



Optimizing Access Metrics in the VA

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PEPReC

Partnered Evidence-based Policy
Resource Center

Significant Focus on Access to Care

- Ensuring access to VA care is the most critical issue in agency
- Access crisis of 2014 led to significant VA transformations
 - Veterans Access Choice and Accountability Act (VACAA)
 - myVA Access Initiative
- Policies require comprehensive access definitions and clinical practice transformations
 - Implementation of group practice managers
 - Focus on virtual health
- How do we know progress is being made?

Access Metrics Should Predict Veteran-Centric Outcomes

- Better access should increase satisfaction/improve health
- Validation with Veteran-Centric Outcomes
 - Do the metrics have the expected impact on outcomes?
 - Previous work validated two wait time metrics
 - 1) New patient create date (primary care/new patients)
 - 2) Consult wait time (specialty care/returning patients)
- Validated metrics for a wider population of Veterans (returning patients)
 - Third next available appointment
- Comprehensive view of access
 - Move beyond wait times for face-to-face encounters
 - Telephone metrics
 - % of encounters done by phone in primary care

Previous Access Metric Validation Work

Patient Satisfaction Validation Analyses

- Used Survey of Healthcare Experiences of Patients (SHEP) data
- Outcomes
 - TIMELY- Frequency of getting appt. as soon as needed (always/usually vs. sometimes/never)
 - TREAT-Frequency of getting test or treatments you needed (always/usually vs. sometimes/never)
 - SPEC- Frequency of accessing VA specialists when needed (always/usually vs. sometimes/never)
 - VARATE- Rate VA health care in last 12 months on scale of 0-10 (≥ 9 compared to ≤ 8)
 - VASAT- Satisfied with VA care at most recent visit on scale of 1-7 (≥ 6 compared to ≤ 5)
- Logistic regression models
- Controlled for Individual and Facility Covariates
 - Age, sex, race, education, health status, health utilization
 - Month fixed effects; facility random effect

New Patient Create Date Results

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
New Patient Create Date (ref=<15.6 days)					
	n=158,841	n=181,250	n=121,721	n=219,772	n=218,677
>=15.6 -<17.5	0.84**	0.87**	0.86**	0.95**	0.93**
>=17.5-<20.0	0.78**	0.80**	0.81**	0.91**	0.89**
>=20.0	0.66**	0.65**	0.66**	0.83**	0.81**
SHEP 2010 data **P<0.05					

New Patient Create Date and Consult Wait Time Results

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
New Patient Create Date (ref=<15.6 days)^					
	n=158,841	n=181,250	n=121,721	n=219,772	n=218,677
>=15.6 -<17.5	0.84**	0.87**	0.86**	0.95**	0.93**
>=17.5-<20.0	0.78**	0.80**	0.81**	0.91**	0.89**
>=20.0	0.66**	0.65**	0.66**	0.83**	0.81**
Consult Wait Times (ref=<23 days)#					
	n=20,000	n=23,497	n=17,797	n=27,095	n=26,597
>=23-27.1	0.85**	0.88**	0.89	0.95	0.90**
>=27.1-33.5	0.82**	0.85**	0.86**	0.87**	0.84**
>=33.5	0.76**	0.80**	0.79**	0.86**	0.86**

^ SHEP 2010 data

SHEP 2012 data; Sample limited to SHEP patients with a consult appointment

**P<0.05

Third Next Available Appointment Validation

Third Next Available (TNA) Appointment

- Need for a validated metric for returning patients in primary care
- Third next available appointment (TNA) widely used in private sector
- In August of 2015, VSSC started calculating and reporting a TNA metric
- Concerns about VA scheduling system and reliability of TNA

Third Next Available (TNA) Appointment

- Definition: Number of days between appt. request date and 3rd open appt.
- TNA is a measure of available **capacity**; not rooted in patient experience or preferences
- Assumes scheduling system accurately displays capacity (open slots)
 - But providers have multiple profiles in scheduling system

