APEG
Amendment 35
Program Evaluation Group

Office of Health Disparities (OHD) Grant Program
Preliminary Gap Analysis

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October 16, 2007

Prepared for the Office of Health Disparities,
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1. Purpose and Scope

The purpose of this preliminary gap analysis is to identify health disparities priority areas recommended by state and national strategic plans that are not addressed by programs funded by the Office of Health Disparities(OHD), to guide the next OHD funding process.

The scope of this report is limited to the existence or absence of funded programs aimed at the priority areas. No inferences are made about efficacy, reach or cultural competence of the interventions, which will be addressed in subsequent analyses.

2. Methods

We abstracted state and major national plans and recommendations related to cancer, cardiovascular and pulmonary disease, the major conditions set as priorities for the program. The following ten plans were reviewed:

- Turning Point Initiative
- Colorado Health Disparities Report (most recent)
- Colorado Health Disparities Conference
- Colorado Heart Healthy and Stroke Free: Reaching the future 2005-2010
- Colorado Action Plans for
    - Asthma
    - Cancer
    - Diabetes
    - Physical Activity & Nutrition
- USHHS Initiative to Eliminate Health Disparities
- Healthy People 2010

The following variables were abstracted from each plan:

- year of publication
- disease or condition (cancer, cardiovascular, pulmonary disease)
- recommendations on cultural sensitivity, education, research and epidemiology, health care access, risk factors and policy making
- populations in need (Latinos, blacks, Asians/Pacific Islanders, Native American, racial and ethnic minorities (REM, when no specific racial or ethnic group was specified))
- proposed strategies

Based on feedback from the Minority Health Advisory Commission (MHAC) on Oct. 5, 2007, we limited the main part of this report to diseases and conditions listed in table 1.

Table 1. **Office of Health Disparities strategic priorities, by population**				
	Latino	black	Asian	Native American
Cancer death (overall)				
Breast cancer death				
Cervical cancer				
Prostate cancer				
Colon cancer death				
Lung cancer				
Asthma management				
Cardiovascular disease (heart disease & stroke)				
Diabetes care				
Healthy life style choices (nutrition, physical activity)				
Obesity				
Increase diversity & cultural competence in the health care professions				

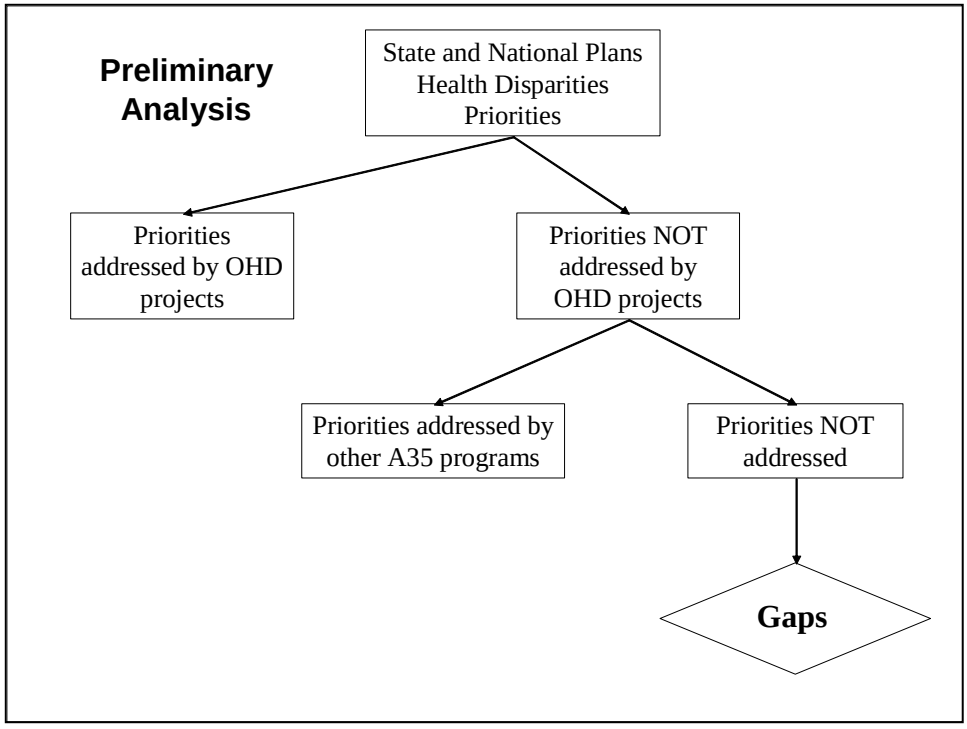
Colorado Priority; US & Colorado Priority; US priority

