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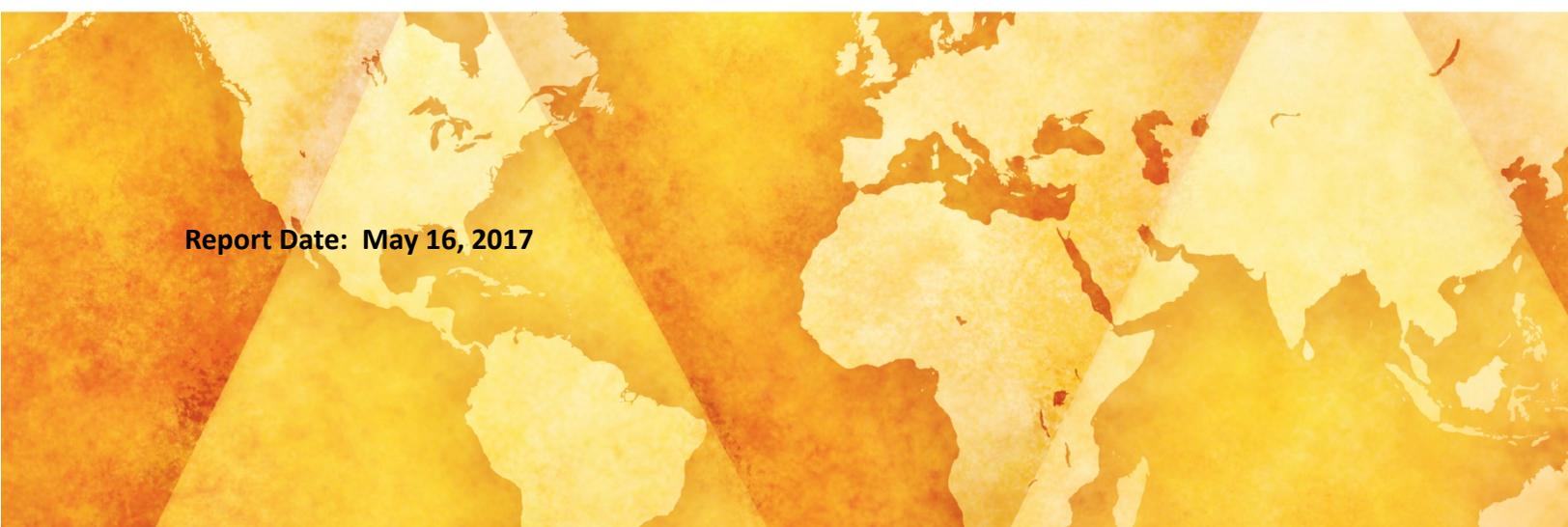Improving Public Health Worldwide

Evaluation Design Report for Montana HELP
Federal Evaluation

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Prepared for:

Centers for Medicare & Medicaid Services
Center for Medicaid and CHIP Services
State Demonstrations Group
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Contents

I. Introduction

In November 2015, Montana received approval from the Centers for Medicare & Medicaid Services (CMS) to implement a Section 1115 demonstration. The demonstration in Montana is called the Montana Health and Economic Livelihood Partnership (HELP), and has been approved through December 31, 2020. Enrollment in HELP began immediately after CMS approval for coverage was made effective on January 1, 2016. As of September 2016, 52,817 individuals were newly enrolled in Montana's HELP Program.[1] The state estimates more than 70,000 Montanans could gain access to coverage under HELP.[2]

Similar to the Affordable Care Act (ACA) Medicaid expansion demonstrations in other states (e.g., Arkansas, Indiana, and Michigan), HELP encourages enrollees to be prudent health care purchasers and to take personal responsibility for their health care through the use of premiums, copayments, and strategies to promote healthy behaviors. In addition to other ACA expansion demonstrations, HELP includes provisions that allow Montana to disenroll some newly eligible individuals with incomes above 100 percent of the federal poverty level (FPL) who do not pay their premiums on a timely basis. On the other hand, to help improve continuity of care and reduce insurance churn, Montana's demonstration provides for 12-month continuous eligibility for all newly eligible individuals.[3]

