Data: Key to Population Health Success

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Our Mission

VirtuaPhysicianPartners is a unique collaboration between Virtua, its physician partners and our community to promote health and wellness. Our network of providers achieves excellence by enhancing the patient’s experience through improving access, maximizing value and emphasizing quality.
### VirtuaPhysicianPartners – Network By the Numbers

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>249 practices engaged in clinical integration</td>
<td></td>
</tr>
<tr>
<td>1,192 physicians participating</td>
<td></td>
</tr>
<tr>
<td>79 group practices with an executed participation agreement</td>
<td></td>
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<tr>
<td>1,484 clinicians participate in VPP</td>
<td></td>
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<tr>
<td>499 primary care clinicians</td>
<td></td>
</tr>
<tr>
<td>13,533 patients under VPP management</td>
<td></td>
</tr>
<tr>
<td>985 specialty clinicians</td>
<td></td>
</tr>
<tr>
<td>292 advanced practice providers</td>
<td></td>
</tr>
<tr>
<td>Clinical Effectiveness Committee</td>
<td>Finance Committee</td>
</tr>
<tr>
<td>-----------------------------------</td>
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</tr>
<tr>
<td>• Define clinically integrated programs and transformation initiatives</td>
<td>• Develop incentive compensation model that will inform how VPP will distribute payments from value-based contracts</td>
</tr>
<tr>
<td>• Develop performance metrics</td>
<td>• Develop a decision-making process for auditing and updating the model over time</td>
</tr>
<tr>
<td>• Monitor performance</td>
<td></td>
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<tr>
<td>• Evaluate and remediate</td>
<td></td>
</tr>
<tr>
<td>• Implement plans</td>
<td></td>
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</tbody>
</table>
### VirtuaPhysicianPartners – Governance by the Numbers

<table>
<thead>
<tr>
<th>4 committees of the Board of Managers</th>
<th>85 physicians participating in governance committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 clinical improvement programs designed for implementation in 2017</td>
<td>5 HQEP performance improvement domains established</td>
</tr>
<tr>
<td></td>
<td>13 physicians across 7 specialties met 4-6 times (2 hours per meeting) investing over 120 hours in VPP clinical programs</td>
</tr>
<tr>
<td></td>
<td>37 Virtua leaders participate in governance committees</td>
</tr>
<tr>
<td></td>
<td>4 care coordination programs in development</td>
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</table>
Defining Population Health

- What is population health?
  Population health is the health outcomes of a defined group of people, including the distribution of such outcomes within that group.

- What is population health management?
  Population health management is a strategic clinical approach to improve outcomes by managing the health of a defined group of people while also reducing cost.

- What is population health improvement?
  Population health improvement is a strategy to improve health outcomes and to eliminate health inequities in a defined group of people.
Data inspires progress and galvanizes change. To know where we need to go, we need to know what we’ve achieved – where progress is being made and where major challenges remain.

Maura Pally
On our Clinical Integration Journey

- Align network metrics / goals with organizational goals
- Demonstrate the link between the metrics and the organizational goals.
- Build accountability into the process. Simply measuring something will not guarantee success.
Data Sources to Support Clinical Integration

- Physicians
- Home Health – Post Acute
- Hospitals
- Laboratory/Radiology
- Health Information Exchange
- Pharmacy Benefit Managers
- Health Plans
Challenges

- Collecting information from multiple data sources
- Normalizing individuals across data sources
- Normalizing definitions across data sources
- Presentation of data at the point of care
- Timing of data availability
- Sensitive data
- Blend of administrative and clinical information
- Funding the investment to support data aggregation, analytics and predictive tools to deliver results
Example #1 – Right Information at the Right Time

- Tri-State Child Health Physician-Hospital Organization in Cincinnati, Ohio developed an improvement initiative focused on decreasing ED utilization and inpatient admissions for children with asthma.
- The clinicians developed a data collection tool for incorporation into a patient registry.
Asthma Data Collection Form – 2014

Patient Name: ____________________________, Date of Birth: __/__/______
Patient E-mail: ____________________________

PARENT SECTION – Please Complete Questions 1-15. Thank you for helping us care for your child

