was used in 68.1% of all completed appointments.

The results of these analyses are summarized in eTable 6. These findings are consistent with our study’s primary findings: Across all strata, VEText was associated with a decrease in waiting time, each incomplete booking was associated with additional waiting time, and VEText was associated with an exacerbation of delay from incomplete bookings.
**eTable 1: Control variables used in Models 1-4 of primary analysis.**

| Control Type                        | Specific control variable                                                                                                                                 |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Patient’s sociodemographic profile  | Age at the time of the appointment, and square of the patient’s age.  
Gender (female, male).  
Race/ethnicity (Asian, African American/Black, American Indian, Pacific Islander, White).  
Marital status (married, divorced, single, separated, widowed,).  
Whether or not the patient used private insurance to supplement the financing of the appointment. |
| Seasonal / cyclical factors          | Calendar month of the appointment, modelled as a categorical variable (levels: January, February, ..., October).  
Day of the week of the appointment, modelled as a categorical variable (levels: Sunday, Monday, ..., Saturday). |
| Patient’s utilization of VA health services | Total number of appointments made by that patient over the study period.  
Total number of different medical classes that the patient had appointments with over the study period. |
| Clinic’s congestion level           | Total number of completed appointments in the same week.  
Total number of booked appointments in the same week.  
Total number of patients seen over the entire study period. |
| Individual facilities and appointment classes | Categorical variable indicating the VA health care facility for the appointment (130 levels in total, one for each facility).  
Categorical variable indicating the medical class of the appointment (15 levels in total, one for each medical class). |
**eTable 2: Full results of waiting time regression for Models 1-4.**

| Explanatory Variable                          | Model 1 Estimate (95% CI) | Model 2 Estimate (95% CI) | Model 3 Estimate (95% CI) | Model 4 Estimate (95% CI) |
|-----------------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| VEText intervention                           | -3.23 (-4.48 to -1.97)    | -1.36 (-2.60 to -0.11)    | -10.20 (-11.20 to -9.20)  | -6.51 (-7.52 to -5.51)    |
| Number of intermediate bookings               |                           |                           |                           |                           |
| Interaction with VEText intervention          |                           |                           |                           |                           |
| Age                                           | 1.34 (1.26 to 1.42)       | 1.39 (1.30 to 1.47)       | 1.34 (1.26 to 1.42)       | 1.39 (1.30 to 1.47)       |
| Age²                                          | -0.009 (-0.009 to -0.008) | -0.009 (-0.010 to -0.008) | -0.009 (-0.009 to -0.008) | -0.009 (-0.010 to -0.008) |
| Sex                                           |                           |                           |                           |                           |
| Female (reference)                            |                           |                           |                           |                           |
| Male                                          | -0.13 (-0.68 to 0.42)     | 0.75 (0.21 to 1.30)       | -0.15 (-0.70 to 0.40)     | 0.73 (0.19 to 1.28)       |
| Race/Ethnicity                                |                           |                           |                           |                           |
| White (reference)                             | ——                        | ——                        | ——                        | ——                        |
| African American / Black                      | -0.70 (-1.26 to -0.14)    | -1.31 (-1.87 to -0.75)    | -0.69 (-1.26 to -0.13)    | -1.30 (-1.86 to -0.74)    |
| Asian                                         | 2.10 (1.08 to 3.11)       | 2.53 (1.53 to 3.53)       | 2.10 (1.08 to 3.11)       | 2.54 (1.54 to 3.53)       |
| American Indian                               | -0.74 (-1.12 to -0.35)    | -1.24 (-1.62 to -0.86)    | -0.74 (-1.13 to -0.36)    | -1.24 (-1.62 to -0.86)    |
| Pacific Islander                              | 0.46 (-0.16 to 1.08)      | 0.04 (-0.57 to 0.64)      | 0.47 (-0.16 to 1.09)      | 0.04 (-0.56 to 0.64)      |
| Marital status                                | ——                        | ——                        | ——                        | ——                        |
| Married (reference)                           | ——                        | ——                        | ——                        | ——                        |
| Divorced                                      | -2.52 (-2.89 to -2.15)    | -3.02 (-3.38 to -2.65)    | -2.53 (-2.90 to -2.16)    | -3.01 (-3.38 to -2.65)    |
| Single                                        | -0.73 (-1.07 to -0.39)    | -0.97 (-1.31 to -0.64)    | -0.74 (-1.08 to -0.40)    | -0.97 (-1.31 to -0.63)    |
| Separated                                     | -3.56 (-3.99 to -3.12)    | -4.33 (-4.77 to -3.90)    | -3.57 (-4.01 to -3.14)    | -4.34 (-4.77 to -3.90)    |
| Widowed                                       | -2.90 (-3.35 to -2.45)    | -3.32 (-3.77 to -2.88)    | -2.92 (-3.37 to -2.47)    | -3.33 (-3.78 to -2.88)    |
| Private Insurance                             |                           |                           |                           |                           |
| Used insurance for appointment                | 5.18 (4.85 to 5.50)       | 5.73 (5.39 to 6.07)       | 5.19 (4.87 to 5.52)       | 5.73 (5.40 to 6.07)       |
| Calendar month of appointment date            | ——                        | ——                        | ——                        | ——                        |
| January (reference)                           | ——                        | ——                        | ——                        | ——                        |

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| Month       | Num appointments | Num. classes | Num. completed appointments in past week | Num. appointments in past week | Total number of patients seen (in 000s) | Constant term | R²        |
|------------|-----------------|-------------|----------------------------------------|------------------------------|---------------------------------------|---------------|-----------|
| February   | 4.75 (4.31 to 5.19) | 2.16 (1.76 to 2.57) | 12.76 (3.00 to 22.51) | 0.29 (0.08 to 0.51) | 39,488,685 | 12.76 (3.00 to 22.51) | 0.102     |
| March      | 7.27 (6.72 to 7.82) | 3.59 (3.10 to 4.08) | 6.80 (-2.65 to 16.25) | 0.31 (0.09 to 0.53) | 39,488,685 | 6.80 (-2.65 to 16.25) | 0.161     |
| April      | 9.07 (8.24 to 9.90) | 5.52 (4.76 to 6.28) | 10.86 (9.99 to 11.73) | 0.03 (0.02 to 0.04) | 39,488,685 | 10.86 (9.99 to 11.73) | 0.101     |
| May        | 8.52 (7.48 to 9.56) | 5.06 (4.09 to 6.03) | 12.55 (11.53 to 13.57) | 0.29 (0.08 to 0.51) | 39,488,685 | 12.55 (11.53 to 13.57) | 0.160     |
| June       | 10.32 (9.16 to 11.48) | 5.82 (4.72 to 6.92) | 15.43 (14.35 to 16.52) | 0.03 (0.02 to 0.04) | 39,488,685 | 15.43 (14.35 to 16.52) | 0.101     |
| July       | 12.08 (10.85 to 13.31) | 6.51 (5.36 to 7.67) | 17.46 (16.36 to 18.57) | 0.31 (0.09 to 0.53) | 39,488,685 | 17.46 (16.36 to 18.57) | 0.160     |
| August     | 14.35 (13.01 to 15.69) | 8.14 (6.88 to 9.39) | 19.99 (18.74 to 21.24) | 0.03 (0.02 to 0.04) | 39,488,685 | 19.99 (18.74 to 21.24) | 0.160     |
| September  | 17.16 (15.75 to 18.56) | 10.54 (9.22 to 11.86) | 22.94 (21.61 to 24.27) | 0.03 (0.02 to 0.04) | 39,488,685 | 22.94 (21.61 to 24.27) | 0.101     |
| October    | 16.29 (14.98 to 17.61) | 9.36 (8.09 to 10.63) | 22.17 (20.94 to 23.39) | 0.03 (0.02 to 0.04) | 39,488,685 | 22.17 (20.94 to 23.39) | 0.101     |

