The Colorado Household Survey Planning Process: Final Report

May, 2008

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Executive Summary

In October of 2007, Health Policy Solutions was retained by the Colorado Department of Health Care Policy and Financing (the Department) to facilitate a planning process for a statewide household survey. The purpose of the survey is to collect baseline data about health insurance coverage and affordability, access to health care, health care utilization, employment characteristics and demographic information. This baseline data will be used to inform health care reform, for the State of Colorado, policy initiatives, program planning, evaluation and to meet other data needs of the health policy community.

The planning process was conducted in collaboration with a steering committee of stakeholders that provided guidance regarding household survey options for the purposes of making recommendations to the Department. In addition, key informant interviews were conducted with over 40 leaders in health policy research, government, advocacy, business, population survey research, and philanthropy. The purpose of these interviews was to assess the need for a Colorado household survey, to identify survey goals and objectives, to assure that the survey would be designed to address Colorado's most pressing health policy needs, and to explore options for survey design and administration from a technical perspective.

The following goals and objectives for the survey emerged from the key informant interviews:

Goals

The Colorado Household Survey collects high quality data to answer timely health policy questions that cannot be answered with existing data. Specifically:

- It informs needs assessments and the development of health policies and programs, especially reform efforts, so that programs can be targeted, responsive, and fiscally sound.

- It facilitates the evaluation and continuous improvement of health policies and programs over time, especially reform efforts, to ensure that programs achieve their intended outcomes.

Objectives

- To provide for better subgroup analysis at state and regional levels.
- To provide better estimates of health insurance coverage.
- To measure access to and utilization of health care.
- To assess the affordability of health care and health insurance coverage.
- To estimate eligibility for public and private insurance options among the uninsured population.
- To provide estimates of dental and mental health insurance coverage and access.
- To assess relationships among coverage, access, utilization, health status, health conditions, and demographics.

Five options for conducting a state household survey were created based on the survey goals and objectives identified by key informants and steering committee input.

- **Option I:** Add questions to two existing public health surveys, the Behavioral Risk Factor Surveillance Survey (BRFSS) and the Child Health Survey (CHS), a call back survey of parents in the BRFSS. These surveys do not have a health insurance focus, but feature detailed measures of health status, health conditions, and health behaviors.

- **Option II:** Add both questions and sample to the BRFSS and CHS, and make the CHS a stand-alone survey.

- **Option III:** Conduct a stand-alone survey focused on health insurance, program eligibility, access, and affordability.

- **Option IV:** Conduct a stand-alone survey and cover the topics in Option III as well as questions measuring health behaviors, health conditions and health status.

- **Option V:** Implement a "hybrid" option that implements a health-insurance-focused stand-alone survey (Option 3) for two cycles in 2008 and 2010 and then migrate to the BRFSS/CHS platform (Option 1).

Exhibit EX-1 compares the four distinct survey options considered by the steering committee. The committee ultimately recommended the Option V, which represents a hybrid between Option III and Option I.

Exhibit EX-1: Comparison of Four Different Colorado Household Survey Options

	Option I	Option II	Option III	Option IV
Comprehensiveness of Questionnaire *				
Comprehensive questions for parents	√	√	Health insurance focus	√
Comprehensive questions for childless adults	No	No	Health insurance focus	√
Comprehensive questions for children	√	√	Health insurance focus	√
Sampling and Periodicity				
Sample size	6,000 adults 2,000 children/parents	6,000 adults 6,000 children/parents	15,600 adults 6,000 children	15,600 adults 6,000 children
Periodicity	parents/children annually childless adults (3 years)	parents/children annually childless adults (3 years)	Every 3 years	Every 3 years
Timeline for Precision				
For statewide adult and child estimates	2010	2010	2009	2009
For statewide analysis of key subpopulations (regional, uninsured, race/ethnicity)	2010-2011 (adults) 2011-2012 (children)	2010	2009	2009
For a three-year merge of data (for analysis of small populations)	2012 (parents/children) 2016 (childless adults)	2012 (parents/children) 2016 (childless adults)	2015	2015
For statewide trend analysis (with 5 data points)	2014 (parents/children) 2022 (childless adults)	2014 (parents/children) 2022 (childless adults)	2021	2021
For cell phone pilot option (n=800)	Unknown	Unknown	2009	2009
Efficiency/Building CO Capacity				
Builds on existing CO survey infrastructure	√	√	No	No
Minimizes duplication with existing CO surveys	√	√	√	No
Adds sample to (improves) existing CO surveys	No	√	No	No
Minimizes "competition for questions"	No	No	√	√
Cost and Sustainability**				
Implementation issues	Requires external approvals	Requires external approvals	Requires a new survey infrastructure	Requires a new survey infrastructure
Staffing requirements	Insurance component coordinator	Insurance component coordinator	Survey director	Survey director
Estimated 3-year data collection costs	$316,000-$408,000	$628,000-$720,000	$1.7 million	$2 million

*"Comprehensive" refers to use of detailed question sets to address all of the domain areas prioritized by the key informants, thus co-locating in the same data set information about health insurance, health care access, affordability, program eligibility, health behaviors/conditions/status.

**Data collection costs are difficult to estimate without exact survey design specifications. These costs do not include staffing, analytical, or dissemination costs. Also these estimates do not include the cost of a cell phone sample, which would be approximately $230,000.

Steering Committee Recommendations

- *Implement Option V: Two Stand-Alone Health Insurance Surveys (2008 and 2010) Followed by a BRFSS Survey Add-On*

Based on the findings from the key informant interviews, the gap analysis, and the five options presented to them, the steering committee recommended that a stand-alone, health insurance survey (Option III) be conducted in 2008 and again in 2010. These surveys would include detailed questions on health insurance, health care access, program eligibility, and affordability. The question set would be designed to minimize overlap with existing public health surveys that focus on health behaviors, health conditions, and health status. They would also feature a cell phone component.

In addition, the steering committee recommended that Colorado transition from a stand-alone survey to adding questions to existing public health surveys, known as the Behavioral Risk Factor Surveillance System (BRFSS) and the Child Health Survey (CHS). Specifically, the committee recommended adding 40 questions on health insurance and related topics to half of the BRFSS sample every three years and adding 80 questions to the CHS annually (Option I). The latter recommendation would require expanding the CHS sample to include all children (aged 0 up to 18).

Including health insurance with related topics on existing public health surveys would facilitate a variety of health-related analyses, would build Colorado data capacity, and would be less expensive and more sustainable into the future. It is anticipated that modification of the BRFSS/CHS surveys could be implemented in the beginning of 2010, which would ensure that three years of data are available from the smaller CHS survey to permit regional analysis by 2013. The Committee recommended that the Department assure strong communication and coordination among all involved parties during the transition between survey modes.

Exhibit 4 in the full report provides a visual representation of the steering committee recommendation.

- *Begin Data Collection in 2008*

The steering committee strongly recommended that the collection of baseline data begin as soon as possible, preferably in 2008. The potential to obtain survey results in early 2009 was the primary reason cited by the steering committee for choosing to begin with a stand-alone survey. The steering committee acknowledged the need for flexibility in order to respond to developments in health care reform and the changing needs of Colorado. However, the committee stressed that data collection in 2010 not be contingent on passage of comprehensive health care reform, but rather, that the 2010 questionnaire be adjusted to reflect any reform developments and future programmatic needs.

- *Finalize Approach, Timing, and Costs*

The following survey-related activities and functions will required to implement the stand-alone health insurance survey and to disseminate the results:

- sample design

- institutional review board (IRB) approval
- data collection, data preparation
- data custodianship
- data analysis and report writing
- web master
- technical assistance.

The full report describes these survey-related activities in detail and provides an initial timeline through March 2011, for further refinement by the Department. Assuming the state moves forward with its plan to hire a survey director, some of these activities and functions will fall under this position's purview. By contrast, data collection will clearly require an outside vendor. Recognizing that some organizations/vendors are equipped to provide more than one of these functions and that a complicated set of purchasing parameters apply, the steering committee recommends that the Department conduct a Request for Information (RFI) to elucidate the division of labor between survey staff and the vendor(s) as well to obtain answers to questions about vendors' proposed approaches, timing and costs. The RFI would also help inform the development of a request for proposals (RFP). Teams of vendors may collaborate and bundle services in response to a Request for Proposals (RFP).

- ### *Develop and Implement a Dissemination Plan*

Finally, the steering committee strongly recommended that the Department develop and implement a dissemination plan for the purposes of assuring that stakeholders have access to the data and any necessary training on its use. The committee recommended that the dissemination planning process be initiated as soon as possible.

Introduction

This report presents a summary of findings from the key informant interviews (detailed findings are in Appendix 5); a summary gap analysis which explores existing data sources and their limitations (a more detailed gap analysis is found in Appendix 6); five different options for conducting a state household survey to address data gaps (a detailed evaluation of each option is found in Appendix 3); and full recommendations from the steering committee on how the Department might conduct the survey.

Findings from the Key Informant Interviews

This section reflects the views of more than 40 key informants[1] who participated in interviews during the months of December 2007 through February 2008. During the interview process, key informants were asked to identify 1) health policy questions of interest, 2) data sources currently used to address those questions and, 3) data gaps that could potentially be filled by a state household survey, including specific measures of interest.

Goals, Objectives and Specific Measures

Collectively, key informants identified goals, objectives and specific measures for the survey, as well as the policy questions that informants would like to address with survey data. The consultants used these goals, objectives, and measures to develop and evaluate survey options for the steering committee to consider. An explicit mapping of survey objectives and measures to different survey design options is provided in Appendix 3.

Goals

The Colorado Household Survey collects high quality data to answer timely health policy questions that cannot be answered with existing data. Specifically:

- It informs needs assessment and the development of health policies and programs, especially reform efforts, so that programs can be targeted, responsive, and fiscally sound.

- It facilitates the evaluation and continuous improvement of health policies and programs over time, especially reform efforts, to ensure that programs achieve their intended outcomes.

Objectives

1. To provide for better subgroup analysis at state and regional levels.
2. To provide better estimates of health insurance coverage.
3. To measure access to and utilization of health care.
4. To assess the affordability of health care and health insurance coverage.

[1] The ideas of technical informants (e.g., population survey experts) are reflected in the appendix outlining the four survey options. Cost estimates from four potential vendors (UCLA, Westat, University of Minnesota State Health Access Data Assistance Center (SHADAC), and the Colorado Department of Public Health and Environment) are incorporated in the cost estimates for each option.

5. To estimate eligibility for public and private insurance options among the uninsured population.
6. To provide estimates of dental and mental health insurance coverage and access.
7. To assess relationships among coverage, access, utilization, health status, health conditions, and demographics.

Select Measures Used to Meet Objectives

Key informants were asked to provide specific measures that could be used in the survey to meet the above listed objectives. A comprehensive list of proposed measures is included in Appendix 5. This section summarizes the main themes that recurred and serves as the basis for evaluating the different survey design options.

Objective 1: To provide for better subgroup analysis at state and regional levels

Provide precise statewide estimates on health coverage, access, utilization, affordability, program eligibility, and outcomes for the following: [2]

- Overall population.
- Children (0 to 18).
- Non-elderly adults (19 – 65)
- Childless adults.
- Young adults (18 to 35).
- White, African American, and Latino populations.
- Citizens, legal permanent residents, and other immigrants.
- Federal poverty level groupings.

Provide precise regional estimates (14 counties or combinations of counties) on health coverage, access, utilization, affordability, program eligibility, and outcomes for the following:

- Overall population.
- Children (0 to 18)
- Non-elderly adults (18 to 65).1Provide precise regional estimates (urban, rural, and frontier) of characteristics of the uninsured.

Objective 2: To provide better estimates of health insurance coverage, including estimates of:

- Insurance coverage (using state-of-the-art insurance questions).
- Characteristics of the uninsured.
- Reasons for uninsurance.
- Underinsurance.

[2] With a margin of error less than +/- five percentage points.

Objective 3: To measure access to and utilization of health care, including estimates of:

- Regular source of care (including safety net provider utilization).
- Medical home.
- Utilization: preventive care visits, sick visits, ED visits, and hospitalizations.
- Reasons for certain health care utilization patterns (e.g, ED visits for primary care).
- Barriers to care.
- Health beliefs and sources for health information.
- Delayed care/unmet health care needs.
- Cultural competency of providers.

Objective 4: To assess the affordability of health care and health insurance coverage, including estimates of:

- Household spending on "necessities" (e.g., housing, utilities, food, child care, health care, transportation, taxes, miscellaneous).[3]
- Consumer and medical debt (e.g., credit cards).

Objective 5: To estimate eligibility for public and private insurance options, including estimates of:

- Eligibility for public insurance programs (e.g., Medicaid and CHP+)[4] for the following groups:
  - Adults.
  - Children.
  - Disabled (especially long-term care).
  - Currently insured (e.g. to assess crowd-out potential).
  - Currently uninsured.
  - Regional (urban/rural/frontier).

- Statewide offer and take-up rates for employer-sponsored health insurance coverage (ESI):
  - Workers.
  - Dependents and spouses.
  - Characteristics of uninsured workers/spouses/dependents who do not take-up ESI and reasons for not taking up ESI.

Objective 6: To provide estimates of dental and mental health insurance coverage and access, including estimates of:

- Dental care access (e.g., time since last dental visit).
- Dental coverage.
- Mental health care access.

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[3] Household income and spending on necessities can be used to determine average residual income that could be used to purchase health insurance coverage or health services.

[4] Public program eligibility determination requires detailed questions about income, age, family status, disability status, pregnancy status, and immigration status.

- Mental health coverage.
- Barriers to dental/mental health care access.

Objective 7: Locate variables of interest within the same data set to assess relationships among variables, such as coverage, access, utilization, health status, health conditions, and demographics:

- Health care access by insurance status.
- Health care utilization by insurance status.
- Health status/conditions/behaviors by insurance status.
- Multivariate analyses of health status, controlling for coverage, health care access, utilization, and social determinants of health (demographics, education, environment, immigration and acculturation).

Data Frequency

Most key informants felt it would be sufficient to obtain new data every two or three years.

Dissemination

Across the board, key informants voiced the need for investment in a strong, multifaceted dissemination strategy. The preferred dissemination strategy varied across the respondents. However, most acknowledged some need exists for each dissemination strategy presented to them, namely: a web-based query system; reports and policy briefs; public-use files; confidential data files; and requests for special data analyses. The need for technical assistance and training was also emphasized by several informants. Informants emphasized that if the data were publicly available, stakeholders could potentially write their own reports reflecting a broad range of viewpoints resulting in a rich resource of ideas for the community.

Key Informant Conclusions

With one exception, key informants expressed a need for better data on: health insurance coverage; affordability; utilization and access to care; and related health topics. These data would be most useful every two to three years, and should be collected on an ongoing basis. Multiple dissemination strategies should be employed to make the data available to a wide range of users.