While HELP covers the ACA Medicaid expansion population, some newly eligible individuals are exempt from the demonstration, including those with incomes at or below 50 percent of the FPL or who are medically frail. Individuals exempted from the demonstration are instead served through Montana's Standard Medicaid program. In contrast, newly eligible individuals who do not fit one of the demonstration exclusions receive health care services through an alternative benefit plan that relies on a provider network managed by a third party administrator (TPA). Using a private insurer to administer, the HELP plan builds on Montana's Children's Health Insurance Program (CHIP), which also uses a private provider network to deliver services. Under a separate 1915(b)(4) selective contracting waiver, also granted in November 2015, Montana was given approval to provide services to non-excluded HELP enrollees through a TPA. Blue Cross Blue Shield of Montana (BCBSMT) was selected as the HELP TPA and is responsible for, among other things, providing a network, reimbursing providers, and collecting enrollee premiums.

Montana's HELP demonstration thus includes many interesting and unique program features. Understanding how the different program elements affect Medicaid expansion enrollees is important to inform Medicaid policymaking at the federal level moving forward. Separating the effects of the many

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[1] HELP Program Newly Enrolled Demographic Report (as of September 1, 2016): http://dphhs.mt.gov/Portals/85/Statistics/documents/HELP%20Newly%20Enrolled%20Demographic%20Report%20%289-1-16%29.pdf

[2] Ibid.

[3] CMS, Special Terms and Conditions, Montana Health and Economic Livelihood Partnership Program Demonstration (approved November 2, 2015. https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/mt/mt-HELP-program-ca.pdf

demonstration features of HELP from the impacts of other factors (e.g., other ongoing health reform initiatives that affect the state, the broader national health care system, and consumers), however, is challenging but critical to informing Medicaid policy. This evaluation design report outlines our plans for conducting the federal HELP evaluation. We will rely on both primary and secondary data and mixed methods to complete the evaluation. The qualitative component will provide an in-depth understanding of the design and implementation of HELP. Specifically, it will document how different demonstration elements were implemented. It will also identify important factors that may be contributing to successful operations, as well as challenges Montana may have encountered during implementation and how these challenges were addressed. The quantitative component of the evaluation will estimate the impact of Montana's Medicaid expansion, including the HELP Plan, on key outcomes and provide descriptions of enrollee experiences and enrollment and disenrollment behavior as HELP moves forward. Findings from the qualitative and quantitative components will feed into the evaluation's two Interim Reports, with drafts due November 20, 2017, and November 20, 2018, respectively, and the Summative Evaluation Report (draft due January 30, 2019). Evaluation results will also be presented through a series of webinars conducted in conjunction with the Interim and Summative Evaluation Reports.

II. Overview of Montana HELP and the HELP Evaluation

A. Montana HELP

Prior to the implementation of Montana's Medicaid expansion, Montana's Medicaid program covered traditional populations: the elderly and persons with disabilities; children in families with income up to 143 percent of the FPL; pregnant women with income up to 157 percent of the FPL; and families with dependent children with income up to 24 percent of the FPL.[4] In 2013, average monthly enrollment in Montana's Medicaid program was 105,696. Under Montana's Medicaid expansion, Medicaid coverage was expanded to include adults (parents and childless adults) with incomes up to 133 percent of the FPL. If state enrollment projections are realized, enrollment in the Montana Medicaid program could increase by more than 50 percent, going from just over 100,000 to approximately 170,000 enrollees.

As noted above, Medicaid expansion enrollees are served by two different delivery systems, Standard Medicaid for the exempt population and Montana's HELP Plan for the demonstration population, where HELP relies on the TPA plan. An individual is exempt from TPA enrollment if:

- The state determines the individual is medically frail;

- The state determines the individual has exceptional health care needs, including but not limited to a medical, mental health, or developmental condition;

- The person lives in an area where the TPA is not able to establish a sufficient provider network;

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[4] Based off State Medicaid & CHIP Eligibility as of June 1, 2016, in Montana for "Parent/Care Taker," as summarized from Montana's State Plan at https://www.medicaid.gov/medicaid-chip-program-information/by-state/stateprofile.html?state=montana

- The individual requires continuity of care that is not available or cannot be effectively delivered through the TPA; or

- The individual is otherwise exempted from premiums or copayments by federal law, including individuals with incomes up to and including 50 percent of the FPL and Native Americans.