The 34 OHD grant proposals and preliminary reports were reviewed and abstracted on the following domains:

- Populations
    - Latinos
    - blacks
    - Asians (includes Pacific Islanders)
    - Native Americans (includes Alaska Natives)
    - Racial and ethnic minorities (REM)
- Condition or disease :
    - Cancer
    - Cardiovascular disease (and diabetes)
    - Pulmonary disease
    - Crosscutting (no specific disease focus, or focus on multiple disease conditions)
- Geographic area:
    - Denver County
    - Denver Metro
    - Outside Denver Metro
    - Statewide (when program claimed statewide outreach)
- Strategies
    - Partnerships
    - Community health workers/ navigators/ promotores
    - Access to care
    - Cultural competence and diversity training

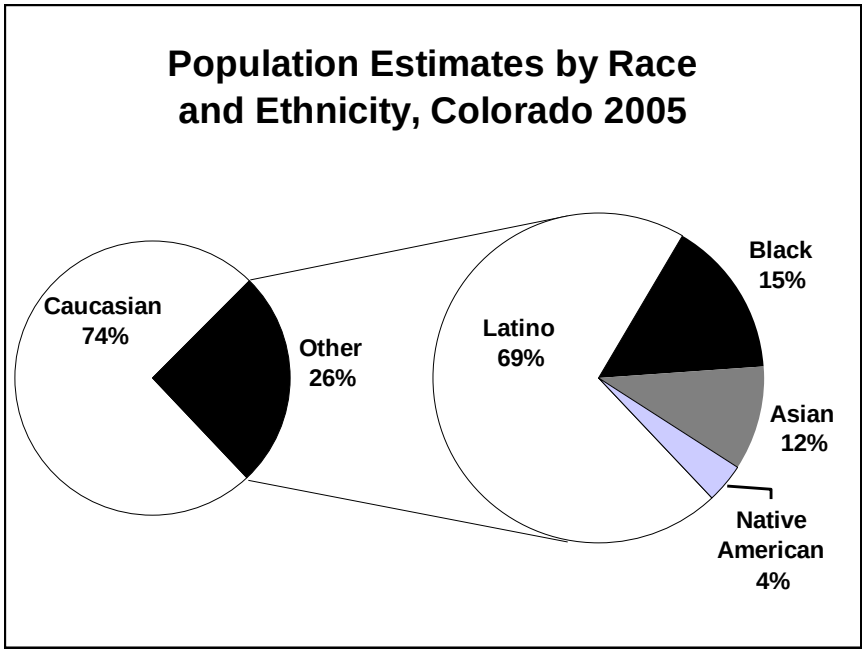
- Services
    - Population-based: (e.g., community education, public campaigns, media)
    - Individual-based: (e.g., case-management, physical activity classes provided to a limited group of individuals, screenings)
    - Technology, research
- Amount of funding (only initial amount funded).

After strategic plans and funded programs had been abstracted, the data were compared to identify tentative gaps. Where a priority was not addressed by the OHD programs, we used limited available information to determine whether other Amendment 35 projects were addressing these areas. Those priorities not addressed by either OHD or other Amendment 35 programs were classified as gaps in this preliminary analysis, as illustrated in the figure below:



3. Background information on REM distribution

The figure below shows the distribution of racial and ethnic populations in Colorado, based on 2005 Census data.



4. OHD funded programs:

4.1. Distribution by race/ethnicity, disease and geographic area

Table 2 shows the distribution of OHD funded programs by population, disease and geographic area during the first and second funding cycles.

Table 2. **OHD funded programs** (*n*=34)

	No.	**%**
Race/Ethnicity		
Latino	17	50%
racial/ethnic minorities (REM)	8	24%
black	4	12%
Native American	3	9%
Asian	2	6%
Disease		
Crosscutting	14	41%
Diabetes/CVD	9	26%
Diabetes	5	15%
Cancer	3	9%
CVD	2	6%

Table 2. **OHD funded programs** (*n*=34)		
Geographic area		
Outside Denver Metro	14	41%
Statewide	9	26%
Denver Metro	8	24%
Denver County	3	9%

