

The following criteria, guiding principles, and framework were refined and adopted by the Quantitative Data Workgroup to support indicator selection and compilation in the 2013 Colorado Health Assessment.

Criteria for indicator selection

- **Availability – at state level:** The indicator is available at the state level; may be available at sub-state (e.g., regional, county) level and by selected demographics.
- **Standardization and comparability:**
 - The indicator is standardized so that it can be compared to other measures. (Source: Quality Indicators for Progress, Jacksonville Community Council)
 - The indicator is equivalent in its metric and timeframe in order to examine the magnitude and direction of differences between counties or between other measures.
 - The indicator is well-documented, consistent, and of known quality
 - The sample and data collection methods used are comparable
 - The analytic methods are comparable
- **Trusted sources:** The indicator comes from recognized population based data sources known to be trustworthy. Credible sources clearly state the context and sources of their data and any assumptions or limitations their data may have. (Source: CHI)
- **Valid and reliable:**
 - **Valid:** The indicator measures what it is intended to measure. Face or ecological validity will also be considered. (Source: Rossi, PH, et al. *Evaluation, A System Approach*, 6th Edition)
 - **Reliable:** The indicator produces the same results repeatedly. Related, the phenomenon being measured by the indicator can be consistently measured over time and will continue to be measured over time (Source: Adapted from Jacksonville; *Evaluation, A System Approach*)
- **At least one indicator is selected in each area recommended by steering committee/Act:**
 - Health status, Behavioral risk, Mental health, Environmental health, Oral health, Health disparities, Social determinants of health

Source: Colorado’s Public Health Improvement Plan 2009, Recommendations for Improving Colorado’s Public Health System. Section II, Assessment and Planning, *Strategic Recommendation #1* (p. 19)
- **Meaningful/salient:** The indicator represents an important and relevant aspect of the public’s health and is presented in a user friendly manner. (Source: Healthy People 2010 Leading Health Indicators Criteria)
- **Burden:** The indicator measures something that significantly contributes to mortality or morbidity or quality of life
- **No redundancy:** Each indicator makes a unique contribution.
(Source: Quality Indicators for Progress, Jacksonville Community Council)

Guiding principles for indicator selection

- **State-level geography at minimum**
 - In order to best facilitate planning at the state level, data should be presented (or available) at the most meaningful geographic unit possible. Depending on the data set, this might be the state, region, county, or sub-county levels.
- **Stratify by demographics to identify disparities**
 - Disparities by race, ethnicity, age, sex, gender identification, income, education, disability and sexual orientation should be illustrated where possible allowing for special focus on priority populations.
- **Stay open to emerging issues**
 - Our data systems can be largely static and measure what we know at any given time to be important. This process should stay open to emerging issues so that we don't overlook upcoming issues of importance.
- **Not limited to outcomes only (health determinants, risk behaviors, health care system indicators, outcomes)**
 - This indicator set should encompass factors contributing to health and/or illness such as social and physical environments, individual behaviors, and health care access as well as morbidity and mortality measures.
- **Smallest timeframe possible**
 - Due to rare events or small population sizes, it is sometimes necessary to combine years of data in order to generate stable estimates; however combining years of data obstructs the ability to look at trends over time. Every effort should be made to combine the fewest number of years that will yield the most reliable estimates.
- **Evidence-based**
 - Indicators should be selected based on evidence that they make an important contribution to the health and wellbeing of the population. For some areas such as environmental health and mental health, there might not be strong evidence in which case we will apply "face or ecological validity" and accept our expert panel's decision.
- **Include indicators that are both actionable and contextual**
 - Indicators should reflect areas amenable to public health intervention (e.g., tobacco prevention); however, we also want to conclude indicators reflecting the context in which people live that impact health (e.g., poverty rates). For indicators that are actionable, they should be sensitive to change over time.
- **Be consistent with key indicators of state-level efforts** (MCH priorities, APCD, etc.) where possible.

Framework for indicator compilation

The work group chose to adopt the Health Equity Framework developed by the Social Determinants of Health Work Group of the Prevention Services Division. That group developed this model as a means of rethinking how prevention services are provided in the state. They relied heavily on work from the Centers for Disease Control and Prevention and the Queensland Government in Australia. The PH Indicators Work Group further refined the model as domains and indicators were selected. The model includes the life course perspective and looks at determinants of health, health factors and population health outcomes.

