Tools to Improve Primary Care-Specialty Care Referrals in the VHA

Varsha Vimalananda, MD, MPH
HSR&D Cyberseminar
PACT Demonstration Labs
September 19, 2018
Referrals are extremely common

- When primary care patients have complex medical or surgical issues, they often require referral to a specialist

- 105 million primary care visits resulted in referrals to specialty care in 2009

Referrals fragment care

• Specialty care referrals split information across providers

• Therefore, every referral contributes to care fragmentation

• Can result in patient confusion, provider frustration, missed and unmet needs, duplicated tests, medication errors, and increased morbidity and mortality

Coordination of specialty care must occur across all steps of the referral process.

Referral decision

- Care integration including role of specialist
- Referral tracking to ensure patient visits specialist
- Entry into specialty care
- Information transfer of reason for referral and prior work-up
- Information transfer on recommendations

The referral (consult request) from primary care to specialty care
  • creates the link between the two services
  • sets the stage for the direction and scope of the patient’s specialty evaluation and care plan

Referrals are therefore a critical step in coordination of specialty care.
Important characteristics of referrals

• reflect a mutual understanding between PCP and specialist about when evaluation or care for a condition is appropriate for referral (i.e. exceeds a reasonable level for management in primary care)

• convey a clear question and sufficient historical information about the patient and their condition to focus the consultation
Referrals frequently lack these characteristics

• Specialists often not sure why a patient was referred
• 70% of specialists rate the background information they receive as poor
• 41% of rheumatology referrals inappropriate

Can contribute to delayed, duplicative, incomplete, or inappropriate specialty evaluations.

In the VA, over 25 million patient visits to specialty care yearly

Tools to improve specialty care coordination
• Service agreements (care coordination agreements)
• Referral templates
• Electronic consultations (e-consults)

• Little is known about the degree to which these tools improve the appropriateness, clarity and completeness of referrals from primary care and, thereby, serve more effectively to coordinate care between PCPs and specialists.

What is the relationship between use of these tools and referral characteristics?
Methods

• Data source - national online survey about specialty care coordination in VA (25% response rate)

• Participants - physicians (N=633) from 13 medical specialties across the VA

• Recruitment - combination of random sampling, a VA specialist listserv, and a letters of support from section chiefs
Methods

• Predictors – use and helpfulness of the 3 tools

  • “If you used them in the last 3 months, how helpful were these tools in promoting coordination of care with PCPs?”
    • Service agreements
    • Templates
    • E-consults
Methods

• Categorized response options
  • Not used (Not available to me or Available to me but did not use in the last 3 months)
  • At most somewhat helpful (Not at all helpful, A little helpful or Somewhat helpful) and
  • Very helpful (Very helpful or Extremely helpful).

• Collapsed all ratings of helpfulness
  • Used (vs. Not Used)
Outcomes – 3 referral characteristics

• “How often did consult requests reflect an understanding on the part of the PCP about what constitutes an appropriate referral to your specialty clinic?”

• “How often was the reason for the consult request sufficiently clear, such that you understood what the referring PCP was asking of you?”

• “How often did the consult request itself include sufficient clinical history and other information to meet your immediate needs?”
Methods

• 7-point response scale (Never to Always)

• Dichotomized
  • Half the time or less vs. More than half the time
<table>
<thead>
<tr>
<th>Methods</th>
<th>Predictors</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Tools</strong></td>
<td><strong>Referral characteristics</strong></td>
</tr>
<tr>
<td></td>
<td>Service agreements</td>
<td>Appropriateness</td>
</tr>
<tr>
<td></td>
<td>Templates</td>
<td>Clarity</td>
</tr>
<tr>
<td></td>
<td>E-consults</td>
<td>Completeness</td>
</tr>
</tbody>
</table>
Methods

• Multivariable logistic regression models to estimate the associations between use of each of the three tools and each referral characteristic

