



NATIONAL
QUALITY FORUM

Opportunities for Healthcare Quality Measurement in Genomics

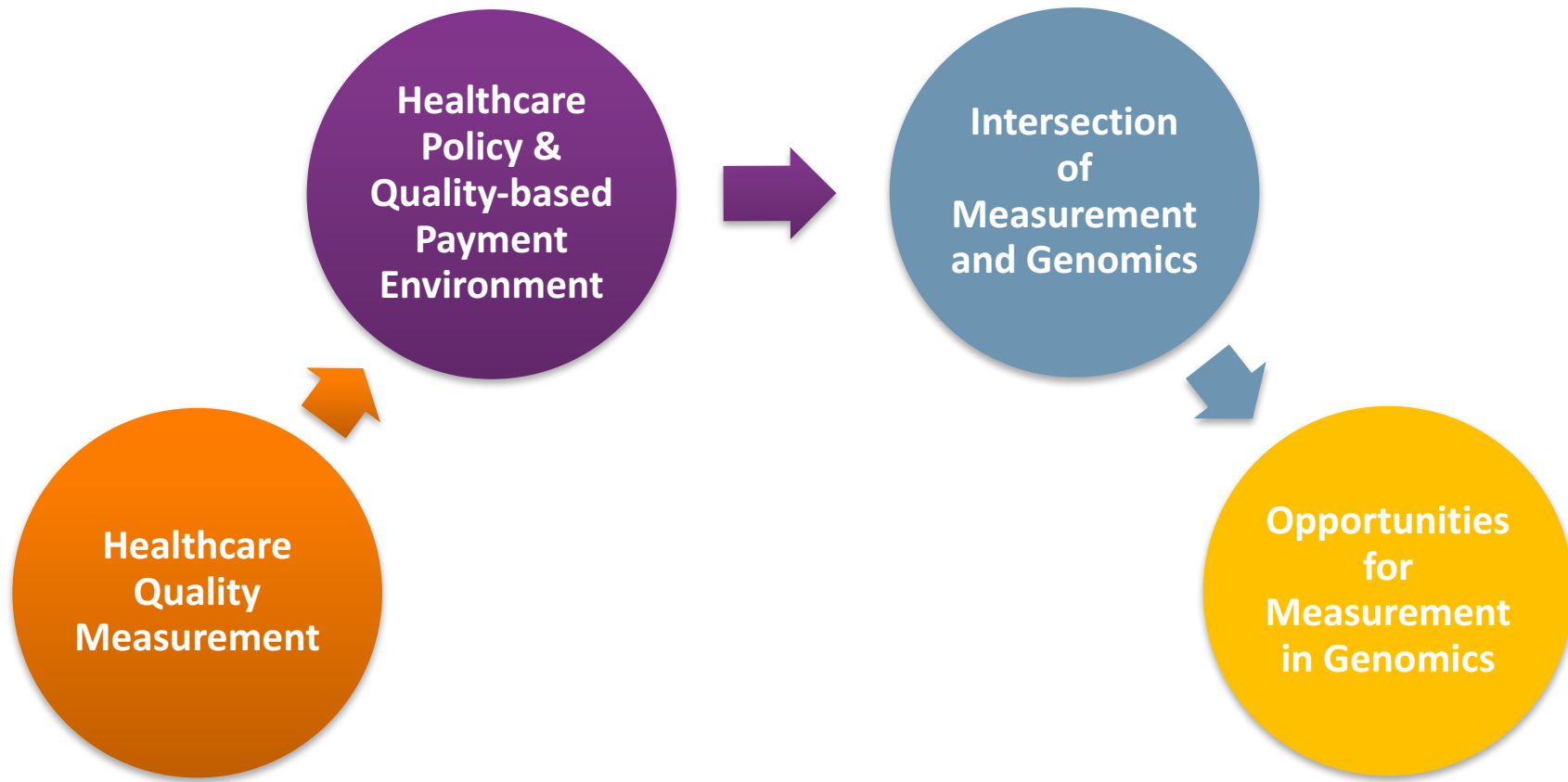
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Sr. Director – Quality Measurement

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About me...