Individuals meeting any of these criteria are considered "Excluded Populations" and are served under Montana's Medicaid state plan. In addition, Excluded Populations are not subject to HELP disenrollment provisions or to premiums. Excluded Populations are, however, required to pay copayments at levels provided for in Montana's Medicaid state plan. As of July 2016, 68 percent of individuals (32,252) made newly eligible under HELP were in the Excluded Populations group—70 percent because of having an income at or below 50 percent of the FPL, 20 percent because of federal American Indian exemptions, and 10 percent because of the medical frailty exemption.[5]

In contrast, individuals not among the Excluded Populations (e.g., new enrollees with incomes above 50 percent and up to and including 133 percent of the FPL who are not medically frail or not otherwise exempt under federal law, such as Native Americans), receive services under the TPA plan (hereafter referred to as "TPA enrollees"). Unlike Excluded Population enrollees, TPA enrollees are charged monthly premiums equal to 2 percent of their income. TPA enrollees are also subject to copayments. Consistent with federal limits, enrollees who are subject to premiums *or* copayments (that is, TPA enrollees and Excluded Populations) pay no more than 5 percent of their income toward these costs. TPA enrollees, however, are given a 2 percent credit for their premium payments that is applied toward any copayments they might incur. Thus, because of this credit, individuals who pay premiums do not start making copayments until the accumulated value of their copayments exceeds 2 percent of their household income. Finally, as a way to promote health and wellness, select preventive services and prescription drugs are exempt from copayments.[6] Copayments made by TPA enrollees are consistent with Montana's Standard Medicaid state plan. As of July 2016, about 32 percent of newly eligible HELP enrollees (15,147) receive their health coverage through the TPA.[7]

The demonstration disenrollment provisions for failing to pay premiums are also applied differently depending upon an enrollee's circumstances. While, as mentioned above, Excluded Populations are not subject to disenrollment provisions, some but not all TPA enrollees are affected by these provisions. Specifically, TPA enrollees with incomes at or below 100 percent of the FPL cannot be disenrolled from HELP for failure to pay premiums, whereas, after notice and a 90-day grace period, TPA enrollees with incomes above 100 percent FPL can be disenrolled. Disenrolled individuals may re-enroll if they pay their past due premiums or when Montana sends a debt notice to the individual, which can take no more

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[5] HELP Act Oversight Committee, Report to the Governor and Legislative Finance Committee, July 15, 2016.
[6] https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/mt/mt-HELP-program-ca.pdf
[7] HELP Act Oversight Committee, 2016.

than 90 days.[8] Also, a new application is not required for disenrolled individuals who seek reenrollment in HELP if they are still within their current continuous eligibility period; instead individuals can "turn on" coverage again online.[9] HELP disenrollment provisions are thus not a hard "lock-out" but are rather a soft lock-out, akin to disenrollment policies often used in CHIP programs.

B. Montana HELP Federal Evaluation

There are four key goals for the federal evaluation of Montana's HELP:

1. Understand the design, implementation, and administrative costs of HELP;

2. Estimate the impacts of Montana's Medicaid expansion, including the HELP Plan, on health insurance coverage, access to and use of health care, quality of health care, health care affordability, and health behaviors;

3. Document beneficiary understanding of and experiences with HELP, including experiences with premiums and copayments, enrollment and disenrollment; and

4. Provide timely information on HELP that can inform CMS, Montana, and other states as they consider ways to improve the Medicaid program.

In meeting these goals, the HELP evaluation will have three components:

- Qualitative analyses;

- Beneficiary surveys and descriptive analyses; and

- Impact analyses.

We describe our approach to each component of the evaluation over the next three chapters.

III. Qualitative Analyses

The evaluation's qualitative components are intended to provide careful documentation of HELP implementation and operations, as well as the successes and challenges faced in managing the demonstration. The qualitative analyses will also provide an in-depth assessment of HELP experiences from the consumer perspective. In addition, these analyses will inform both the descriptive and impact analyses in the evaluation's quantitative components, guiding them and providing valuable context for interpreting results.

