Challenges of providing genomic medicine in a resource constrained system

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Genomic medicine in an urban FQHC

• Variation between providers’ knowledge and practice
• Genetic diseases – rarely seen, leading to delay of recognition/referral
• Genetic consultation by external referral and varies by payor source
• Rare and severe genetic syndromes are best managed in subspecialty care setting
• Screening asymptomatic patients with risk for well-defined hereditary syndromes needed but not yet standard of care
• Role of primary care in genomic medicine not yet well defined
Denver Health

• Primary integrated safety net health system in Denver and regional trauma center
• Nine outpatient federally qualified health centers
• Cares for almost one-third of Denver county’s population
• Inpatient 525 bed facility with >25,000 admissions annually
Lowry Family Health Center

Unique users: 27,000
Providers: 15
<200% FPL 98%
Hispanic 29%
Black 29%
Medicare or Medicaid 74%
50 Languages in Total

- English, 15,541
- Spanish, 4,093
- Nepali, 3,185
- Arabic, 2,480
- Amharic, 1,526
- Other, 3,347
Navigators Adrien Matadi and Kuang Oo standing outside of LFHC
Primary Care Providers in FQHC

- Perceive limited benefit of genomic medicine
- Competing demands
- More urgent issues
- Confusion about who and how to screen and refer (no clear guidelines or standard care)
- Awareness and education about genomic medicine and resources inconsistent
- Lack of actionable information and triggers in EMR
- Limited resources and support for patients, esp. with language/cultural barriers
- Unclear handoffs to specialty care
## 2018 ACS Clinical Performance Indicators

<table>
<thead>
<tr>
<th></th>
<th>Diabetes A1c &lt;8</th>
<th>Hypertension BP Controlled</th>
<th>Breast Cancer Screening</th>
<th>Colorectal Cancer Screening</th>
<th>Pediatric Vaccinations 60%</th>
<th>Six Well Child Visits Before 15 Months 79%</th>
<th>Well Child Check Rate 3-9 year olds 76%</th>
<th>Weight Assessment and Counseling - Peds 64%</th>
<th>First Trimester Entry into Prenatal Care**</th>
<th>Post-Partum Visit 21-56 days**</th>
<th>ACS Tobacco Interventions*</th>
<th>Ambulatory Quality Strategic Index 14 pts</th>
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<tbody>
<tr>
<td><strong>OHS Overall</strong></td>
<td>57.25%</td>
<td>63.42%</td>
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<td>51.47%</td>
<td>74.42%</td>
<td>74.87%</td>
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<td>62.84%</td>
<td>57.3%</td>
<td>50.69%</td>
<td>44.89%</td>
<td>72.26%</td>
<td>73.3%</td>
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<td>57.14%</td>
<td>80.82%</td>
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*Note: The data includes various clinical performance indicators such as Diabetes A1c, Hypertension BP, Breast Cancer Screening, Colorectal Cancer Screening, Pediatric Vaccinations, Six Well Child Visits, Well Child Check Rate, Weight Assessment and Counseling, First Trimester Entry into Prenatal Care, Post-Partum Visit, and ACS Tobacco Interventions. Each indicator is measured against a strategic index to assess performance across different divisions within OHS and Family Medicine Division.
% patients with FH collected in DH Primary Care 05/2018

<table>
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<th>Any Family History</th>
<th>Cancer FH</th>
<th>Diabetes/CVD FH</th>
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<td>FM</td>
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<tr>
<td>OB/GYN</td>
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<td>19</td>
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<tr>
<td>Total</td>
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<td>20</td>
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Diverse patients

- More likely to have ambiguous result
- Higher burden of comorbid conditions with fewer resources
- Information about family history uncertain
- Preventive healthcare and wellness less of a priority, more accepting of acute care
- Language, literacy and cultural barriers
- Additional burden and costs accessing care
- Less knowledge about genomic medicine and syndromes
- Lack of culturally competent educational resources and support groups
- More likely to rely on provider or community for guidance than their own research
System issues

- Screening for familial conditions inconsistent and not measured
- Limited resources and access to genomic medicine
- Lack of payor sources
- Cost and consistency of downstream care
- Handoffs between primary and specialty care not defined
Meeting these gaps where I work

- Diverse patient centered care
- Tailoring genomic medicine services to diverse populations
- Cost-effective
- Evidence-based guidelines for population care
- Patient/provider communication and trust
- Provider education, support and feedback
- Optimizing electronic tools and standard work
- Empowering patients to understand their and their families’ health