Objectives



National Quality Forum

- 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

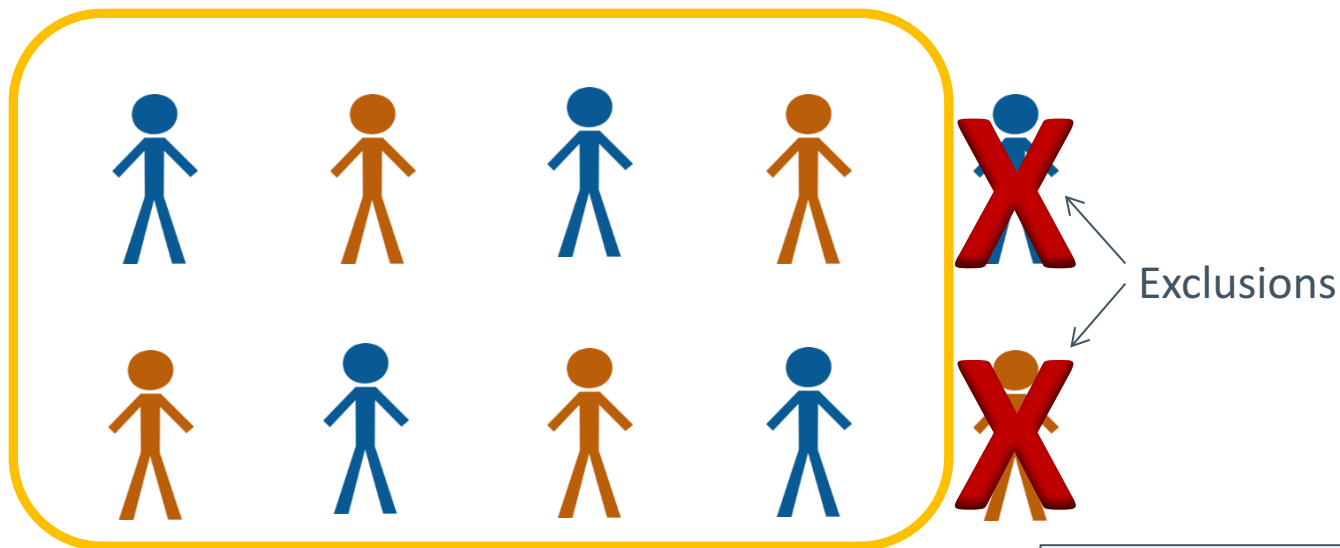
Patients with type 1 or 2 diabetes who had at least one described encounter during the measurement period