Multiple Profiles

staffsid	clinic	location	sta3n	date	Schedule Availability
provider 1	3	111464	562	2/9/2016	TU 09 [0 0 0 1 1 1 1 1 0 1 0 1 0 1 0 0 1]
provider 1	3	111464	562	2/11/2016	TH 11 [0 0 1 0 1 1 0 0 1 0 0 0 0 0 1 1 1]
provider 1	3	111464	562	2/12/2016	FR 12 [0 1 1 1 1 1 0 0 1 1 0 0 0 1 0 1 0]
provider 1	3	111464	562	2/16/2016	TU 16 [0 0 1 0 1 0 1 0 0 0 0 1 1 0 1 1 1]
provider 1	3	111464	562	2/18/2016	TH 18 [0 0 0 0 1 0 0 1 1 1 1 1 1 1 0 0 0]
provider 1	3	111464	562	2/19/2016	FR 19 [0 1 0 1 1 1 0 0 0 1 0 1 0 1 1 1 1]
provider 2	2	1200114691	558	1/5/2016	TU 05 [0 1 0 0 0 1 0 0 0 0 1 0 0 0 1 0 0]
provider 2	1	1200113935	558	1/6/2016	WE 06 [0 0 0 0 0 0 0 0 0 0 1 1 0 1 0 0 0]
provider 2	2	1200114691	558	1/6/2016	WE 06 [1 1 0 0 0 1 0 0 0 0 0 0 0 0 1 0 0]
provider 2	1	1200113935	558	1/8/2016	FR 08 [0 1 0 0 0 1 0 0 0 0 1 0 0 0 1 0 0]
provider 2	2	1200114691	558	1/8/2016	FR 08 [1 0 0 0 0 0 0 0 0 0 0 1 0 1 0 0 0]

1=available slot; 0=scheduled appointment

Provider 1 has one profile per day, so it gives a true measure of actual appointment availability.

Provider 2 has 2 profiles per day, which can overestimate availability.

VSSC metric/PEPReC metric

- Not enough data to link to available SHEP satisfaction data
 - Started reporting in August 2015, so <1 year of data
- VSSC metric looks for 3rd open slot in schedule going forward
 - Referred to as “slot metric”
- PEPReC TNA metric looks for 3rd appointment actually scheduled
 - Referred to as “appointment metric”
 - At 0400 AM each Monday, all appointments that were scheduled after that time are lined up and the 3rd appointment that occurred is calculated as the TNA
 - Historical metric
- Two metrics should be highly correlated if scheduling grid is accurate

Scheduling Grid is Not Accurate

- Correlation between appt./slot based metric is weak
- Multiple profiles are especially problematic

Primary Care TNA Metrics Calculated For	Correlation Appt./Slot metric
All providers	0.35
Providers with single profiles only	0.39
Providers with multiple profiles only	0.28

How Many Providers Have Multiple Profiles?

Provider Type	% With Multiple Profiles
All Providers	42
Primary Care +/- Specialty Care	25
Primary Care Excluding Specialty Care Profiles	14

- Multiple profiles are more common among specialty care providers and those providing both primary and specialty care
- Primary care/mental health integration might contribute to it

Patient Satisfaction Validation Analyses

- 2012 SHEP data
- Logistic regression models
- SHEP samples split into primary and specialty care
- Dependent Variables
 - TIMELY- Frequency of getting appt. as soon as needed (always/usually vs. sometimes/never)
 - TREAT-Frequency of getting test or treatments you needed (always/usually vs. sometimes/never)
 - SPEC- Frequency of accessing VA specialists when needed (always/usually vs. sometimes/never)
 - VARATE- Rate VA health care in last 12 months on scale of 0-10 (≥ 9 compared to ≤ 8)
 - VASAT- Satisfied with VA care at most recent visit on scale of 1-7 (≥ 6 compared to ≤ 5)
 - Same outcomes have validated other access metrics
- Controlled for Individual and Facility Covariates
 - Age, sex, race, education, health status, health utilization
 - SHEP non-response rate, SHEP response time, Multiple profile rate, Appointment loss rate

Patient Satisfaction Validation Analyses

- Appointment based TNA predicts SHEP satisfaction outcomes
- TNA calculated separately for providers with 1 profile and >1 profile
- Calculated separately for primary and specialty care (top 50 clinic stops)
- Limited to providers with TNA of <120 days
 - 90% of providers
- Compare satisfaction to TNA for month previous to SHEP response

Descriptive Statistics of TNA (Number of days)

TNA	Mean	25%	50%	75%
Single Profile PC	20.7	13	18	26
Multiple Profile PC	22.5	16	21	27
Single Profile SC	28.2	22	28	34
Multiple Profile SC	30.5	27	30	34

