ABSTRACT: 2016 ELAM Institutional Action Project Symposium

**Project Title:** The Vascular Anomalies Center (VAC) at Boston Children’s Hospital – Process Improvement Initiatives

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**Collaborators:** Steven Fishman, MD; John Mulliken, MD; Ahmad Alomari, MD; Cameron Trenor III, MD; Marilyn Liang, MD; Samantha Spencer, MD; Mary Beth Sylvia, MS, CFNP; Erin Spera, MS, CPNP; Cindy Kerr, MSN, CPNP; Bridget DeYoung, CPNP; Maria DaRocha, CPNP; Meghan O’Hare RN, BSN, CPNP; Brooke Corder, MSW, LICSW; Linda Han; Taylor Everett, Mohammad Alkawaldeh BSN, MSN/NI, Michael Gillespie

**Background, Challenge or Opportunity:**
VAC is the oldest vascular anomaly center in the world and highly regarded for its expertise and state of the art care for children and adults with vascular anomalies. In 2014, VAC was chosen as the first center of excellence as part of a hospital wide strategic initiative. In FY 15 VAC cared for 2,804 unique patients with a favorable payer mix and a higher percentage of patients from regional and national areas. VAC’s mission is to provide patients with complex vascular anomalies world-class interdisciplinary care in a single setting while educating the next generation of vascular anomalists. Although VAC’s expertise is hard to surpass, process and outcome evaluation has been slow. In order to continue to meet center expectations while maintaining excellent patient/family satisfaction an updated analysis of VAC process is needed. My recent transition back to this program as one of its directors is an opportunity to bring my expertise in process improvement to this center.

**Purpose/Objectives:**
The global objective is to establish a comprehensive dashboard measuring performance in both process and outcome measures (clinical, research, patient and family satisfaction, functional and financial) in order to provide optimal and reliable care to VAC patients.
The immediate objective is to develop a foundation for success by promoting team work and contribution from the VAC stakeholders and to launch key process and outcome measures that will be used on the VAC dashboard.

**Methods/Approach:**
1. Establishing the Team
   - Individual meetings with key stakeholders to discuss issues and possible solutions
   - Creation of a document combining and categorizing into buckets: Clinic Process, Wednesday Case Conference Process, MD Process, Access, IT, Patient/Family Experience, Research, Team Building, Other.
   - Group meeting with key teams to assess buy-in
   - Identification of areas of focus: Clinical and Conference Process, MD Process and Access
2. Creation of Process Maps
   - First meeting is scheduled for mapping of clinic and conference process
   - Identification of areas of improvement after this meeting
3. Expansion of clinic (Early phase of implementation)
   - Piloting a monthly hand clinic with Medical, Surgical, IR, NP
   - Medical/NP clinic for acute visits, low acuity new visits and medication initiation
4. Obtain Baseline data and identify measures (Early phase of Implementation)
   - Patient and family satisfaction
   - Employee satisfaction
   - Time to first appointment
   - Time to first conference review

**Outcomes and Evaluation Strategy:**
1. Identification of areas of improvement and strategies for improvement from process mapping
2. Improvement of patient and family satisfaction from baseline (survey) (assessed at clinic visits)
3. Improvement of employee satisfaction from baseline (survey) (monthly)
4. Improvement in time to first appointment (quarterly)
5. Improvement in time to first conference review from baseline data (quarterly)
Background

- VAC is the oldest vascular anomaly center in the world
- Highly regarded for its expertise and state of the art care
- 2014 chosen as BCH first center of excellence
- Significant increase in volume and acuity of patients
- Need for process and outcome re-evaluation

Methods

- Establishing a Team
  - Meetings with stakeholders (issues/solutions)
  - Document of issues/solutions categorized into buckets: Clinic Process, Wednesday Case Conference Process, MD Process, Patient/Family Experience, Research, Team Building, Other
- Creation of Process Maps
  - Mapping of the Clinic Process and the Wednesday Case Conference Process
  - Failure Mode Effect Analysis (FMEA)
- Expansion of Clinic
  - Piloting a monthly anatomic subspecialty clinic (extremity: surgery, IR, medical)
  - Piloting a NP/Medical clinic 2x/month for acute and low acuity new patients
- Obtain baseline data
  - Patient and Family experience (Press Ganey outpatient surveys)
  - Employee Satisfaction
  - Time to first clinic appointment
  - Time to conference review
- Identify Measures

Outcomes and Evaluation Strategy

- Participation of team members in all steps of change
- Promotion of team “buy-in”
- Identification of key improvement areas and strategies from process mapping
- Discussion of possible outcome measures:
  - Improvement of patient and family satisfaction from baseline (assessment at clinic visit)
  - Improvement of VAC team satisfaction from baseline (survey administered quarterly)
  - Improvement in time to first appointment (quarterly)
  - Improvement in time to conference review (quarterly)

Conclusions

- Team engagement is critical to success
- Change is difficult and may take time
- Continual evaluation of processes and roles is essential for maintaining a center's growth and productivity
- Importance of awareness of the strengths and weaknesses of your team
- An early win is helpful for team confidence building
- Transparency and communication is needed for team cohesiveness

Future Directions

- Team Development
- Develop Measures
- Collect and Report Data
- Standardize Care
- Optimize Systems
- Sustain/Institutionalize

VAC Clinical Volume

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Global Objective: To establish a comprehensive dashboard measuring performance in both process and outcome measures (clinical, research, patient and family satisfaction, functional and financial)

Immediate Objective: To develop a foundation for success by promoting team work and contribution from the VAC stakeholders. To launch key process and outcome measures

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The Journey to a Comprehensive QI Dashboard

Denise M Adams, MD; Steven Fishman, MD; John Mulliken, MD; Ahmad Alomari, MD; Cameron Trenor III, MD; Marilyn Liang, MD; Samantha Spencer, MD; Ann Greene, MD; Darren Orback, MD PhD; Gulraiz Chaudry, MD; Raja Shaikh, MD; Mary Landrigan-Ossar, MD; PhD; Reza Rahbar, DMD MD; Amir Taghnia, MD; Mary Beth Sylvia, MS, CFNP; Erin Spera, MS, CPNP; Cindy Kerr, MSN, CPNP; Bridget DeYoung, CPNP; Maria DaRocha, CPNP; Meghan O’Hare, CPNP; Brooke Corder, MSW, LICSW; Linda Han; Taylor Everett, Mohammad Alkhawaldeh BSN, MSN/NI; Michael Gillespie, VP

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