—

Exclusions

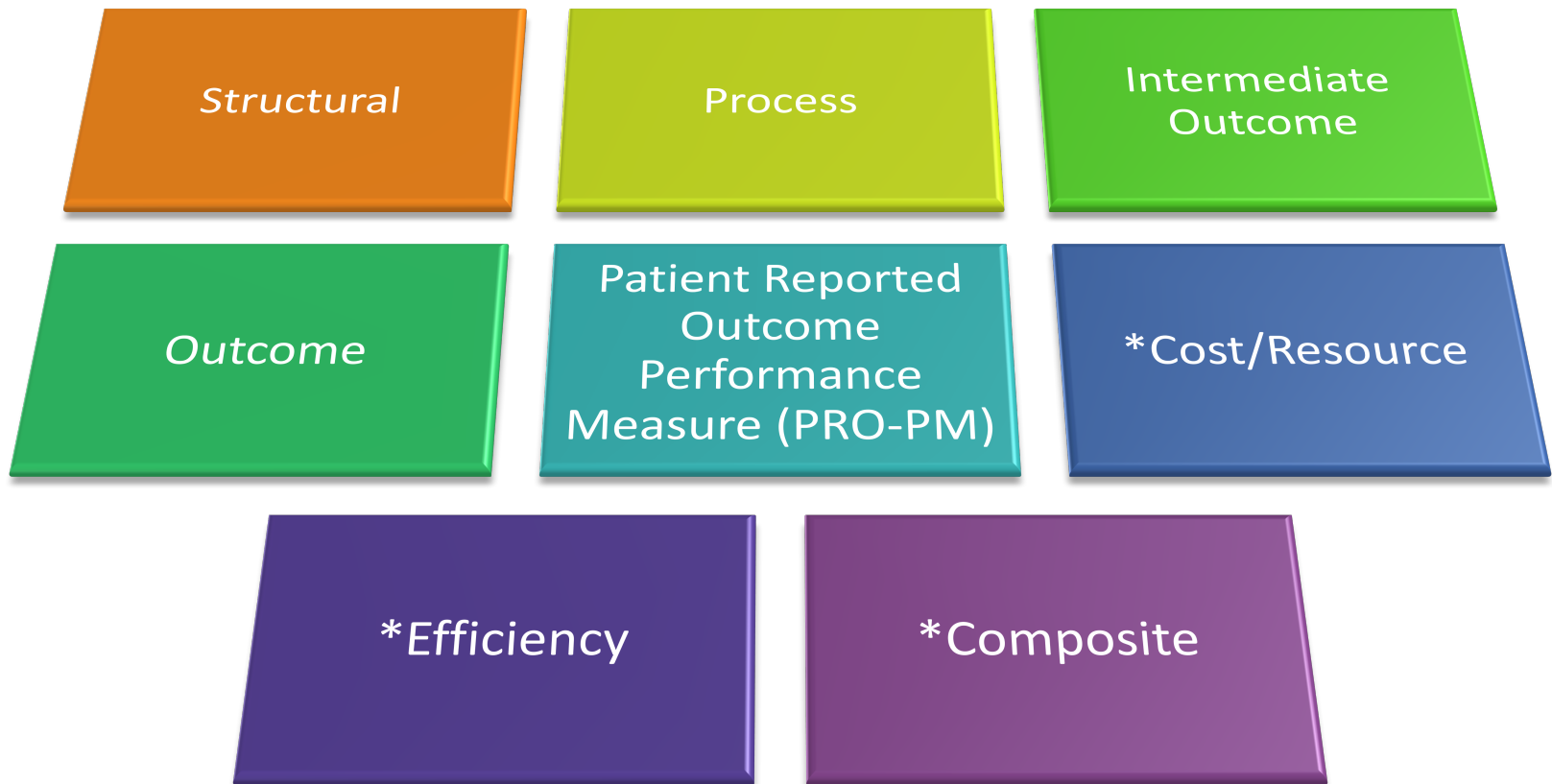
Patients with gestational or steroid-induced diabetes

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



*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

Types of Measures: Intermediate Outcome

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%

Types of Measures: Outcome

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.