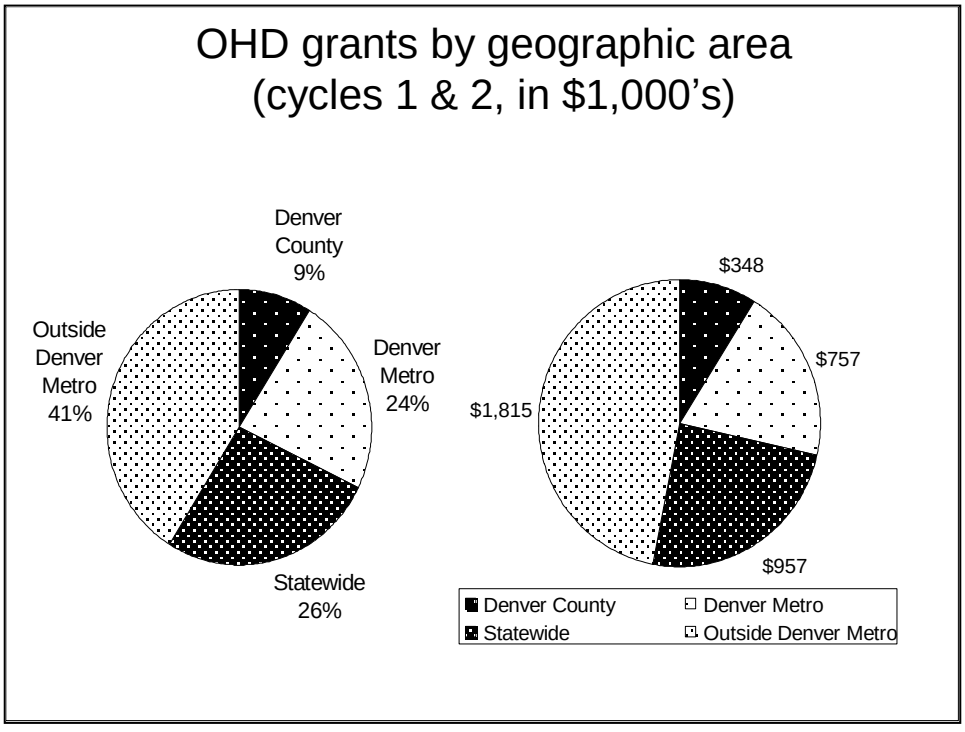
Crosscutting OHD programs addressed:

- Education on behavioral changes for prevention of CCPD (*n*=11):
    - 7 population-based (media, educational materials)
    - 1 population-based campaign with mini-grants to schools
    - 3 through community health workers

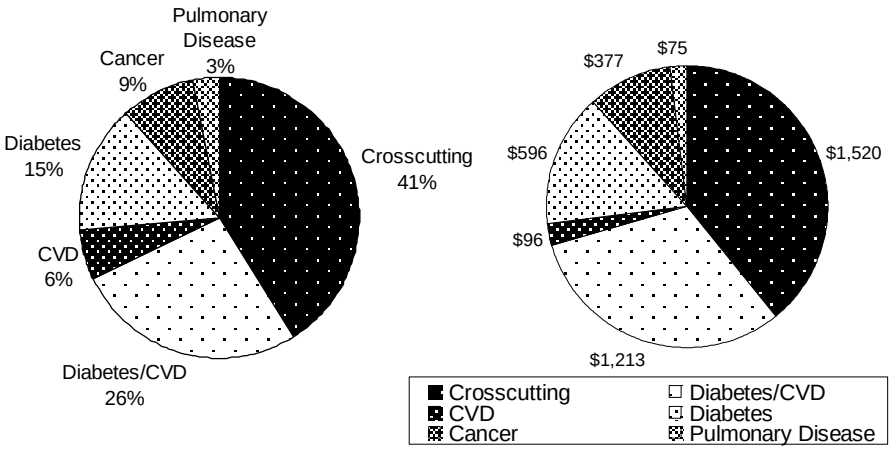
- Increase diversity & cultural competence in the health care professions (*n*=3)