**Note:** Coefficients for individual facility controls (130 levels) and appointment class controls (15 levels) omitted from table for brevity.
**eTable 3: Main waiting time regression results from Models 3 and 4 with progressively added controls**

| Explanatory Variable / Controls Included | (1) | (2) | (3) | (4) | (5) |
|-----------------------------------------|-----|-----|-----|-----|-----|
| **Main results from Model 3:**         |     |     |     |     |     |
| VEText intervention                     | 6.73 (5.68 to 7.78) | 7.13 (6.43 to 7.83) | -10.05 (-10.86 to -9.23) | -10.09 (-10.91 to -9.28) | -10.20 (-11.20 to -9.20) |
| Controls for facility and class         | NO  | YES | YES | YES | YES |
| Controls for month and day-of-week      | NO  | NO  | YES | YES | YES |
| Controls for sociodemographic factors   | NO  | NO  | NO  | YES | YES |
| Controls for clinic-level congestion and patients’ utilization of VA health services | NO | NO | NO | YES | YES |
| Number of observations                  | 39,488,685 | 39,488,685 | 39,488,685 | 39,488,685 | 39,488,685 |
| \(R^2\)                                 | 0.002 | 0.080 | 0.083 | 0.089 | 0.101 |
| **Main results from Model 4:**         |     |     |     |     |     |
| VEText intervention                     | 3.57 (2.60 to 4.53) | 4.09 (3.50 to 4.69) | -6.51 (-7.34 to -5.68) | -6.50 (-7.32 to -5.68) | -6.51 (-7.52 to -5.51) |
| Number of intermediate bookings         | 23.04 (22.14 to 23.94) | 23.48 (22.72 to 24.24) | 23.07 (22.33 to 23.81) | 23.40 (22.65 to 24.15) | 23.88 (23.11 to 24.66) |
| Interaction with VEText intervention    | 9.26 (8.05 to 10.48) | 8.43 (7.46 to 9.41) | 8.60 (7.64 to 9.57) | 8.66 (7.69 to 9.62) | 8.54 (7.65 to 9.44) |
| Controls for facility and class         | NO  | YES | YES | YES | YES |
| Controls for month and day-of-week      | NO  | NO  | YES | YES | YES |
| Controls for sociodemographic factors   | NO  | NO  | NO  | YES | YES |
| Controls for clinic-level congestion and patients’ utilization of VA health services | NO | NO | NO | YES | YES |
| Number of observations                  | 39,488,685 | 39,488,685 | 39,488,685 | 39,488,685 | 39,488,685 |
| \(R^2\)                                 | 0.060 | 0.138 | 0.139 | 0.147 | 0.160 |
**eTable 4: Full results of waiting time regression for Model 4, in aggregate and stratified by clinical group.**

| Explanatory Variable | All Clinical Groups Estimate (95% CI) | Regular Outpatient Estimate (95% CI) | Procedural Estimate (95% CI) | Rehab Estimate (95% CI) | Radiology Estimate (95% CI) |
|----------------------|--------------------------------------|--------------------------------------|-----------------------------|------------------------|-----------------------------|
| **First stage statistics:** | | | | | |
| **Under-identification test** | | | | | |
| Kleibergen-Paap rk LM statistic | 472.95 (344.34) | 56.75 (75.47) | 108.09 (108.09) | | |
| Chi-squared p-value | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| **Weak identification test** | | | | | |
| Kleibergen-Paap rk Wald F-statistic | 592.19 (462.33) | 55.65 (91.36) | 91.12 (91.12) | | |
| Cragg-Donald Wald F-statistic | 2,285,163.66 (2,228,270.74) | 223,451.35 (129,528.89) | 63,494.66 (63,494.66) | | |
| Stock-Yogo critical values | | | | | |
| 10% maximal IV size: | 7.03 (7.03) | 7.03 (7.03) | 7.03 (7.03) | 7.03 (7.03) | 7.03 (7.03) |
| 15% maximal IV size: | 4.58 (4.58) | 4.58 (4.58) | 4.58 (4.58) | 4.58 (4.58) | 4.58 (4.58) |
| 20% maximal IV size: | 3.95 (3.95) | 3.95 (3.95) | 3.95 (3.95) | 3.95 (3.95) | 3.95 (3.95) |
| 25% maximal IV size: | 3.63 (3.63) | 3.63 (3.63) | 3.63 (3.63) | 3.63 (3.63) | 3.63 (3.63) |
| **Endogeneity test** | | | | | |
| C statistic | 46.39 (22.94) | 13.83 (2.75) | 4.24 (4.24) | | |
| Chi-squared p-value | <0.001 | <0.001 | 0.0971 | <0.001 | <0.001 |
| **Second stage results:** | | | | | |
| VEText intervention | -6.51 (-7.52 to -5.51) | -5.73 (-7.04 to -4.41) | -10.24 (-13.64 to -6.84) | -1.52 (-2.17 to -0.86) | -3.31 (-4.98 to -1.64) |
| Number of intermediate bookings | 23.88 (23.11 to 24.66) | 25.21 (24.33 to 26.10) | 22.73 (20.93 to 24.53) | 9.34 (8.95 to 9.74) | 15.71 (14.07 to 17.34) |
| Interaction with VEText intervention | 8.54 (7.65 to 9.44) | 7.80 (6.86 to 8.75) | 15.15 (12.15 to 18.14) | 2.32 (1.26 to 3.38) | 16.62 (13.50 to 19.74) |
| Age | 1.39 (1.30 to 1.47) | 1.62 (1.52 to 1.71) | 0.81 (0.64 to 0.98) | 0.08 (0.04 to 0.12) | 0.81 (0.70 to 0.92) |
| Age² | -0.009 (-0.010 to -0.008) | -0.010 (-0.011 to -0.010) | -0.005 (-0.006 to -0.003) | -0.001 (-0.001 to -0.001) | -0.005 (-0.006 to -0.004) |
| Sex | | | | | |
| Female (reference) | | | | | |
| Male | 0.73 (0.19 to 1.28) | 1.13 (0.50 to 1.76) | 1.18 (-0.10 to 2.46) | -0.50 (-0.73 to -0.27) | -1.42 (-2.54 to -0.30) |

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### Race/Ethnicity

|                          | White (reference) | African American / Black | Asian | American Indian | Pacific Islander |
|--------------------------|-------------------|--------------------------|-------|----------------|-----------------|
|                          |                   | -1.30 (-1.86 to -0.74)   | 2.54 (1.54 to 3.53) | -1.24 (-1.62 to -0.86) | 0.04 (-0.56 to 0.64) |
|                          |                   | -1.46 (-2.12 to -0.79)   | 2.95 (1.73 to 4.18)  | -1.61 (-2.06 to -1.16) | 0.15 (-0.63 to 0.94) |
|                          |                   | -1.43 (-2.68 to -0.19)   | 1.51 (-0.10 to 3.13) | -0.19 (-1.23 to 0.84) | -0.48 (-1.63 to 0.67) |
|                          |                   | 0.16 (-0.13 to 0.45)     | 0.57 (0.05 to 1.08)  | 0.02 (-0.38 to 0.42)  | -0.22 (-0.73 to 0.29) |
|                          |                   | -0.77 (-1.31 to -0.23)   | -0.39 (-1.04 to 0.25) | -1.05 (-1.68 to -0.43) | -0.67 (-1.28 to -0.06) |

### Marital status

|                          | Married (reference) | Divorced | Single | Separated | Widowed |
|--------------------------|---------------------|----------|--------|-----------|---------|
|                          |                     | -3.01 (-3.38 to -2.65) | -0.97 (-1.31 to -0.63) | -4.34 (-4.77 to -3.90) | -3.33 (-3.78 to -2.88) |
|                          |                     | -3.46 (-3.90 to -3.01) | -1.11 (-1.52 to -0.69) | -4.87 (-5.39 to -4.36) | -3.57 (-4.11 to -3.03) |
|                          |                     | -3.17 (-3.91 to -2.43) | -1.49 (-2.09 to -0.89) | -4.59 (-5.64 to -3.54) | -4.07 (-5.07 to -3.07) |
|                          |                     | -0.51 (-0.64 to -0.38) | -0.37 (-0.57 to -0.16) | -0.65 (-0.93 to -0.37) | -0.40 (-0.61 to -0.19) |
|                          |                     | 0.24 (0.02 to 0.45)    | 0.77 (0.49 to 1.05)   | 0.15 (-0.21 to 0.50)  | 0.06 (-0.32 to 0.44)  |

### Private Insurance

| Used insurance for appointment | 5.73 (5.40 to 6.07) | 6.52 (6.13 to 6.92) | 4.81 (3.98 to 5.64) | 0.83 (0.68 to 0.98) | 2.79 (2.41 to 3.17) |