• For the subgroup using all three tools, we estimated the associations between perceived helpfulness of each tool and each referral characteristic
Methods

• Covariates
  • age, sex, years in VA, weekly hours of VA clinical time, and percent of consult requests related to procedures (≤ 25% vs. > 25%)
Results

• Analytic sample included 497 specialists

Respondent characteristics (N=497)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>39</td>
</tr>
<tr>
<td>≥ 50 years old</td>
<td>52</td>
</tr>
<tr>
<td>≥ 10 years in VA</td>
<td>46</td>
</tr>
<tr>
<td>≥ 25% referrals related to procedures</td>
<td>42</td>
</tr>
<tr>
<td>≥ 5 clinic sessions weekly</td>
<td>27</td>
</tr>
</tbody>
</table>
Specialists reporting the referral characteristic is present more than half the time (N=497)

<table>
<thead>
<tr>
<th></th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate</td>
<td>273 (55)</td>
</tr>
<tr>
<td>Clear</td>
<td>332 (67)</td>
</tr>
<tr>
<td>Complete</td>
<td>124 (25)</td>
</tr>
</tbody>
</table>
Use of tools to coordinate care (N=497)

<table>
<thead>
<tr>
<th></th>
<th>Service agreements (%)</th>
<th>Referral templates (%)</th>
<th>E-consults (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not used</td>
<td>59</td>
<td>31</td>
<td>13</td>
</tr>
<tr>
<td>Used</td>
<td>41</td>
<td>69</td>
<td>87</td>
</tr>
</tbody>
</table>

Helpfulness of tools to coordinate care (N=163)

<table>
<thead>
<tr>
<th></th>
<th>Service agreements (%)</th>
<th>Referral templates (%)</th>
<th>E-consults (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At most somewhat helpful</td>
<td>83</td>
<td>71</td>
<td>41</td>
</tr>
<tr>
<td>Very helpful</td>
<td>17</td>
<td>29</td>
<td>59</td>
</tr>
</tbody>
</table>
## Association between use of coordination tools and specialists’ perspectives of referral characteristics (N=497)

<table>
<thead>
<tr>
<th></th>
<th>Appropriateness</th>
<th>Clarity</th>
<th>Completeness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Referrals appropriate &gt; 50% of the time N (%)</td>
<td>Adjusted* OR (95%CI)</td>
<td>Referrals complete &gt; 50% of the time N (%)</td>
</tr>
<tr>
<td>Service agreements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not used (N=292)</td>
<td>172 (59)</td>
<td>(Ref)</td>
<td>68 (23)</td>
</tr>
<tr>
<td>Used (N=205)</td>
<td>103 (50)</td>
<td>0.7 (0.5-1.0)</td>
<td>58 (28)</td>
</tr>
<tr>
<td>Referral templates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not used (N=156)</td>
<td>81 (52)</td>
<td>(Ref)</td>
<td>27 (17)</td>
</tr>
<tr>
<td>Used (N=341)</td>
<td>194 (57)</td>
<td>1.5 (1.0-2.4)</td>
<td>99 (29)</td>
</tr>
<tr>
<td>E-consults</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not used (N=63)</td>
<td>37 (59)</td>
<td>(Ref)</td>
<td>12 (19)</td>
</tr>
<tr>
<td>Used (N=434)</td>
<td>238 (55)</td>
<td>0.8 (0.5-1.4)</td>
<td>114 (26)</td>
</tr>
</tbody>
</table>