4.2. Number of grants and amount of funding by geographic area, disease and race/ethnicity

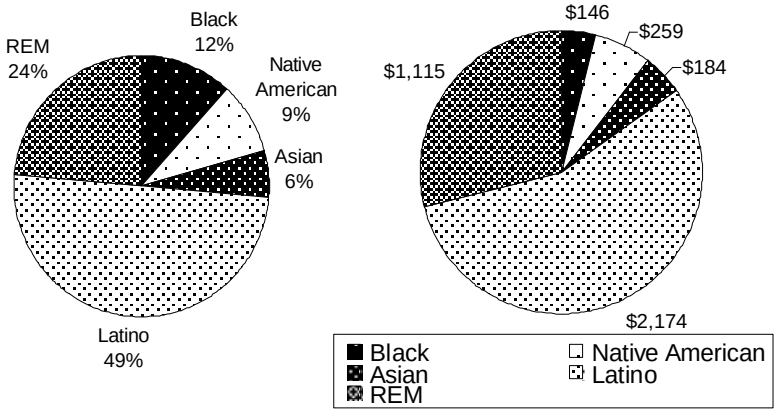
The number of grants correlated closely with the amount of funding when viewed by geographic area and by disease. By race/ethnicity, programs serving the Black population received less funding per grant than programs serving other racial and ethnic groups. Funding patterns were similar for both funding cycles (data available upon request).



OHD grants by disease (cycles 1 & 2, in $1,000's)



OHD programs by race/ ethnicity (cycles 1 & 2, in $1,000s)



4.3. OHD funded programs and health disparities priorities

Table 3 shows the alignment of OHD-funded programs and the health disparities priorities determined by state and national agencies. Priorities remaining to be addressed include cancer of the breast, colon, cervical and lung among blacks, and cervical cancer among Latinas.

Table 3. Number of OHD-funded programs, by health disparities priorities

Condition	Latino	Black	Asian	Native American	REM
Cancer death (overall)	5	1			2
Breast cancer death		0			
Cervical cancer	0	0	1		
Prostate cancer		1			
Colon cancer death		0	0		
Lung cancer		0			
Asthma Management	0	1	1		
CVD (heart disease & stroke)	13	3		1	1
Healthy life style choices (nutrition, physical activity)	17	2	0	3	5
Obesity (specifically)	6	1	0	3	2
Cultural competence training for health care providers	0	1	0	0	3
Diabetes care	15	1		2	1

CO Priority; US & CO Priority; US priority; not set as priority

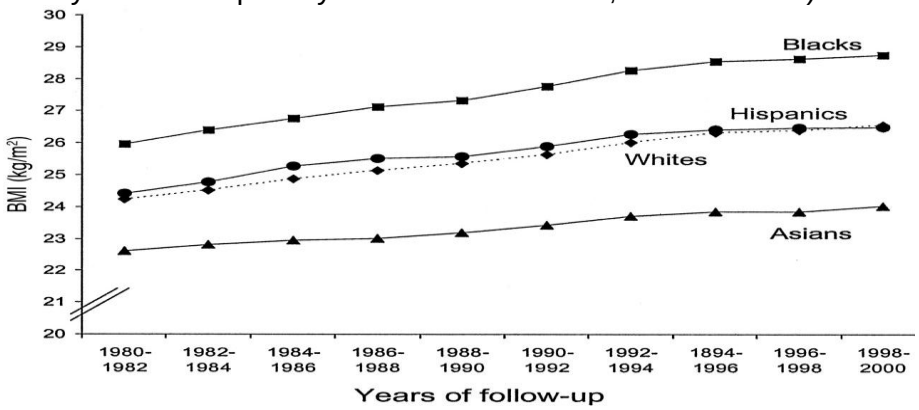
4.3.1 The gap in addressing obesity among Asians

Overview: The Asian American population has considerably less obesity than other U.S. populations, but weight gain in Asian Americans brings higher risk of diabetes than in other populations. Data suggest that educational interventions should focus on physical activity and awareness of the diabetes risk from weight gain.

Regarding healthy life style choices among Asians, according to the CDC (Behavioral Risk Factor Surveillance System Survey Data, 2005, unpublished data), overweight and obesity rates in adults are lower among Asians than other racial/ethnic groups.

United States	Percent
White	57.8%
Black	67.9%
Hispanic	59.6%
Asian/Pacific Islander	37.1%
American Indian/Alaska Native	66.5%
Other	58.2

While the Body Max Index (BMI) has been steadily rising for all racial/ethnic groups, BMI among Asians has been lower than that for Whites as shown by a recently published 20-year study (Figure below)(Shai I et al. Ethnicity, Obesity, and Risk of Type 2 Diabetes in Women: A 20-year follow-up study. *Diabetes Care* 2006; 29:1585-1590)



However, the risk of diabetes associated with weight gain is higher among Asians than other groups. Indeed, the above mentioned 20-year study revealed that for each 5-kg weight gain since age18, the risk of diabetes was increased by 84% (95% CI 58–114) for Asians, 44% (26–63) for Latinos, 38% (28–49) for Blacks, and 37% (35–38%) for Whites. (Shai I et al. Ethnicity, Obesity, and Risk of Type 2 Diabetes in Women: A 20-year follow-up study. *Diabetes Care* 2006; 29:1585-1590) The association between greater weight gain and risk of diabetes was most pronounced among Asians, suggesting that lower cutoff BMI values are needed to identify Asians at a higher risk of diabetes.

