Outpatient Waiting Time Measures and Patient Satisfaction

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Wait Times are a Key Policy Focus

• VA has monitored wait times for over a decade
  - Before 1999, anecdotal evidence on waits

• Congress requested wait time data

• VA began systematically collecting wait time data
Interventions to Decrease Waits

- Performance measures
- Advanced Clinic Access in six target clinics
- Primary care panel sizes
- Limited enrollment to priority 7/8
  - 2003 to 2009
Wait Times Have Decreased

Wait Times

Mean 10% 90%

Time to first next available appointments for new patient

Jan-02 Apr-02 Jul-02 Oct-02 Jan-03 Apr-03 Jul-03 Oct-03 Jan-04 Apr-04 Jul-04 Oct-04 Jan-05 Apr-05 Jul-05 Oct-05 Jan-06 Apr-06 Jul-06 Oct-06 Jan-07 Apr-07 Jul-07 Oct-07 Jan-08 Apr-08 Jul-08 Oct-08 Jan-09 Apr-09 Jul-09 Oct-09 Jan-10 Apr-10 Jul-10

100 90 80 70 60 50 40 30 20 10 0
Concerns About Waits Still Remain

- VA OIG audits wait time policies
  - Access to mental health care- April 2012

- Congressional hearings on access
  - SVAC April 2012
  - HVAC May 2012
Reliability of Wait Time Measures is Unknown

• VA has used a variety of wait time measures

• Initiatives to decrease wait times require reliable measures
  - Little research has used wait time measures to predict outcomes

• This study aims to fill this knowledge gap
  - Today focusing on patient satisfaction results
  - Future analyses focus on health outcomes
Wait Time Measures

• Capacity measures
  - First next available (FNA)

• Time stamp measures
  - Create date (CD)
  - Desired date (DD)

• Access list measures
  - Create date (CD)
  - Desired date (DD)
FNA Calculation

- New patient A requests to be seen as soon as possible on January 5, 2010

- First next available appointment is January 10, 2010

- Wait time = 5 days (O-X)

\[ \text{X} \]

\[ 1/5/2010 \quad 1/10/2010 \]
FNA Measure

• Overall supply in system
  - Patient availability/preferences not considered

• Schedulers distinguish between follow-up and urgent care appointments
  - More problematic for established vs. new patients

• Appointment type/Multiple physician profiles
  - FNA appointment type is not what patient needs
  - Cannot consult all scheduling profiles for same physician
Previous Research

• Veterans visiting VA facilities with longer FNA have poorer health outcomes

• Mortality, preventable hospitalization for geriatric veterans

• Mortality, preventable hospitalization, AMI, stroke, HbA1c
  - Veterans with diabetes
  - Veterans over age 70 and with greater comorbidities
FNA Measure Limitations

• Patient availability/preferences not considered

• VA managers explored other options
Create Date Time Stamp Calculation

- New patient A requests to be seen as soon as possible on January 5, 2010
- Cannot take January 10, 2010 appointment
- Appointment is scheduled for January 21, 2010
- Wait time = 16 days (Y-X)

1/5/2010  1/10/2010  1/21/2010
Create Date (CD) Time Stamp Measure

• Little information required of scheduling clerks

• Based on completed appointments
  - Excludes no-shows, cancellations

• Use of recall systems versus scheduling follow-up appointments right away
  - Influences wait time
  - More problematic for established versus new patients
Desired Date Time Stamp Calculation

- Established Patient B requests an April 5, 2010 follow-up appointment on January 1, 2010
- Appointment is scheduled for April 20, 2010
- Wait time= 15 days (Z-W)
Desired Date (DD) Time Stamp Measure

• In 2010, VA shifted to desired date measure

• Not influenced by use of recall systems

• Takes into account patient preferences
Desired Date (DD) Time Stamp Measure

• Schedulers must correctly enter desired date
  - Original DD kept when negotiating appointment
  - E.g. May 1\textsuperscript{st} versus May 5\textsuperscript{th}