PC=Primary Care; SC=Specialty Care

- Differences are more pronounced at 25% than at 75%
- Providers with multiple profiles have longer TNA/profile because some profiles may have appointments infrequently

Patient Satisfaction Validation Analyses

- Primary care TNA categories:
 - <=2 weeks
 - 2 < weeks <=3
 - 3 < weeks <=4
 - > 4 weeks
- Specialty care TNA categories:
 - <=3 weeks
 - 3 < weeks <=4
 - 4 < weeks <=5
 - >5 weeks

Single Profile Appt. Based TNA Predicts Primary Care Patient Satisfaction

Appt. Based TNA Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
Single Profile PC TNA PC Patients^	Yes	Yes	No	No	Yes
Single Profile SC TNA SC Patients	No	No	No	No	No

PC=Primary Care; SC=Specialty Care

^ Limited to primary care appointments that were scheduled <45 days from SHEP visit date.

Comparing Effect Sizes and Trends

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
New Patient Create Date (ref=<15.6 days)					
	n=158,841	n=181,250	n=121,721	n=219,772	n=218,677
>=15.6 -<17.5	0.84**	0.87**	0.86**	0.95**	0.93**
>=17.5-<20.0	0.78**	0.80**	0.81**	0.91**	0.89**
>=20.0	0.66**	0.65**	0.66**	0.83**	0.81**
Single Profile PC TNA on PC Patients (ref=< 14 days) ^					
	n=84,203	n=93,210	n=52,722	n=117,260	n=116,821
>=14-<21	0.97	1.01	0.96	0.98	1.00
>=21 -<28	0.94	0.95	1.00	0.96	0.99
>=28	0.90**	0.92**	0.95	0.97	0.95**

PC=Primary Care

^ Limited to primary care appointments that were scheduled <45 days before SHEP date

**P<0.05

Multiple Profile Appt. Based TNA Predicts Specialty Care Patient Satisfaction

Appt. Based TNA Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
Multiple Profile PC TNA PC Patients	No	No	No	No	No
Multiple Profile SC TNA SC Patients	No	Yes	Yes	Yes	No

PC=Primary Care; SC=Specialty Care

^ Limited to primary care appointments that were scheduled <45 days from SHEP visit date.

Comparing Effect Sizes and Trends

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
Consult Wait Time (ref=<23 days)					
	n=20,000	n=23,497	n=17,797	n=27,095	n=26,597
>23-<27.1	0.85**	0.88**	0.89	0.95	0.90**
>=27.1-<33.5	0.82**	0.85**	0.86**	0.87**	0.84**
>=33.5	0.76**	0.80**	0.79**	0.86**	0.86**
Multiple Profile SC TNA on SC Patients (ref=<=21 days)					
	n=119,846	n=139,018	n=108,828	n=161,221	n=160,532
>21-<28	0.98	0.93	0.93	0.96	0.98
>=28 -<35	0.97	0.91**	0.90**	0.94	0.99
>=35 days	0.96	0.88**	0.91	0.93**	0.97

SC=Specialty care

**P<0.05

Policy Implications

- Appt. based TNA metric validated with self-reported patient satisfaction
 - Historical metric that cannot be captured in real time
 - Single-profile version works best for primary care
 - Multiple-profile version works best for specialty care (multi-profiles more common in SC)
- Less reliable than other validated access metrics (new patient create date; consult)
- Slot-based metric should be tested
 - Real time metric
 - Need to deal with multiple profiles leading to “phantom slots,” especially in specialty care
- Consider alternatives (clinically indicated date/return to clinic)

Telephone Metric Validation

Telephone Access Hypothesized to be Important

- Telephone access is first interaction with VA system
- Metrics are included in the SAIL report
 - Speed of response
 - Abandonment rate
- Telehealth/virtual health emphasized as tool to increase access
 - Needed to meet goals of myVA Access initiative

Telephone Access Metrics

- Monthly speed of response
 - Average # of seconds
- Monthly abandonment rate
 - % of calls terminated before staff person answers it
- Used the combined metric
 - Pharmacy, scheduling and clinical

Telephone Access Metrics

- Not all facilities have telephone metric data
 - Specified another facility provides phone coverage
 - Applied covered facility data in these cases (27%)
 - Some were missing data with no coverage facility listed
 - Imputed with parent station (12%)
- If data missing between months imputed missing data
 - Linear interpolation between months

