TAP Mission

To improve access to effective, compassionate, evidence-based health care for uninsured and underinsured patients in our community with demonstrated financial need.
Who is eligible?

• Hopkins primary care patient
  Until recently this meant EBMC; with expansion this includes JHOC GIM, Bayview GIM, CMP and CCP
• Uninsured or Underinsured
  Underinsured primarily means PAC
• Demonstrated financial need
• Reside in zip code:
  21202, 21205, 21213, 21219, 21222, 21224, 21231.
Eligible Residents

Zip Codes:
21202
21205
21213
21219
21222
21224
21231
Key Components

- **Navigator**: TAP removes financial barriers to care and provides assistance and support to patients in scheduling and attending appointments.
- **TAP fee**: All patients commit to the process by paying $20 upon enrollment.
- **Medical Director**: reviews all referrals to ensure that care is delivered in the most appropriate setting
TAP Process

Hopkins Primary Care Patient
Uninsured/PAC
Seven Zip Codes

East Baltimore Medical Center
JHB Children’s Medical Practice
JHB Comprehensive Care Practice
JHH General Internal Medicine
JHB General Internal Medicine
Specialty Referrals
May 1, 2009 through February 28, 2011

Total Referrals (1,676)

Approved Referrals (918)

Completed Referrals (783)
Pending Referrals (135)

Closed Referrals (758)*

Clinical Reason (236)
Patient Reason (496)

* There are 26 referrals that remain to be classified as a 'clinical reason' or 'patient reason.'
## TAP Unique Patients

May 1, 2009 through February 28, 2011

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient with Completed Referrals</td>
<td>347</td>
</tr>
<tr>
<td>Patient with Closed for Patient Reason Referrals</td>
<td>204</td>
</tr>
<tr>
<td>Patient with all Pending Referrals</td>
<td>87</td>
</tr>
<tr>
<td>Patient with Closed for Clinical Reason Referrals</td>
<td>52</td>
</tr>
<tr>
<td><strong>Total Unique Patients</strong></td>
<td><strong>690</strong></td>
</tr>
</tbody>
</table>
# TAP Charges

May 1, 2009 through February 28, 2011

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Hospital</th>
<th>CPA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery Subspecialties</td>
<td>354,098</td>
<td>219,269</td>
<td>573,367</td>
</tr>
<tr>
<td>Medicine Subspecialties</td>
<td>263,677</td>
<td>105,252</td>
<td>368,929</td>
</tr>
<tr>
<td>Radiology</td>
<td>151,849</td>
<td>115,984</td>
<td>267,833</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>14,201</td>
<td>97,914</td>
<td>112,115</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>31,795</td>
<td>17,077</td>
<td>48,872</td>
</tr>
<tr>
<td>Lab and Miscellaneous</td>
<td>3,471</td>
<td>29,524</td>
<td>32,995</td>
</tr>
<tr>
<td>Physical Medicine and Rehab</td>
<td>18,853</td>
<td></td>
<td>18,853</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>10,148</td>
<td>1,034</td>
<td>11,182</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>848,092</strong></td>
<td><strong>586,054</strong></td>
<td><strong>1,434,146</strong></td>
</tr>
</tbody>
</table>

*As of March 22, 2011*
Administrative Measures

- Referrals by specialty and disposition
- Number of unique patients, by zip code
- No-show rate and follow-through rate
- Patient demographics
- Stability of residence and insurance status of the TAP population
- Types of conditions/medical status
Key Evaluation Questions

• Does TAP improve access to outpatient specialty care?
• Does access to outpatient specialty care
  – improve health,
  – reduce overall health care costs,
  – reduce ED use in the enrolled population?
• Does TAP change health care utilization patterns overall?
Impact on Patients and Physicians

• Does the program
  – improve clinician and patient satisfaction,
  – change referral patterns, and
  – strengthen the relationship between the provision of primary and specialty care?
• Does participating in the program change the practice patterns of primary care physicians?
• Does TAP attract patients to primary care?
Finance-related questions

- What is the net financial impact of this program on each hospital (JHH and JHBMC)? On the JHU CPA? On each clinical department?
- What is the incremental change in charity care?
- Who bears the costs of the program? If there are savings, who benefits (patients, physician practice plan, the hospital)?
Evaluate the Components of TAP

• Do the key components of TAP—medical review, navigator support, and/or paying $20 up front—improve patient attendance and engagement in health care? (see no-show and follow-through rates)
TAP Evaluation

Sai Ma PhD
Lauren Block MD
Matt Emerson MIM MHA

April 21, 2011
Evaluation Framework

TAP Program Core Services

- Provides specialty care to uninsured

- Process/admin
  - # referrals made, approved/rejected, completed/missed
  - Referred departments
  - No show rate
  - Types of conditions/medical status
  - Cost $

Patient’s experience

- Satisfaction
- Understanding
- Self-reported access to care

Doctors’ experience

Care Utilization

- Specialty care
- PCP visits
- ED visits
- Inpatient care

Ultimate Outcomes

- Health status
- Cost-effectiveness
- Community trust

April 21, 2011
Outcome Evaluation
Research Objectives

• Evaluate TAP impact on access and utilization of care
• Create and test evaluation tools for annual evaluation
• Assess TAP sustainability and generalizability
Outcome Evaluation
Research Questions

• How effective is TAP in improving patients’ **access** to, **understanding** of, and **satisfaction** with care?

