

CHAPTER 15

Genomics (G)

Lead Agencies

Agency for Healthcare Research and Quality
Centers for Disease Control and Prevention

Contents

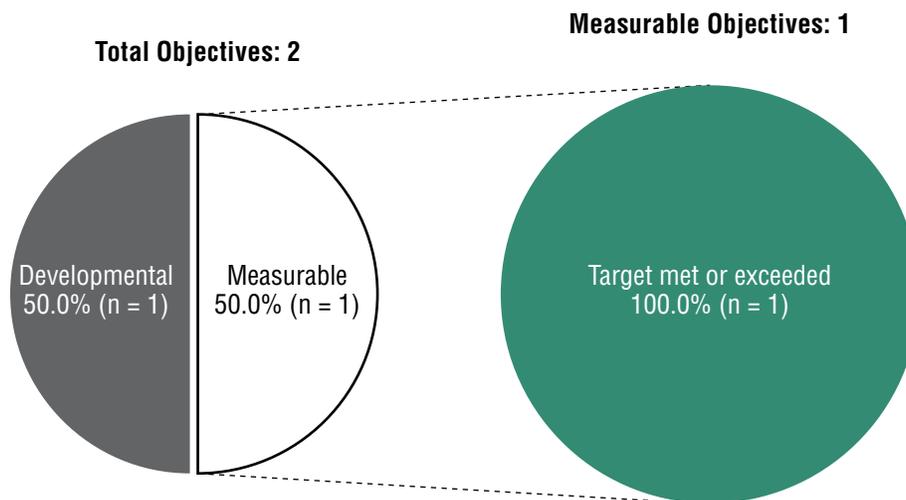
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Goal: Improve health and prevent harm through valid and useful genomic tools in clinical and public health practices.

This chapter includes objectives that monitor the receipt of genetic counseling by women with a family history of breast and/or ovarian cancer or genetic testing by persons with colorectal cancer. The *Reader's Guide* provides a step-by-step explanation of the content of this chapter, including criteria for highlighting objectives in the Selected Findings.¹

Status of Objectives

Figure 15–1. Midcourse Status of the Genomics Objectives



Of the two objectives in the Genomics Topic Area, one objective was developmental,² and one was measurable³ (Figure 15–1, Table 15–1). At midcourse, the measurable objective had achieved the 2020 target⁴ (Table 15–2).

Selected Findings

- The age-adjusted proportion of **women aged 18 and over with a family history of breast and/or ovarian cancer who received genetic counseling (G-1)** increased from 34.6% in 2005 to 52.9% in 2010, exceeding the 2020 target (Table 15–2).

More Information

Readers interested in more detailed information about the objectives in this topic area are invited to visit the [HealthyPeople.gov](http://www.healthypeople.gov) website, where extensive substantive and technical information is available:

- For the background and importance of the topic area, see: <http://www.healthypeople.gov/2020/topics-objectives/topic/genomics>
- For data details for each objective, including definitions, numerators, denominators, calculations, and data limitations, see: <http://www.healthypeople.gov/2020/topics-objectives/topic/genomics/objectives> *Select an objective, then click on the “Data Details” icon.*
- For objective data, including rates, percentages, or counts for multiple years, see: <http://www.healthypeople.gov/2020/topics-objectives/topic/genomics/objectives> *Select an objective, then click on the “Data2020” icon.*

Data for the measurable objective in this chapter were from the following data source:

- National Health Interview Survey:
<http://www.cdc.gov/nchs/nhis.htm>

Footnotes

¹The **Technical Notes** provide more information on Healthy People 2020 statistical methods and issues.

²**Developmental** objectives did not have a national baseline value.

³**Measurable** objectives had a national baseline value.

⁴**Target met or exceeded**—One of the following, as specified in the Midcourse Progress Table:

- » At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)
- » The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)

Suggested Citation

National Center for Health Statistics. Chapter 15: Genomics. Healthy People 2020 Midcourse Review. Hyattsville, MD. 2016.

Table 15-1. Genomics Objectives

LEGEND

-  Data for this objective are available in this chapter's Midcourse Progress Table.
-  Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.
-  A state or county level map for this objective is available at the end of the chapter.

Not Applicable Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
G-1	Increase the proportion of women with a family history of breast and/or ovarian cancer who receive genetic counseling	National Health Interview Survey (NHIS), CDC/NCHS	
G-2	(Developmental) Increase the proportion of persons with newly diagnosed colorectal cancer who receive genetic testing to identify Lynch syndrome (or familial colorectal cancer syndromes)	(Potential) National Program of Cancer Registries (NPCR), CDC/NCCDPPH; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI	Not Applicable

Table 15–2. Midcourse Progress for the Measurable¹ Genomics Objective

LEGEND

 Target met or exceeded^{2,3}
 Improving^{4,5}
 Little or no detectable change⁶⁻¹⁰
 Getting worse^{11,12}
 Baseline only¹³
 Informational¹⁴

Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
 ² G-1 Women with a family history of breast and/or ovarian cancer who receive genetic counseling (age-adjusted, percent, 18+ years)	34.6% (2005)	52.9% (2010)	38.1%	522.9%		

NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The **Technical Notes** provide more information on the measures of progress.

FOOTNOTES

- ¹**Measurable** objectives had a national baseline value.
- Target met or exceeded:**
 - ²At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)
 - ³The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)
- Improving:**
 - ⁴Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.
 - ⁵Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.
- Little or no detectable change:**
 - ⁶Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.
 - ⁷Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.
 - ⁸Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.
 - ⁹Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline.
 - ¹⁰There was no change between the baseline and the midcourse data point.

FOOTNOTES—Continued

- Getting worse:**
 - ¹¹Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.
 - ¹²Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.
- ¹³**Baseline only:** The objective only had one data point, so progress toward target attainment could not be assessed.
- ¹⁴**Informational:** A target was not set for this objective, so progress toward target attainment could not be assessed.
- ¹⁵For objectives that **moved toward** their targets, movement toward the target was measured as the percentage of targeted change achieved (unless the target was already met or exceeded at baseline):

$$\text{Percentage of targeted change achieved} = \frac{\text{Midcourse value} - \text{Baseline value}}{\text{HP2020 target} - \text{Baseline value}} \times 100$$
- ¹⁶For objectives that **moved away** from their baselines and targets, movement away from the baseline was measured as the magnitude of the percentage change from baseline:

$$\text{Magnitude of percentage change from baseline} = \frac{|\text{Midcourse value} - \text{Baseline value}|}{\text{Baseline value}} \times 100$$
- ¹⁷Statistical significance was tested when the objective had a target and at least two data points, standard errors of the data were available, and a normal distribution could be assumed. Statistical significance of the percentage of targeted change achieved or the magnitude of the percentage change from baseline was assessed at the 0.05 level using a normal one-sided test.

DATA SOURCE

G-1 National Health Interview Survey (NHIS), CDC/NCHS