Looking at risk factors for obesity, specifically nutrition and physical activity, the following table recently published by the CDC in the MMWR of April 6, 2007, may be helpful in determining which factors should be the focus of interventions aimed at decreasing obesity among Asians. These data show that Asians, both men and women, are more likely to have 5 or more servings of fruits and vegetables than other racial/ethnic groups, yet they were less likely to engage in physical activity, most specially Asian men. These findings suggest that efforts related to overweight and obesity in Asians should focus on incorporating more physical activity into the lives of Asian communities. In addition, awareness of the Asians populations' increased risk of developing diabetes with a smaller weight gain should be included in education for the population and for health care providers.

TABLE. Prevalence of selected levels of fruit and vegetable consumption and physical activity, by sex and race/ethnicity — Behavioral Risk Factor Surveillance System, United States, 2005

Characteristic	No. in sample	White, non-Hispanic		Black, non-Hispanic		Hispanic		American Indian/ Alaska Native		Asian/ Pacific Islander		Multiracial/ Other	
		%*	(95% CI†)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Men§													
Fruit and vegetable consumption													
<5 times per day	97,872	80.5	(80.1–81.0)	78.5	(76.6–80.2)	79.3	(77.1–81.3)	75.8	(70.8–80.1)	74.9¶	(71.1–78.5)	72.9¶	(69.4–76.1)
≥5 times per day	24,048	19.5	(19.0–20.0)	21.5	(19.8–23.4)	20.7	(18.7–23.0)	24.2	(19.9–29.2)	25.1¶	(21.5–28.9)	27.1¶	(23.9–30.6)
Physical activity status													
Regularly active	61,078	52.5	(52.0–53.1)	45.9¶	(43.9–48.0)	42.5¶	(40.1–44.9)	55.5	(51.0–59.9)	37.5¶	(33.7–41.5)	53.3	(49.8–56.7)
Insufficient	44,430	36.7	(36.1–37.3)	35.8	(33.9–37.8)	37.7	(35.3–40.1)	31.0	(26.9–35.5)	46.2¶	(42.0–50.4)	32.4	(29.2–35.7)
Inactive	16,412	10.8	(10.4–11.1)	18.3¶	(16.8–19.9)	19.8¶	(17.9–21.9)	13.5	(10.7–16.8)	16.3¶	(13.4–19.7)	14.4¶	(11.9–17.2)
Combined ≥5 times per day for fruits and vegetables and regularly active	14,997	12.6	(12.2–13.0)	11.2	(10.1–12.5)	11.7	(10.0–13.5)	17.5	(13.7–22.2)	10.5	(8.5–12.9)	16.5¶	(14.1–19.3)
Women**													
Fruit and vegetable consumption													
<5 times per day	138,826	71.2	(70.8–71.7)	72.7	(71.4–73.9)	71.7	(69.9–73.4)	67.5	(62.7–72.0)	64.1¶	(59.8–68.2)	69.1	(66.2–71.8)
≥5 times per day	56,555	28.8	(28.4–29.2)	27.3	(26.1–28.7)	28.3	(26.6–30.2)	32.5	(28.0–37.3)	35.9¶	(31.8–40.2)	30.9	(28.2–33.8)
Physical activity status													
Regularly active	89,739	49.8	(49.3–50.2)	36.3¶	(35.0–37.7)	42.3¶	(40.4–44.2)	50.3	(45.6–54.9)	45.5	(41.4–49.8)	48.0	(44.9–51.1)
Insufficient	76,430	38.9	(38.4–39.3)	40.6	(39.3–42.0)	37.8	(36.0–39.7)	34.0	(29.8–38.5)	38.7	(35.1–42.4)	37.0	(34.1–39.9)
Inactive	29,212	11.4	(11.1–11.6)	23.0¶	(21.9–24.2)	19.9¶	(18.4–21.5)	15.7¶	(12.9–19.1)	15.8	(12.3–20.0)	15.0	(13.2–17.1)
Combined ≥5 times per day for fruits and vegetables and regularly active	31,978	17.4	(17.0–17.7)	12.6¶	(11.6–13.6)	14.8¶	(13.4–16.3)	19.6	(15.6–24.2)	17.3	(14.6–20.4)	18.2	(15.7–21.0)