Data Gap Analysis

Clearly, some of the health policy questions identified by key informants can be answered with existing data. The purpose of the gap analysis was to identify: 1) data sources currently used to address key health policy questions; 2) the limitations of those data; and 3) data gaps that could potentially be filled by a state household survey.

Colorado has many rich sources of public health data, and key informant interviews revealed that some existing data are underutilized because either people are unaware of them, or because agencies have limited in-house capacity to conduct analyses of large, national data sets. However, it also became clear that some needed data are either: not available at all; not available for populations of interest; not

available at the state, county or regional level; not co-located with other data of interest preventing multivariate analyses; or are simply not strong measures.

Key informants reported using a broad range of data sets to answer policy questions, including household surveys, employer surveys, provider surveys, and administrative data sets, which were reviewed for potential overlap with a proposed new household survey. For this analysis, the focus was on the most relevant databases, including only those that:

- Feature person-level survey data that can be used to answer policy questions identified by key informants.
- Provide data at the state-level.
- Are conducted regularly and periodically.
- Include broad sections of the population.
- Have potential for overlap with any new household survey that might be conducted.

Four health surveys met the criteria. These are: the Current Population Survey (CPS), the Behavioral Risk Factor Surveillance Survey BRFSS), the Colorado Child Health Survey (CHS), and the National Survey of Children's Health (NSCH).[5] The characteristics, strengths and limitations of each survey are analyzed in Appendix 6. They are followed by tables that examine the degree to which the surveys are able to answer policy questions identified by key informants, and to provide estimates for subgroups of interest, including ethnic minorities, children, non-elderly adults, childless adults, and young adults at both the state and regional level (defined for our purposes as 14 counties or regions).

A review of these four data sets reveals that none are able to adequately address *all* the policy questions that were most commonly identified by key informants, namely: insurance coverage; dental and mental health access and coverage; affordability of health care and health insurance; health access; health care utilization; eligibility for public and private insurance; health status, health conditions, and health behaviors; and social determinants of health. While some estimates of interest can be generated at the state level, many are not available at the county or regional level, or for subpopulations of interest. Lastly, while each data set does a good job of measuring certain health topics, they each lack data on other topics, limiting multivariate analyses of policy interest.

Insurance Coverage

Although CPS contains a fairly strong set of questions on health insurance coverage, the sample is not representative at the county/regional level, even when there is sufficient sample by combining multiple years of data. BRFSS, CHS, and NSCH lack the comprehensive question set needed to generate valid and

[5] In the future, The U.S. Census Bureau's American Community Survey (ACS) will be an important new source of health insurance coverage data for health policy researchers as it will provide precise annual estimates at the state and sub-state levels. The ACS estimates will be available in August of 2009 and offer several advantages over commonly used data series on health insurance coverage. The Department staff have been given a copy of a recent paper by Davern et al. that addresses the strengths and weaknesses of the ACS relative to the Current Population Survey (CPS), currently the most commonly used source, and identifies challenges that will arise for health policy researchers using these data.

reliable health insurance estimates. None of the surveys in this analysis contain questions on underinsurance, reasons for uninsurance, or offer and take up rates for employer sponsored coverage.

Dental and Mental Health Access and Coverage

None of the surveys include questions on dental or mental health coverage, although the CHS and the NSCH have questions on dental and mental health access.

Affordability of Health Care and Health Insurance

Only the NSCH includes a question on health care affordability, specifically whether the respondent felt the costs were "reasonable." No survey provides estimates on health insurance affordability.

Health Access

While the BRFSS asks adults whether they have a regular source of care, no other survey data are available on adult access to care.

Healthcare Utilization

Very little data are available on adult or child utilization, such as use of the emergency departments, number of doctor visits.

Eligibility for Public and Private Insurance Program

No data set contains the information on immigration status needed to model public program eligibility, although the CPS does measure citizenship. Also, BRFSS, CHS and NSCH lack detailed information on monthly family income, which is more appropriate for measuring program eligibility than annual income, because income can fluctuate on a month to month basis especially among vulnerable populations.

Health Status, Health Conditions and Health Behavior

While the BRFSS, CHS and NSCH have strong question sets on health status, health conditions, and health behaviors, they are not collocated with health insurance—related variables and other variables of interest identified by key informants.

Determinants of Health

Very little data are collected on the health environment, immigration and acculturation.

Five Household Survey Options for Colorado

This section briefly reviews five different survey options considered by the steering committee to respond to Colorado's data needs. Each option addresses, to a greater or lesser extent, the goals and objectives that emerged from the work of the steering committee and from key informants during the

survey planning process. Appendix 3 contains a detailed analyses of each option, including strengths and weaknesses, costs, and ability to address survey goals and objectives.

- **Option I:** Add questions to two existing public health surveys, the Behavioral Risk Factor Surveillance Survey (BRFSS) and the Child Health Survey (CHS), a call back survey of parents in the BRFSS. These surveys do not have a health insurance focus, but feature detailed measures of health status, health conditions, and health behaviors.

- **Option II:** Add both questions and sample to the BRFSS and CHS, and make the CHS a stand-alone survey.

- **Option III:** Conduct a stand-alone survey focused on health insurance, program eligibility, access, and affordability.

- **Option IV:** Conduct a stand-alone survey and cover the topics in Option III as well as questions measuring health behaviors, health conditions and health status.

- **Option V:** Implement a "hybrid" option that implements a health-insurance-focused stand-alone survey (Option 3) for two cycles in 2008 and 2010 and then migrate to the BRFSS/CHS platform (Option 1).

Exhibit 1 compares the four distinct survey options considered by the steering committee. The committee ultimately recommended Option V, which represents a hybrid between Option III and Option I.

Exhibit 1: Comparison of Four Different Colorado Household Survey Options

	Option 1	Option 2	Option 3	Option 4
Comprehensiveness of Questionnaire *				
Comprehensive questions for parents	√	√	Health insurance focus	√
Comprehensive questions for childless adults	No	No	Health insurance focus	√
Comprehensive questions for children	√	√	Health insurance focus	√
Sampling and Periodicity				
Sample size	6,000 adults 2,000 children/parents	6,000 adults 6,000 children/parents	15,600 adults 6,000 children	15,600 adults 6,000 children
Periodicity	parents/children annually childless adults (3 years)	parents/children annually childless adults (3 years)	Every 3 years	Every 3 years
Timeline for Precision				
For statewide adult and child estimates	2010	2010	2009	2009
For statewide analysis of key subpopulations (regional, uninsured, race/ethnicity)	2010-2011 (adults) 2011-2012 (children)	2010	2009	2009
For a three-year merge of data (for analysis of small populations)	2012 (parents/children) 2016 (childless adults)	2012 (parents/children) 2016 (childless adults)	2015	2015
For statewide trend analysis (with 5 data points)	2014 (parents/children) 2022 (childless adults)	2014 (parents/children) 2022 (childless adults)	2021	2021
For cell phone pilot option (n=800)	Unknown	Unknown	2009	2009
Efficiency/Building CO Capacity				
Builds on existing CO survey infrastructure	√	√	No	No
Minimizes duplication with existing CO surveys	√	√	√	No
Adds sample to (improves) existing CO surveys	No	√	No	No
Minimizes "competition for questions"	No	No	√	√
Cost and Sustainability**				
Implementation issues	Requires external approvals	Requires external approvals	Requires a new survey infrastructure	Requires a new survey infrastructure
Staffing requirements	Insurance component coordinator	Insurance component coordinator	Survey director	Survey director
Estimated 3-year data collection costs	$316,000-$408,000	$628,000-$720,000	$1.7 million	$2 million

*"Comprehensive" refers to use of detailed question sets to address all of the domain areas prioritized by the key informants, thus co-locating in the same data set information about health insurance, health care access, affordability, program eligibility, health behaviors/conditions/status.

**Data collection costs are difficult to estimate without exact survey design specifications. These costs do not include staffing, analytical, or dissemination costs. Also these estimates do not include the cost of a cell phone sample, which would be approximately $230,000.

Disclaimers

Any one of these options, if selected, would require fine tuning through consultation with the Department and their vendor(s) on operational issues. Cost estimates for each option should be considered as order-of-magnitude estimates. These cost estimates were generated in conjunction with four potential vendors: the University of California, Los Angeles (UCLA), Westat, the University of Minnesota State Health Access Data Assistance Center (SHADAC), and the Colorado Department of Public Health and Environment. Vendors were somewhat reluctant to provide cost estimates without concrete specification of survey design (i.e. questionnaire length and sampling methods). Likewise, the ability to measure subpopulations is dependent on the final sample design and response rates among subpopulations. Finally, some of the options (e.g., those building on existing public health surveys) require obtaining external approvals from advisory committees and possibly the federal government.

Steering Committee Recommendations

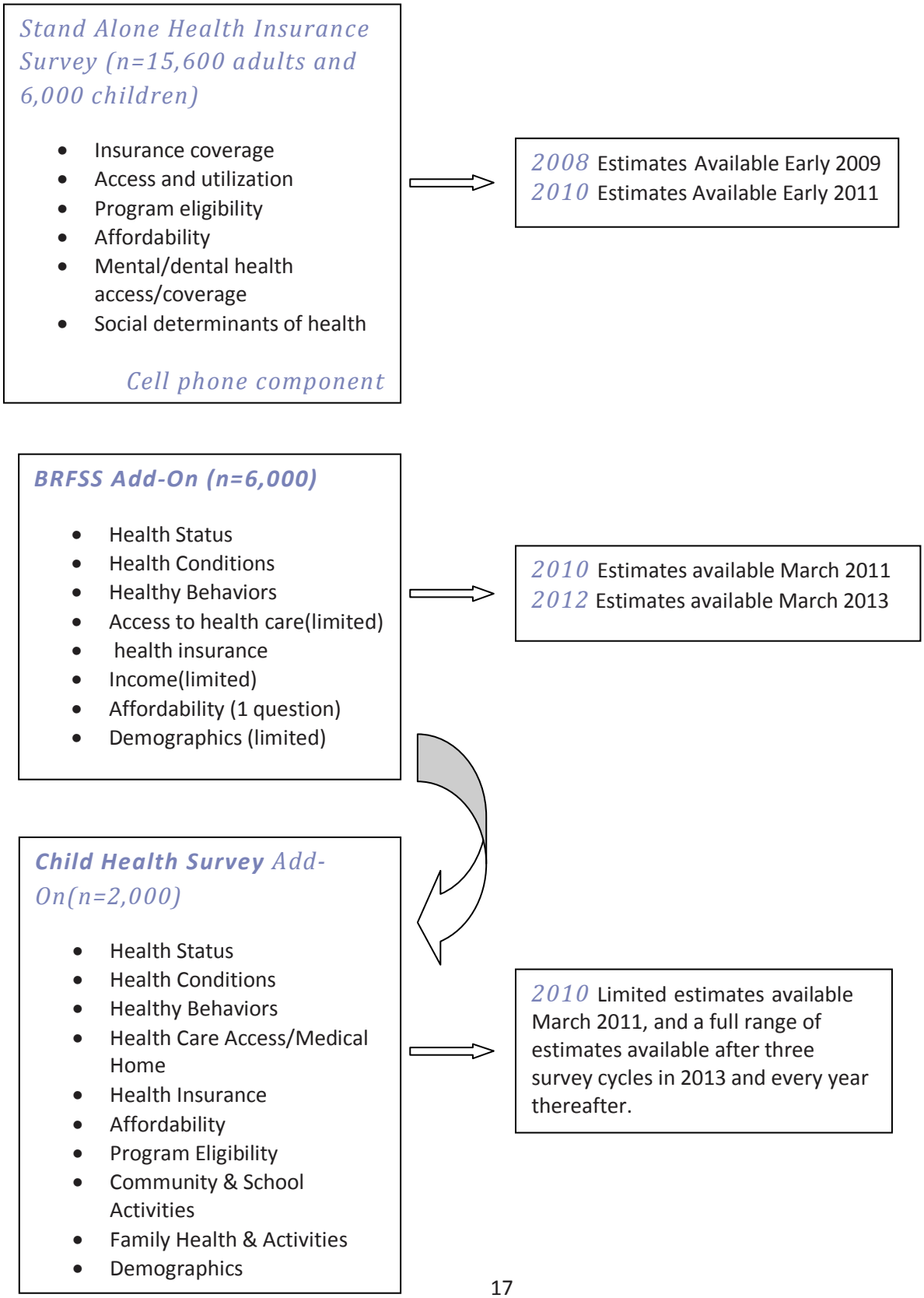
- *Recommendation 1: Implement Option V, Two Stand-Alone Health Insurance Surveys (2008 and 2010) Followed by a BRFSS Survey Add-On (beginning in 2010)*

After reviewing the four options set forth in the proceeding section, the steering committee recommended that the Department consider a hybrid option. The Department should conduct a stand-alone health insurance survey (Option III) in 2008 and again in 2010 for the purpose of obtaining timely base-line data to inform and evaluate health care reform. These surveys would feature a cell phone component. The steering committee also recommended that the Department implement a long-term plan of migrating to a Behavioral Risk Factor Surveillance Survey (BRFSS)/Child Health Survey (CHS) platform (Option I) with data collection beginning in 2010. Including health insurance with related topics on existing public health surveys would facilitate a variety of health-related analyses, would build Colorado data capacity, and would be less expensive and more sustainable into the future. A companion cell phone survey would be evaluated for inclusion in the BRFSS/CHS strategy, contingent on federal approval.

Option I entails adding 40 questions to half of the BRFSS sample every three years and adding 80 questions to the CHS annually. Because Option I assumes the current, small sample of (n=2000) children, it must be initiated earlier (2010) to ensure that three years of data for children are available for regional analysis by 2013. The steering committee emphasized that planning is needed to assure strong communication and coordination during the transition between survey modes.

Exhibit 2 provides a visual representation of the steering committee recommendation.

Exhibit 2: Recommendation 1: Two Stand-Alone Health Insurance Surveys (2008 and 2010) Followed by a BRFSS Survey Add-On (2010)



▪ *Recommendation 2: Begin Data Collection in 2008*

The steering committee strongly recommended that the collection of baseline data begin as soon as possible, preferably in 2008. The potential to obtain survey results in early 2009 was the primary reason cited by the steering committee for choosing to begin with a stand-alone survey. The steering committee acknowledged the need for flexibility in order to respond to developments in health care reform and the changing needs of Colorado. However, the committee stressed that data collection in 2010 not be contingent on passage of comprehensive health care reform, but rather, that the 2010 questionnaire be adjusted to reflect any reform developments and future programmatic needs.

▪ *Recommendation 3: Obtain Vendor Input to Finalize Approach, Timing, and Costs*

The following survey-related activities and functions will be required to implement the stand-alone health insurance survey and to disseminate the results:

- Survey design (questionnaire and sample design)
- Institutional review board (IRB) approval
- Data collection, data preparation
- Data custodianship
- Data analysis and report writing
- Web master
- Technical assistance to survey director (for survey design, imputation of variables, and variable construction).