*Model adjusted for age, gender, years in VA, number of clinic sessions weekly, and percent of referrals related to procedures*
<table>
<thead>
<tr>
<th></th>
<th>Appropriateness</th>
<th>Clarity</th>
<th>Completeness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Referrals appropriate &gt; 50% of the time N (%)</td>
<td>Adjusted* OR (95%CI)</td>
<td>Referrals clear &gt; 50% of the time N (%)</td>
</tr>
<tr>
<td><strong>Service agreements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At most somewhat helpful (N=136)</td>
<td>67 (49)</td>
<td>(Ref) 0.7 (0.2-1.8)</td>
<td>89 (65)</td>
</tr>
<tr>
<td>Very helpful (N=27)</td>
<td>13 (48)</td>
<td></td>
<td>20 (74)</td>
</tr>
<tr>
<td><strong>Referral templates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At most somewhat helpful (N=121)</td>
<td>56 (46)</td>
<td>(Ref) 1.7 (0.8-3.9)</td>
<td>75 (62)</td>
</tr>
<tr>
<td>Very helpful (N=42)</td>
<td>24 (57)</td>
<td></td>
<td>34 (81)</td>
</tr>
<tr>
<td><strong>E-consults</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At most somewhat helpful (N=75)</td>
<td>34 (45)</td>
<td>(Ref) 1.3 (0.7-2.6)</td>
<td>46 (61)</td>
</tr>
<tr>
<td>Very helpful (N=88)</td>
<td>46 (52)</td>
<td></td>
<td>63 (72)</td>
</tr>
</tbody>
</table>

*Model adjusted for age, gender, years in VA, number of clinic sessions weekly, and percent of referrals related to procedures*
Conclusions

• Specialists who used referral templates more likely to report more frequent appropriateness, clarity, and completeness

• Specialists who used e-consults more likely to report more frequent clarity

• Use of service agreements not associated with any referral characteristic

• Among specialists who used all 3 tools, only very helpful templates were associated with clarity and completeness
Conclusions – referral templates

• Use of templates may improve the appropriateness, clarity and completeness of referrals.

• Easy to develop, tailor, and integrate into workflow

• But – they do have limitations
Conclusions – referral templates

- They are usually ‘home-grown’ and vary widely in their format and content.

- Only 26% of specialists using all three tools reported that templates were very helpful.
  - They were more than three times as likely to report that referrals were clear and complete more than half the time.
Conclusions – referral templates

• Templates can be poorly laid out, rigid in their structure, require irrelevant details, or require inappropriate labs and tests be ordered

• Future work should examine templates already in use and identify which are perceived as most helpful by specialists and PCPs alike.

Conclusions – referral templates

• Standardized templates modeled on those rated as very helpful could improve referrals at low cost, and possibly improve the efficiency and quality of specialty care more widely.

• Refinement of templates in collaboration with primary care required to ensure usability, usefulness, and appropriateness.
Conclusions – e-consults

• Specialists who used e-consults more likely to report more frequent clarity

• Having an e-consult option may prompt referring providers to articulate question more clearly

• No association with appropriateness – perhaps because usage includes questions that never would have led to an ‘inappropriate’ referrals
Conclusions – service agreements

• No association between service agreements and any referral characteristic
  • Only 17% of specialists found service agreements very helpful in coordination -> opportunities to improve and re-assess

• ‘Home-grown’ with similar potential for clinician buy-in
  • But broader in scope, not embedded in workflow, not routinely developed in partnership with PC

Conclusions – service agreements

• Service agreements were most successful where both parties already had stable communication pathways and strong working relationships.

• Work is needed on collaborative efforts to develop service agreements, integrate agreements into the clinical workflow, and test their impact on referral characteristics.
  • Attention to improving PCP-specialist relationships
Limitations

• Cross-sectional and observational
• Three tools which very widely in form and processes
• 25% response rate
• Generalizability
• Specialist perspective only
  • Stay tuned for results from a PCP survey of specialty care coordination!
Acknowledgments

• Mark Meterko, PhD
• B. Graeme Fincke, MD
• Dan Berlowitz, MD, MPH

This work was supported by a VA HSR&D Career Development Award.

The contents do not represent the views of the U.S. Department of Veterans Affairs or the United States Government.
Questions or Comments?

Contact information
Varsha Vimalananda, MD, MPH
Varsha.vimalananda@va.gov