### Calendar month of appointment date

| January (reference) | February | March | April | May | June | July | August | September | October |
|---------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|
|                     | 2.37 (1.96 to 2.77) | 4.01 (3.51 to 4.51) | 6.89 (6.07 to 7.70) | 7.70 (6.74 to 8.65) | 9.00 (7.97 to 10.03) | 9.79 (8.76 to 10.83) | 11.53 (10.36 to 12.69) | 13.99 (12.75 to 15.24) | 12.84 (11.66 to 14.02) |
|                     | 2.98 (2.41 to 3.54) | 4.86 (4.22 to 5.50) | 8.04 (6.96 to 9.13) | 8.62 (7.31 to 9.94) | 9.37 (7.90 to 10.83) | 9.90 (8.43 to 11.36) | 12.28 (10.64 to 13.91) | 14.76 (12.97 to 16.54) | 12.99 (11.39 to 14.59) |
|                     | 1.83 (1.00 to 2.67) | 2.42 (1.14 to 3.70) | 6.29 (4.32 to 8.26) | 7.31 (4.99 to 9.64) | 8.73 (6.27 to 11.19) | 10.81 (8.27 to 13.34) | 11.79 (9.17 to 14.41) | 15.11 (12.28 to 17.95) | 16.01 (12.92 to 19.10) |
|                     | -1.14 (-1.42 to -0.86) | -0.80 (-1.14 to -0.46) | -0.15 (-0.61 to 0.31) | 0.05 (-0.52 to 0.62) | 0.89 (0.25 to 1.52) | 2.08 (1.41 to 2.74) | 1.78 (1.03 to 2.53) | 2.43 (1.72 to 3.14) | 2.25 (1.60 to 2.91) |
|                     | 0.59 (0.10 to 1.09) | 1.28 (0.70 to 1.86) | 2.58 (1.85 to 3.32) | 3.15 (2.07 to 4.23) | 4.01 (2.74 to 5.28) | 4.03 (2.85 to 5.21) | 3.64 (2.37 to 4.92) | 5.21 (3.85 to 6.57) | 5.92 (4.39 to 7.44) |

### Day of week of appointment date

| Sunday (reference) | Monday | Tuesday | Wednesday | Thursday |
|--------------------|--------|---------|-----------|---------|
|                    | 12.79 (9.94 to 15.65) | 23.73 (19.79 to 27.66) | 10.36 (7.50 to 13.22) | 9.78 (6.93 to 12.63) |
|                    | -1.15 (-15.61 to 13.32) | -1.57 (-18.12 to 10.97) | 20.63 (16.72 to 24.55) | 19.46 (15.55 to 23.37) |
|                    | 2.15 (-4.90 to 9.19) | 1.80 (-5.24 to 8.84) | -4.73 (-19.28 to 9.82) | -4.95 (-19.43 to 9.53) |
|                    | 12.88 (10.11 to 15.65) | 10.89 (8.22 to 13.55) | 10.10 (7.40 to 12.79) | 1.25 (-5.79 to 8.30) |
|                    | 8.69 (6.11 to 11.27) | 10.10 (7.40 to 12.79) | 10.10 (7.40 to 12.79) | 8.69 (6.11 to 11.27) |

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### Patient’s Utilization of VA Health Services

|                      | Friday       | Saturday    | Monday       | Tuesday     | Total         |
|----------------------|--------------|-------------|--------------|-------------|---------------|
| Num. appointments    | 7.91 (5.06 to 10.75) | 0.29 (-4.08 to 4.67) | -0.18 (-0.20 to -0.17) | -1.00 (-1.24 to -0.76) | 7.73 (5.14 to 10.31) |
| Num. classes         | 18.09 (14.18 to 22.01) | 6.79 (0.45 to 13.13) | -0.20 (-0.22 to -0.19) | -0.85 (-1.13 to -0.58) | 2.42 (0.17 to 4.67) |

### Clinic’s Congestion Level

|                      | Friday       | Saturday    | Monday       | Tuesday     | Total         |
|----------------------|--------------|-------------|--------------|-------------|---------------|
| Num. completed appts in past week | -0.04 (-0.05 to -0.02) | -0.06 (-0.08 to -0.04) | -0.03 (-0.05 to -0.01) | -0.01 (-0.02 to 0.00) | -0.26 (-0.32 to -0.20) |
| Num. appointments in past week | 0.02 (0.01 to 0.04) | 0.04 (0.03 to 0.05) | 0.02 (0.00 to 0.03) | 0.01 (0.00 to 0.02) | 0.23 (0.17 to 0.29) |
| Total number of patients seen (in 000s) | 0.31 (0.09 to 0.53) | 0.14 (-0.08 to 0.37) | 1.20 (0.92 to 1.48) | -0.20 (-0.55 to 0.14) | -0.76 (-1.81 to 0.30) |

|                      | Friday       | Saturday    | Monday       | Tuesday     | Total         |
|----------------------|--------------|-------------|--------------|-------------|---------------|
| Constant term        | 7.30 (-2.29 to 16.89) | -5.83 (-15.95 to 4.29) | 21.56 (0.32 to 42.81) | 18.47 (9.44 to 27.50) | -28.86 (-35.12 to -22.60) |

**Note:** Coefficients for individual facility controls (130 levels) and appointment class controls (15 levels) omitted from table for brevity.
### eTable 5: Summary of results from sensitivity analyses.

| Explanatory Variable | All Clinical Groups Estimate (95% CI) | Regular Outpatient Estimate (95% CI) | Procedural Estimate (95% CI) | Rehab Estimate (95% CI) | Radiology Estimate (95% CI) |
|----------------------|---------------------------------------|--------------------------------------|----------------------------|-------------------------|---------------------------|
| **Sensitivity Analysis 1: Only retain waiting time ≤ cutoff** | | | | | |
| **Cutoff: 12 months** | | | | | |
| VEText intervention | -5.45 (-6.36 to -4.53) | -4.69 (-5.88 to -3.49) | -9.06 (-12.38 to -5.74) | -1.45 (-2.10 to -0.80) | -2.55 (-4.14 to -0.96) |
| Number of incomplete bookings | 20.73 (20.13 to 21.33) | 21.83 (21.13 to 22.53) | 19.55 (18.20 to 20.90) | 9.19 (8.81 to 9.58) | 14.10 (12.64 to 15.56) |
| Interaction with VEText intervention | 5.97 (5.30 to 6.65) | 5.36 (4.64 to 6.08) | 10.65 (8.60 to 12.70) | 2.25 (1.23 to 3.28) | 14.31 (11.63 to 16.99) |
| Number of observations | 39,069,729 | 28,180,615 | 6,815,231 | 1,705,117 | 2,368,766 |
| **Cutoff: 9 months** | | | | | |
| VEText intervention | -4.26 (-4.92 to -3.60) | -3.94 (-4.83 to -3.05) | -5.25 (-7.41 to -3.09) | -1.40 (-2.04 to -0.76) | -1.71 (-3.08 to -0.33) |
| Number of incomplete bookings | 20.21 (19.67 to 20.75) | 21.34 (20.73 to 21.96) | 18.80 (17.62 to 19.98) | 9.14 (8.76 to 9.52) | 13.66 (12.31 to 15.01) |
| Interaction with VEText intervention | 4.74 (4.17 to 5.32) | 4.22 (3.61 to 4.84) | 8.53 (6.75 to 10.31) | 2.14 (1.16 to 3.12) | 13.08 (10.62 to 15.53) |
| Number of observations | 38,182,221 | 27,564,232 | 6,568,341 | 1,704,789 | 2,344,859 |
| **Cutoff: 6 months** | | | | | |
| VEText intervention | -3.03 (-3.54 to -2.53) | -3.01 (-3.65 to -2.37) | -2.87 (-4.85 to -0.89) | -1.27 (-1.90 to -0.65) | -1.37 (-2.90 to 0.15) |
| Number of incomplete bookings | 15.76 (15.45 to 16.08) | 16.57 (16.20 to 16.93) | 14.37 (13.71 to 15.04) | 9.18 (8.79 to 9.57) | 12.26 (11.19 to 13.34) |
| Interaction with VEText intervention | 2.65 (2.27 to 3.03) | 2.33 (1.92 to 2.73) | 4.78 (3.54 to 6.02) | 1.23 (0.45 to 2.00) | 8.61 (6.91 to 10.32) |
| Number of observations | 35,605,890 | 25,394,051 | 6,198,081 | 1,702,413 | 2,311,345 |
| **Cutoff: 3 months** | | | | | |
| VEText intervention | -0.91 (-1.20 to -0.62) | -0.83 (-1.17 to -0.49) | -1.13 (-1.86 to -0.40) | -0.22 (-0.76 to 0.32) | 0.09 (-1.08 to 1.27) |
| Number of incomplete bookings | 10.37 (10.18 to 10.55) | 10.53 (10.30 to 10.76) | 10.66 (10.24 to 11.08) | 8.01 (7.67 to 8.35) | 10.00 (9.44 to 10.56) |
| Interaction with VEText intervention | 0.74 (0.55 to 0.94) | 0.62 (0.39 to 0.84) | 1.42 (0.63 to 2.21) | 0.36 (0.08 to 0.64) | 2.30 (1.31 to 3.30) |
| Number of observations | 30,987,248 | 21,678,142 | 5,406,399 | 1,683,544 | 2,219,163 |
| **Sensitivity Analysis 2: Calendar month as a continuous variable** | | | | | |
| VEText intervention | -6.17 (-6.93 to -5.40) | -5.98 (-6.98 to -4.98) | -10.04 (-12.86 to -7.23) | -0.75 (-1.28 to -0.21) | -2.30 (-3.67 to -0.94) |
| Number of incomplete bookings | 23.99 (23.21 to 24.76) | 25.37 (24.48 to 26.26) | 22.72 (20.93 to 24.50) | 9.31 (8.91 to 9.71) | 15.74 (14.10 to 17.38) |
| Interaction with VEText intervention | 8.39 (7.51 to 9.27) | 7.56 (6.64 to 8.49) | 15.16 (12.19 to 18.14) | 2.39 (1.33 to 3.45) | 16.59 (13.47 to 19.70) |
| Number of observations | 39,488,685 | 28,550,739 | 6,858,327 | 1,705,387 | 2,374,232 |