Appendix 2 provides a detailed description of these survey-related activities and Appendix 1 provides an initial timeline through March 2011 for further refinement by the Department. Assuming the state moves forward with its plan to hire a survey director, some of these activities and functions will fall under this position's purview. By contrast, data collection will clearly require an outside vendor. Recognizing that some organizations/vendors are equipped to provide more than one of these functions and that a complicated set of purchasing parameters apply, the steering committee recommends that the Department conduct a Request for Information (RFI) to elucidate the division of labor between survey staff and the vendor(s) as well to obtain answers to questions about vendors' proposed approaches, timing and costs. The RFI would also help inform the development of a request for proposals (RFP). Teams of vendors may collaborate and bundle services in response to a Request for Proposals (RFP).

▪ *Recommendation 4: Develop and Implement a Dissemination Plan*

Finally, the steering committee strongly recommended that the Department develop and implement a dissemination plan for the purposes of assuring that stakeholders have access to the data and any necessary training on its use. The committee recommended that the dissemination planning process be initiated as soon as possible and be given as much emphasis as the survey planning process. It should include plans both for a data custodian and for communicating the findings to the public.

Potential funding sources

Because state health surveys are expensive endeavors, they are often funded collaboratively. The following entities have been known to fund portions of state health surveys, and the Department should consider exploring funding possibilities with them.

- The Robert Wood Johnson Foundation
- Health foundations
- Kaiser Permanente
- The Centers for Disease Control
- The National Cancer Institute
- The Centers for Medicare and Medicaid Services (matching funds)
- County health departments
- Local governments
- State health care agencies
- Indian Health Services
- The State Attorney General's office
- Universities
- Pharmaceutical companies

In addition, efforts are underway to secure federal funding (in addition to Medicaid and SCHIP matching funds) to support state health surveys.

Conclusions and Next Steps

Based on the findings from the key informant interviews and gap analysis, the steering committee recommends that a stand-alone health insurance survey (Option III) be conducted in 2008 and again in 2010 to assure timely baseline data for the evaluation of health care reform. In addition, the steering committee recommends that the Department migrate to a Behavioral Risk Factor Surveillance Survey (BRFSS)/Child Health Survey (CHS) platform for implementing the survey (Option I) beginning in 2010. Including detailed health insurance questions and related topics on existing public health surveys

facilitates a variety of health-related analyses, builds Colorado data capacity, and is a less expensive and more sustainable long-term strategy. The steering committee stressed that planning is needed to assure strong communication and coordination during the transition between survey modes.

The steering committee acknowledges the need for flexibility in order to respond to developments in health care reform and the changing needs of Colorado. However, the steering committee strongly recommends that the collection of baseline data begin as soon as possible, preferably in 2008. The committee also stressed that data collection in 2010 not be contingent on passage of comprehensive health care reform, but rather, that the 2010 questionnaire be adjusted to reflect any reform developments and current programmatic needs.

The household survey will be conducted by a contract vendor with the Department. In order to inform the RFP process, the steering committee recommends that a "Request for Information" (RFI) process be initiated whereby potential vendors come together with the state on a conference call to answer questions. The purpose of the RFI would be to understand the range of available vendors and their respective scopes of services, to define survey staffing needs to support the project, and to refine timeline and pricing estimates. The RFI would not be used to select a vendor but would inform the development of a request for proposals (RFP).

Finally, the steering committee strongly recommends that the Department develop and implement a dissemination plan for the purposes of assuring that stakeholders have access to the data and any necessary training on its use. The committee recommended that the dissemination planning process be initiated as soon as possible and be given as much emphasis as the survey planning process. In addition to the funding sources it has already identified, the Department should reference the section on "potential funding sources" for additional contributors.

Appendices

Appendix 1: Timeline for Hybrid Option

Exhibit 3 provides a timeline for the hybrid option recommended by the steering committee. The timeline indicates how long it would take to accomplish individual tasks and the sequence of those tasks. In general, delays at any stage of the process affect the overall timeline. The timeline assumes an efficient purchasing process such that data collection vendors are hired and begin work by summer 2008.

Exhibit 3: Timeline for Hybrid Option

Spring 2008	• **Hire Survey Director.** • **Initiate Dissemination Planning Process** • **Initiate Request for Information (RFI) Process**
Early Summer 2008	*Hire vendors for stand-alone survey.* *Design survey instrument and sample. (2 months)* *Seek IRB Approval. (Survey design must be finalized prior to seeking IRB approval, including plans for data custodianship. IRB approval time will vary by IRB.)*
Summer 2008	• **CATI programming and survey testing (1 to 2 months)**
Fall 2008	• **Data collection for 2008 Stand-Alone Health Insurance Survey (3 to 4 months)** • **Begin development of BRFSS/CHS add-on survey question set. (This will be an iterative process in collaboration with CDPHE staff and the BRFSS/CHS Advisory Committees).**
Winter2008-2009	• **Data cleaning, preparation of methodological documentation.** • **Imputation, variable construction, creation of codebook.** • **Preparation of public use data file.**
Winter/Spring 2009	• **Data from 2008 Health Insurance Survey available. Analysis and dissemination begins.** • **Work with BRFSS/CHS to finalize question set and gain approval to expand CHS sample to include infants and adolescents.** • **Begin planning for 2010 Stand-Alone Health Insurance Survey.**
August 2009	• **BRFSS /CHS advisory committee approves question set.**
January 2010	• **Data collection for the first BRFSS/CHS add-on survey (12 months).**
July 2010	• **Data collection for 2010 Stand-Alone Health Insurance Survey begins (3 to 4 months).**
January 2011	• **Data from 2010 Stand-Alone Survey available. Analysis and dissemination begins.**
March 2011	• **2010 BRFSS/CHS survey data available for analysis**

Appendix 2: Key Survey Implementation Functions

The following functions will need to be completed in order to implement the stand-alone health insurance survey (Option III) and to disseminate the results. Assuming the state moves forward with its plan to hire a survey director, some of these activities and functions will fall under this position's purview. By contrast, data collection will clearly require an outside vendor. Recognizing that some organizations/vendors are equipped to provide more than one of these functions and that a complicated set of purchasing parameters apply, the steering committee recommends that the Department conduct a Request for Information (RFI) to elucidate the division of labor between survey staff and the vendor(s). Organizations/vendors that can fulfill the listed functions should be invited to participate in the (RFI) process. Teams of vendors may collaborate and bundle services in response to a Request for Proposals (RFP).

- **Technical Assistance:** This project will require content expertise in measuring health insurance coverage using population survey research methods. Consulting with experts throughout the process will prevent expensive mistakes and ensure a good product. Consultation will be needed for: survey instrument design; the imputation of variables; variable construction; and to create a data center to house the confidential data set.

- **Survey Design**: This includes health insurance questionnaire design, which is highly specialized, and sampling design. Sampling design experts have specialized knowledge that will assure that all groups of interest are properly represented in the survey sample. Sampling design expertise may be a service provided by the data collection vendor, but not always. Some data collection vendors (e.g., marketing or polling firms) have limited experience with population-based samples.

- **Institutional Review Board (IRB) Approval:** IRBs review proposed survey designs ahead of time to ensure that the well-being of future survey respondents will be protected. Federal law states that any institution receiving federal money is required to have IRB approval before it conducts research involving human subjects, including population survey research. For example, receipt of federal Medicaid matching funds for the Colorado household survey would trigger this requirement for IRB approval.

  The IRB process has value beyond simply meeting legal requirements and satisfying a professional code of ethics. IRBs are experienced and objective. They can bring up issues that may not have occurred to the research team. The IRB process varies in length and can be an iterative process. There are private IRBs for hire, university IRBs, and public IRBs.

  Although the IRB process can cause delays, skipping this important step would eliminate the possibility that the data could be analyzed by anyone affiliated with an agency that receives federal funds, and anyone associated with a university. Excluding most public employees, recipients of federal grants, and the university community would eliminate a large group of potential data analysts.

- **Data Collection Vendor-** This vendor will conduct CADI programming, test the survey instrument, collect and clean the data, write technical reports on methodology, and prepare a preliminary data dictionary. This vendor specializes in population survey research, but may have no health insurance content expertise.

- **Data Preparation**: Data preparation involves the construction of variables (e.g., insurance status) and the imputation of missing variables. This activity requires specialized knowledge and health insurance content expertise. Data preparation also includes additions to the data dictionary (e.g., for constructed variables), preparation of the confidential data set, and preparation of the public use data file. A public use data file excludes certain sensitive variables or variables that could allow the identification of individuals when combined with other variables (for example, county of residence).
- **Data Custodianship:** By law, confidential data files with personally-identifying information are closely guarded. This includes files containing variables that could lead to the identification of a study subject, such as county of residence in combination with other variables that may enable someone to deduce a respondent's identity. By contrast, the public use data file can be posted on the web and downloaded by anyone for analysis.

  A data custodian is charged with restricting access to the confidential data file, which is subject to HIPAA privacy rule provisions. Typically, an application process is developed to review requests from trained analysts who wish to access the confidential data. In order to conduct analyses with these data, researchers/analysts typically must come to the data access center where the confidential data files are kept in a locked room. Researchers may be provided a "dummy data set" to fine tune their computer programs before coming to the data access center. In addition, the data custodian could potentially respond to data requests from the community, or run computer programs (code) sent to them by outside researchers so that the researchers do not need to come into the data access center.
- **Data Analysis and Report Writing**: At a minimum, this project requires analysis of the data files to summarize the baseline data (2009) and to evaluate health care reform efforts (2011). However, key informants expressed interest in a wide variety of analytical products including data books, maps, policy reports, and policy briefs. A dissemination process that results in the creation of a public use file and appropriate training enables multiple data analysts and report writers from different organizations to analyze the data for a variety of purposes.
- **Web Master**: The web master functions refers to the need to post the public use data file on the internet and to design and maintain a web-based query system (if chosen as a dissemination strategy).

The BRFSS/CHS has established vendors for sampling design, data collection, and data preparation. CDPHE is the data custodian for the BRFSS/CHS and has their own web-based query system.

Appendix 3: Five Household Survey Options for Colorado

Five Household Survey Options for Colorado

This section puts forth five different survey options for addressing Colorado's data needs. Each option addresses, to a greater or lesser extent, the goals and objectives that emerged from the work of the steering committee and from key informants during the survey planning process.

Disclaimers

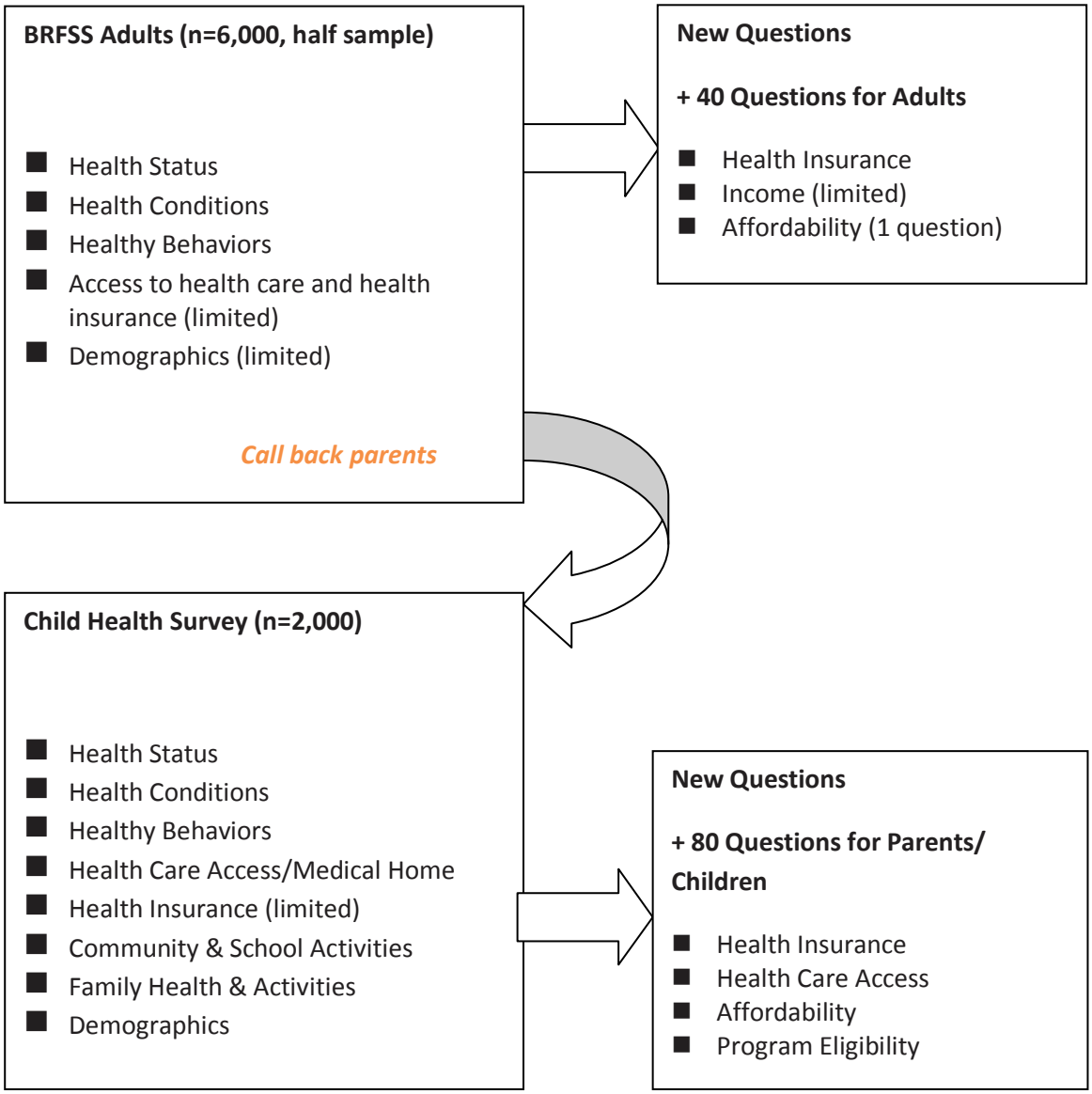
Any one of these options, if selected, would require fine tuning through consultation with the vendor on operational issues. Cost estimates for each option should be considered as order-of-magnitude estimates. These cost estimates were generated in conjunction with potential vendors that were sometimes reluctant to provide them without concrete specification of survey design (i.e. questionnaire length and complex sampling methods). Likewise, the ability to measure subpopulations is dependent on the final sample design and response rates among subpopulations. Finally, two of the options (Option I and Option II) require obtaining external approvals (e.g., from advisory committees and the federal government).