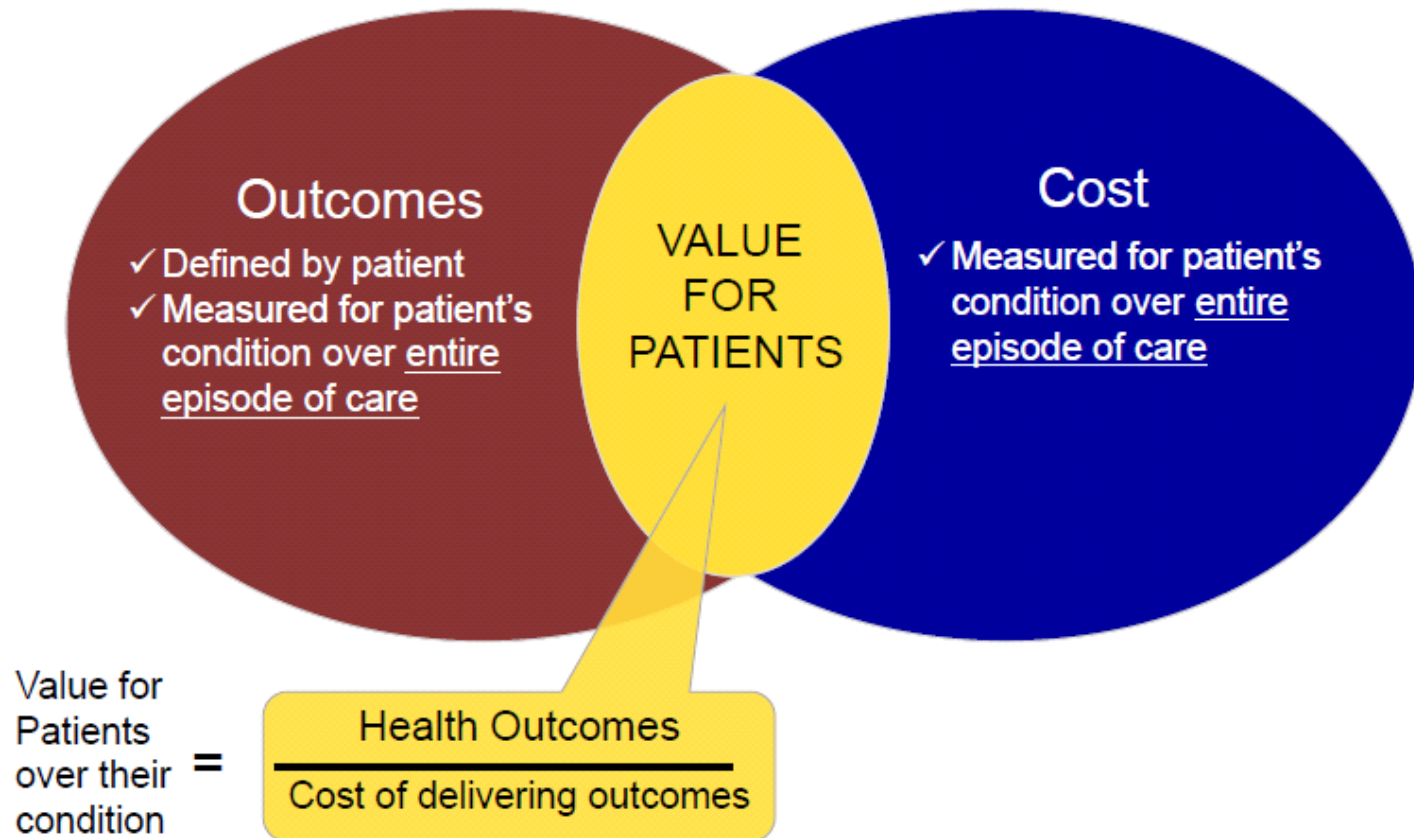
Promote effective communication and coordination of care.

Promote effective prevention and treatment of chronic disease.

Work with communities to promote best practices of healthy living.

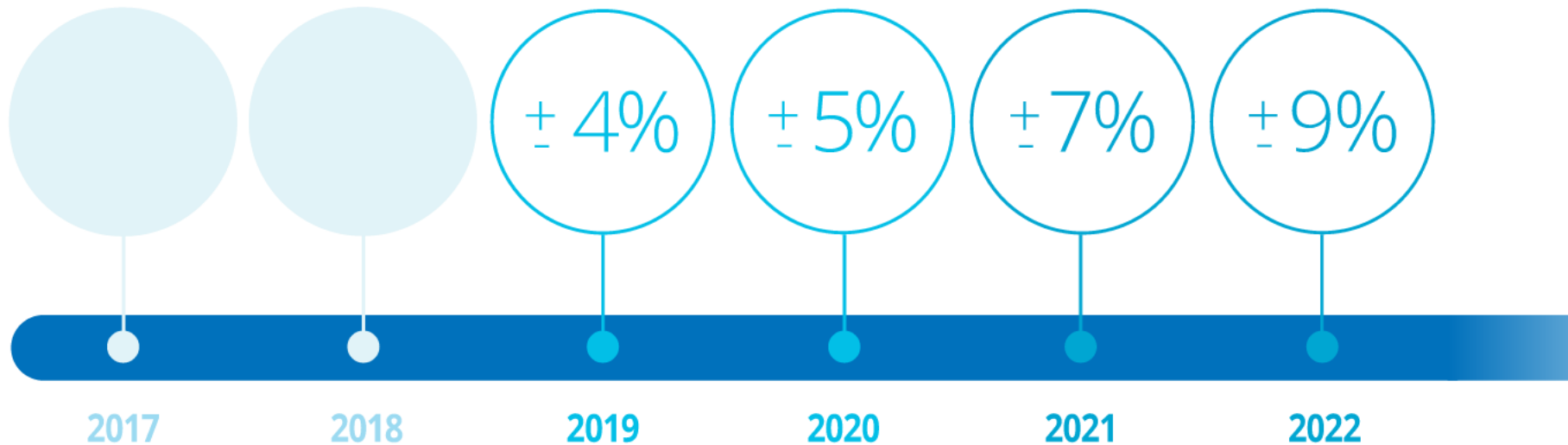
Make care affordable.