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Sensitivity Analysis 3: Using nonlinear fitted probabilities as instruments

|                              |                       |                       |                       |                       |                       |
|-----------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| VEText intervention         | -5.68 (-7.87 to -3.49) | -3.78 (-6.82 to -0.74) | -9.40 (-12.94 to -5.87) | -1.87 (-3.13 to -0.61) | -3.58 (-5.22 to -1.94) |
| Number of incomplete bookings | 24.07 (23.32 to 24.83) | 25.39 (24.50 to 26.27) | 23.13 (20.43 to 25.84) | 9.85 (9.14 to 10.57)    | 19.59 (18.43 to 20.76) |
| Interaction with VEText intervention | 8.22 (7.02 to 9.43)    | 7.56 (6.28 to 8.84)    | 14.31 (7.36 to 21.26)  | 1.36 (-0.08 to 2.81)    | 6.49 (4.27 to 8.71)    |
| Number of observations      | 39,488,685             | 28,550,739             | 6,858,327              | 1,705,387              | 2,374,232              |

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### eTable 6: Summary of results from additional subgroup analyses.

| Explanatory Variable | All Clinical Groups Estimate (95% CI) | Regular Outpatient Estimate (95% CI) | Procedural Estimate (95% CI) | Rehab Estimate (95% CI) | Radiology Estimate (95% CI) |
|----------------------|---------------------------------------|--------------------------------------|-------------------------------|--------------------------|----------------------------|
| **Subgroup Analysis 1: Stratified by age group** | | | | | |
| **Stratum 1: Age ≤ 65** | | | | | |
| VEText intervention | -7.11 (-8.02 to -6.20) | -6.77 (-7.91 to -5.64) | -10.64 (-13.92 to -7.37) | -1.83 (-2.53 to -1.13) | -1.96 (-3.63 to -0.30) |
| Number of incomplete bookings | 21.30 (20.46 to 22.14) | 22.40 (21.42 to 23.38) | 20.41 (18.33 to 22.50) | 9.16 (8.75 to 9.57) | 15.56 (14.70 to 16.43) |
| Interaction with VEText intervention | 7.36 (6.30 to 8.42) | 6.61 (5.46 to 7.77) | 13.79 (10.23 to 17.35) | 2.92 (1.97 to 3.87) | 15.59 (13.00 to 18.19) |
| Number of observations | 18,384,868 | 13,266,821 | 3,043,841 | 935,674 | 1,138,532 |
| **Stratum 2: Age > 65** | | | | | |
| VEText intervention | -6.06 (-7.29 to -4.84) | -4.94 (-6.56 to -3.31) | -9.68 (-13.48 to -5.89) | -1.21 (-2.02 to -0.39) | -4.62 (-6.74 to -2.50) |
| Number of incomplete bookings | 27.10 (26.35 to 27.86) | 28.73 (27.89 to 29.56) | 25.34 (23.61 to 27.08) | 9.58 (9.07 to 10.09) | 15.84 (12.99 to 18.69) |
| Interaction with VEText intervention | 10.18 (9.34 to 11.02) | 9.54 (8.71 to 10.36) | 16.51 (13.55 to 19.47) | 1.49 (-0.02 to 2.99) | 17.71 (13.23 to 22.18) |
| Number of observations | 21,103,817 | 15,283,918 | 3,814,486 | 769,713 | 1,235,700 |
| **Sensitivity Analysis 2: Stratified by race** | | | | | |
| **Stratum 1: White** | | | | | |
| VEText intervention | -6.53 (-7.62 to -5.44) | -5.51 (-6.93 to -4.10) | -10.66 (-14.37 to -6.96) | -1.43 (-2.10 to -0.75) | -3.85 (-5.76 to -1.94) |
| Number of incomplete bookings | 24.70 (23.91 to 25.50) | 26.08 (25.18 to 26.99) | 23.51 (21.64 to 25.37) | 9.19 (8.72 to 9.65) | 16.03 (13.98 to 18.07) |
| Interaction with VEText intervention | 9.14 (8.30 to 9.98) | 8.20 (7.32 to 9.07) | 16.23 (13.17 to 19.29) | 2.90 (2.04 to 3.77) | 16.25 (12.90 to 19.59) |
| Number of observations | 30,133,197 | 21,641,015 | 5,484,953 | 1,206,901 | 1,800,328 |
| **Stratum 2: Non-white** | | | | | |
| VEText intervention | -6.75 (-7.86 to -5.65) | -6.74 (-8.16 to -5.32) | -8.60 (-11.91 to -5.29) | -1.89 (-2.97 to -0.80) | -2.14 (-4.63 to 0.35) |
| Number of incomplete bookings | 21.78 (20.82 to 22.74) | 23.02 (21.90 to 24.13) | 20.26 (17.91 to 22.61) | 9.66 (9.11 to 10.21) | 14.88 (13.30 to 16.46) |
| Interaction with VEText intervention | 7.01 (5.58 to 8.45) | 6.78 (5.23 to 8.33) | 11.46 (6.67 to 16.26) | 1.22 (-1.08 to 3.51) | 17.61 (13.09 to 22.14) |
| Number of observations | 9,355,488 | 6,909,724 | 1,373,374 | 498,486 | 573,904 |
| **Sensitivity Analysis 3: Stratified by usage of private insurance** | | | | | |
| **Stratum 1: Used private insurance** | | | | | |
| VEText intervention | -6.18 (-7.29 to -5.07) | -5.30 (-6.76 to -3.84) | -9.69 (-13.30 to -6.08) | -1.43 (-2.16 to -0.71) | -4.12 (-6.02 to -2.21) |
| Number of incomplete bookings | 25.71 (24.93 to 26.49) | 27.19 (26.31 to 28.07) | 24.19 (22.32 to 26.05) | 9.54 (9.13 to 9.96) | 16.69 (14.50 to 18.88) |
| Interaction with VEText intervention | 9.22 (8.37 to 10.07) | 8.45 (7.59 to 9.30) | 16.88 (13.88 to 19.88) | 1.74 (0.29 to 3.19) | 17.45 (13.83 to 21.07) |
| Stratum 2: No private insurance | Number of observations | VEText intervention | Number of incomplete bookings | Interaction with VEText intervention | Number of observations |
|-------------------------------|-----------------------|---------------------|-------------------------------|-------------------------------------|-----------------------|
|                               | 27,161,996            | -7.27 (-8.19 to -6.34) | 21.01 (20.20 to 21.82)       | 7.31 (6.17 to 8.44)                | 12,326,689            |
|                               | 19,669,053            | -6.73 (-7.88 to -5.58) | 22.08 (21.14 to 23.02)       | 6.66 (5.43 to 7.89)               | 8,881,686             |
|                               | 4,778,103             | -11.51 (-14.82 to -8.21) | 20.41 (18.45 to 22.37)       | 11.88 (7.87 to 15.89)             | 2,080,224             |
|                               | 1,125,850             | -1.71 (-2.58 to -0.84)  | 8.97 (8.38 to 9.57)          | 3.38 (2.38 to 4.37)               | 579,537               |
|                               | 1,588,990             | -1.73 (-3.64 to 0.17)   | 14.19 (12.84 to 15.54)       | 15.12 (11.32 to 18.92)            | 785,242               |