The qualitative analyses will examine three research questions:

1. How were different components of HELP implemented?

2. What were the successes and challenges experienced while administering HELP?

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[8] CMS, Special Terms and Conditions, Montana Health and Economic Livelihood Partnership Program Demonstration.
[9] Montana's New Healthcare Plan HELP Participants under "Can I reenroll in the HELP Plan if I have unpaid premiums?" (near bottom of page), http://dphhs.mt.gov/helpplan

3. What were enrollees' understanding of and experience with HELP?

To address these questions, we will collect and analyze a range of qualitative data. These will include information derived from HELP materials and related documents and, during site visits, insights garnered from informational interviews with a broad range of major stakeholders and from focus groups with consumers.

A. Data Sources

1. Document Review

We will collect and review publicly available documents produced by Montana about HELP as well as other materials provided to us by either the state or CMS, or what we find through other background research efforts. We will, for example, review Montana's demonstration application, planning documents, and the "grey literature," as well as state administrative data. Throughout the evaluation, we will also review new documents pertaining to HELP as they become available, including findings produced from Montana's HELP evaluation and other materials made available to us either by the state or CMS. In addition, we will regularly view Montana's HELP website (http://dphhs.mt.gov/helpplan) for pertinent documents. We will also monitor new articles and research reports published on HELP by other organizations, as well as major health policy developments in Montana that may affect the demonstration.

This document review will support our development of an analytical framework of major HELP design features, policy variations, and implementation issues. It will also inform our preparation for conducting informational interviews and consumer focus groups (described below), and help us to develop and tailor our data collection instruments for these activities. Finally, the document review will help guide the development of the evaluation's beneficiary surveys and the quantitative analyses, both discussed in subsequent chapters.

2. Site Visits

We will conduct two site visits to Montana over the course of the evaluation period. Subject to reaching an agreement with Montana state officials, the first (round 1) will be conducted in June/July 2017 and the second (round 2) in June/July 2018. The first visit will provide information about stakeholders' and consumers' view of HELP about 18 months into the demonstration period, whereas the second visit will provide information about a matured HELP halfway through the demonstration, or 2.5 years into the demonstration period. Site visits will include informational interviews with a variety of stakeholders (described below) and focus groups with HELP enrollees.

Informational Interviews

To gain a broad perspective on HELP, we will conduct informational interviews with individuals representing a range of roles, functions, and interests of relevance to HELP. They will include at least five major types of stakeholders:

1. State officials;
2. HELP TPA administrators;
3. Health care providers and provider associations;
4. Consumer and patient advocates; and
5. Tribal or Indian Health Services representatives.

At this point, we plan to conduct our site visits in four regions of the state—Helena (the state capitol), Billings (the largest city in eastern Montana), the Blackfeet Indian Reservation, and Havre (a rural area). We will conduct interviews with up to 25 stakeholders per site visit. Most interviews will be conducted in person, but we expect that some may need to be conducted by telephone in case of scheduling conflicts or when an important stakeholder is not located in the four regions we will visit. We expect that about one-third of the interviews will be with state officials and government staff, and the balance with other HELP stakeholders. Key among our non-state interviewees will be stakeholders who can speak about HELP implementation in rural parts of the state, as well as those who represent the perspective of consumers/members, providers, and Tribal or Indian Health Services. Given the geographic size of Montana, these informational interviews will likely be conducted by telephone.

In the first site visit, we will concentrate on developing our understanding of the design and early implementation of HELP. We will also ask about implementation progress, challenges, and lessons learned to date. The second site visit, scheduled for June 2018, will gather information on ongoing implementation progress, challenges, and lessons learned under the more mature program.

Protocol Development

In anticipation of the planned June 2017 site visit, we have developed a core, semi-structured protocol that will be customized for each of the four types of informational interviews we will conduct. **Table III-1** provides the major topics we expect to address during the first site visit by type of interviewee. Included are questions about HELP implementation, public education, public awareness about HELP, HELP eligibility, enrollment systems and processes, enrollee cost-sharing (including whether consumers understand that copayments do not apply to preventive services), accomplishments and challenges, and lessons learned.

We will update this protocol for the second site visit in which, as mentioned, we will focus on a more developed HELP demonstration and assess progress made, challenges faced, and lessons learned. In addition, we will explore how interviewees perceive the operations and effectiveness of the more mature HELP program.