Patient Satisfaction Validation Analyses

- Following previous work, used FY 2012 SHEP data
- Logistic regression models
- Outcomes
 - TIMELY- Frequency of getting appt. as soon as needed (always/usually vs. sometimes/never)
 - TREAT-Frequency of getting test or treatments you needed (always/usually vs. sometimes/never)
 - SPEC- Frequency of accessing VA specialists when needed (always/usually vs. sometimes/never)
 - VARATE- Rate VA health care in last 12 months on scale of 0-10 (≥ 9 compared to ≤ 8)
 - VASAT- Satisfied with VA care at most recent visit on scale of 1-7 (≥ 6 compared to ≤ 5)
 - Same outcomes have validated other access metrics
- Controlled for Individual and Facility Covariates
 - Age, sex, race, education, health status, health utilization
 - SHEP non-response rate, SHEP response time
 - Call volume and number of encounters in a month
 - Month fixed effects; facility random effect

Patient Satisfaction Validation Analyses

- Hypothesize telephone access metrics predict SHEP satisfaction outcomes
 - Higher rates decrease satisfaction
- Speed of response and abandonment rate in separate models
- Telephone metrics for month previous to SHEP visit
- Metrics broken into quartiles

Descriptive Statistics of Telephone Access Metrics

Telephone Metrics	Mean	25%	50%	75%
Abandonment Rate	13.5	7.1	11.0	17.8
Speed of Response	114.2	45.7	81.6	141.0

Correlation coefficient=0.64

Telephone Access Metrics Predict Veteran Satisfaction

Access Metric	Timely Appt. (n=96,696)	Access to Treatment (n=110,594)	Access to Specialists (n=77,980)	VA rating (n=135,548)	VA Satisfaction (n=131,754)
Abandonment Rate	Yes	Yes	Yes	No	No
Speed of Response	Yes	Yes	Yes	Yes	Yes

Comparing Effect Sizes and Trends

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
New Patient Create Date (ref=<15.6 days)					
	n=158,841	n=181,250	n=121,721	n=219,772	n=218,677
>=15.6 -<17.5	0.84**	0.87**	0.86**	0.95**	0.93**
>=17.5-<20.0	0.78**	0.80**	0.81**	0.91**	0.89**
>=20.0	0.66**	0.65**	0.66**	0.83**	0.81**
Speed of Response (ref=<45.7 seconds)					
	n=96,696	n=110,594	n=77,980	n=135,548	n=131,754
>45.7-81.5	0.98	0.92**	0.90**	0.98	0.96
81.6-141.0	0.94**	0.93**	0.87**	0.96**	0.99
>141.0	0.88**	0.86**	0.82**	0.95**	0.93**

**P<0.05

Telephone Access and Satisfaction

- Both speed of response and abandonment rate predict Veteran satisfaction
 - Speed of response has more consistent results
- Some evidence that satisfaction is lower at facilities that do not monitor phone metrics
 - High rate of waivers on telephone metrics
- Telephone access is important to Veterans
 - Resources should be considered at all facilities

Telephone Care Delivery (Visits/Encounters) Hypothesized to be Important

- Does a higher proportion of primary care telephone visits/encounters at a facility predict Veteran satisfaction?
 - Hypothesize a higher percent will lead to increased satisfaction

Patient Satisfaction Validation Analyses

- Same outcomes and covariates as telephone metrics data
- Limited to SHEP respondents who had a primary care visit
- Outcomes
 - TIMELY- Frequency of getting appt. as soon as needed (always/usually vs. sometimes/never)
 - TREAT-Frequency of getting test or treatments you needed (always/usually vs. sometimes/never)
 - SPEC- Frequency of accessing VA specialists when needed (always/usually vs. sometimes/never)
 - VARATE- Rate VA health care in last 12 months on scale of 0-10 (≥ 9 compared to ≤ 8)
 - VASAT- Satisfied with VA care at most recent visit on scale of 1-7 (≥ 6 compared to < 6)
- Controlled for Individual and Facility Covariates
 - Age, sex, race, education, health status, health utilization
 - SHEP non-response rate, SHEP response time
 - Number of encounters in a month; month fixed effects; facility random effect