* Percentages are weighted and age adjusted to the 2000 U.S. standard population.
† Confidence interval.
§ Denominators by race/ethnicity: non-Hispanic white (99,768), non-Hispanic black (7,228), Hispanic (7,266), American Indian/Alaska Native (1,938), Asian/Pacific Islander (2,558), and multiracial/other (3,162).
¶ Significantly different ($p<0.01$) compared with non-Hispanic whites.
** Denominators by race/ethnicity: non-Hispanic white (156,576), non-Hispanic black (15,931), Hispanic (11,930), American Indian/Alaska Native (2,955), Asian/Pacific Islander (3,537), and multiracial/other (4,452).

4.3.2 Programs addressing cultural competence for health care providers

Funded OHD programs in this area are directed either to black populations or to all REM. One important thing to keep in mind when recommending that this type of training is directed at specific population groups is the potential danger of stereotyping. More information about the content of these trainings for health care providers and the needs of specific populations (as expressed by their communities) could shed some light on future directions.

4.4. OHD funded programs and geographic areas in the state of Colorado

One third of the programs (*n*=11) were located within the Denver Metro area:

- 5 on cardiovascular disease (including diabetes), including 3 directed to Latinos, 1 to blacks and 1 to Native Americans
- 4 on prevention and early detection of all CCPD (2 for all REM, 1 in Native Americans, and 1 in blacks)
- 1 on prostate cancer in blacks
- 1 on cervical and liver cancer in Asians

Nine programs (26%) are called "statewide":

- 5 on prevention and early detection of all CCPD (2 of these specifically addressed Latinos, and 3 targeted all REM)
- 2 on cardiovascular disease (1 directed to Latinos and 1 to blacks)
- 1 on cancer prevention and early detection in all REM
- 1 on pulmonary disease among Asians.

The remaining 14 (41%) OHD funded programs were located outside the Denver Metro area. The maps, in the attached Powerpoint presentation, illustrated the distribution of these 14 programs by racial/ethnic groups and diseases.

4.5. OHD funded programs by prevention, early detection and treatment focus

Most funded programs focused on prevention (32, 94%) and early detection (24, 71%). Half addressed treatment (17, 50%), with most of these directed at management of diabetes and cardiovascular disease.

4.6. Services offered by the OHD funded programs

We sorted the services offered into two basic categories: population-based services, which included services delivered to large community groups without an individualized or personal approach, and individual-based services, which included a personalized, individualized approach.

Population-based services were included in all projects.

Population-Based Services	Latino	Black	Asian	Native American	REM	Total
Community education [Public campaign (10), Brochures(7), others]	16	3	2	3	3	**27**
Community Health Worker/ Navigator/ Case manager	7	3	1	3	7	**21**
Cultural Competence Training for HCP	2	1	1	0	1	**5**
Community participation [Advisory Board (2), Opinion leaders (6), Community liaisons, Town hall meetings, workshops, web enhanced conf. Calls, focus groups]	5	1	2	0	1	**9**
Total	17	4	2	3	8	**34**

Individual-based services were provided by 24 (71%) of the funded programs:

- Screenings (n=14): diabetes; asthma; CVD; cancer; prostate cancer; obesity; healthy life style choices
- Physical activity and nutrition (n=8):
    - classes (n=3)
    - integrated fitness, mental health
    - obesity screening
    - weight loss clinic
    - renovation of community center for health, PA, nutrition classes
    - school mini-grants for healthy eating and physical activity
    - sport physicals
    - youth triathlon trainings
    - heart health

- Disease management (n=7): case management for diabetes, CVD, and cancer; high blood pressure self management
- Referrals (n=3): cancer, hepatitis B immunization
- Mobile van for screening (n=1)
- Technical assistance to develop disparities action plans (n=1)
- Transportation (cancer) (n=1)

4.7. Addressing access to medical care in CCPD related conditions

Out of 34 funded programs, only 6 specifically addressed access to care in cancer, cardiovascular and pulmonary conditions, one each for:

- 90-day case management (CVD, diabetes, obesity)
- Case manager (CVD, diabetes, cancer)
- Establish diabetes clinic
- Navigator (CVD, diabetes, cancer)
- Sports physicals
- Diabetes screening, medical care, case-management, equipment and medications

4.8. Checking for projects in CCPD and STEPP

Only limited information was available on CCPD- and STEPP-funded projects to address disparities. More complete information will forwarded to the OHD when it is available. Based on the limited information, here are some of the OHD priorities being addressed by CCPD or STEPP projects:

CCPD

- Cervical cancer in Asians
- Colorectal cancer in REM
- CVD in low income (REM?)
- Asthma in Rural Eastern Colorado
- Heart health and cancer prevention in GLBTI
- Heart health and cancer prevention in Latinos
- Physical activity in Arapahoe and Broomfield

STEPP: secondhand smoke and other tobacco-related priorities

5. Gaps in addressing populations and CCPD conditions

No projects address asthma management in Latinos. Few projects address the following strategic priorities:

- Lung cancer in blacks
- Cervical cancer in Latinas and blacks
- Colon cancer in blacks and Asians
- Healthy life style choices in Asians
- Obesity in blacks & Asians
- Cultural competence and health disparities training regarding the care of Latinos, Asians & Native Americans (while avoiding stereotyping).

- Access to medical care (refer to section 4.7.) specifically regarding cardiovascular diseases, diabetes, cancer and pulmonary disease for all REM, especially blacks and Asians.

6. Strategies recommended by State Strategic an Action Plans and Potential Gaps

The following tables summarize the strategies recommended by the ten State and National plans reviewed for this report. The first table depicts the strategies, which clearly are already being used by funded OHD plans. The second table reflects those recommendations, which, in this very preliminary evaluation, we were unable to find evidence that they were in use. This represents only a superficial, at-a-glance, view of the strategies most commonly employed by the funded programs. It is quite possible many of the strategies we were unable to detect in this preliminary review are in fact being used by funded programs. The purpose of these tables is to provide ideas and food for thought, as well as topics we should pay attention during our in-depth review of the funded programs.

Table: Cancer, cardiovascular and pulmonary disease: State and national recommended strategies already in use by OHD funded programs

Strategies	**No. of Plans recommending**
Area: Cultural sensitivity	
Cultural Competency and Health Disparities training for HCP	5
Increase REM in health professions • Pipeline programs (2) • Mentoring, social and psychological support for URM (2) • Leadership training for REM in health professionals	2
Inclusion of REM communities in planning • Accommodate needs (Meet after hours, compensation) • Diverse community boards and councils	10
Organizational cultural sensitivity • CC strategic plan and written policies • Diverse boards and commissions • Bilingual printed materials, signage and staff “Hablo …” tags	1
Disease-specific culturally sensitive medical care • Culturally appropriate diabetes medical care • Cancer health disparities training for HCP • Address cancer fear, cost, and lack of physician referral	1
Culturally sensitive patient and community education (all CCPD) • Develop (6) / evaluate (1) public campaigns using media of high impact on USREM: public/network television, public radio • Assistance on the development of education (3) • Target populations with the greatest disparities (2) • Community health worker or navigator (2) • Innovative communication avenues guided by social marketing • Opinion leaders • Educate USREM on where to access resources • Free web-based educational support interventions and systems • Support community education efforts on risk reduction measures	10