Table III-1. Site Visit Interview Topic Areas by Type of Informational Interviewee, Round 1					
Topic Areas	State Officials	BCBSMT TPA	Providers & Medical Associations	Consumer/Patient Advocates	Tribal or Indian Health Services Representatives
Respondent involvement with HELP	X	X	X	X	X
Raising public awareness/public education	X	X	X	X	X
HELP eligibility, enrollment, and renewal processes and systems	X	X		X	X
Cost-sharing	X	X	X	X	
HELP service delivery and access to care	X	X	X	X	X
HELP benefits coverage and adequacy	X	X	X	X	X
HELP implementation, accomplishments, and challenges	X	X	X	X	X
HELP Lessons	X	X			

Informational Interview Procedures

Informational interview procedures will be reviewed and approved by the Urban Institute's Institutional Review Board (IRB). Using our customized semi-structured protocols, our interviews will begin by stating the purpose of the evaluation; reviewing our evaluation goals, funding source, and procedures for keeping subjects' identities private to the extent allowable by law; and obtaining informed consent to proceed. After obtaining informed consent, we will continue with our interview questions. Two Urban Institute researchers will attend each interview. A senior Urban Institute researcher will lead all interviews, while a research assistant will take detailed notes on an encrypted, password-protected laptop. In addition, if the interviewee agrees, we will use a digital recorder to create an audio recording of the interview. We will explain to each interviewee that the recording will only be used to confirm or clarify our written notes, and will not be shared with anyone outside of the research team. We will also inform interviewees that they can terminate the interview at any time or skip any question that they are

uncomfortable answering. Upon completion of each site visit and our return to Urban Institute's offices, focus group notes and electronic audio recordings will be uploaded directly into the Secure Data Center (SDC) maintained by Social & Scientific Systems, Inc. (SSS), hereafter referred to as the "SSS-SDC," with access limited to only those project staff with a need to use these data and who have signed a staff pledge of confidentiality. Files will then be deleted from laptops. All Urban Institute staff members who access such data will undergo the necessary training required to work in the SSS-SDC. All audio recordings and interview notes will be securely stored for up to 1 year after the project ends and will then be destroyed.

3. Focus Groups

During each of the two site visits, we will also conduct focus groups with Montana's Medicaid expansion enrollees. The focus groups are designed to collect rich information from the perspective of enrollees in the demonstration, including their understanding of various aspects of HELP as well as their experiences with enrollment, cost-sharing, seeking and obtaining care through the TPA or Standard Medicaid, and overall satisfaction with the demonstration.

Given that key features of the demonstration vary by subgroup (such as application of premiums and copayments), in the more densely populated site visit locations with larger numbers of Medicaid expansion enrollees, we will hold separate focus groups with enrollees who are TPA-exempt (in Medicaid Standard), TPA-enrolled with income ≤100 percent FPL, and TPA-enrolled with income >100 percent FPL. Based on Montana's "Medicaid Expansion Enrolled by County Population (as of January 1, 2017)" report,[10] it appears there is a sufficient population of Medicaid expansion enrollees to recruit for these separate focus groups in Helena and Billings.

In the less densely populated locations where there are fewer Medicaid expansion enrollees to recruit from, we will include all subgroups in single focus groups, but will differentiate between the subgroups where applicable throughout our focus group discussion. These locations include the Blackfeet Indian Reservation and Havre, which are both in counties with fewer than 1,800 enrollees as of January 1, 2017, over 70 percent of which were at or below 50 percent FPL and therefore exempt from the TPA and all demonstration provisions except continuous eligibility. While we will aim to include individuals from the full range of subgroups in each of these focus groups, we anticipate most participants in the focus group at the Blackfeet Indian Reservation will be exempt from the TPA given that American Indians/Alaskan Natives (AI/AN) are an exempt population. In Hill County, where Havre is located, 45 percent of enrollees are AI/AN as well, based on the January 2017 enrollment report.

We will not be including a focus group with disenrollees because the disenrollment policies under the HELP demonstration are similar to other existing policies (such as in CHIP programs). Therefore, the experiences of HELP disenrollees are less of a priority in terms of understanding how unique aspects of

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[10] "Medicaid Expansion Enrolled By County Population (as of January 1, 2017)."
http://dphhs.mt.gov/Portals/85/Statistics/documents/ALL%20by%20County_01012017.pdf

Montana's demonstration are affecting beneficiaries. In addition, the disenrolled population would be challenging to both identify and recruit.