Number of observations: 27,161,996, 19,669,053, 4,778,103, 1,125,850, 1,588,990.
**eTable 7: Full regression results for number of patient cancellations (post-hoc analysis), for all clinical groups and stratified by clinical group.**

| Explanatory Variable          | All Clinical Groups Estimate (95% CI) | Regular Outpatient Estimate (95% CI) | Procedural Estimate (95% CI) | Rehab Estimate (95% CI) | Radiology Estimate (95% CI) |
|------------------------------|--------------------------------------|-------------------------------------|------------------------------|-------------------------|----------------------------|
| VEText intervention          | -0.10 (-0.10 to -0.10)               | -0.11 (-0.12 to -0.11)              | -0.06 (-0.07 to -0.05)       | -0.06 (-0.07 to -0.05)  | -0.06 (-0.07 to -0.05)     |
| Age                          | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                 | 0.00 (0.00 to 0.00)          | 0.00 (0.00 to 0.00)     | 0.00 (0.00 to 0.00)        |
| Age²                         | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                 | 0.00 (0.00 to 0.00)          | 0.00 (0.00 to 0.00)     | 0.00 (0.00 to 0.00)        |
| Sex                          |                                      |                                     |                              |                         |                            |
| Female (reference)           | ***                                  | ***                                 | ***                          | ***                     | ***                        |
| Male                         | -0.04 (-0.04 to -0.04)               | -0.04 (-0.04 to -0.04)              | -0.02 (-0.02 to -0.02)       | -0.05 (-0.05 to -0.04)  | -0.04 (-0.04 to -0.03)     |
| Race/Ethnicity               |                                      |                                     |                              |                         |                            |
| White (reference)            | ***                                  | ***                                 | ***                          | ***                     | ***                        |
| African American / Black     | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                 | 0.00 (-0.01 to 0.00)         | 0.01 (0.01 to 0.01)     | 0.00 (0.00 to 0.00)        |
| Asian                        | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                 | 0.00 (-0.01 to 0.00)         | 0.00 (-0.01 to 0.01)    | 0.00 (0.00 to 0.01)        |
| American Indian              | 0.01 (0.00 to 0.01)                  | 0.01 (0.00 to 0.01)                 | 0.00 (0.00 to 0.01)          | 0.01 (0.00 to 0.01)     | 0.00 (0.00 to 0.01)        |
| Pacific Islander             | 0.01 (0.00 to 0.01)                  | 0.01 (0.00 to 0.01)                 | 0.00 (0.00 to 0.01)          | 0.01 (0.01 to 0.02)     | 0.00 (0.00 to 0.01)        |
| Marital status               |                                      |                                     |                              |                         |                            |
| Married (reference)          | ***                                  | ***                                 | ***                          | ***                     | ***                        |
| Divorced                     | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                 | 0.00 (0.00 to 0.00)          | 0.00 (0.00 to 0.00)     | 0.01 (0.01 to 0.01)        |
| Single                       | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                 | 0.00 (0.00 to 0.00)          | -0.01 (-0.01 to -0.01)  | 0.01 (0.00 to 0.01)        |
| Separated                    | 0.01 (0.00 to 0.01)                  | 0.01 (0.00 to 0.01)                 | 0.00 (0.00 to 0.01)          | 0.00 (0.00 to 0.01)     | 0.01 (0.01 to 0.01)        |
| Widowed                      | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                 | 0.00 (0.00 to 0.00)          | 0.00 (-0.01 to 0.00)    | 0.01 (0.01 to 0.01)        |
| Private Insurance            |                                      |                                     |                              |                         |                            |
| Used insurance for appointment| -0.01 (-0.01 to -0.01)               | -0.01 (-0.01 to -0.01)              | -0.01 (-0.01 to 0.00)        | 0.00 (0.00 to 0.00)     | -0.01 (-0.01 to -0.01)     |
| Calendar month of appointment|                                      |                                     |                              |                         |                            |
| January (reference)          | ***                                  | ***                                 | ***                          | ***                     | ***                        |
| February                     | 0.05 (0.05 to 0.05)                  | 0.06 (0.06 to 0.06)                 | 0.03 (0.03 to 0.03)          | 0.04 (0.03 to 0.04)     | 0.03 (0.03 to 0.04)        |
| March                        | 0.07 (0.07 to 0.07)                  | 0.08 (0.08 to 0.08)                 | 0.04 (0.04 to 0.05)          | 0.05 (0.04 to 0.05)     | 0.04 (0.04 to 0.04)        |

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| Month      | Apr   | May    | Jun    | Jul    | Aug    | Sept   | Oct    | Nov    | Dec    |
|------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Day of week of appointment date | April | May    | June   | July   | August | September | October | November | December |
| Sunday (reference) | 0.08 (0.07 to 0.08) | 0.09 (0.09 to 0.09) | 0.05 (0.04 to 0.05) | 0.04 (0.04 to 0.05) | 0.05 (0.04 to 0.05) | 0.05 (0.04 to 0.05) | 0.05 (0.04 to 0.05) | 0.05 (0.04 to 0.05) | 0.05 (0.04 to 0.05) |
| Monday     | 0.09 (0.09 to 0.09) | 0.11 (0.10 to 0.11) | 0.05 (0.05 to 0.06) | 0.05 (0.04 to 0.06) | 0.05 (0.04 to 0.06) | 0.05 (0.04 to 0.06) | 0.05 (0.04 to 0.06) | 0.05 (0.04 to 0.06) | 0.05 (0.04 to 0.06) |
| Tuesday    | 0.11 (0.11 to 0.12) | 0.13 (0.13 to 0.14) | 0.07 (0.06 to 0.07) | 0.07 (0.06 to 0.08) | 0.07 (0.06 to 0.08) | 0.07 (0.06 to 0.08) | 0.07 (0.06 to 0.08) | 0.06 (0.05 to 0.07) | 0.06 (0.05 to 0.07) |
| Wednesday  | 0.13 (0.13 to 0.14) | 0.15 (0.15 to 0.16) | 0.08 (0.07 to 0.08) | 0.08 (0.07 to 0.09) | 0.08 (0.07 to 0.09) | 0.08 (0.07 to 0.09) | 0.08 (0.07 to 0.09) | 0.07 (0.06 to 0.07) | 0.07 (0.06 to 0.07) |
| Thursday   | 0.14 (0.14 to 0.15) | 0.17 (0.16 to 0.17) | 0.08 (0.08 to 0.09) | 0.08 (0.07 to 0.09) | 0.08 (0.07 to 0.09) | 0.08 (0.07 to 0.09) | 0.08 (0.07 to 008) | 0.07 (0.06 to 0.08) | 0.07 (0.06 to 0.08) |
| Friday     | 0.15 (0.15 to 0.16) | 0.18 (0.17 to 0.18) | 0.09 (0.08 to 0.10) | 0.09 (0.08 to 0.10) | 0.09 (0.08 to 0.10) | 0.08 (0.07 to 0.09) | 0.08 (0.07 to 008) | 0.07 (0.06 to 0.08) | 0.07 (0.06 to 0.08) |
| Saturday   | 0.16 (0.15 to 0.16) | 0.18 (0.17 to 0.19) | 0.09 (0.08 to 0.10) | 0.10 (0.09 to 0.11) | 0.10 (0.09 to 0.11) | 0.08 (0.07 to 0.09) | 0.08 (0.07 to 008) | 0.07 (0.06 to 0.08) | 0.07 (0.06 to 0.08) |

| Patient’s utilization of VA health services | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Num. appointments | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |
| Num. classes | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |

| Clinic’s congestion level | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Num. completed appts in past week | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |
| Num. appointments in past week | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |
| Total number of patients seen (in 000s) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |

| Constant term | 0.12 (0.10 to 0.13) | 0.11 (0.09 to 0.13) | 0.03 (-0.02 to 0.08) | 0.13 (0.06 to 0.21) | -0.01 (-0.03 to 0.01) | 0.13 (0.06 to 0.21) | -0.01 (-0.03 to 0.01) | 0.13 (0.06 to 0.21) | -0.01 (-0.03 to 0.01) |

| Number of observations | 39,488,685 | 28,550,739 | 6,858,327 | 1,705,387 | 2,374,232 |
| R² | 0.012 | 0.012 | 0.008 | 0.012 | 0.008 |

