Opportunities for Healthcare Quality Measurement in Genomics

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About me...
Healthcare Policy & Quality-based Payment Environment

Intersection of Measurement and Genomics

Healthcare Quality Measurement

Opportunities for Measurement in Genomics
NQF is an independent, nonprofit, membership organization that brings together all stakeholders working to improve health and healthcare through quality measurement.

Stakeholders include:

- Patients, Consumers, Families, & Caregivers
- Primary Care, Specialists, & Other Health Professionals
- Health Systems & Care Facilities
- Employers & Payers (private & public)
- Measure Developers and Programs
- Health and Measurement Researchers
Quality Measurement Basics

**Measure**

n. A standard: a basis for comparison; a reference point against which other things can be evaluated; “they set the measure for all subsequent work.”

v. To bring into comparison against a standard.*
### How is Performance Calculated?

**Numerator**
- Patients with HbA1c testing during the measurement period

**Denominator**
- Patients with type 1 or 2 diabetes who had at least one described encounter during the measurement period

**Exclusions**
- Patients with gestational or steroid-induced diabetes
Example Measure: Percentage of Patients Receiving Hemoglobin A1c Testing

\[
\frac{\text{Numerator}}{\text{Denominator} - \text{Exclusions}} = \frac{4}{10 - 2} = \frac{4}{8} = 50\%
\]
Types of Measures

- Structural
- Process
- Intermediate Outcome
- Outcome
- Patient Reported Outcome Performance Measure (PRO-PM)
- *Cost/Resource
- *Efficiency
- *Composite

*Listed for completeness and will not be discussed in detail
Types of Measures: Structural

**Structural**: Assesses healthcare infrastructure

Examples:
- Providers who can send prescription information to a pharmacy electronically
- Number of nursing hours per patient day
- Providers who have a reminder system for screening mammograms
Types of Measures: Process

**Process**: Assesses steps that should be followed to provide appropriate care

**Examples:**
- Patients with HbA1c testing during the measurement period
- Adolescents who have received recommended immunizations
- Stroke patients who receive clot-busting medications in a timely manner
Intermediate Outcome: Assesses a factor or short-term result that contributes to an ultimate outcome

Examples:

• Individuals with Blood Pressure < 140/90
• Diabetics with HbA1c levels < 8%
**Outcome**: Assesses the results of healthcare that are experienced by patients

Examples:
- Individuals who die after a heart attack
- Hospital readmissions
Types of Measures: Patient-Reported Outcome Performance Measure (PRO-PM)

**PRO-PM:** Assesses performance using an instrument, scale, or survey that gathers the information directly from the patient, consumer, or caregiver on their healthcare engagement and experiences.

Examples:

- Improvement in patient-rated pain
- Patients or caregivers who say they are involved in care decisions
- Caregivers who feel confident giving medications to a family member
The Current Landscape of Quality Measurement
National Quality Strategy

Better Care

Healthier People, Healthier Communities

Smarter Spending

PRIORITIES

Make care safer by reducing harm caused in the delivery of care.

Strengthen person and family engagement as partners in care.

Promote effective communication and coordination of care.

Promote effective prevention and treatment of chronic disease.

Work with communities to promote best practices of healthy living.

Make care affordable.
U.S. Policy Environment: From Volume to Value

Outcomes
- Defined by patient
- Measured for patient’s condition over entire episode of care

Cost
- Measured for patient’s condition over entire episode of care

Value for Patients over their condition = Health Outcomes / Cost of delivering outcomes

VALUE FOR PATIENTS
U.S. Policy Environment: From Volume to Value

Percentage of Medicare payments linked to quality measurement

- 2017: ± 0%
- 2018: ± 0%
- 2019: ± 4%
- 2020: ± 5%
- 2021: ± 7%
- 2022: ± 9%
Other Measurement Considerations

- Attribution (Who is responsible?)
- Intended Use (How is this used? Quality improvement? Payment?)
Opportunities for Quality Measurement in Genomics
Emerging Priorities in Quality Measurement

- Actionable & Improvable
- Patient Centered
- Outcome Focused
- Integrated Care
Gene conversion within regulatory sequences generates maize r alleles with altered gene expression.


Author information

Abstract
The maize r locus encodes a transcription factor that regulates the developmental expression of the plant pigment anthocyanin. In an unusual example of gene regulatory diversity, the R-sc (Sc, strong seed color) and the R-p (P, plant color) alleles of r have nonoverlapping tissue specificity and nonhomologous 5' flanking sequences. Heterozygotes between wild-type P and Sc mutants with Ds6 transposable element inserts (r-sc:m::Ds6 or sc:m) produce colored seed.
Alignment of NHGRI’s Genomic Medicine Workgroup concepts with NQF

- Family implications of screening
- Familial hypercholesterolemia
- Lynch Syndrome
- BRCA1/2
- EGFR testing in lung cancer
- HLA-B*5701 & abacavir
Opportunities for Measure Development

- NHGRI’s Genomic Medicine Workgroup has several well developed measure concepts
- Late 2016 - discussions with the NQF on implementation
- Identified two topic areas most ready for advancement

Familial Hypercholesterolemia

Lynch Syndrome
When in Doubt, Remember that the Patient is the True North
THANK YOU