Option I: A Limited BRFSS Add-On (The Illinois Model)

Option I would create an "omnibus" (multi-topic) health care and health insurance survey by building on two existing public health surveys focused on health behaviors and conditions that are currently administered by CDPHE annually. Specifically, it would:

- Add 40 questions <u>every three years</u> to half of the Behavioral Risk Factor Surveillance Survey (BRFSS) survey of adults, including:
    - Detailed health insurance questions (including dental and mental health).
    - Limited income-related and affordability questions.
- Add 80 questions <u>annually</u> to the BRFSS companion ("call-back") survey of parents, known as the Child Health Survey (CHS), including:
    - Detailed health insurance (including dental and mental health) questions for children.
    - Health care access questions for parents and children (as necessary).
    - Utilization questions for parents and children.
    - Affordability questions for parents and children.
    - Insurance program eligibility modeling for parents and children.

A Limited BRFSS Add-On Survey



Assumptions:

- Colorado would hire a health insurance components coordinator by the second quarter 2008 to interface with existing BRFSS and CHS staff, to develop the questionnaire, participate in the data collection planning activities, and facilitate the dissemination strategy.

- The health insurance components coordinator would have access to a consulting budget to obtain additional technical assistance on questionnaire development and analysis (e.g., from SHADAC or UCLA).[6]

- Data collection would be conducted through the existing CDPHE mechanisms for BRFSS and the CHS.

- The BRFSS staff and advisory committee would be willing to allocate half of the state-option questions (n=40) to health insurance and income every 3 years; incurring an opportunity cost.

- The Colorado CHS staff and advisory committee would be willing to allocate annually 80 questions on health insurance and related topics, incurring an opportunity cost.

- The Colorado CHS sample would be expanded to include children 0-18 years (from the current sample of 1-14 years).

- The BRFSS sampling redesign planned for 2009 is implemented on time. This planned redesign would permit regional analysis for 10 counties and 10 regions by ensuring a sample size of 600 in each region for the entire adult sample of n=12,000. This option proposes adding questions to half of the sample (n=6000). We assume that this would result in n=400 completed adult surveys for at least 14 regions, allowing for a margin of error of +/- five percentage points.

Evaluation of Option I: A Limited BRFSS Add-On

This section examines how Option I stands up to the eight criteria identified by the steering committee for use in evaluating survey options, namely: policy relevance, comprehensiveness (depth/breadth), precision, efficiency, cost, building Colorado capacity, sustainability, and timeliness. Exhibit I explores the first three criteria: policy relevance, comprehensiveness and precision, dividing precision into three separate categories: state-level precision, county- or regional-level precision and precision for estimates made of the uninsured population. The last five criteria are applied to Option I later in this section.

Legend for Exhibit I

We used symbols to rank Option I according to criteria 1 and 2; A check (✓) indicates that an option meets the criteria, the letter L (L) indicates that an option has limitations in meeting the criteria, and a dash (—) indicates that the option does not meet the criteria . More specific descriptions of the meanings of these symbols in relation to the criteria are explained in Appendix 4.

[6] University of Minnesota State Health Access Data Assistance Center (SHADAC) and the University of California, Los Angeles Center for Health Policy Research share a mission to develop capacity in states for conducting and analyzing state health surveys. They provide limited technical assistance free to states and more extensive technical assistance on a consulting basis.

Exhibit I: EVALUATION OF OPTION I: A Limited BRFSS Add-On

Steering Committee Criteria: Policy Relevance, Comprehensiveness (depth/breadth), and Precision

Policy Relevant Domain/Measure Set	Comprehensiveness	Precision: Statewide	Precision:14 Regions	Precision: Uninsured Analysis	Explanation of Limitations
Health Insurance Coverage Examples: type of insurance; reasons for uninsurance; underinsurance	✓	✓	L	L	Regional estimates for children and analysis of uninsured children will require 2 or 3 years of data.
Health Care Access Examples: regular source of care/where; medical home; barriers to care; delayed care	L	✓	L	L	Regional estimates for children and analysis of uninsured children will require 2 or 3 years of data; Childless adults will have limited questions on access.
Health Care Utilization Examples: preventive, sick, ED, and hospital visits; health beliefs; sources of health information	L	✓	L	L	Regional estimates for children and analysis of uninsured children will require 2 or 3 years of data; Childless adults will have NO questions on utilization.
Affordability of Health Care and Health Insurance Examples: household spending on necessities/discretionary income; medical and consumer debt	L	✓	L	L	Regional estimates for children and analysis of uninsured children will require 2 or 3 years of data; Childless adults will have one question on affordability.
Eligibility for Public and Private Insurance Examples: eligible-but-not-enrolled; crowd-out potential; ESI offer and take-up rates	✓	L	—	L	Statewide estimates for children and analysis of uninsured children will require 2 or 3 years of data.
Dental and Mental Health Access and Coverage Examples: dental and mental health coverage; visits; barriers to care; unmet needs	✓	✓	L	L	Regional estimates for children and analysis of uninsured children will require 2 or 3 years of data.
Health Status, Health Conditions, Health Behaviors Examples: self-assessed health; disability; chronic conditions; healthy/risky behaviors; quality of life; disease management	✓	✓	L	L	Regional estimates for children and analysis of uninsured children will require 2 or 3 years of data.
Social Determinants of Health Examples: education; demographic characteristics; environment	L	✓	L	L	Regional estimates for children and analysis of uninsured children will require 2 or 3 years of data; Childless adults will have limited questions on social determinants of health.

Criteria Four through Eight

The last five criteria established by the steering committee are explored in relation to Option I below.

Efficiency

Option I:

- Builds on an existing Colorado public health surveying infrastructure and minimizes duplication of effort and competing estimates.
- Addresses the data gaps by:
    - Providing detailed insurance information (including, dental, mental health, and underinsurance) for adults and children statewide (by 2010).
    - Providing regional estimates of health insurance coverage for adults (by 2010) and children (by 2012).
    - Providing detailed information on health care access, utilization, and affordability for parents and children (but more limited information for childless adults) statewide (by 2010) and regionally (by 2012).
    - Providing information on program eligibility and characteristics of uninsured children statewide (by 2011).
    - Provides a rich data set that "co-locates" health insurance-related information with health status information for policy-relevant analyses.

Cost

Option I:

- Data collection, cleaning, and weighting costs for 2009 are estimated to be $124,000 if a FY08-09 decision item passes, and $216,000 otherwise. These costs include technical assistance on sampling design and questionnaire development provided to the state by the federal government at no cost. [7]
- Data collection, cleaning, and weighting costs associated with adding health insurance-related questions to the CHS in 2010 and 2011 would be $96,000 per year.
- The three-year cost for the project would be $316,000 if a FY08-09 decision item passes and $408,000 otherwise.
- No cell phone sample is priced because prior federal approval is required. (Pilots are underway, but states do not currently have a cell phone option.).

[7] Estimating cost is very difficult without exact specifications of complex survey design, structure of the interview, Colorado response rates, length of the interview, and contractors.

- Health insurance component coordinator, analytical, and dissemination costs are not included (although the current BRFSS infrastructure includes posting BRFSS estimates on the COHID website).

Building Colorado Capacity

Option I:

- Employs a Colorado-based health insurance component coordinator to develop a new question set and to interface with existing Colorado-based BRFSS and CHS staff.
- Provides new resources to an existing infrastructure dedicated to supporting state health information needs. The Colorado-based CDPHE already conducts health-related data collection for the existing BRFSS and CHS samples.
- Invests Colorado data users with a public health orientation and those with a health insurance orientation in the same dataset and creates opportunities for cross-training and bridging silos.

Sustainability

Option I:

- Requires on-going, but comparatively little funding.
- Creates opportunity costs, as public health-related questions are displaced in order to accommodate health insurance-related questions.
- Requires approval of two state advisory committees and the CDC.
- Benefits from CDPHE's on-going and statutory-based commitment to data collection and content expertise in health status/conditions/behaviors (but not in health insurance).

Timeliness

Option I:

- Assumes data collection would begin in January 2009.
- Produces statewide results and adult regional estimates in 2010.
- Requires merging multiple years of data to produce certain child estimates (such as state-wide program eligibility estimates and regional uninsured rates), with first estimates available in 2011 or 2012.

Overall Strengths and Weaknesses

Strengths

Option I:

- Builds on and strengthens existing infrastructure to implement a comprehensive health survey that includes overall health, health care, and health insurance questions.

- Minimizes duplication with other surveys and production of competing estimates.
- Is inexpensive and therefore more sustainable.

Weaknesses

Option I:

- Lacks timeliness – Multiple years of data must be merged for certain regional and child estimates.
- Offers less control and flexibility, as compared to a stand-alone survey.
- Offers no cell phone sample in 2009 (it would not be possible).

Recommendations, if Option I is selected:

Call a spring 2008 meeting of the BRFSS and CHS advisory committees to gain approval for the approach and identify operational issues, including any federal approvals that might be necessary. Assuming the approach is endorsed, add health insurance expertise to the BRFSS and CHS advisory committees.

Option II: BRFSS Add-On with Expanded Sample

Option II is similar to Option I in that it would create an "omnibus" (multi-topic) health care and health insurance survey by building on two existing public health surveys focused on health behaviors and conditions that are currently administered by CDPHE annually. It addresses some of the timeline limitations by adding to the survey sample size. Specifically, it would:

- Add 40 questions every three years to half of the Behavioral Risk Factor Surveillance Survey (BRFSS) survey of adults, including:
    - Detailed health insurance questions (including dental and mental health).
    - Limited income-related and affordability questions.
- Increase the sample size of the Child Health Survey(CHS) to 6,000 respondents annually by delinking it from BRFSS[8].
- Add 80 questions annually to the CHS, including:
    - Detailed health insurance (including dental and mental health) questions for children.
    - Health care access questions for parents and children (as necessary).
    - Utilization questions for parents and children.
    - Affordability questions for parents and children.

[8] The Colorado Child Health Survey currently operates in conjunction with the BRFSS survey. Specifically, parents who respond to the BRFSS give permission to be called back to answer health questions about their children. To increase the sample size of the CHS, it would be delinked from the BRFSS and exist as a separate, stand-alone survey.

- Insurance program eligibility modeling for parents and children.

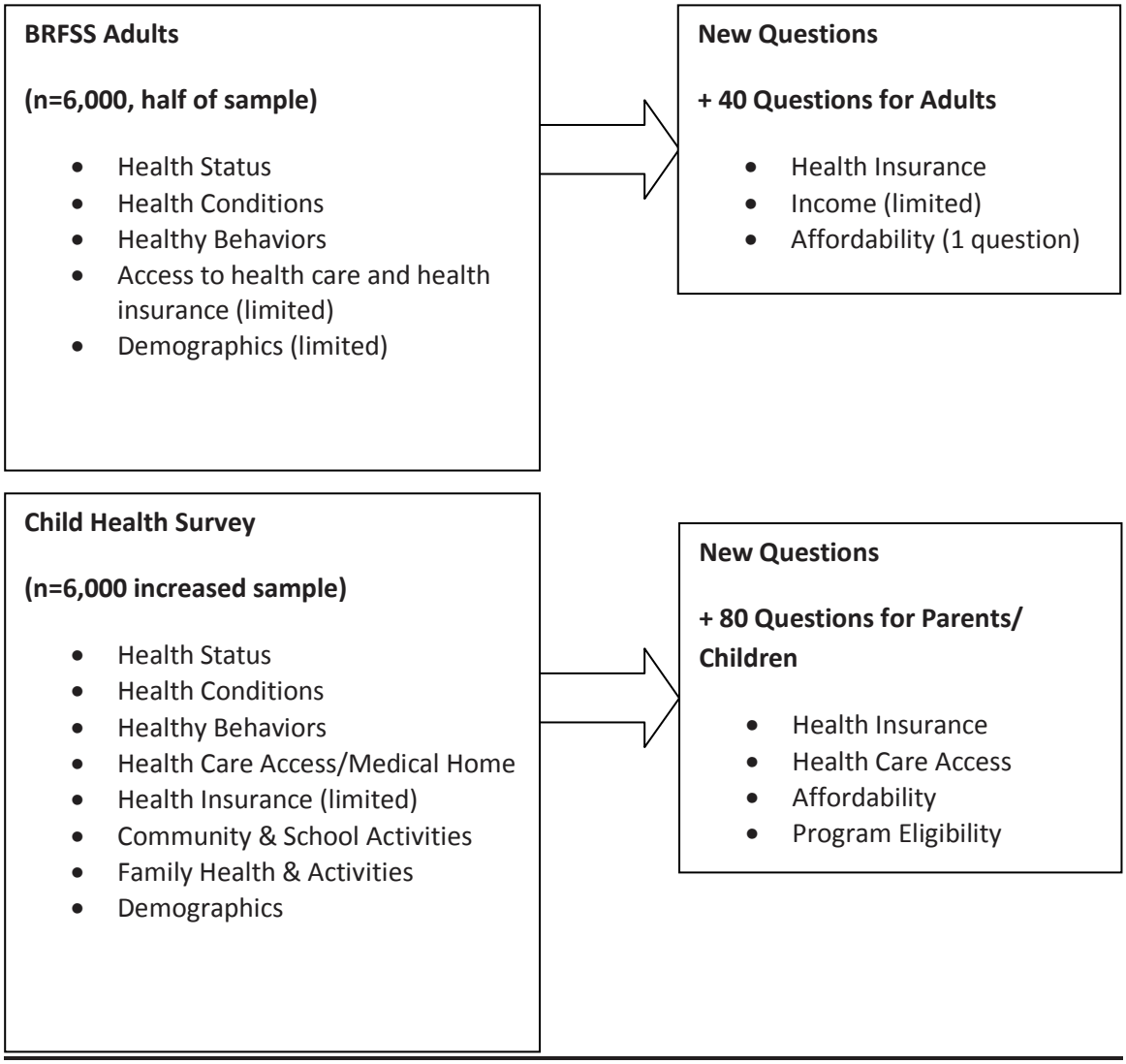
OPTIONAL: New "call-back" survey for childless adults. (Not priced or evaluated)

Assumptions:

- Colorado would hire a health insurance component coordinator by the second quarter 2008 to interface with existing BRFSS and CHS staff, to develop the questionnaire, participate in the data collection planning activities, and facilitate the dissemination strategy.
- The health insurance component coordinator would have access to a consulting budget to obtain additional technical assistance on questionnaire development and analysis (e.g., from SHADAC or UCLA).[9]
- Data collection would be conducted through the existing CDPHE mechanisms for the BRFSS and the CHS.
- The BRFSS staff and advisory committee would be willing to allocate all of the state-option questions (n=40) to health insurance and income every 3 years; incurring an opportunity cost
- The Colorado CHS staff and advisory committee would be willing to make several changes to the current operations, specifically:
    - To delink the CHS from the BRFSS survey samples.
    - To increase (triple) the sample size.
    - To expand the sample to include children 0-18 years (from current sample of 1-14 years).
    - To allocate 80 questions on health insurance and related topics; incurring an opportunity cost
    - To explore the necessity/feasibility of oversampling low-income and middle-income households.
- Current CHS partners (who buy questions) would continue to participate in the survey.
- The BRFSS sampling redesign planned for 2009 is implemented on time. This planned redesign would permit regional analysis for 10 counties and 10 regions by ensuring a sample size of 600 in each region. Option Two proposes adding questions to half of the sample (n=6000). We assume that this would result in n=400 completed adult surveys for at least 14 regions, allowing for a margin of error of +/- five percentage points.