1. How many days has your child missed due to asthma in the past 6 months? ______ # of days
   - [ ] Does not attend
   - [ ] Does not apply
2. How many days have you or your spouse missed due to your child’s asthma in the past 6 months? ______ # of days
   - [ ] Does not apply
3. Has your child visited the Emergency Room or Urgent Care Center due to asthma in the past 12 months? ______
   - [ ] Yes
   - [ ] No
4. Has your child been admitted to the hospital due to asthma in the past 12 months? ______
   - [ ] Yes
   - [ ] No
5. How comfortable are you taking care of your child with asthma when he/she is sick? ______
   - [ ] Not comfortable
   - [ ] Very comfortable
6. During the past 4 weeks, how frequently has your child experienced episodes of cough, shortness of breath, wheezing or reduced activity due to asthma during the day? ______
   - [ ] 3-5 times per week
   - [ ] 3-4 times per month
7. During the past 4 weeks, how frequently has your child experienced episodes of cough, shortness of breath, wheezing or waking up due to asthma at night? ______
   - [ ] 3-4 times per month
8. During the past week, how often did your child need a fast acting or quick relief medication (Prescription Inhaler) at times other than before exercise? ______
   - [ ] Not sure
   - [ ] Yes
   - [ ] No
9. Does your child use a spacer with her asthma inhaler? ______
10. When are asthma symptoms worse? (Check all that apply):
    - [ ] Winter
    - [ ] Spring
    - [ ] Summer
    - [ ] Fall
    - [ ] All
11. Please mark all things that make your child’s asthma worse:
    - [ ] Respiratory infections
    - [ ] Sinusitis
    - [ ] Allergies
    - [ ] Exercise/Increased Activity
    - [ ] Head/Humidity
    - [ ] Cold Air
    - [ ] Other
12. How often does asthma limit your child’s activities? ______
    - [ ] Not at all
    - [ ] A little of the time
    - [ ] Most of the time
    - [ ] All of the time
13. How would you rate your child’s asthma control during the past month? ______
    - [ ] Well controlled
    - [ ] Not well controlled
    - [ ] Very poorly controlled
14. Are you planning to have your child receive the flu vaccine this flu season? ______
    - [ ] Yes
    - [ ] No
    - [ ] Reason
15. Are there things about your child’s asthma you want to discuss with your physician today? ______

PHYSICIAN SECTION – Please Complete Questions 16-23:

16. Was a recommendation made for the patient to receive the flu vaccine? ______
    - [ ] Yes
    - [ ] No
17. Asthma severity level:
    - [ ] Intermittent
    - [ ] Mild Persistent
    - [ ] Moderate Persistent
    - [ ] Severe Persistent
18. Is the patient on a controller medication? ______
    - [ ] Yes
    - [ ] No
19. Has the patient received oral steroids for bronchospasm within the past 12 months? ______
20. Does the patient have a written asthma action plan? ______
21. Has the plan updated as needed and reviewed with the patient and/or family at this visit? ______
22. Has the patient been seen by an allergist or pulmonologist during the last 12 months for assistance with asthma management due to severity of illness? ______
    - [ ] Yes
    - [ ] No
23. Follow-up visit: Return in ______ weeks, or ______ months (return visit date: ______/_____/______)

*Well controlled asthma is defined as: Symptoms ≤ 2 days/week, ≥ 8 nighttime awakenings ≤ 1/month, no interference with normal activity, short acting beta agonists ≤ 2/day for symptom control, no exacerbations requiring oral systemic corticosteroids 0-1/year or PEAKS or peak flow ≤ 80% predicted values or personal best:

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VirtuaPhysicianPartners
CLINICALLY INTEGRATED NETWORK

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Asthma perfect care is a component measure and includes three essential and evidence-based elements of care:

1. Asthma must be severity classified.
2. The asthmatic must receive a written copy of his or her management plan.
3. If the asthmatic is diagnosed as “persistent,” he or she must be prescribed controller medication.

These components must be validated through a documented encounter in the PHO registry within the prior 24 months. All three elements must be met for a success to be counted.
Patient Alerts

- Cincinnati Children’s engaged HealthBridge, the region’s health information exchange, to send alerts to practices when their pediatric patients with a diagnosis of asthma had an ED visit or admission at one of 29 local hospitals.