• How effective is TAP in improving the **efficiency** of the system, measured by the **follow-through rates** at specialty appointments and monthly **ED utilization**?

• Is TAP effective at lowering ED utilization at the **population** level?
**Outcome Evaluation: Goals**

<table>
<thead>
<tr>
<th>Paper #1</th>
<th>Paper #2</th>
<th>Paper #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre vs. Post TAP</td>
<td>TAP vs. comparison</td>
<td>ED utilization at population level</td>
</tr>
<tr>
<td>• Survey</td>
<td>• Survey</td>
<td></td>
</tr>
<tr>
<td>• Administrative</td>
<td>• Administrative</td>
<td></td>
</tr>
<tr>
<td>• Follow-thru</td>
<td>• Follow thru</td>
<td></td>
</tr>
<tr>
<td>• Primary care</td>
<td>• Primary care</td>
<td></td>
</tr>
<tr>
<td>• ED utilization</td>
<td>• ED utilization</td>
<td></td>
</tr>
</tbody>
</table>

April 21, 2011
Outcome Evaluation
Comparison Populations

EBMC Patients

Uninsured
Underinsured

TAP Patients
Non- TAP Patients

Priority Partners (PP)

Medicare
Private

Referral not approved, fee not paid
(Treatment group)

Referral approved, fee paid, appt scheduled

Referred, appt scheduled
(Comparison Group)
Outcome Evaluation
Risk Adjustment

Demographics
• Age
• Gender
• Zip Code

Referral types
• Therapeutic
• Diagnostic
• Pain
• Ancillary

Comorbidities
• Charlson Co-morbidity Score
Outcome Evaluation
Data Sources

Survey:
- Pre- vs. Post-TAP
- TAP vs. PP

JHCP:
- PP patients and referrals
- Primary care utilization

JHHC:
- PP referral follow-thru (claims data)

JHH:
- ED utilization (JHH and BMC)
- ICD9 codes

TAP:
- TAP patients
- Referral follow-thru

April 21, 2011
## Outcome evaluation

### Survey data

**Surveyed patients, N = 128**

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>69</td>
<td>54%</td>
</tr>
<tr>
<td>Male</td>
<td>59</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td><strong>Mean number of referrals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per patient</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Top 3 departments for referral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology</td>
<td>75</td>
<td>22%</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>37</td>
<td>11%</td>
</tr>
<tr>
<td>Cardiology</td>
<td>33</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Referral types</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnostic</td>
<td>128</td>
<td>35%</td>
</tr>
<tr>
<td>Therapeutic</td>
<td>180</td>
<td>49%</td>
</tr>
<tr>
<td>Ancillary</td>
<td>31</td>
<td>8%</td>
</tr>
<tr>
<td>Pain</td>
<td>31</td>
<td>8%</td>
</tr>
</tbody>
</table>

**Survey flowsheet**

- **214 TAP patients with completed referral 5/09 – 4/10**
- **134 patients (63%) reached by phone**
- **128 patients (60%) surveyed**
- **72 could not reach**
  - 4 incarcerated
  - 1 deceased
  - 3 refused
- **3 confused/dementia**
- **1 data entry error**
- **2 never heard of TAP**

April 21, 2011
Outcome evaluation
Patient-reported data

Patient-reported healthcare access, understanding, and satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Pre-TAP</th>
<th>Post-TAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding</td>
<td>85%</td>
<td>91%</td>
</tr>
<tr>
<td>Access</td>
<td>23%</td>
<td>37%</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>41%</td>
<td>91%</td>
</tr>
</tbody>
</table>

Understanding, p=0.11  
Access, p<0.001  
Satisfaction, p<0.001

Patient-reported referral completion

<table>
<thead>
<tr>
<th></th>
<th>Pre-TAP</th>
<th>Post-TAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients completing referrals</td>
<td>84%</td>
<td>96%</td>
</tr>
<tr>
<td>Financial barrier to referrals</td>
<td>24%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Patients completing referrals, p<0.001  
Financial barrier to referrals, p<0.001

April 21, 2011
Outcome evaluation
Administrative data

Overall 90d follow-through rate: 89%

Follow through by referral type, relative to diagnostic, N=605 referrals

ED utilization, reported vs. admin data, N=204 patients

<table>
<thead>
<tr>
<th></th>
<th>Pre-TAP</th>
<th>Post-TAP</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported visits/month</td>
<td>0.18</td>
<td>0.09</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>ED visits, admin data</td>
<td>191</td>
<td>148</td>
<td>0.08</td>
</tr>
<tr>
<td>Inpatient stays</td>
<td>52</td>
<td>36</td>
<td>0.11</td>
</tr>
</tbody>
</table>
Outcome evaluation
Limitations/problems

- Recall bias
- Comparison data
- Short-term data
Outcome evaluation

Next steps

• Analysis of comparison group data
• Primary care utilization evaluation
• Survey of those patients who refuse TAP
• Assessment of heavy ED users
• Population-level assessment of ED use