Table: Cancer, cardiovascular and pulmonary disease: State and national recommended strategies already in use by OHD funded programs	
Strategies	**No. of Plans recommending**
Culturally sensitive patient and community education (disease specific) • Culturally appropriate diabetes self-management education • Educational programs for diabetes educators • Explore innovative ways to finance diabetes education • Educate HCP/ public about effectiveness of diabetes self-management education to improve self-care • Fact sheets on CVD risk factors, health disparities, and costs • Outreach to groups with stroke and CVD HD • Increase discussion of stroke with HCP • Disseminate "best practices" and evidence-based medicine (e.g., Cancer Control PLANET) • Increase public awareness about cancer-related HD in Colorado	10
Area: Health Care Access (All CCPD) • Partnerships: community, minority associations, public health agencies, HCP, mal- practice insurers, health insurers, advocacy organizations, industry, environmental agencies, celebrities and influential persons, local merchants,foundations (All plans) • Direct financing of services (2) • Community Health Worker, certified CHW and navigators (2) • Finance of Translators & Interpreters (e.g. grant applications) • Reduce financial barriers to obtaining primary care • Strengthen safety net system (e.g., increase number/capacity of community health centers) • Support communities in assessing health-promoting characteristics of the community, available resources, barriers	10
Area: Health Care Access (disease-specific) • Identify rural communities that lack diabetes self-management education • Regularly scheduled self-management diabetes education programs for which no rural resident will need to travel > 130 miles • Collaboration with diabetes equipment manufacturers to obtain low cost supplies for uninsured persons • Disseminate empowering strategies to providers/ diabetes educators • Community Health Centers, AHECs, Metropolitan Community Provider Network to provide cancer prevention, control, treatment • Mobile units in rural /underserved areas for cancer screening • Direct financing of nutrition and physical activity classes/programs • Mini-grants to culturally diverse community organizations to promote better nutrition and increased physical activity • Better balance between the clinical approach to disease and efforts that address determinants of disease, injury, and disability	1
Area: Research and Epidemiology • Partnerships between academic and community, public officials, business, HCP, churches, pharmacies, senior centers to raise questions, generate hypotheses, and share findings(all plans) • State/regional meeting of community and researchers to identify key health disparities research questions (2)	2

The next table represents those strategies recommended by national and state strategic and action plans, which we were unable to detect in the preliminary review.

Table: Cancer, cardiovascular and pulmonary disease: State and national recommended strategies NOT yet in use by OHD funded programs
Strategies *Where not mentioned, only 1 plan recommended, if more than 1 plan recommended, number of plans is between parenthesis)*
Area: Cultural sensitivity
Cultural Competency training for HCP (5 plans recommended) • Investigate CC training impact on health insurance cost • Increase public health education of HCP • Increase REM in health professions (2 plans recommended) • Incentives for institutions/ REM for increase in diversity • Critical mass of URM in health professions
Organizational cultural sensitivity • Enforce legal mandates (Title VI, CLAS), develop minimum CLAS • HD and CC training in business schools • Develop/review existing CC evaluation tools and standards for health care organizations and encourage organizations to use them
Culturally sensitive patient and community education (disease-specific) • Asthma education in school and childcare settings • Education on asthma and asthma exacerbations triggers • Increase awareness of the impact of asthma, and how to effectively manage it
Area: Health Care Access (all CCPD) • Improve identification/distribution of benefits to those who are eligible • Telemedicine (2 plans recommended) and Telemedicine reimbursement system in underserved areas • Web-based, virtual medical home for uninsured (e.g., HealthTrack) • Determine effective methods of impacting provider behavior • Volunteer provider system for the underinsured/uninsured • Web-based, HIPAA-compliant system to improve reimbursement for care (e.g., HealthTrack)
Area: Health Care Access (disease-specific) • Asthma health services for children in school, childcare • Educate policy makers about cancer treatment of the un/under insured • Transportation services for cancer patients in rural areas • Link veterans to VA cancer prevention, screening, clinical trial and treatment services • Recommend ACS Road to Recovery program modification (not limited to treatment option)
Area: Research and Epidemiology • Investigate the basis of observed race-associated differences in health outcomes. • Interpret race-related findings instead of controlling for race (not a confounding variable) • Conduct follow-up research if findings from initial research are unclear. • Develop measurements of racism (institutionalized, personally mediated), and link them to health outcomes • Acknowledge and document the association between race and social economic class, which is perpetuated by institutionalized racism • Better race/ethnicity and SES data collection • Identify capacity and access issues for RURAL Colorado for cancer services • Cancer HD report biennial

Appendix: Relationship between oral health and CCPD conditions

Oral health status can be an early warning system for diabetes, cardiovascular disease and obesity, as follows:

- **Diabetes**
    - 95% of Americans with diabetes have periodontal problems, which can complicate the management of diabetes (CDC)
    - Poorly controlled diabetes may intensify periodontal disease.
    - Individuals with diabetes can suffer from greater tooth loss (Types I and II).
- **Cardiovascular Disease**
    - People with periodontitis more likely to develop CVD (NIDCR)
    - Periodontitis shown to be associated with heart disease, coronary disease, stroke
    - Periodontal disease may also exacerbate existing heart conditions. Longitudinal studies have reported periodontal disease to be a risk factor for.
- **Obesity**
    - The link between oral health and poor nutrition, particularly excessive sugar consumption, may have important implications on the rising prevalence of obesity and overweight among children and adolescents in the U.S.