• Extensive training of schedulers
  - Implemented in 2010
  - Audits find date is entered correctly 90% of the time
Prospective Access Measures

• Time stamp measures are retrospective
  - Only includes completed appointments
  - Patient no-shows not included
  - Cancellations that are not rescheduled not included

• Access list measures are prospective
  - Calculate waits off of pending appointments
  - Includes no-shows and cancellations
Access List Create Date Calculation

- New patient A requests an appt ASAP on January 5, 2010
- Appointment is scheduled for February 10, 2010
- Bi-monthly report dates (1 and 15th of each month)
- Appointment is not eligible for calculation until CD is equal to or before report date
- 1/1/2010 report- appt. not included
- 1/15/2010 report- Wait time = 10 days (R2-O)
- 2/1/2010 report- Wait time = 26 days (R3-O)
Access List CD Measure

• Performance measure is percent of appts. that have less than a 14 day wait
  - We average waits to match other measures

• Influenced by how follow-up appts. are scheduled (e.g. recall systems)
Access List Desired Date Calculation

- Established Patient B requests an April 5, 2010 follow-up appointment on January 5, 2010
- Appointment is scheduled for May 5, 2010
- Report dates are 1\textsuperscript{st} and 15\textsuperscript{th} of each month
- 4/15/2010 report- Wait time= 10 days (R1-O)
- 5/1/2010 report- Wait time= 25 days (R2-O)
Access List DD Measure

• Performance measure is percent of appts. that have less than a 14 day wait
  - We average waits to match other measures

• Schedulers must correctly enter DD
Summary of Wait Time Measures

• New versus established patients
• Time Stamp Retrospective
• FNA-Access Prospective

Access CD

Time Stamp CD

FNA

O

R

W

1/5/2010

1/10/2010

1/15/2010

1/21/2010

Access DD

DD Time Stamp

X

W

Y

Z

1/5/2010

4/5/2010

4/15/2010

4/20/2010
Research Question

• How well do alternative measures of wait times predict patient satisfaction?
Surveys on Patient Satisfaction

- Access is a key component of satisfaction
- Difficult to judge technical quality
- Patients focus on practical aspects of their healthcare experience
Satisfaction Data

- 2010 Survey of Healthcare Experiences of Patients (SHEP)
  - Managed by Office of Quality and Performance
  - Modeled after Consumer Assessment of Healthcare Providers and Systems
- Simple random sample of patients with completed appointments each month
- Visit date of appointment is recorded
- n=221,924 people
Access Satisfaction Measures

1) Appt. as soon as wanted (Timely appt.)

2) Ease of getting test or treatment in last 12 months? (Treatment access)

3) Ease of accessing specialist visit (Specialist access)
   - Asked for the last 12 months
     - Most recent visit is likely in mind
   - Coded as Always/Usually vs. Sometimes/Never
4) Rate VA health care in last 12 months (VA rating)
   - On a scale of 1 (worst) to 10 (best)
   - 9 or 10 versus <=8

5) Satisfaction with VA at recent visit (satisfied)
   - Likert scale 1 (least) to 7 (most) of satisfaction
   - 6 or 7 versus <=5
Analyses

• Logistic regression predicting satisfaction

• Wait time measures
  - High volume clinic stops
  - Patient/provider interactions
  - All major medical sub-specialties
  - Facility level monthly averages (including Access measures)
  - Matched to visit date when respondent was selected for sample
  - Quartiles
Analyses Continued

- Risk adjustors from SHEP
  - Sex
  - Race
  - Age
  - Education
  - Health care utilization
  - Health status
## Descriptive Statistics of Sample