U.S. Policy Environment: From Volume to Value



U.S. Policy Environment: From Volume to Value

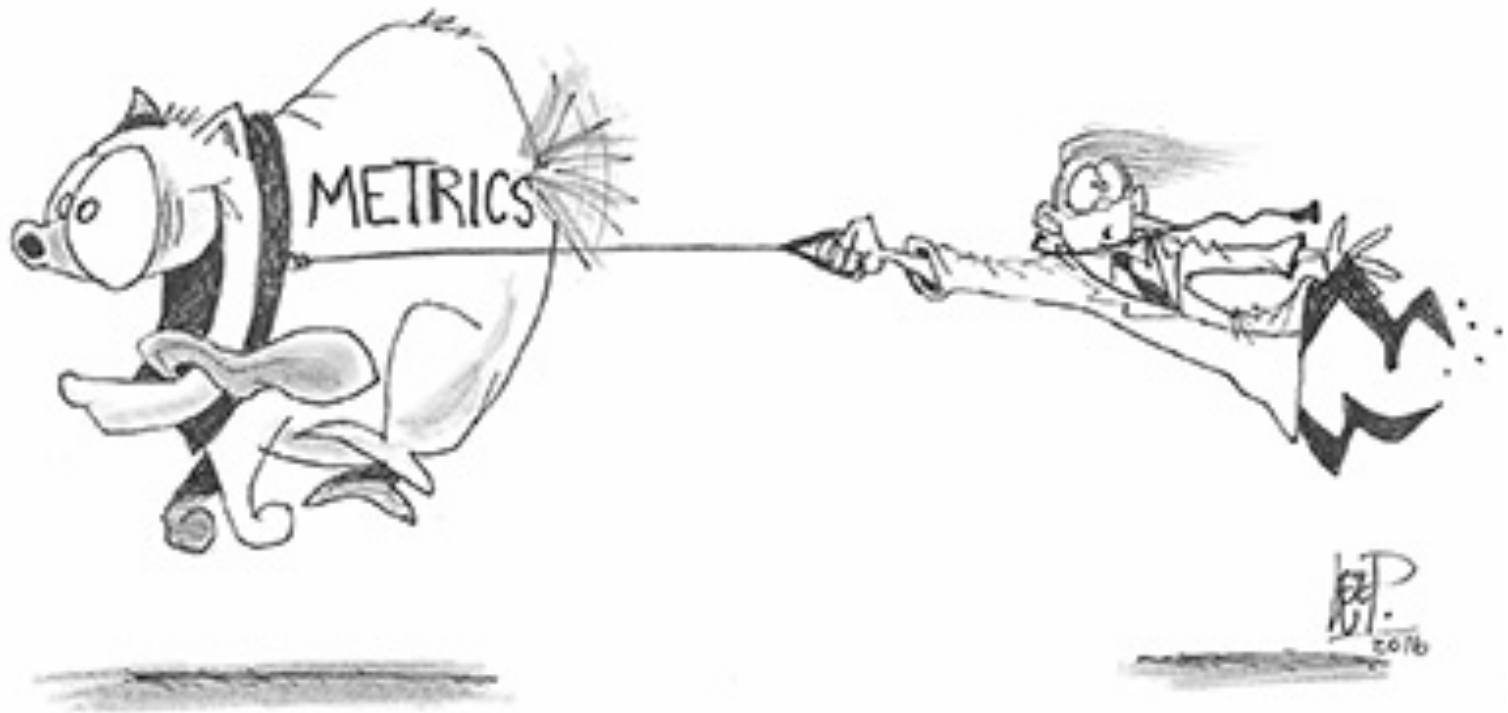
Percentage of Medicare payments linked to quality measurement