**Note:** Coefficients for individual facility controls (130 levels) and appointment class controls (15 levels) omitted from table for brevity.
### eTable 8: Full regression results for short cancellations within 21 days (post-hoc analysis), for all clinical groups and stratified by clinical group.

| Explanatory Variable          | All Clinical Groups Estimate (95% CI) | Regular Outpatient Estimate (95% CI) | Procedural Estimate (95% CI) | Rehab Estimate (95% CI) | Radiology Estimate (95% CI) |
|-------------------------------|--------------------------------------|--------------------------------------|-------------------------------|-------------------------|----------------------------|
| **VEText intervention**       | -0.09 (-0.09 to -0.08)               | -0.10 (-0.10 to -0.09)               | -0.05 (-0.06 to -0.05)        | -0.06 (-0.07 to -0.05)  | -0.06 (-0.07 to -0.05)     |
| **Age**                       | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)           | 0.00 (0.00 to 0.00)     | 0.00 (0.00 to 0.00)        |
| **Age²**                      | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)           | 0.00 (0.00 to 0.00)     | 0.00 (0.00 to 0.00)        |
| **Sex**                       |                                       |                                       |                               |                         |                            |
| Female (reference)            | ---                                  | ---                                  | ---                           | ---                     | ---                        |
| Male                          | -0.03 (-0.03 to -0.03)               | -0.03 (-0.04 to -0.03)               | -0.02 (-0.02 to -0.02)        | -0.04 (-0.05 to -0.04)  | -0.03 (-0.03 to -0.03)     |
| **Race/Ethnicity**            |                                       |                                       |                               |                         |                            |
| White (reference)             | ---                                  | ---                                  | ---                           | ---                     | ---                        |
| African American / Black      | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)           | 0.01 (0.01 to 0.02)     | 0.01 (0.00 to 0.01)        |
| Asian                         | -0.01 (-0.01 to 0.00)                | -0.01 (-0.01 to -0.01)               | 0.00 (-0.01 to 0.00)          | 0.00 (-0.01 to 0.00)    | 0.00 (-0.01 to 0.00)       |
| American Indian               | 0.01 (0.01 to 0.01)                  | 0.01 (0.01 to 0.01)                  | 0.00 (0.00 to 0.01)           | 0.01 (0.00 to 0.01)     | 0.00 (0.00 to 0.01)        |
| Pacific Islander              | 0.01 (0.00 to 0.01)                  | 0.01 (0.00 to 0.01)                  | 0.00 (0.00 to 0.00)           | 0.01 (0.00 to 0.02)     | 0.00 (0.00 to 0.01)        |
| **Marital status**            |                                       |                                       |                               |                         |                            |
| Married (reference)           | ---                                  | ---                                  | ---                           | ---                     | ---                        |
| Divorced                      | 0.01 (0.01 to 0.01)                  | 0.01 (0.01 to 0.01)                  | 0.00 (0.00 to 0.01)           | 0.00 (0.00 to 0.00)     | 0.01 (0.01 to 0.01)        |
| Single                        | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)           | 0.00 (-0.01 to 0.00)    | 0.01 (0.01 to 0.01)        |
| Separated                     | 0.01 (0.01 to 0.01)                  | 0.01 (0.01 to 0.01)                  | 0.01 (0.00 to 0.01)           | 0.00 (0.00 to 0.01)     | 0.01 (0.01 to 0.01)        |
| Widowed                       | 0.00 (0.00 to 0.01)                  | 0.01 (0.00 to 0.01)                  | 0.00 (0.00 to 0.00)           | 0.00 (-0.01 to 0.00)    | 0.01 (0.01 to 0.01)        |
| **Private Insurance**         |                                       |                                       |                               |                         |                            |
| Used insurance for appointment| -0.01 (-0.01 to -0.01)               | -0.01 (-0.01 to -0.01)               | -0.01 (-0.01 to -0.01)        | 0.00 (-0.01 to 0.00)    | -0.01 (-0.01 to -0.01)     |
| **Calendar month of appointment date** |                                   |                                       |                               |                         |                            |
| January (reference)           | ---                                  | ---                                  | ---                           | ---                     | ---                        |
| February                      | 0.05 (0.04 to 0.05)                  | 0.05 (0.05 to 0.05)                  | 0.03 (0.03 to 0.03)           | 0.04 (0.03 to 0.04)     | 0.03 (0.03 to 0.04)        |
| March                         | 0.06 (0.06 to 0.07)                  | 0.07 (0.07 to 0.07)                  | 0.04 (0.03 to 0.04)           | 0.04 (0.04 to 0.05)     | 0.04 (0.04 to 0.04)        |
| April                         | 0.07 (0.06 to 0.07)                  | 0.08 (0.07 to 0.08)                  | 0.04 (0.03 to 0.04)           | 0.04 (0.03 to 0.04)     | 0.04 (0.04 to 0.05)        |
| May                           | 0.08 (0.07 to 0.08)                  | 0.09 (0.09 to 0.09)                  | 0.04 (0.04 to 0.05)           | 0.04 (0.04 to 0.05)     | 0.05 (0.04 to 0.05)        |
| Month    | 0.10 (0.09 to 0.10) | 0.11 (0.11 to 0.12) | 0.06 (0.05 to 0.06) | 0.06 (0.05 to 0.07) | 0.05 (0.05 to 0.06) |
|----------|---------------------|---------------------|---------------------|---------------------|---------------------|
| June     | 0.11 (0.11 to 0.12) | 0.13 (0.13 to 0.13) | 0.06 (0.06 to 0.07) | 0.07 (0.06 to 0.08) | 0.06 (0.06 to 0.07) |
| July     | 0.12 (0.12 to 0.13) | 0.14 (0.14 to 0.15) | 0.07 (0.06 to 0.08) | 0.08 (0.07 to 0.09) | 0.07 (0.06 to 0.07) |
| August   | 0.13 (0.13 to 0.13) | 0.15 (0.14 to 0.15) | 0.07 (0.07 to 0.08) | 0.09 (0.08 to 0.10) | 0.07 (0.06 to 0.08) |
| September| 0.13 (0.13 to 0.14) | 0.15 (0.15 to 0.16) | 0.08 (0.07 to 0.08) | 0.09 (0.08 to 0.10) | 0.07 (0.07 to 0.08) |
| October  | 0.11 (0.11 to 0.12) | 0.13 (0.13 to 0.13) | 0.06 (0.05 to 0.06) | 0.06 (0.05 to 0.07) | 0.05 (0.05 to 0.06) |

Day of week of appointment date

|         | --- | --- | --- | --- | --- |
|---------|-----|-----|-----|-----|-----|
| Sunday (reference) | --- | --- | --- | --- | --- |
| Monday  | 0.01 (0.00 to 0.02) | 0.03 (0.01 to 0.04) | 0.02 (-0.03 to 0.07) | 0.06 (0.00 to 0.12) | 0.00 (0.00 to 0.01) |
| Tuesday | 0.01 (0.00 to 0.02) | 0.03 (0.02 to 0.05) | 0.02 (-0.03 to 0.07) | 0.06 (0.00 to 0.12) | 0.00 (0.00 to 0.01) |
| Wednesday| 0.01 (0.00 to 0.02) | 0.03 (0.02 to 0.05) | 0.02 (-0.03 to 0.07) | 0.06 (0.00 to 0.12) | 0.00 (0.00 to 0.01) |
| Thursday| 0.01 (0.01 to 0.02) | 0.03 (0.02 to 0.05) | 0.02 (-0.03 to 0.07) | 0.06 (0.00 to 0.12) | 0.00 (0.00 to 0.01) |
| Friday  | 0.02 (0.01 to 0.03) | 0.04 (0.02 to 0.05) | 0.03 (-0.02 to 0.08) | 0.07 (0.01 to 0.12) | 0.01 (0.00 to 0.01) |
| Saturday| 0.02 (0.01 to 0.03) | 0.04 (0.02 to 0.05) | 0.03 (-0.01 to 0.08) | 0.06 (-0.01 to 0.12) | 0.01 (0.00 to 0.01) |

Patient’s utilization of VA health services

|                  | Num. appointments | Num. classes |
|------------------|-------------------|--------------|
|                  | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |
|                  | 0.00 (0.00 to 0.00) | 0.00 (-0.01 to 0.00) |
|                  | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |

Clinic’s congestion level

|                            | Num. completed appts in past week | Num. appointments in past week | Total number of patients seen (in 000s) |
|---------------------------|-----------------------------------|--------------------------------|-------------------------------------|
|                            | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |
|                            | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |
|                            | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | -0.01 (-0.01 to 0.00) |

Constant term

|                  | 0.11 (0.10 to 0.12) | 0.10 (0.08 to 0.12) | 0.04 (-0.01 to 0.09) | 0.13 (0.06 to 0.21) | 0.00 (-0.02 to 0.02) |

Number of observations

|                   | 39,488,685 | 28,550,739 | 6,858,327 | 1,705,387 | 2,374,232 |
|-------------------|------------|------------|-----------|-----------|-----------|

R²

|     | 0.012 | 0.013 | 0.008 | 0.012 | 0.007 |

**Note:** Coefficients for individual facility controls (130 levels) and appointment class controls (15 levels) omitted from table for brevity.
### eTable 9: Full regression results for short cancellations within 14 days (post-hoc analysis), for all clinical groups and stratified by clinical group.

| Explanatory Variable                      | All Clinical Groups Estimate (95% CI) | Regular Outpatient Estimate (95% CI) | Procedural Estimate (95% CI) | Rehab Estimate (95% CI) | Radiology Estimate (95% CI) |
|-------------------------------------------|--------------------------------------|--------------------------------------|------------------------------|-------------------------|-----------------------------|
| VEText intervention                       | -0.08 (-0.09 to -0.08)               | -0.09 (-0.10 to -0.09)               | -0.05 (-0.06 to -0.04)      | -0.06 (-0.07 to -0.05)  | -0.06 (-0.07 to -0.05)     |
| Age                                       | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)         | 0.00 (0.00 to 0.00)     | 0.00 (0.00 to 0.00)         |
| Age²                                      | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)         | 0.00 (0.00 to 0.00)     | 0.00 (0.00 to 0.00)         |
| Sex                                       |                                      |                                      |                              |                         |                             |
| Female (reference)                        |                                      |                                      |                              |                         |                             |
| Male                                      | -0.03 (-0.03 to -0.03)               | -0.03 (-0.03 to -0.03)               | -0.02 (-0.02 to -0.01)      | -0.04 (-0.04 to -0.04)  | -0.03 (-0.03 to -0.03)     |
| Race/Ethnicity                            |                                      |                                      |                              |                         |                             |
| White (reference)                         | ***                                   | ***                                   | ***                          | ***                     | ***                         |
| African American / Black                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)         | 0.01 (0.01 to 0.02)     | 0.01 (0.00 to 0.01)         |
| Asian                                     | -0.01 (-0.01 to -0.01)               | -0.01 (-0.01 to -0.01)               | -0.01 (-0.01 to 0.00)       | 0.00 (-0.01 to 0.00)    | 0.00 (-0.01 to 0.00)        |
| American Indian                           | 0.01 (0.01 to 0.01)                  | 0.01 (0.01 to 0.01)                  | 0.01 (0.00 to 0.01)         | 0.01 (0.00 to 0.01)     | 0.01 (0.00 to 0.01)         |
| Pacific Islander                          | 0.01 (0.00 to 0.01)                  | 0.01 (0.00 to 0.01)                  | 0.00 (0.00 to 0.00)         | 0.01 (0.00 to 0.02)     | 0.00 (0.00 to 0.01)         |
| Marital status                            |                                      |                                      |                              |                         |                             |
| Married (reference)                       | ***                                   | ***                                   | ***                          | ***                     | ***                         |
| Divorced                                  | 0.01 (0.01 to 0.01)                  | 0.01 (0.01 to 0.01)                  | 0.00 (0.00 to 0.01)         | 0.00 (0.00 to 0.01)     | 0.01 (0.01 to 0.01)         |
| Single                                    | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)                  | 0.00 (0.00 to 0.00)         | 0.00 (-0.01 to 0.00)    | 0.01 (0.01 to 0.01)         |
| Separated                                 | 0.01 (0.01 to 0.01)                  | 0.01 (0.01 to 0.01)                  | 0.01 (0.00 to 0.01)         | 0.00 (0.00 to 0.01)     | 0.01 (0.01 to 0.01)         |
| Widowed                                   | 0.01 (0.00 to 0.01)                  | 0.01 (0.01 to 0.01)                  | 0.00 (0.00 to 0.00)         | 0.00 (-0.01 to 0.00)    | 0.01 (0.01 to 0.01)         |
| Private Insurance                         |                                      |                                      |                              |                         |                             |
| Used insurance for appointment            | -0.01 (-0.01 to -0.01)               | -0.01 (-0.01 to -0.01)               | -0.01 (-0.01 to -0.01)      | 0.00 (-0.01 to 0.00)    | -0.01 (-0.01 to -0.01)     |
| Calendar month of appointment date        |                                      |                                      |                              |                         |                             |
| January (reference)                       | ***                                   | ***                                   | ***                          | ***                     | ***                         |
| February                                  | 0.04 (0.04 to 0.04)                  | 0.05 (0.05 to 0.05)                  | 0.03 (0.02 to 0.03)         | 0.04 (0.03 to 0.04)     | 0.03 (0.03 to 0.03)         |
| March                                     | 0.06 (0.06 to 0.06)                  | 0.07 (0.07 to 0.07)                  | 0.04 (0.03 to 0.04)         | 0.04 (0.04 to 0.05)     | 0.04 (0.03 to 0.04)         |
| April                                     | 0.06 (0.06 to 0.06)                  | 0.07 (0.07 to 0.07)                  | 0.04 (0.03 to 0.04)         | 0.04 (0.03 to 0.04)     | 0.04 (0.04 to 0.04)         |
| May                                       | 0.07 (0.07 to 0.08)                  | 0.08 (0.08 to 0.09)                  | 0.04 (0.04 to 0.05)         | 0.04 (0.03 to 0.05)     | 0.04 (0.04 to 0.05)         |
| Month   | Day of week of appointment date | Num. appointments | Num. classes | Total number of patients seen (in 000s) | R²   |
|---------|---------------------------------|-------------------|-------------|---------------------------------------|------|
| June    | Sunday (reference)              | ---               | ---         | ---                                   | 0.013|
| July    | Monday                          | 0.09 (0.09 to 0.09)| 0.11 (0.10 to 0.11)| 0.05 (0.05 to 0.06) | 0.06 (0.05 to 0.07) | 0.05 (0.05 to 0.06) |
|         | Tuesday                         | 0.10 (0.10 to 0.11)| 0.12 (0.12 to 0.13)| 0.06 (0.05 to 0.06) | 0.07 (0.06 to 0.08) | 0.06 (0.05 to 0.06) |
| September | Wednesday                      | 0.12 (0.11 to 0.12)| 0.13 (0.13 to 0.14)| 0.06 (0.06 to 0.07) | 0.07 (0.06 to 0.08) | 0.06 (0.06 to 0.07) |
| October | Thursday                        | 0.13 (0.12 to 0.13)| 0.14 (0.14 to 0.15)| 0.07 (0.06 to 0.07) | 0.08 (0.07 to 0.09) | 0.07 (0.06 to 0.07) |
|         | Friday                          | 0.12 (0.12 to 0.13)| 0.14 (0.14 to 0.15)| 0.07 (0.06 to 0.08) | 0.09 (0.08 to 0.10) | 0.07 (0.06 to 0.08) |
|         | Saturday                        | 0.13 (0.12 to 0.13)| 0.15 (0.14 to 0.15)| 0.07 (0.06 to 0.08) | 0.09 (0.08 to 0.10) | 0.07 (0.06 to 0.08) |

**Note:** Coefficients for individual facility controls (130 levels) and appointment class controls (15 levels) omitted from table for brevity.
eTable 10: Full regression results for short cancellations within 7 days (post-hoc analysis), for all clinical groups and stratified by clinical group.