[9] University of Minnesota State Health Access Data Assistance Center (SHADAC) and the University of California, Los Angeles Center for Health Policy Research share a mission to develop capacity in states for conducting and analyzing state health surveys. They provide limited technical assistance free to states and more extensive technical assistance on a consulting basis.

Option II: BRFSS Add-On with Expanded Sample



Evaluation of Option II: BRFSS Add-On with Expanded Sample

This section examines how Option II stands up to the eight criteria identified by the steering committee for use in evaluating survey options, namely: policy relevance, comprehensiveness (depth/breadth), precision, efficiency, cost, building Colorado capacity, sustainability, and timeliness. Exhibit II explores the first three criteria: policy relevance, comprehensiveness and precision, dividing precision into three separate categories: state-level precision, county-or regional -level precision and precision for estimates made of the uninsured population. The last five criteria are applied to Option II later in this section.

Legend for Exhibit II

We used symbols to rank Option II according to criteria 1 and 2; A check (✓) indicates that an option meets the criteria, the letter L (L) indicates that an option has limitations in meeting the criteria, and a dash (—) indicates that the option does not meet the criteria . More specific descriptions of the meanings of these symbols in relation to the criteria are explained in Appendix 4.

Exhibit II: EVALUATION OF OPTION II: BRFSS Add-On with Expanded Sample

Steering Committee Criteria: Policy Relevance, Comprehensiveness (Breadth/Depth), and Precision

Policy Relevant Domain/Measure Set	Comprehensive	Precision: Statewide	Precision: 14 Regions	Precision: Uninsured Analysis	Explanation of Limitations
Health Insurance Coverage Examples: type of insurance; reasons for uninsurance; underinsurance	✓	✓	✓	✓	
Health Care Access Examples: regular source of care/where; medical home; barriers to care; delayed care	L	✓	✓	✓	Childless adults will have limited questions on access, unless a new call back survey is implemented for them.
Health Care Utilization Examples: preventive, sick, ED, and hospital visits; health beliefs; sources of health information	L	✓	✓	✓	Childless adults will have NO questions on utilization, unless a new call back survey is implemented for them.
Affordability of Health Care and Health Insurance Examples: household spending on necessities/discretionary income; medical and consumer debt	L	✓	✓	✓	Childless adults will have one question on affordability, unless a new call back survey is implemented for them..
Eligibility for Public and Private Insurance Examples: eligible-but-not-enrolled; crowd-out potential; ESI offer and take-up rates	✓	✓	L	✓	Aggregated regional estimate only (rural, urban, frontier) and possibly for Denver Metro
Dental and Mental Health Access and Coverage Examples: dental and mental health coverage; visits; barriers to care; unmet needs	✓	✓	✓	✓	
Health Status, Health Conditions, Health Behaviors Examples: self-assessed health; disability; chronic conditions; healthy/risky behaviors; quality of life; disease management	✓	✓	✓	✓	
Social Determinants of Health Examples: education; demographic characteristics; environment	L	✓	✓	✓	Childless adults will have limited questions on social determinants of health, unless a new call back survey is implemented for them.

Criteria Four through Eight

The last five criteria established by the steering committee are explored in relation to Option II below.

Efficiency

Option II:

- Builds on an existing Colorado public health surveying infrastructure and minimizes duplication of effort.
- Addresses the data gaps by:
  - Providing detailed insurance information (including dental, mental health, and underinsurance) for adults and children statewide (by 2010).
  - Providing regional estimates of health insurance coverage, health care access, utilization, affordability, for parents and children (but more limited information for childless adults) statewide regionally (by 2010).
  - Enabling analyses of the uninsured by region (urban, rural, frontier) and separate analysis of children and adults (by 2010).
  - Providing a rich data set that "co-locates" health insurance-related information with health status information for policy-relevant analyses.

Cost

- Data collection, cleaning, and weighting costs for the changes to BRFSS in 2009 are estimated to be $280,000 if a FY08-09 decision item passes and $120,000 otherwise. These costs include technical assistance on sampling design provided to the state by the federal government at no cost.[10]
- Data collection, cleaning, and weighting costs associated with increasing the number of interviews (adding sample) and health insurance-related questions to the CHS annually would be $200,000. This assumes that current CHS partners continue to participate and contribute approximately $100,000 annually to the redesigned survey.
- The three-year cost for the project would be $628,000 if a FY08-09 decision item passes and $720,000 otherwise.
- No cell phone sample is priced because prior federal approval is required. (Pilots are underway, but states do not currently have a cell phone option.)

[10] Estimating cost is very difficult without exact specifications of complex survey design, structure of the interview, Colorado response rates, length of the interview, and contractors.

Building Colorado Capacity

Option II:

- Employs a Colorado-based health insurance component coordinator to develop new question set and to interface with existing Colorado-based BRFSS and CHS staff.
- Provides new resources to an existing infrastructure dedicated to supporting state health information needs. The Colorado-based CDPHE already conducts health-related data collection for the existing BRFSS and CHS samples.
- Enhances the ability (power) to conduct analysis of a broad range of child and parent health issues in Colorado by expanding the CHS sample and co-locating health behavior/condition information with health insurance related variables.
- Facilitates trend analysis through annual data collection on children and parents and enhances analysis of smaller populations (e.g., regional analysis) because data accumulates more quickly for merged-year analyses.
- Invests Colorado data users with a public health orientation and those with a health insurance orientation in the same dataset and creates opportunities for cross-training and bridging silos.

Sustainability

Option II:

- Creates opportunity costs, as public health-related questions are displaced in order to accommodate health insurance-related questions.
- Requires the approval of two state advisory committees and the CDC. In particular, it requires project approval by the CHS advisory committee – especially for the delinking of the CHS from the BRFSS. Approval is likely to be contingent on assurances of on-going funding to add questions and sample to the CHS every year.
- Benefits from the CDPHE on-going commitment to data collection and content expertise in health status, conditions and behaviors (but not in health insurance).

Timeliness

Option II:

- Assumes data collection would begin in January 2009.
- Produces statewide and regional results for adults and children in early 2010.

Overall Strengths and Weaknesses

Strengths

Option II:

- Builds on and strengthens existing infrastructure to implement a comprehensive health survey that includes overall health, health care, and health insurance questions.
- Allows for annual data collection on children and parents that facilitates trend analysis and enhances analysis of smaller populations (e.g., regional analysis) because data accumulates more quickly for merged-year analyses.
- Minimizes duplication with other surveys and production of competing estimates.
- Is less expensive than new, stand-alone surveys.
- Benefits from current funding partnership with the CHS.

Weaknesses

Option II:

- Offers less control and flexibility, as compared to a new, stand-alone survey.
- Has less detailed information on childless adults.
- Offers no possibility of a cell phone sample in 2009.

Recommendations, if Option II is selected:

Call a spring 2008 meeting of the BRFSS and CHS advisory committees to gain approval for the approach and identify operational issues, including necessary federal approvals. Assuming the approach is endorsed, add health insurance expertise to the BRFSS and CHS advisory committees.

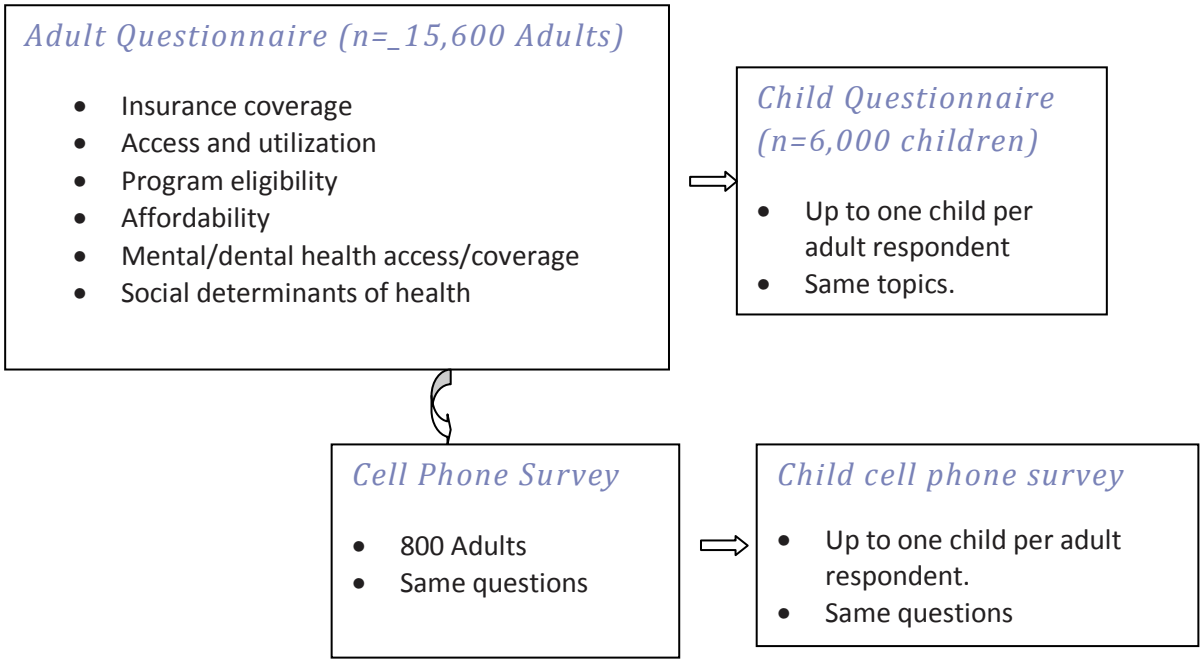
Option III: Stand-Alone Health Insurance Survey (The Minnesota Model)

Survey option III is a stand-alone health insurance survey of adults and their children similar in content to the 2001 Colorado Household Survey and conducted every two to three years. It would feature a cell phone sample to address under-coverage of cell phone-only households. Specifically, Option III would:

- Survey 15,600 adults, one adult per household. When that adult has a child, it would also survey the most knowledgeable adult in the household about that child using a separate survey instrument (a child survey).
- Oversample parents to insure a large sample of children (with a target of 6,000).
- Survey 800 cell-phone only households.
- Include the following types of questions in both the adult and child surveys:
    - Detailed health insurance questions (including underinsurance and dental, pharmaceutical and mental health coverage).

- Detailed questions on utilization and access (healthcare, mental health, dental and pharmacy).
- Questions on the affordability of health insurance and health care.
- One general question on health status and one on disability status.
- Demographic questions.
- Health insurance eligibility questions including detailed family structure and income.
- Immigration and acculturation questions.

Survey Option III: Stand-Alone Health Insurance Survey



Assumptions:

- Colorado would hire a survey director by the second quarter 2008 to develop the questionnaire, oversee the data collection activities, and facilitate the dissemination strategy.
- The survey director would have access to a consulting budget to obtain additional technical assistance on questionnaire development and analysis (e.g., from SHADAC or UCLA).[11]

[11] University of Minnesota State Health Access Data Assistance Center (SHADAC) and the University of California, Los Angeles Center for Health Policy Research share a mission to develop capacity in states for conducting and analyzing state health surveys. They provide limited technical assistance free to states and more extensive technical assistance on a consulting basis.

- A data collection vendor (such as Westat, NORC, or the Research Triangle Institute) would be hired to conduct sample design, to implement CATI programming, to test the instrument, to conduct the interviews and to clean the data.

- There would be continued funding every two to three years ongoing.

Evaluation of Option III:

This section examines how Option III stands up to the eight criteria identified by the steering committee for use in evaluating survey options, namely: policy relevance, comprehensiveness (depth/breadth), precision, efficiency, cost, building Colorado capacity, sustainability, and timeliness. Exhibit III explores the first three criteria: policy relevance, comprehensiveness and precision, dividing precision into three separate categories: state-level precision, county-or regional -level precision and precision for estimates made of the uninsured population. The last five criteria are applied to Option III later in this section.

Legend for Exhibit III

We used symbols to rank Option III according to criteria 1 and 2; A check (✓) indicates that an option meets the criteria, the letter L (L) indicates that an option has limitations in meeting the criteria, and a dash (—) indicates that the option does not meet the criteria . More specific descriptions of the meanings of these symbols in relation to the criteria are explained in Appendix 4.

Exhibit III: EVALUATION OF OPTION III: A Stand Alone Health Insurance Survey

Policy Relevant Domain/Measure Set	Comprehensive	Precision: Statewide	Precision: 14 Regions	Precision: Uninsured Analysis	Explanation of Limitations
Health Insurance Coverage Examples: type of insurance; reasons for uninsurance; underinsurance	✓	✓	✓	✓	
Health Care Access Examples: regular source of care/where; medical home; barriers to care; delayed care	✓	✓	✓	✓	
Health Care Utilization Examples: preventive, sick, ED, and hospital visits; health beliefs; sources of health information	✓	✓	✓	✓	
Affordability of Health Care and Health Insurance Examples: household spending on necessities/discretionary income; medical and consumer debt;	✓	✓	✓	✓	
Eligibility for Public and Private Insurance Examples: eligible-but-not-enrolled; crowd-out potential; ESI offer and take-up rates	✓	✓	L	✓	Aggregated regional estimate only (rural, urban, frontier) and possibly for Denver Metro
Dental and Mental Health Access and Coverage Examples: dental and mental health coverage; visits; barriers to care; unmet needs	✓	✓	✓	✓	
Health Status, Health Conditions, Health Behaviors Examples: self-assessed health; disability; chronic conditions; healthy/risky behaviors; quality of life; disease management	L	L	L	L	Variables limited to self-assessed health status, and one or two questions on disability
Social Determinants of Health Examples: education; demographic characteristics; immigration and acculturation, environment	L	L	L	L	No questions on health environment

Criteria Four through Eight

Efficiency

Option III:

- Builds on an existing survey instruments and allows for possible piggy backing on translation, CATI programming, imputation, and variable construction of the CHIS or the SHADAC surveys.
- Would address most data gaps, providing the estimates in 2009, including:
    - Detailed insurance information (including dental, mental health, and underinsurance).
    - State-wide and regional estimates of health insurance coverage, health care access utilization, and affordability for adults and children.
    - Statewide estimates of public and private health insurance program eligibility for adults and children.
    - Immigration and acculturation information.
    - Statewide analysis of the uninsured, and by more aggregated regions (urban, rural, frontier) and separate analyses of children and adults.
    - It would not "co-locate" health insurance-related information with health conditions and health behaviors, although it would feature one health status question and one disability question.
- Does not overlap with BRFSS (as would Option IV)
- Requires the development of a new infrastructure to support the implementation and dissemination of an on-going health insurance survey.