Primary Care Telephone Clinics

- Proportion of primary care visits/encounters done by phone at each facility
 - 322, 323, 348, 350- Face to face primary care
 - 338, 326-Telephone primary care

	Mean	25%	50%	75%
% Telephone primary care clinics	27.0	21.2	28.2	34.2

- Split into quartiles
- Proportion of primary care visits in month previous to SHEP visit

Primary Care Telephone Care Delivery Predicts Patient Satisfaction

Access Metric	Timely Appt. (n=64,522)	Access to Treatment (n=72,233)	Access to Specialists (n=41,212)	VA rating (n=91,232)	VA Satisfaction (n=90,955)
% of primary care telephone clinics	No	No	Yes	Yes	Yes

Comparing Effect Sizes and Trends

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
New Patient Create Date (ref=<15.6 days)					
	n=158,841	n=181,250	n=121,721	n=219,772	n=218,677
>=15.6 -<17.5	0.84**	0.87**	0.86**	0.95**	0.93**
>=17.5-<20.0	0.78**	0.80**	0.81**	0.91**	0.89**
>=20.0	0.66**	0.65**	0.66**	0.83**	0.81**
% Primary Care Telephone Clinics (ref=<21.2)					
	n=64,522	n=72,233	n=41,212	n=91,232	n=90,955
>=21.2-28.1	1.00	1.07	1.08	1.06**	1.11**
>=28.2-34.2	0.97	1.01	1.13**	1.07**	1.11**
>34.2	1.01	1.01	1.10	1.09**	1.13**

**P<0.05

Telephone Care Delivery Validated with Veteran Satisfaction

- Validates general satisfaction metrics
 - VA rate, VA satisfaction
- Weak validation with access to specialists
 - Primary care as gatekeepers?
- Virtual and tele-health may improve Veteran experience
- Workload needs to be appropriately captured

Comparison of Validated Access Metrics- Primary Care

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
New patient Create Date [#]	Yes	Yes	Yes	Yes	Yes
Single Profile PC TNA PC Patients [^]	Yes	Yes	No	No	Yes
Abandonment rate	Yes	Yes	Yes	No	No
Speed of response	Yes	Yes	Yes	Yes	Yes
% primary care telephone clinics	No	No	Yes	Yes	Yes

[#] Limited to primary care appointments that were scheduled <45 days from SHEP visit date.

[^] Number of days between appointment create date and appointment completed

*P<0.10; **P<0.05

Comparison of Validated Access Metrics- Specialty Care

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
Consult Wait Time[^]	Yes	Yes	Yes	Yes	Yes
Multiple Profile SC TNA SC Patients	No	Yes	Yes	Yes	No
Abandonment rate	Yes	Yes	Yes	No	No
Speed of response	Yes	Yes	Yes	Yes	Yes

[^] Number of days between consult request date and consult completed date

Lessons in Validating Metrics

- Different metrics based on type of access and population predict Veteran satisfaction
 - Telephone compared to face-to-face
 - Primary care (new patient create date)
 - Specialty care (consult wait times)
- Advantages to minimizing human input in data generation
 - Telephone data is entered manually at some facilities
 - Providers historically had power to create many profiles
- Metrics can be highly correlated
 - Abandonment rate/speed of response
 - Useful management strategy
- Effect of incentives on data fidelity needs consideration

Backup Slides

Explanation of Two Metrics

The Slot Based TNA measure looks ahead and records how many days until the 3rd Available Slot. TNA for this clinic would be 2 days.

staffsid	clinic	location	sta3n	date	Schedule Availability
provider 1	3	111464	562	2/9/2016 MO 09	[0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1]
provider 1	3	111464	562	2/11/2016 WE 11	[0 0 1 0 1 1 0 0 1 0 0 0 0 0 1 1 1]
provider 1	3	111464	562	2/12/2016 TH 12	[0 1 0 0 1 1 0 0 1 1 0 0 0 0 1 1 1]

The Appointment Based TNA looks at all appointments that were booked after that moment (denoted in red below), then records the 3rd one that occurs in time. In the example below the TNA for this clinic would be 2 days.

staffsid	clinic	location	sta3n	date	Schedule Availability
provider 1	3	111464	562	2/9/2016 MO 09	[0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0]
provider 1	3	111464	562	2/11/2016 WE 11	[0 0 0 0 1 1 0 0 1 0 0 0 0 0 1 1 1]
provider 1	3	111464	562	2/12/2016 TH 12	[0 1 0 0 1 1 0 0 1 1 0 0 0 0 1 1 1]

Two metrics should be very highly correlated if scheduling grid is accurate. Multiple profiles will cause greater discrepancy between metrics.