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Mean or %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>67</td>
</tr>
<tr>
<td>Male</td>
<td>95%</td>
</tr>
<tr>
<td>Had some college</td>
<td>53%</td>
</tr>
<tr>
<td>White</td>
<td>79%</td>
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<tr>
<td>Black</td>
<td>10%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
</tr>
<tr>
<td>&gt;=5 visits to a doctor’s office in last 12 months</td>
<td>31%</td>
</tr>
<tr>
<td>Excellent/very good self-reported health status in last 12 months</td>
<td>25%</td>
</tr>
</tbody>
</table>
# Descriptive Statistics of Satisfaction Measures

<table>
<thead>
<tr>
<th>Satisfaction Measure</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timely visit</td>
<td></td>
</tr>
<tr>
<td>Always/Usually vs. Sometimes/Never</td>
<td>83</td>
</tr>
<tr>
<td>Treatment access</td>
<td></td>
</tr>
<tr>
<td>Always/Usually vs. Sometimes/Never</td>
<td>85</td>
</tr>
<tr>
<td>Specialist access</td>
<td></td>
</tr>
<tr>
<td>Always/Usually vs. Sometimes/Never</td>
<td>82</td>
</tr>
<tr>
<td>VA rating in last 12 months</td>
<td></td>
</tr>
<tr>
<td>9 or 10 versus &lt;9</td>
<td>78</td>
</tr>
<tr>
<td>VA satisfaction at most recent visit</td>
<td></td>
</tr>
<tr>
<td>6 or 7 versus &lt;6</td>
<td>82</td>
</tr>
</tbody>
</table>
New Patient Results

• How well do alternative measures of wait times predict patient satisfaction?
  - Longer waits predict lower satisfaction
New Patient FNA/CD Timely Visit*

*Everything is significant at $P<0.05$
Reference group is VA facilities in quartile 1
New Patient DD Timely Visit*

*Significant at $P<0.05$ in wrong direction
Reference group is VA facilities in quartile 1
# New Patient Waits Predicting Satisfaction

<table>
<thead>
<tr>
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<th>Timely Appt.</th>
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<tbody>
<tr>
<td>FNA (ref=Q1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>0.89*</td>
<td>0.93*</td>
<td>0.93*</td>
<td>0.95*</td>
<td>0.95*</td>
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<tr>
<td>Q3</td>
<td>0.82*</td>
<td>0.84*</td>
<td>0.84*</td>
<td>0.92*</td>
<td>0.91*</td>
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<tr>
<td>Q4</td>
<td>0.73*</td>
<td>0.73*</td>
<td>0.74*</td>
<td>0.86*</td>
<td>0.85*</td>
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<tr>
<td>Time Stamp CD</td>
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Numbers are odds ratio from logistic regression.  
* Significant at $P<=0.05$
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<tr>
<td>Q2</td>
<td>1.06*</td>
<td>1.01</td>
<td>1.05*</td>
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<td>Q3</td>
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<tr>
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* Significant at $P<=0.05$

* Significant in wrong direction
New Patient Results

• FNA and create date measures are most reliable
  - Predict all 5 satisfaction measures

• New patients want to be seen as soon as possible
  - Date an appointment request was originally made is reliable
Established Patient Results

• How well do alternative measures of wait times predict patient satisfaction?
  - Longer waits predict lower satisfaction
Established Patient FNA/CD Timely Visit

*Significant at $P<0.05$

Reference group is VA facilities in quartile 1
Established Patient DD Timely Visit

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</tbody>
</table>

Numbers are odds ratio from logistic regression.

*Significant at $P \leq 0.05$

*Significant in wrong direction
Established Patient Results

- Access list desired date is most reliable
  - Includes no-shows/cancellations
  - More accurate measure of supply in system

- DD reflects established patient preferences versus FNA/CD measures
Policy Implications

• Multiple wait time measures needed
  - New versus established patients

• New patients want to be seen right away
  - Change in health status
  - Appointment request dates are reliable
  - Capacity and create date measures
Policy Implications Continued

- Established patients may not prioritize wait times
  - Continuity of care
  - Convenient time

- VA is a leader in recognizing new versus established patient complexity

- Future work will predict health outcomes
Questions or Comments?

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Resources