Cost

- Estimated cost for interviews in English and Spanish with 15,600 households (up to two interviews per household) is $1.7 million for data collection and cleaning in 2008. [12]
- Pilot cell phone sample of 800 is estimated at an additional $230,000.
- The survey would be implemented every two or three years with a similar budget of $1.7 million, plus any cell phone sample costs;
- Imputation, variable construction, analytical and dissemination costs not included.

[12] Estimating cost is very difficult without exact specifications of complex sample design, structure of the interview, Colorado response rates, length of the interview, and contractors.

Sustainability

Option III requires significant and ongoing fundraising efforts.

Building Colorado Capacity

Option III:

- Features a Colorado-based survey director/staff, possibly Colorado-based Westat call staff.
- Would foster Colorado experience and expertise by implementing a pilot cell-phone sample to address the growing problem of cell-phone only households.
- Provides mechanisms for public participation in key data collection decisions and public access to the eventual database would need to be built into the new infrastructure to support implementation and dissemination of an on-going health insurance survey.

Timeliness

Option III produces statewide results and regional estimates in early 2009. This assumes data collection would begin in the summer of 2008. This assumption depends on an efficient purchasing mechanism to hire a survey director and a data collection vendor, and vendor availability.

Overall Strengths and Weaknesses

Strengths

Option III:

- May provide data as early as winter 2009.
- Is flexible - Colorado can scale this survey up or down as needed. Questions /sample can be added or taken away
- May offer a more representative sample; a successful cell phone sample would adjust for cell-phone only households.
- Provides table regional estimates for adults and children with one year of data
- Has no opportunity costs associated with adding questions to the BRFSS/CHS surveys.

Weaknesses

Option III:

- Is expensive.
- May increase respondent burden by having one more survey in the field.

- Features no questions on health behaviors/conditions - can't cross tabulate those variables with health insurance, access, utilization and costs.
- Requires development of a new infrastructure to support implementation and dissemination of an on-going health insurance survey.
- Offers less opportunity to combine multiple years of data to examine small populations due to the periodicity (every 3 years) of the survey.

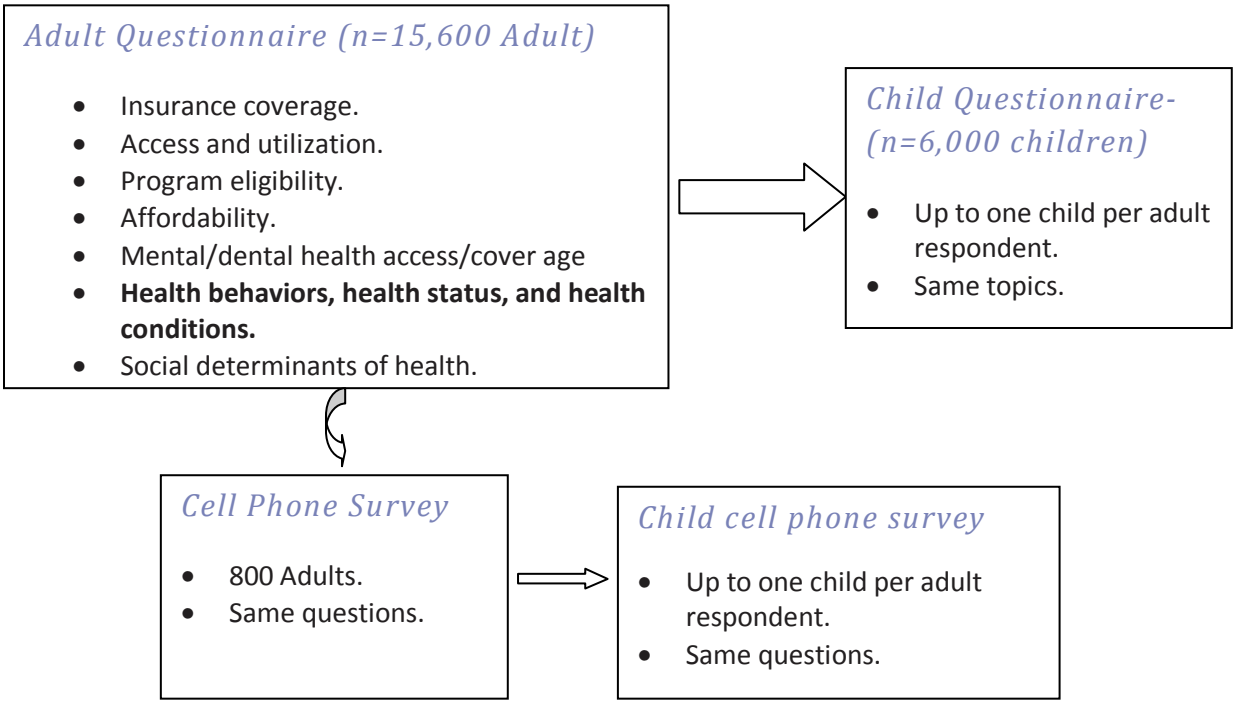
Recommendations, if Option III is selected:

Clarify the design of the infrastructure to implement and disseminate the survey before or soon after hiring a survey director.

Option IV: A Stand-Alone Omnibus Survey (The California Model)

Survey Option IV is an omnibus (multi-topic) survey. It is an expanded version of Option III, with the important difference that it adds questions on health conditions, health behaviors, and more detailed questions on health status. Because Option IV is similar in many ways to Option III, the discussion of assumptions and the evaluation will highlight what is different about Option IV and otherwise refer the reader back to the analysis of Option III.

Option IV: A Stand-Alone Omnibus Survey



Assumptions:

Assumptions for Option IV are the same as for Option III, with the following additions:

- Given the breadth of the topics to be included, a prioritization process would need to balance comprehensiveness of the questions with questionnaire length.
- There would be some coordination/dialogue between BRFSS and the new survey regarding the release of duplicative estimates of health behaviors, health conditions, and health status.

Evaluation of Option IV: A Stand-Alone Health Insurance Survey

As with the two previous options, this section examines how Option IV stands up to the eight criteria identified by the steering committee for use in evaluating survey options. Exhibit IV explores policy relevance, comprehensiveness and precision. The last five criteria are applied to Option IV later in this section. The legend for Exhibit IV is the same as for previous exhibits.

Exhibit IV: EVALUATION OF OPTION IV: Stand Alone Omnibus Survey

Steering Committee Criteria: Policy Relevance, Breadth/Depth, and Precision

Policy Relevant Domain/Measure Set	Level Of Detail	Precision: Statewide	Precision: 14 Regions	Precision: Uninsured Analysis	Explanation of Limitations
Health Insurance Coverage Examples: type of insurance; reasons for uninsurance; underinsurance	✓	✓	✓	✓	
Health Care Access Examples: regular source of care/where; medical home; barriers to care; delayed care	✓	✓	✓	✓	
Health Care Utilization Examples: preventive, sick, ED, and hospital visits; health beliefs; sources of health information	✓	✓	✓	✓	
Affordability of Health Care and Health Insurance Examples: household spending on necessities/discretionary income; medical and consumer debt	✓	✓	✓	✓	
Eligibility for Public and Private Insurance Examples: eligible-but-not-enrolled; crowd-out potential; ESI offer and take-up rates	✓	✓	L	✓	Aggregated regional estimates for rural, urban, and frontier only.
Dental and Mental Health Access and Coverage Examples: dental and mental health coverage; visits; barriers to care; unmet needs	✓	✓	✓	✓	
Health Status, Health Conditions, Health Behaviors Examples: self-assessed health; disability; chronic conditions; healthy/risky behaviors; quality of life; disease management	✓	✓	✓	✓	
Social Determinants of Health Examples: education; demographic characteristics; immigration and acculturation; environment	✓	✓	✓	✓	

Efficiency

Option IV:

- Is designed to addresses same data gaps as Option III, but also provides for the co-location of health insurance, health behaviors and health condition variables.
- Overlaps with the BRFSS, resulting in concerns about differing estimates between surveys and potential respondent burden.
- If adapted from an existing survey (such as the Urban Institute health insurance survey, the California Health Interview Survey (CHIS), or the Minnesota health insurance survey) certain economies are possible (e.g., savings on translation, CATI programming, etc).

Cost

- The estimated cost for interviews in English and Spanish with 15,600 households (up to two interviews per household) is $2 million for data collection and cleaning in 2008. [13]
- A pilot cell phone sample of 800 adults and their children is estimated at an additional $250,000.
- The survey would be implemented every three years with a similar budget of $2 million, plus any cell phone sample costs;
- Imputation, variable construction, analytical and dissemination costs are not included.

Building Colorado Capacity

Option IV:

- Could have unintended consequences for other Colorado surveys if respondent burden in rural areas results in decreased response rates for all surveys.
- Builds Colorado capacity in the same ways mentioned for Option III

Sustainability and Timeliness

Sustainability for Option IV is the same as for Option III

Overall Strengths and Weaknesses

Strengths

Option IV has the same strengths as Option III, but data could be used to determine associations between health conditions, health behaviors, and health insurance, access, utilization and costs.

[13] Estimating cost is very difficult without exact specifications of complex sample design, structure of the interview, Colorado response rates, length of the interview, and contractors.

Weaknesses

Option IV has the same weaknesses as Option III, plus;

- It introduces the challenge of explaining the potential differences in estimates between the BRFSS and the new survey where topics overlap.
- Increases overall respondent burden, especially in the rural areas.

Recommendations, if Option IV is selected:

The consultants' recommendations for Option IV are the same as for Option III.

A comparison across options

Exhibit 4 summarizes the differences among models, examining how each option meets criteria established by the steering committee.

Exhibit 4: Comparison of Four Different Colorado Household Survey Options

	Option 1	Option 2	Option 3	Option 4
Comprehensiveness of Questionnaire *				
Comprehensive questions for parents	√	√	Health insurance focus	√
Comprehensive questions for childless adults	No	No	Health insurance focus	√
Comprehensive questions for children	√	√	Health insurance focus	√
Sampling and Periodicity				
Sample size	6,000 adults 2,000 children/parents	6,000 adults 6,000 children/parents	15,600 adults 6,000 children	15,600 adults 6,000 children
Periodicity	parents/children annually childless adults (3 years)	parents/children annually childless adults (3 years)	Every 3 years	Every 3 years
Timeline for Precision				
For statewide adult and child estimates	2010	2010	2009	2009
For statewide analysis of key subpopulations (regional, uninsured, race/ethnicity)	2010-2011 (adults) 2011-2012 (children)	2010	2009	2009
For a three-year merge of data (for analysis of small populations)	2012 (parents/children) 2016 (childless adults)	2012 (parents/children) 2016 (childless adults)	2015	2015
For statewide trend analysis (with 5 data points)	2014 (parents/children) 2022 (childless adults)	2014 (parents/children) 2022 (childless adults)	2021	2021
For cell phone pilot option (n=800)	Unknown	Unknown	2009	2009
Efficiency/Building CO Capacity				
Builds on existing CO survey infrastructure	√	√	No	No
Minimizes duplication with existing CO surveys	√	√	√	No
Adds sample to (improves) existing CO surveys	No	√	No	No
Minimizes "competition for questions"	No	No	√	√
Cost and Sustainability**				
Implementation issues	Requires external approvals	Requires external approvals	Requires a new survey infrastructure	Requires a new survey infrastructure
Staffing requirements	Insurance component coordinator	Insurance component coordinator	Survey director	Survey director
Estimated 3-year data collection costs	$316,000-$408,000	$628,000-$720,000	$1.7 million	$2 million

*"Comprehensive" refers to use of detailed question sets to address all of the domain areas prioritized by the key informants, thus co-locating in the same data set information about health insurance, health care access, affordability, program eligibility, health behaviors/conditions/status.

**Data collection costs are difficult to estimate without exact survey design specifications. These costs do not include staffing, analytical, or dissemination costs. Also these estimates do not include the cost of a cell phone sample, which would be approximately $230,000.

Option V: Hybrid Option

After reviewing the four options set forth in the proceeding section, the steering committee recommended that the Department consider a hybrid option. The Department should conduct a stand-alone health insurance survey (Option III) in 2008 and again in 2010 for the purpose of obtaining timely base-line data to inform and evaluate health care reform. These surveys would feature a cell phone component. The steering committee also recommended that the Department implement a long-term plan of migrating to a Behavioral Risk Factor Surveillance Survey (BRFSS)/Child Health Survey (CHS) platform (Option I) with data collection beginning in 2010. Including health insurance with related topics on existing public health surveys would facilitate a variety of health-related analyses, would build Colorado data capacity, and would be less expensive and more sustainable into the future. A companion cell phone survey would be evaluated for inclusion in the BRFSS/CHS strategy, contingent on federal approval.

Option I entails adding 40 questions to half of the BRFSS sample every three years and adding 80 questions to the CHS annually. Because Option I assumes the current, small sample of (n=2000) children, it must be initiated earlier (2010) to ensure that three years of data for children are available for regional analysis by 2013. The steering committee emphasized that planning is needed to assure strong communication and coordination during the transition between survey modes.

The steering committee acknowledges the need for flexibility in order to respond to developments in health care reform and the changing needs of Colorado. However, the steering committee strongly recommends that the collection of baseline data begin as soon as possible, preferably in 2008. The committee also stressed that data collection in 2010 not be contingent on passage of comprehensive health care reform, but rather, that the 2010 questionnaire be adjusted to reflect any new reform developments and future programmatic needs.

Evaluation of the Recommended Hybrid Option

The steering committee identified eight criteria for use in evaluating survey options, namely: policy relevance, comprehensiveness (depth/breadth), precision, efficiency, cost, building Colorado capacity, sustainability, and timeliness. The hybrid option satisfies these criteria to the degree that its component options satisfy these criteria. Thus, in addition to the analysis provided below, we refer the reader to the sections evaluating these individual options.

Overall Strengths and Weaknesses

Strengths

The hybrid option offers the following benefits:

- A stand-alone health insurance survey in 2008 would provide data in time to establish a base-line for the evaluation of health care reform. A second stand-alone survey in 2010 would enable analysts to trend data across the two years and detect changes that could be attributed to health care reform.
- A BRFSS/CHS platform approach facilitates a variety of health-related analyses, builds Colorado data capacity, and is less expensive and more sustainable long-term strategy.

- Delaying the implementation of the BRFSS/CHS platform until 2010 would give CDPHE time to plan for the changes to the survey, including the addition of new questions and changing the CHS sample to include infants and adolescents.
- By overlapping the 2010 stand-alone health insurance survey with the implementation of the BRFSS/CHS platform, we can compare estimates from the two surveys, enabling the creation of a conversion factor that accounts for methodological differences and may allow trending between the two surveys (stand-alone and BRFSS/CHS platform) over time. This should be considered experimental.
- By implementing the BRFSS/CHS platform in 2010, we would have regional estimates for children by 2013.
- Data collection for the expanded BRFSS/CHS would begin in January of 2010 and data would be collected every month thereafter as long as the expanded BRFSS/CHS retained its structure (i.e. as long as we continued adding questions to the surveys). This creates a unique opportunity to have "before and after" data in relation to any point-in-time policy change or other event that might impact health, access or coverage.