| Explanatory Variable                  | All Clinical Groups | Regular Outpatient | Procedural | Rehab | Radiology |
|---------------------------------------|---------------------|--------------------|------------|-------|-----------|
|                                       | Estimate (95% CI)   | Estimate (95% CI)  | Estimate (95% CI) | Estimate (95% CI) | Estimate (95% CI) |
| VEText intervention                   | -0.08 (-0.08 to -0.07) | -0.09 (-0.09 to -0.08) | -0.05 (-0.05 to -0.04) | -0.05 (-0.06 to -0.04) | -0.05 (-0.06 to -0.04) |
| Age                                   | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |
| Age²                                  | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |
| Sex                                   |                     |                    |             |       |           |
| Female (reference)                    |                     |                    |             |       |           |
| Male                                  | -0.03 (-0.03 to -0.03) | -0.03 (-0.03 to -0.03) | -0.01 (-0.02 to -0.01) | -0.04 (-0.04 to -0.03) | -0.03 (-0.03 to -0.02) |
| Race/Ethnicity                        |                     |                    |             |       |           |
| White (reference)                     |                     |                    |             |       |           |
| African American / Black              | 0.01 (0.01 to 0.01) | 0.01 (0.01 to 0.01) | 0.00 (0.00 to 0.01) | 0.01 (0.01 to 0.02) | 0.01 (0.01 to 0.01) |
| Asian                                 | -0.01 (-0.01 to -0.01) | -0.01 (-0.01 to -0.01) | -0.01 (-0.01 to 0.00) | -0.01 (-0.01 to 0.00) | -0.01 (-0.01 to 0.00) |
| American Indian                       | 0.01 (0.01 to 0.01) | 0.01 (0.01 to 0.01) | 0.01 (0.00 to 0.01) | 0.01 (0.00 to 0.01) | 0.01 (0.00 to 0.01) |
| Pacific Islander                      | 0.01 (0.00 to 0.01) | 0.01 (0.01 to 0.01) | 0.00 (0.00 to 0.00) | 0.01 (0.00 to 0.02) | 0.00 (0.00 to 0.01) |
| Marital status                        |                     |                    |             |       |           |
| Married (reference)                   |                     |                    |             |       |           |
| Divorced                              | 0.01 (0.01 to 0.01) | 0.01 (0.01 to 0.01) | 0.01 (0.00 to 0.01) | 0.00 (0.00 to 0.01) | 0.01 (0.01 to 0.01) |
| Single                                | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | -0.01 (-0.01 to 0.00) | 0.01 (0.01 to 0.01) |
| Separated                             | 0.01 (0.01 to 0.01) | 0.01 (0.01 to 0.01) | 0.01 (0.01 to 0.01) | 0.01 (0.00 to 0.01) | 0.01 (0.01 to 0.02) |
| Widowed                               | 0.01 (0.01 to 0.01) | 0.01 (0.01 to 0.01) | 0.00 (0.00 to 0.01) | 0.00 (0.00 to 0.00) | 0.01 (0.01 to 0.01) |
| Private Insurance                     |                     |                    |             |       |           |
| Used insurance for appointment        | -0.01 (-0.01 to -0.01) | -0.01 (-0.01 to -0.01) | -0.01 (-0.01 to -0.01) | 0.00 (-0.01 to 0.00) | -0.01 (-0.01 to -0.01) |
| Calendar month of appointment date    |                     |                    |             |       |           |
| January (reference)                   |                     |                    |             |       |           |
| February                              | 0.04 (0.04 to 0.04) | 0.04 (0.04 to 0.04) | 0.02 (0.02 to 0.02) | 0.03 (0.03 to 0.04) | 0.03 (0.03 to 0.03) |
| March                                 | 0.05 (0.05 to 0.05) | 0.06 (0.06 to 0.06) | 0.03 (0.03 to 0.03) | 0.04 (0.03 to 0.04) | 0.03 (0.03 to 0.04) |
| April                                 | 0.05 (0.05 to 0.06) | 0.06 (0.06 to 0.06) | 0.03 (0.03 to 0.03) | 0.03 (0.03 to 0.04) | 0.03 (0.03 to 0.04) |
| May                                   | 0.06 (0.06 to 0.07) | 0.07 (0.07 to 0.08) | 0.03 (0.03 to 0.04) | 0.04 (0.03 to 0.05) | 0.04 (0.03 to 0.04) |
| Month      | Mean (95% CI) | Mean (95% CI) | Mean (95% CI) | Mean (95% CI) | Mean (95% CI) |
|------------|---------------|---------------|---------------|---------------|---------------|
| June       | 0.08 (0.08 to 0.08) | 0.09 (0.09 to 0.10) | 0.04 (0.04 to 0.05) | 0.05 (0.05 to 0.06) | 0.04 (0.04 to 0.05) |
| July       | 0.09 (0.09 to 0.10) | 0.11 (0.10 to 0.11) | 0.05 (0.04 to 0.05) | 0.06 (0.05 to 0.07) | 0.05 (0.04 to 0.05) |
| August     | 0.10 (0.10 to 0.11) | 0.12 (0.11 to 0.12) | 0.05 (0.05 to 0.06) | 0.07 (0.06 to 0.07) | 0.05 (0.05 to 0.06) |
| September  | 0.11 (0.10 to 0.11) | 0.12 (0.12 to 0.13) | 0.06 (0.05 to 0.06) | 0.08 (0.07 to 0.09) | 0.06 (0.05 to 0.06) |
| October    | 0.11 (0.11 to 0.12) | 0.13 (0.13 to 0.13) | 0.06 (0.05 to 0.07) | 0.08 (0.07 to 0.09) | 0.06 (0.05 to 0.07) |

| Day of week of appointment date | Sunday (reference) | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---------------------------------|--------------------|--------|---------|-----------|----------|--------|----------|
|                                 | ---                | 0.01 (0.00 to 0.01) | 0.03 (0.01 to 0.04) | 0.02 (-0.03 to 0.06) | 0.05 (0.00 to 0.10) | 0.00 (-0.01 to 0.01) |
|                                 | ---                | 0.01 (0.00 to 0.02) | 0.03 (0.01 to 0.04) | 0.02 (-0.03 to 0.06) | 0.05 (0.00 to 0.10) | 0.00 (0.00 to 0.01) |
|                                 | ---                | 0.01 (0.00 to 0.02) | 0.03 (0.01 to 0.04) | 0.02 (-0.03 to 0.06) | 0.05 (0.00 to 0.10) | 0.00 (0.00 to 0.01) |
|                                 | ---                | 0.01 (0.01 to 0.02) | 0.03 (0.02 to 0.05) | 0.02 (-0.02 to 0.07) | 0.06 (0.01 to 0.11) | 0.00 (0.00 to 0.01) |
|                                 | ---                | 0.01 (0.01 to 0.02) | 0.03 (0.02 to 0.04) | 0.03 (-0.02 to 0.07) | 0.05 (-0.01 to 0.11) | 0.00 (0.00 to 0.01) |

| Patient’s utilization of VA health services | Num. appointments | Num. classes | Num. appointments | Num. classes | Num. appointments | Num. classes | Num. appointments | Num. classes |
|--------------------------------------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|
| Mean (95% CI)                              | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) | 0.00 (0.00 to 0.00) |

| Clinic’s congestion level | Num. completed appts in past week | Num. appointments in past week | Total number of patients seen (in 000s) | Constant term | Number of observations | R² |
|---------------------------|-----------------------------------|---------------------------------|-----------------|----------------------|----------------------|----|
| Mean (95% CI)             | 0.00 (0.00 to 0.00)               | 0.00 (0.00 to 0.00)             | 0.00 (0.00 to 0.00)                   | 0.10 (0.09 to 0.11) | 39,488,685            | 0.013 |
| Mean (95% CI)             | 0.00 (0.00 to 0.00)               | 0.00 (0.00 to 0.00)             | 0.00 (0.00 to 0.00)                   | 0.09 (0.07 to 0.11) | 28,550,739            | 0.013 |
| Mean (95% CI)             | 0.00 (0.00 to 0.00)               | 0.00 (0.00 to 0.00)             | 0.00 (0.00 to 0.00)                   | 0.05 (0.00 to 0.09) | 6,858,327             | 0.008 |
| Mean (95% CI)             | 0.00 (0.00 to 0.00)               | 0.00 (0.00 to 0.00)             | 0.00 (0.00 to 0.00)                   | 0.12 (0.06 to 0.19) | 1,705,387             | 0.013 |
| Mean (95% CI)             | 0.00 (0.00 to 0.00)               | 0.00 (0.00 to 0.00)             | 0.00 (0.00 to 0.00)                   | 0.01 (-0.02 to 0.03) | 2,374,232             | 0.007 |

**Note:** Coefficients for individual facility controls (130 levels) and appointment class controls (15 levels) omitted from table for brevity.
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