- Alerting identifies patients most at risk and enables practices to pursue interventions that reduce preventable hospitalizations, rehospitalizations and return visits to the ED.
Key Processes for Routing Alerts

- Accurately assigning patients and routing alerts to the correct practice
- Viewing and triaging alerts
- Contacting families to understand factors that contribute to the asthma exacerbation
- Assuring timely follow-up visits and implementing clinical interventions that improve patient outcomes
Real Time is Best

Figure 1. Asthma Alert Processes for Gen Peds and the PHO

Preparation for Alerts
- **Gen Peds:** Sends full patient panel to HealthBridge
- **PHO:** Sends practice-specific asthma registry patients to HealthBridge

Screening Alerts
- **Gen Peds:** Staff review alerts daily and screen asthma patients. Alerts from non-CCHMC hospitals that are populated with chief complaint are cross-checked with charts to verify patient has asthma.
- **PHO:** Staff consolidate CCHMC and other hospital data into single alert report

Follow-up
- **Gen Peds and PHO:** Practice staff track if follow-up visit occurred within 7-30 days of discharge from hospital or ED

Clinical Intervention After Alert
- **Gen Peds:** Patients meeting criteria are referred to care coordinator
- **PHO:** Root cause analysis is completed which includes a phone call with family to identify and address factors contributing to ED visit or hospitalization

*Care Coordination Criteria: One hospitalization or two ED visits for asthma within the past 12 months.

Trudnak, Tara; Mansour, Mona; Mandel, Keith; Sauers, Hadley; Pandzik, Gerry; Donisi, Carl; and Fairbrother, Gerry (2014) “A Case Study of Pediatric Asthma Alerts from the Beacon Community Program in Cincinnati: Technology is Just the First Step,” eGEMs (Generating Evidence & Methods to improve patient outcomes): Vol. 2:Iss. 1, Article 1.
Example #2 - Attribution

- A PA-based clinically integrated network engaged Lumeris to provide an accountable delivery system platform to manage a population of commercially insured patients.

- Post-implementation, in reviewing attribution of patients to providers, the data was not actionable.
  - Naming convention for practices was different between payer and network
  - Network and platform owner rebuilt the provider hierarchy
Example #3 – Finding Common Definitions and Reliable Measurement Solutions

- Two payers with 2 variations of a single measure

<table>
<thead>
<tr>
<th>Payer</th>
<th>Measure</th>
<th>Description</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payer 1</td>
<td>Diabetes Care - Controlled</td>
<td>Percentage of members ages 18-75 with diagnosis diabetes of who were</td>
<td>Payer 1 considers control &lt;9%</td>
</tr>
<tr>
<td></td>
<td>HbA1c</td>
<td>continuously enrolled during the measurement year and had an annual HbA1c</td>
<td>Payer 2 considers control &lt;8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>test with a result that demonstrates control.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Control HbA1c Level &lt;9%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The absence of A1c testing equals poor control</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Members in hospice are excluded</td>
<td></td>
</tr>
<tr>
<td>Payer 2</td>
<td>Diabetes HbA1c Control</td>
<td>HbA1c level &lt;8%</td>
<td></td>
</tr>
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</table>

- Take the strictest definition and use across all three payers

- Payers accurately reporting on “Well Child Visits within the first 15 Months of Life”
  - Baby sits under parent’s policy for first 30 days 1-2 visits occur in the first 30 days.
Example #4 – Aggregating Data

- Health system in the middle of a clinical system conversion – ideal solution in build

- Developed “Metrics Manager,” a portal for clinicians to report performance on clinical quality measures.
  - Small / large practices
  - Electronic / Paper-based medical records
Reporting Overview

Data Collection

Internal Database
VMG-NextGen only

Bulk Data Upload
Via Metrics Manager
(in Build Phase)

Data Entered
to Metrics Manager

Data Aggregation

VPP Database

Reports & Dashboards
Example #5 – Risk Stratification

Options:

- Utilize risk scores provided by the payer
  - Inconsistent naming conventions and doesn’t allow for easy mapping. A risk score of 8 from Payer A doesn’t match a risk score of 8 from Payer B

- Utilize a risk score assigned by our organization
2017 Roadmap

- Launch Metrics Manager
- Develop and distribute practice-level and network-level score cards
- Build the data warehouse
- Develop actionable work lists for practices, care coordinators, practice engagement leaders
- Develop a data governance model
“Waiting for ‘perfect data’ is not an option.

- Advocate Physician Partners