Weaknesses

The hybrid option has the following limitations:

- If the simple BRFSS/CHS platform (Option I) is implemented in 2010 simultaneous to the stand-alone survey, 2009 will be a very busy year. The survey staff will be analyzing data from the 2008 stand-alone survey, gearing up for the 2010 stand-alone survey, and working with BRFSS/CHS staff to migrate key survey questions to the BRFSS/CHS platform.

"Hybrid Option": Two Stand-Alone Health Insurance Surveys (2008 and 2010) Followed by a BRFSS Survey Add-On

Stand Alone Health Insurance Survey (n=15,600 adults and 6,000 children)

- Insurance coverage
- Access and utilization
- Program eligibility
- Affordability
- Mental/dental health access/coverage
- Social determinants of health

Cell phone component

→ *2008* Estimates Available Early 2009
2010 Estimates Available Early 2011

BRFSS Add-On (n=6,000)

- Health Status
- Health Conditions
- Healthy Behaviors
- Access to health care(limited)
- health insurance
- Income(limited)
- Affordability (1 question)
- Demographics (limited)

→ *2010* Estimates available March 2011
2012 Estimates available March 2013

***Child Health Survey** Add-On(n=2,000)*

- Health Status
- Health Conditions
- Healthy Behaviors
- Health Care Access/Medical Home
- Health Insurance
- Affordability
- Program Eligibility
- Community & School Activities
- Family Health & Activities
- Demographics

→ *2010* Limited estimates available March 2011, and a full range of estimates available after three survey cycles in 2013 and every year thereafter.

Appendix 4: Legend for Exhibits I, II, III and IV.

Criteria 1: Comprehensiveness. This score refers to the questionnaire depth as it pertains to the domain/measure set. These domains and their measures were generated by the key informant interviews and represent the most relevant health policy topics that could be addressed in a survey.

✓= Multiple, in-depth, "state of the art" question sets.

L =Limited question sets.

—=Topic not covered or covered with inadequate measures.

Criteria 2: Precision. These scores refer to the survey sample and its ability to produce stable estimates of the domains/measures listed in the table. Expectations of precision are different for statewide and regional estimates, as well as for estimates made of uninsured populations, who represent a subset of the general population.

Statewide Precision

✓ = Provides statewide estimates for the entire population as well as estimates for the following subgroups: children; non-elderly adults; childless adults; young adults (18 to 35); Whites, African Americans, and Latinos; citizens, legal permanent residents, and other immigrants; and federal poverty level (income) groupings.

L = There are some limitations to statewide estimates (e.g., multiple years of data required).

— = State-wide estimates cannot be produced.

Regional Precision

✓ **=** Can report overall regional estimates as well as regional estimates for children and non-elderly adults.

L = Regional estimates have some limitations (e.g., urban/rural/frontier only OR merging multiple years of data required)**.**

— = Regional estimates cannot be produced

Precision of Uninsured Analyses

✓= Can support analysis of the uninsured by region as well as separate analysis of the uninsured children and uninsured adults.

L = Analyses of the uninsured have some limitations (e.g., merging multiple years of data required).

—= Analyses of the uninsured cannot be produced.

Appendix 5: Summary of Key Informant Responses by Question

Question 1: What survey data are you currently using for health policy purposes?

Key point: Each of the following data sources were mentioned by at least one key informant. Consultants considered these data sources in subsequent phases of the project, including a data gap analysis to assure that the proposed survey would not be duplicative.

- *National Surveys*: The Current Population Survey (CPS); The Behavioral Risk Factor Surveillance Survey (BRFSS); The Medical Expenditure Panel Survey (MEPS); Kaiser/HRET Annual Health Benefits Survey; Mercer's National Survey of Employer-Sponsored Health Plans; Surveys conducted by Hewitt Associates; American Community Survey (ACS); National Child Health Survey; Youth Risk Behavior Survey; The State and Local Area Integrated Telephone Survey or SLAITS; Foundation surveys conducted by the Commonwealth Fund, Kaiser Family Foundation, and the Alan Guttmacher Foundation

- *Colorado Surveys*: The 2001 Colorado Household Survey; Mountain States Employers Council, Inc Health and Welfare Employer Survey; Colorado Health Institute surveys: 2005 Deficit Reduction Act impact surveys, survey of Non-Federally Qualified Health Center (FQHC) clinics, Health Professions Survey; Peregrine; Colorado Child Health Survey (CHS); "Informal surveys," Member "market analysis" surveys; Mental Health Statistics Improvement Program (MHSIP) health plan satisfaction surveys; CAHPS Health Plan Surveys; The Colorado Division of Insurance Small Group Survey; Consumer Expenditure Survey; BRFSS-type survey in Alamosa county

- *Non-Survey Data*: US Statistical Abstract; Medicaid claims data; Private health plan and self insured groups administrative data; HEDIS; Colorado Client Assessment Record; Colorado Hospital Association Data; Centers for Disease Control Data; Colorado Immunization Information System; Uniform Data System; Small Area Income and Poverty Estimates (SAIPE); Colorado Client Assessment Record; and Colorado Commission on Mandated Health Benefits Data.

What are the policy questions you are trying to answer?

Key Point: Policy questions fell into two main categories: 1) Those used to inform the development of health policies and programs and, 2) Those used for evaluation and continuous improvement of health policies and programs over time.. Consultants mapped these policy questions against existing data sources to identify data gaps.

The programmatic interests cited by key informants fell most often into the areas of health insurance coverage, affordability, utilization/access to care, and eligibility for public and private programs.

- **Health insurance coverage:** Number of uninsured; Characteristics of uninsured and insured; Types of insurance, reasons for uninsurance, underinsurance;

- **Affordability of health care and health insurance:** Average price of premiums for single or family coverage; Health care spending; Household spending
- **Utilization/Access to care:** Demographic characteristics of people potentially vulnerable to poor access to health care; Impact of Deficit Reduction Act on health care access; Chronic diseases and health care access; Characteristics of users of safety net services; Health professions shortages; Unmet need (medical, dental and mental health).
- **Eligibility and program participation:** Number of uninsured eligible for public programs and employer sponsored coverage; Crowd out

When asked how they would use the data gathered on these policy topics, they identified the following program development and evaluation activities:

- **Budgeting:** Pricing currently uncovered benefits under Medicaid; Pricing coverage expansions under Medicaid/CHP+
- **Policy analysis:** Responding to requests for information from policy makers
- **Trend analysis:** coverage, health status/needs, utilization, cost, marketplace
- **Public program design and private plan/benefit design**
- **Program evaluation**
- **Theoretical framework development**
- **Complex research studies:** Multivariate studies of health insurance, affordability and health status;

What are the limitations of these data? How do you address these limitations? Are there important questions that can't be answered?

Key point: Existing data could be more fully utilized, but important policy questions still cannot be answered with existing data**.**

- Lack Colorado-specific and regional data, and data on subpopulations
- No data on: immigration and acculturation, affordability, and health outcomes
- Need better data on health insurance coverage, employers and employer sponsored coverage, mental health status and access, and the safety net
- Data are not timely or is not collected more than once
- Data are not representative
- Important variables are not together in the same data set so you can't cross tabulate

- Can't compare across states when data are not standardized
- No state-wide, all insurers outpatient claims data base for children, and no Emergency Department data.
- Potential users don't know how to use existing data, and thus it's underutilized

Question 2: After reading the list of topics provided, what do you think the main focus of the 2008 Colorado Household Survey should be? Which topic AREAS do you feel would be most important for Colorado to include in a health survey?

The following list of topics was provided to key informants for reference. The most frequently requested topics are listed first.

Key point: Health insurance coverage; health care access, utilization, and affordability; and program eligibility were the most requested topics. However, there is broad interest in a wide range of survey topics beyond coverage, access, and affordability.

- Health insurance coverage 84%
- Health care access and utilization 74%
- Health care/insurance affordability/cost 63%
- Program eligibility 58%
- Mental health status and access 53%
- Dental coverage and access 47%
- Health status 47%
- Immigration and acculturation 47%
- Health behaviors 47%
- Health conditions 42%
- Preventive care 34%
- Disability 26%
- Quality of care 16%
- Housing 11%
- Childcare 11%
- Hunger 5%

- Violence 0%
- Injuries 0%

Questions 3: Are there important topics that were not included on the list?

- Transportation
- Internet access
- Health Education/Literacy.
- Adults
- Underinsurance
- Claims/coverage denials
- Health outcomes
- Private coverage. Is the private market the best way to go or are we better off with a public centered system
- Cultural Competency
- Medical home/coordination of care
- Public opinions about health care and health reform
- Adequacy of delivery systems

Question 4: "What specific measures are you interested in?"

Responses to question four are located at the end of this appendix due to their length.

Questions 5: If Colorado were able to collect data on the topics you have identified as important, how do you think you or others would use those data?

Key point: The data would be widely used in the public, private and non-profit sectors to develop health policies and programs and to facilitate the evaluation of health policies and programs over time. Proposed data uses closely matched policy questions generated by question 1, and are thus not repeated here.

Data Users: Legislators; lobbyists; the Department/Governor's Office staff/Colorado Division of Insurance; Employers; Researchers; Students; local organizations/governments.

Questions 6: What are the most important subpopulations to measure with this survey?

Key point: Most key informants identified every subpopulation as important. When key informants did voice a preference, there was no agreement among informants.

- Racial/Ethnic minorities
- Counties/Regions
- Federal Poverty Levels
- Age: –People aged 55 to 65; working age adults; elderly; young adults; children
- Family structure: childless adults; families; pregnant women.
- Special populations: seasonal workers; disabled/mentally ill/special needs

Question 7: How often does Colorado need new data for these subpopulations?

Most key informants needed data every two to three years on an ongoing basis.

Question 8: How should survey data be made available to end users?

Key point. Most key informants recommended all of the following dissemination tools: a web-based query system; reports and policy briefs; public-use files; confidential data files; and requests for special data analyses. However, key informants differed as to which dissemination tool should be primary. Some informants felt that dissemination should entail a separate planning process that includes communication staff.

Each of the following dissemination strategies was the first choice of multiple respondents:

- **Hundreds of tables with a great table of contents**.
- **Public use files with a data dictionary, documentation on necessary statistical adjustments (perhaps sample weighting code), and training on how to use the data file.**
- **Confidential data files.**
- **Unbiased reports.**
- **Policy briefs with pie charts that are downloadable.**
- **A web-based query system.**

Comments on the web-based query system:

- This would be helpful to non-profits and associations focused on employers.
- **People do not understand the underlying data. We need to design it to ensure responsible use of the data.** Web-based query systems are often abused if not well designed.

- This would be expensive.
- The web-based query system may not fully anticipate data needs. It would need to allow me to create data runs the way I want them.
- We need workshops on how to use the data.
- Variable definitions would need to be specific.

Comments on the confidential data file:

- A confidential data file would allow different groups to put their own spin on the data.
- A confidential data file would require technical assistance and training, but also a change in data culture.
- The data custodian could respond to specific data requests.

Question 4: "What specific measures are you interested in?"

Some respondents suggested specific survey questions, for example "have you had trouble finding a provider?" Other respondents identified a more general analytic interest, such as "questions that would help us understand the barriers to access.." Both types of responses are listed below, and highlighted when suggested by more than one informant.

Health Care Access and Utilization

Primary care access

- **Questions that would help understand the barriers to access and the correlates to appropriate and inappropriate utilization.**
- Have you had trouble finding a provider?
- Unmet needs, especially for uninsured.
- Do you have access to after-hours telephone availability.
- **What were the barriers to care? (Waiting times? Travel? Health education? Coverage?)**
- Did you get a mammogram in last 2 years? If not why not? (Access barriers? Not a benefit? Too expensive? Large co-pay? Forgot? etc.)

Utilization

- Do you go to the doctor for regular check-ups? If not, why not?
- Do you regularly go to the doctor due to an illness?
- Emergency department utilization.

- Have you missed a doctor's appointment? Why? (Transportation issues, child care issues, health issues, forgetfulness, provider staff attitude?)

Medical home and regular source of care

- **Do you have a regular source of care?** (Note: Medicaid- and CHP+-enrolled children were of particular analytical interest. One key informant suggested doing a call back study to doctor to validate that they have a provider.)
- If you do not have a regular source of care, why not?
- Is continuity of care important to you?
- Do people have all of the components of a medical home (coordination of care, etc.)?
- What are the barriers to a medical home?
- Do they have a medical home with access 24/7? Ages of children without medical homes? This can be used to estimate costs.
- To measure health outcomes as they relate to medical home processes.

Quality

- Which providers are using a pre-defined quality frame and what are the health outcomes that flow from that.
- Experience of care questions (like on CAHPS).
- **Language/communication/translation services and cultural competency of provider (e.g., are family members allowed to attend visits) .**
- Anticipatory guidance.

Health Insurance Coverage

Dimensions of uninsurance

- Questions that measure chronic vs. temporary or intermittent uninsurance.
- Coverage status by month, transitions over time, interruptions in coverage.
- How many people/workers are uninsured?
- Are some children in a family insured while another child in the same family is uninsured?
- Characteristics of the uninsured.
- Why do people become uninsured?

- Consequences of being uninsured.

Coverage and pregnancy

- How long did you go without insurance before you were pregnant?
- How long after you delivered did you lose coverage?

Reasons for uninsurance

- Why are moderate to high income people uninsured?
- Why are eligible people not enrolled in Medicaid or CHP+.

Health Savings Accounts (HSA)

- Do you have an HSA?
- Have you funded your HSA?

Individual market

- How do people currently access the individual market? Are there barriers?

Employer sponsored coverage (ESI)

- How many uninsured workers people are offered ESI but do not take it up (take-up rate)?
- If you do not take-up ESI, is it because you are covered under a spouse's plan?
- Why do people choose not to take-up ESI?
- Offer rate (percent of employers who offer insurance coverage) and take-up rate among dependents of employed persons.
- Does your employer contribute to ESI? How much?
- Of the people who are insured with ESI, what types of plans are they enrolling in HMO, PPO, consumer-directed plans?
- How many people are in plans that are self-insured?
- Do you have dependent coverage under ESI?
- What are employee perceptions of their ESI coverage?

Underinsurance

- Underinsurance: How many people exceed insurance benefit on annual or lifetime basis and how long were they paying into the system.
- **What benefits are covered under your insurance? Deductibles? Co-pays?**

Public Coverage (more under program eligibility)

- How long does it take to get public coverage?
- Are some children enrolled in Medicaid or CHP+ while their siblings are uninsured or have other coverage?
- The number of people who are undocumented (will drive policy)?
- Why kids go on and off Medicaid and CHP+ (churning) Kids are enrolled in CHP for average of 10 months despite the fact that they have 12 months continuous enrollment.