Other Measurement Considerations

Attribution
(Who is responsible?)

Intended Use
(How is this used?
Quality improvement?
Payment?)



Opportunities for Quality Measurement in Genomics



Healthcare Quality Measurement



Genomics & Personalized Medicine

Emerging Priorities in Quality Measurement

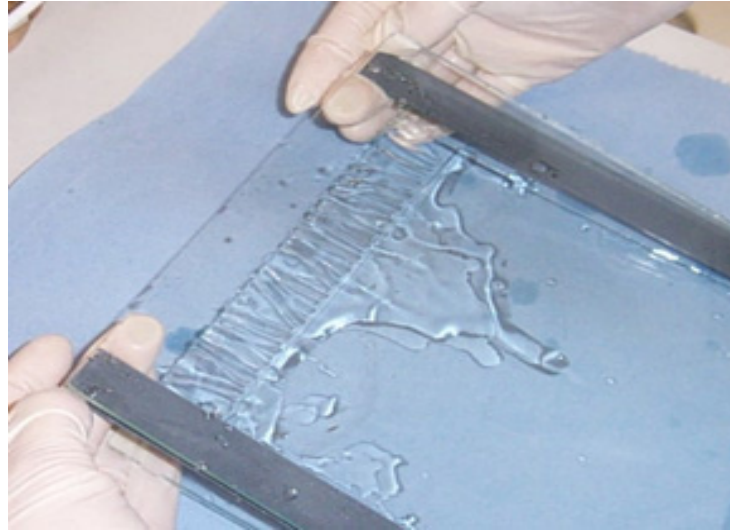
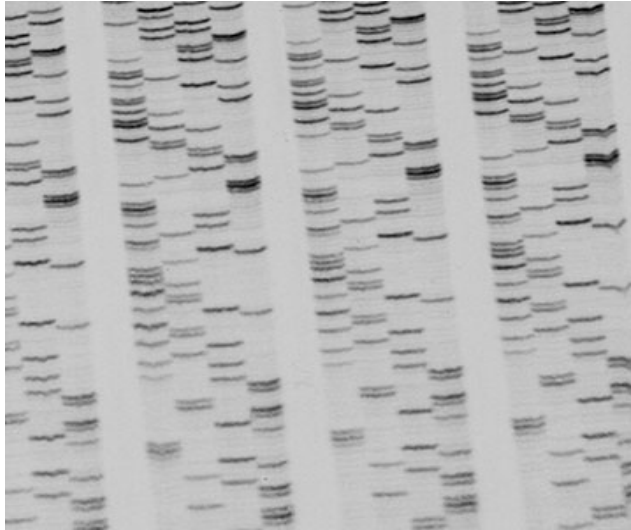
Actionable &
Improvable

Patient
Centered

Outcome
Focused

Integrated
Care

Advancements in Genetics and Genomics



[Genetics](#). 2001 Dec;159(4):1727-40.

Gene conversion within regulatory sequences generates maize *r* alleles with altered gene expression.