How Many Providers Are Excluded By Max TNA?

Days	Providers	% Providers Lost
365	26124	0
180	23887	9
120	23543	10
90	23340	11

Scheduling Grid is Not Accurate

- Appointments do not match up clearly with slots

Example Data From VSSC Clinic Access Index (November 2014-November 2015)

Past Year (All)	Primary Care	Specialty
Clinic Schedule Slot Utilization	58.3%	76.4%
Clinic Slot Utilization	41.6%	52.3%

Only 42% and 52% of slots are used in primary care/ specialty care respectively.

Odds Ratios: Primary Care TNA/Primary Care SHEP Patients

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
Single Profile PC TNA on PC Patients (ref=\leq2 weeks)^					
	n=84,203	n=93,210	n=52,722	n=117,260	n=116,821
2-3 weeks	0.97	1.01	0.96	0.98	1.00
3-4 weeks	0.94	0.95	1.00	0.96	0.99
>4 weeks	0.90**	0.92**	0.95	0.97	0.95**
Multiple Profile PC TNA on PC Patients (ref=$<$2 weeks)^					
	n=82,644	n=91,451	n=51,793	n=115,057	n=114,636
2-3 weeks	1.02	1.01	1.07	1.02	1.04
3-4 weeks	1.01	1.00	1.05	0.99	1.01
>4 weeks	0.99	0.99	1.04	0.98	0.98

^Limited to primary care appointments that were scheduled $<$ 45 days from SHEP visit date.

** $P < 0.05$

Odds Ratios: Specialty Care TNA/Specialty Care SHEP Patients

Access Metric	Timely Appt.	Access to Treatment	Access to Specialists	VA rating	VA Satisfaction
Single Profile SC TNA on SC Patients (ref=≤ 3 weeks)					
	n=120,683	n=140,072	n=109,643	n=162,412	n=161,730
3-4 weeks	0.98	1.02	0.97	1.02	0.99
4-5 weeks	0.95	1.04	0.99	1.00	1.00
>5 weeks	0.93	0.99	0.97	1.00	1.00
Multiple Profile SC TNA on SC Patients (ref=≤ 3 weeks)					
	n=119,846	n=139,018	n=108,828	n=161,221	n=160,532
3-4 weeks	0.98	0.93	0.93	0.96	0.98
4-5 weeks	0.97	0.91**	0.90**	0.94	0.99
>5 weeks	0.96	0.88**	0.91	0.93**	0.97

**P<0.05

Odds Ratios: Telephone Access Metrics and Satisfaction

Access Metric	Timely Appt. (n=96,696)	Access to Treatment (n=110,594)	Access to Specialists (n=77,980)	VA rating (n=135,548)	VA Satisfaction (n=131,754)
Abandonment Rate (ref=<7.1%)					
>7.1-11.0	0.96	0.98	0.98	0.98	0.97
>11.0-17.7	0.97	0.92**	0.91**	0.98	0.97
>17.7	0.92**	0.89**	0.87**	0.98	1.01
Speed of Response (ref=<45.7 seconds)					
>45.7-81.5	0.98	0.92**	0.90**	0.98	0.96
81.6-141.0	0.94**	0.93**	0.87**	0.96**	0.99
>141.0	0.88**	0.86**	0.82**	0.95**	0.93**
**P<0.05					

Impact of Covered Facility or Parent Station Imputation

Access Metric	Timely Appt. (n=96,696)	Access to Treatment (n=110,594)	Access to Specialists (n=77,980)	VA rating (n=135,548)	VA Satisfaction (n=131,754)
Abandonment Rate models					
Covered facility	0.95	0.92**	0.89**	0.93**	1.01
Parent facility	0.89**	0.88**	0.90**	0.94**	1.03
Speed of Response					
Covered facility	0.96	0.92**	0.90**	0.93**	1.01
Parent facility	0.91**	0.89**	0.91**	0.95**	1.04
*P<0.10; **P<0.05					