Health Insurance Affordability

Personal finance as it relates to affordability

- What % of your income do you spend on health care/insurance?
- What are your competing financial priorities (e.g., housing, etc.)?
- **Have you had to declare bankruptcy due to medical bills?**
- What are the opportunity costs of purchasing insurance? (What do you have to give up?)
- Household spending (on things including but not limited to health care): mortgage/rent, childcare, gas, credit cards, etc. (Create an index)
- Questions that allow one to assess the economic trade-offs between housing prices and purchasing insurance coverage. (e.g., western slope housing shortage, Colorado leading the nation in foreclosure.)
- Do you have medical bills you are unable to pay?
- Do you leave the county to get medical care?

Other

- Questions that would allow one to assess whether people with pre-existing conditions can obtain and afford coverage.
- **Questions that allow one to assess the affordability of health care, and not just insurance.**
- How are you paying for your health care?
- **Did you forgo care due to cost?**
- Cost of care/expenditures

Health Status and Health Conditions

- Questions that enable a projection of population health status, utilization, and/or cost.

- Are you obese?
- Do you have diabetes?
- Chronic illnesses among children.
- Questions that would allow one to assess functional and health outcomes of programs/policies/plan designs.
- Questions that would allow one to assess programs while controlling for selection (e.g., adverse selection in enrollment).
- Weight.
- Have you received mental health care treatment?
- What is your baseline health status?
- Days missed school/work (disability marker).
- Do you know whether you have high blood pressure?
- Health risk appraisal questions (CBGH has copies)?
- A longitudinal panel study to track people with specific health conditions to determine the age at which the cost of the services they use exceeds the total value of their premium and co-pays. These data could be used to better understand the market place and when insurance carriers are incentivized to shed certain individuals.

Program Eligibility

- Are you eligible but not enrolled in a public program? Why?
- Characteristics of the uninsured eligible (geographic location, age, race/ethnicity)
- What are the barriers to public program enrollment?
    - Lack of information.
    - Don't want to be on a government system.
    - Paperwork.
- Is there a still a stigma to be on public programs?
- Would you use internet application?
- If you previously had Medicaid coverage, why are you no longer covered?

- Prevalence of ADL's in the community (for HCBS expansions).

Disability

- Is disability a barrier to work?
- Questions that get at independence outcomes (e.g., ability to live at home, work, participate in social activities, etc.)

Mental health status and access

- Questions on mental health status and access.
- How did mental health status affect work?
- Questions that assess whether stigma affects access and utilization.
- **Do you have mental health benefits? Parity with physical health benefits?**

Prevention

- Questions that would permit the development of a business case for wellness.
- Do you have access to a wellness program at work?
- Is the wellness program through your health plan or the employer?
- Have you enrolled in the wellness program at work?
- Have you changed behaviors as a result of participation in a wellness program?

Health Behaviors

- Questions that would allow one to relate health behaviors to the cost of benefits.
- Anticipatory guidance outcomes: are you wearing seatbelts?
- Do you smoke?
- Do you/your kids wear helmets?
- Teen Outcomes: anticipatory guidance, family planning, sexual behaviors, smoking, drug, alcohol, sleep.
- Activity level – time spent watching TV or on the computer. Participation in sports.
- Attitudes towards personal responsibility for health. How people make health choices.
- Nutrition

Dental coverage and access

- Questions that would allow one to relate dental health to overall health
- Do you have dental insurance?
- What are the barriers to dental care?

Housing

- Questions that would allow one to assess the correlation between housing and health.
- How many people are homeless?
- How do the homeless access care?
- Toxicity of neighborhoods: asbestos, toxic waste dumps
- Question that make the link between environment and health status and the health care system (e.g., currently treat environmentally-induced asthma medically instead of cleaning up the environment)

Child care issues

- What do you do with kids when need to go to doctor? Is this a barrier?

Demographic information

- Questions that will facilitate linking to other data sources
- Federal poverty level (FPL)
- Immigration status, especially undocumented and mixed status households
- Geography (e.g., metro/non-metro, region, legislative district, county, predominantly Black Denver and Aurora neighborhoods)
- Disability status
- Age
- Gender
- Family status
- Demographics/questions necessary for program eligibility modeling (FPL, immigration status, family composition, disability status, pregnancy status, age)
- Education

- Race/ethnicity using Census wording (In particular, subgroups of Latinos should be broken out)

Employment

- Employment status
- Wage earners versus salaried worker
- Season workers
- **Employer size**
- **Employer industry code (SIC codes)**

Transportation

- Do you: have a car? Friend with a car? Bus? Walk?

Health Education/Literacy

- Where do you go for your health information? Internet? Church?
- Do you have access to/use the internet? Do you understand the information you are given from doctors/providers and do you ask questions if you do not understand?
- Do you know your blood pressure, cholesterol levels, etc., and did you ask about them at your last visit?

Education

- Questions that allow you to correlate health status to educational outcomes
- School enrollment status

Delivery System

- What is the capacity of the health care system, especially the safety net?
- Are you aware of/do you use safety net clinics? (Which one(s)?) (Consider providing a drop-down list of safety net providers in their area or asking for cross-streets to allow for subsequent mapping.)
- If you use multiple providers for primary care, why?
- Questions and analyses that assess the cultural competency of providers and the delivery system:
- It may appear that many Black people do not care to have medical conditions treated when they know there is problem. Why do you believe this is so? (They are afraid to hear bad news, Once treatment is started the condition gets worse, Medical costs are too high, No insurance, It is less trouble to suffer

than to hassle with the health care system, Hope that the illness heals itself or goes away, Another family member had the same problem so, why bother, Other)

- Sometimes I feel that doctors who are not Black are not sensitive to Black health issues. (Likert scale)
- I would be more comfortable discussing my health issues with a Black doctor.

Public Opinion

- Do you know the profile of the uninsured?
- Are you willing to pay more taxes to cover the uninsured?
- Are you willing to change system/behavior/utilization?
- Questions that allow you to craft public policy messages.

Other

- Questions that allow one to assess use of multiple systems: criminal, mental health, Medicaid. Such as, brushes with the legal system, youth treatment, transitions to and from criminal justice system.

Appendix 6: Existing Health Survey Data

The Current Population Survey (CPS)

Type: Survey of all adults and children in a household.

Topics: Mainly an employment survey, CPS is used to measure health insurance coverage, and public program eligibility (but is limited by a lack of immigration information).

Frequency: Annual.

National Data: Yes.

Colorado Sample (last survey year): 1,404 children, 2,642 non-elderly adults, and 340 seniors. Although the samples size is small, multiple years of data can be combined. CPS conducts telephone interviews and interviews with people without telephones.

Sampling Strengths: Captures households without telephones.

Sampling Limitations: Sample is not designed for making county/regional level estimates (not representative/weighted correctly).

The Behavioral Risk Factor Surveillance Survey (BRFSS)

Type: Surveys one adult per household.

Topics: Public health-focused survey of health conditions and health behaviors.

Frequency: Annual.

National Data: Yes.

Colorado Sample (last survey year): 12,000 adults aged 18+. Sample is not currently stratified regionally, but will be in 2009. Households with landline telephones only.

Sampling Strengths: The 2009 survey will be stratified to provide estimates for adults in 10 counties and 10 regions. Parents in the BRFSS are linked with the children in the CHS.

Sampling limitations: Although one can make regional estimates with current BRFSS data, until 2009, the sample will not representative at the regional level. The sample excludes households that do not have landline telephones.

Child Health Survey (CHS)

Type: A call-back survey of parents in the BRFSS sample regarding one child in the household between the ages of 1 to14.

Topics: Public health focused survey of health conditions, access and health behaviors.

Frequency: Annual.

National Data: No.

Colorado Sample (last survey year): 2,000 children aged 1 through 14. Households with landline telephones only.

Sample Strengths: Provides estimates for children statewide, and can combine multiple years of data to generate regional estimates. Parents in the BRFSS are linked with the children in the CHS.

Sample Limitations: Excludes infants and adolescents. Sample design excludes people without landline telephones.

National Survey of Children's Health (NSCH)

Type: Household survey of parents of children aged 0 to17.

Topics: A public health-focused survey of health conditions, health status, health environment, child development, socio-emotional difficulties, injuries, breastfeeding, medical home, preventive care, mental and dental health access. Part of the SLAITS family of surveys.

Frequency: 03/04 and 06/07.

National Data: Yes.

Colorado Sample (last survey year): 1,855.

Sample Strengths: Providing estimates for children statewide.

Sample Limitations: Small sample of children in Colorado limits county/regional estimates. Infrequent data collection limits combination of data across survey years. Excludes people without landline telephones.

Content and Power Analyses of Existing Surveys

Exhibit 5 compares the *content* of the four surveys listed above with important health policy topics identified by key informants. These important topics come directly from the survey goals, objectives and measures (see the chapter summarizing findings from the key Informant interviews). Exhibit 6 compares the ability (*power*) of the same four health surveys to make estimates for subpopulations of policy interest in Colorado. The power of each survey depends on the number of interviews (sample size) for each subpopulation of interest.

Assumptions

The following assumptions were made when conducting the power analysis:

- The racial and ethnic composition of the samples is similar to the composition of the state (US Census Bureau estimates for 2002): Whites (73 percent), Latinos (18 percent), African Americans (4 percent) and Asian Pacific Islander Americans (3 percent). While surveys aim to be representative, this may or

may not be true for any given survey in any given year. Also, the response rate for African Americans in Colorado is disproportionately low.

- Large samples provide for a minimum of 400 interviews within each of 14 counties/regions or for each subgroup (i.e. children, African Americans, etc.). This can vary from year to year, especially if the sample is not specifically designed to capture a given subpopulation.
- We use health insurance status as our bench mark estimate, because it applies to the entire population, and not only a subset of the population. For example, mammography estimates would only apply to women over age 40, thus further reducing the sample for analysis.

Exhibit 5 Key

✓ : Survey addresses this topic.

—: Survey does not address this topic.

L : Survey partially addresses this topic as described in the *content limitations column.*

Exhibit 6 Key

✓ : Sample size is adequate to make estimates that are precise within +/- 5 percentage points (minimum).

—: Sample is not adequate to generate precise estimates.

L : Either sample size is adequate, but not representative of sub-state regions (CPS) and /or estimates may be available for more aggregated regional designations only (i.e. Rural vs. urban.).

Exhibit 5: A Content Analysis of Four Existing Health Surveys: The Current Population Survey, the Behavioral Risk Factor Surveillance Survey, the Child Health Survey, and the National Survey of Child Health.

Health Policy Topics of Interest in Colorado	CPS	BRFSS	CHS	NSCH	Content Limitations
Health Insurance Coverage Examples: type of insurance; reasons for uninsurance; underinsurance	L	L	L	—	BRFSS, CHS, and NSCH have limited insurance question sets. CPS measures coverage and ESI
Dental and Mental Health Access and Coverage Examples: dental and mental health coverage; visits; barriers to care; unmet needs	—	—	L	L	CHS and NSCH have access questions only
Affordability of Health Care and Health Insurance Examples: household spending on necessities/discretionary income; debt	—	—	—	L	NSCH asks whether health costs are "reasonable" only.
Health Access Examples: regular source of care/where; medical home; barriers to/delayed care;	_	L	✓	✓	BRFSS has regular source of care only.
Health Care Utilization Examples: preventive, sick, ED, and hospital visits; health beliefs; sources of health information	—	L	L	L	NSCH and BRFSS have a question on preventive care only. CHS has "any services within the past 12 months" only.

Health Policy Topics of Interest in Colorado	CPS	BRFSS	CHS	NSCH	Content Limitations
Eligibility for Public and Private Insurance Examples: eligible-but-not-enrolled; crowd-out potential; ESI offer and take-up rates	L	L	L	L	BRFSS, CHS and NSCH have limited income questions and no immigration questions. CPS has citizenship only
Health Status, Health Conditions, Health Behaviors Examples: self-assessed health; disability; chronic conditions; healthy/risky behaviors; quality of life; disease management	—	✓	✓	✓	
Social Determinants of Health Examples: education; immigration and acculturation, demographic characteristics; environment	L	L	L	L	CPS has citizenship but no environment questions. BRFSS, CHS, NSCH have no questions on immigration/acculturation. BRFSS has no environment questions.

Exhibit 6: A Power Analysis of Four Existing Health Surveys

Ability to estimate insurance coverage for the following sub-populations	CPS 1 Year of Data	CPS 3 Years of Data	BRFSS 1 Year of Data	BRFSS 2 Years of Data	CHS 1 Year of Data	CHS 2 Years of Data	NSCH
Statewide Estimates:							
Children (0 to 17)	✓	✓	—	—	L[14]	L[15]	✓
Non-Elderly Adults (18 to 64)	✓	✓	✓	✓	—	—	—
Young Adults (18 to 35)	✓	✓	✓	✓	—	—	—
Childless Adults	✓	✓	✓	✓	—	—	—
Latinos	✓	✓	✓	✓	—	✓	—
Whites	✓	✓	✓	✓	✓	✓	✓
African Americans	—	✓	—	✓	—	—	—
Asian Pacific Islander Americans	—	—	—	✓	—	—	—

[14] CHS sample includes children 1 to 14 only, and can provide statewide estimates for this group with both one and two survey years.

[15] See above footnote.

Ability to estimate insurance coverage for the following sub-populations	CPS 1 Year of Data	CPS 3 Years of Data	BRFSS 1 Year of Data	BRFSS 2 Years of Data	CHS 1 Year of Data	CHS 2 Years of Data	NSCH
14 County or Regional Estimates:	—	L	✓[16]	✓[17]	—	L	—
Children (0 to 17)	—	-	—	—	—	L	—
Non-Elderly Adults (18 to 64)	—	L	✓	✓	—	—	—
Young Adults (18 to 35)	—	-	L	✓	—	—	—
Childless Adults	—	L	L	✓	—	—	—
Latinos	—	—	L	L	—	—	—
Whites	—	L	L	L	—	—	—
African Americans	—	—	—	—	—	—	—
Asian Pacific Islander Americans	—	—	—	—	—	—	—

[16] BRFSS plans to institute a regionally representative sample in 2009 with at least 600 interviews in 10 large counties and 10 regions. The above assessment of precision for statewide and regional estimates is based on this redesigned 2009 sample.

[17] See footnote 8

Acknowledgements

For their leadership and support, we would like to thank Joan Henneberry, Sue Williamson and Jenny Nate of the Colorado Department of Health Care Policy and Financing (the Department). We would also like to thank the 28 members of the steering committee for their time, insight and dedication to the survey planning process:

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Lastly, we would like to thank the 42 key informants who met with us to inform this planning process and who are listed below.

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