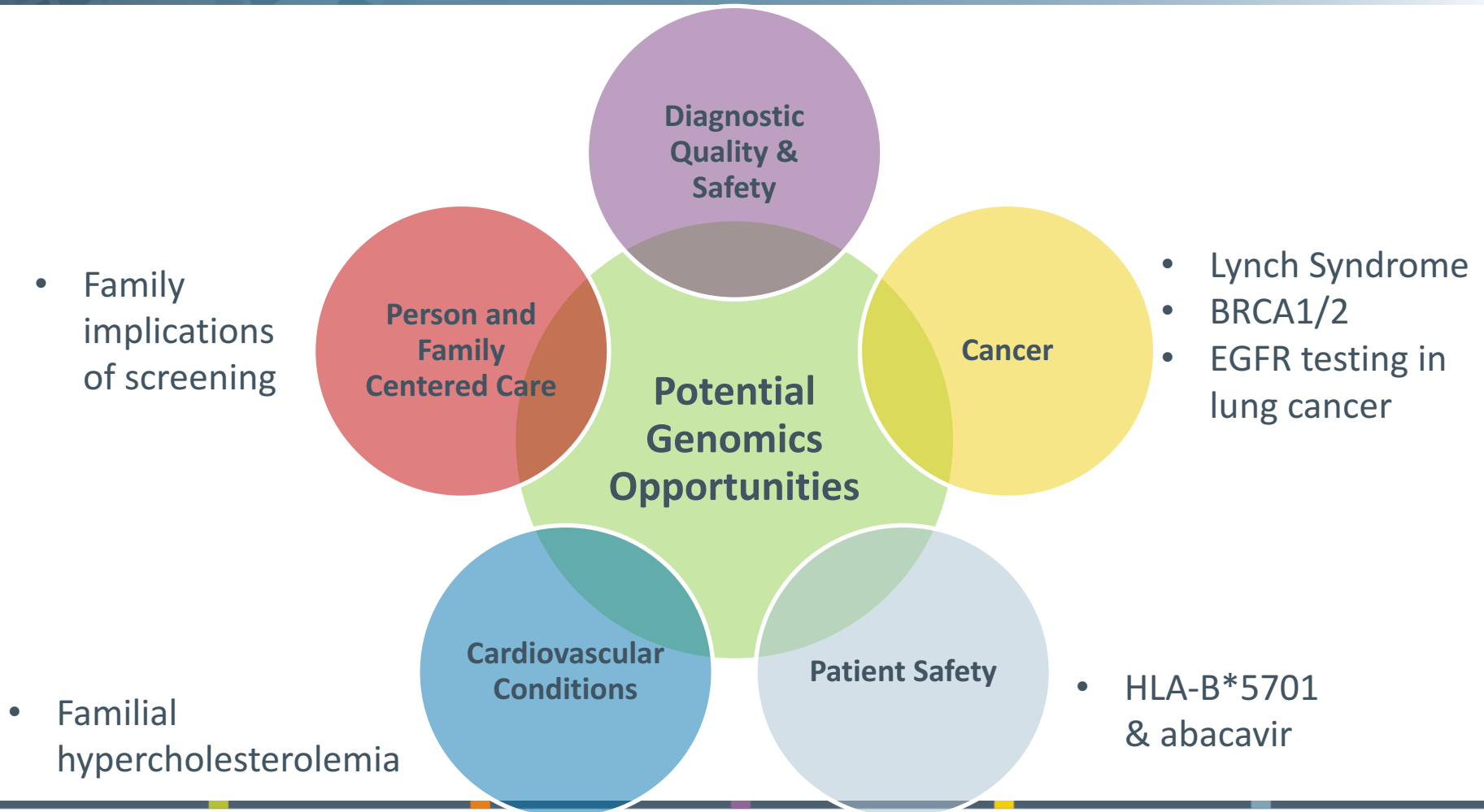
[Li Y¹](#), [Bernot JP](#), [Illingworth C](#), [Lison W](#), [Bernot KM](#), [Eggleston WB](#), [Fogle KJ](#), [DiPaola JE](#), [Kermicle J](#), [Alleman M](#).

⊕ 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::Ds6* or *sc:m*) produce colored seed

Alignment of NHGRI's Genomic Medicine Workgroup concepts with NQF



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