Although focus groups cannot provide fully representative feedback such as that of the survey, they will greatly enrich the evaluation by capturing the "voices" of adults most directly affected by Montana's Medicaid expansion and provide valuable details about their experiences and perceptions. Further, focus group findings will complement other data collection and analysis efforts in the evaluation. A total of up to 12 focus groups will be conducted, up to 6 as part of the first site visit (planned for June/July 2017) and up to 6 as part of the second site visit (planned for June/July 2018). For each site visit, the focus groups will be divided across locations by subgroup based on the available enrollee populations in their county from which to recruit (see **Table III-2**). Overall, among the up-to-six focus groups conducted during each round of site visits, up to three will be with TPA-exempt enrollees (given the mixed groups will likely be mostly TPA-exempt) and up to three will be with TPA-administered HELP enrollees.

Table III-2. Focus Group Subgroups by Location				
Consumer Focus Group Locations	**Number of Groups**	**TPA-Exempt**	**TPA-Enrolled, ≤100% FPL**	**TPA-Enrolled, >100% FPL**
Helena	Up to 2	X	X	
Billings	Up to 2		X	X
Blackfeet Indian Reservation	1	X (mostly TPA-exempt)		
Havre	1	X (mostly TPA-exempt)		

Focus Group Moderator's Guide Development

In anticipation of a June/July 2017 site visit, a core focus group moderator's guide was developed for use in the first round of focus groups. A range of topics will be covered (**Table III-3**), including information about the respondents, their views on HELP marketing and outreach, eligibility determination, enrollment and renewal under HELP (including their awareness and perceived benefit of the 12-month continuous eligibility), HELP premiums and copayments, access to care and benefits under HELP, how HELP may have affected daily life, and overall satisfaction with coverage. We expect that many of the same topics will be covered in the second round of focus groups in 2018.

Table III-3. General Consumer Focus Group Discussion Topics, Round 1
Consumer Focus Group Topics
• Respondent characteristics • Marketing and outreach • Eligibility determination, enrollment, and renewal • Monthly premiums and copayments • Access to care and benefits • HELP overall impacts on daily life • Overall satisfaction with coverage

Focus Group Procedures

Participant Recruitment

We will conduct focus groups with Medicaid expansion enrollees (including TPA-exempt and TPA-administered HELP enrollees) as part of the two site visits to be conducted under the HELP evaluation. In each round, approximately 8 weeks before each site visit, the Urban Institute will request from the state a list of current Medicaid expansion enrollees from the state's enrollment files, with the information needed to identify each enrollee's location and to which subgroup the enrollee belongs. This information from the state will be provided through a "Masterfile," which will also be provided for the beneficiary survey. This list will serve as the sampling frame for focus group recruitment. From this master list, we will randomly draw lists of 300 individuals for each of our targeted locations and subgroups to use for recruitment. Apart from being currently enrolled as part of Montana's Medicaid expansion, individuals will also meet the following criteria:

- Adult enrollees (ages 19–64 years);

- Continuously enrolled in HELP or Standard Medicaid if they are TPA-exempt for at least 4 months at the point in time when the lists are drawn; and

- Primary language is English.

In addition, for each sampled person, we will request that the following information from enrollment files be provided: name, contact information (street address, telephone number, and, if available, email address), age, gender, race/ethnicity, and income level (ideally, as expressed as a percentage of the federal poverty level). This information will enable us to assemble focus groups that are generally representative of the demographic and economic characteristics of the overall HELP population. Our recruitment process requires having this information available when we contact prospective focus group participants.

During each site visit, we will convene a total of up to six focus groups—up to two groups with enrollees living in Helena (one group with TPA-exempt enrollees and another with TPA-administered HELP enrollees ≤100 percent FPL) and up to two groups with those living in Billings (one group with TPA-administered HELP enrollees ≤100 percent FPL, and another with those >100 percent FPL). We will also

conduct one focus group at the Blackfeet Indian Reservation and one in Havre; these two groups will include a mix of all subgroups but likely will include mostly TPA-exempt enrollees based on the population in those locations. Each focus group will include approximately 8–10 participants. However, to account for the likelihood that some people who sign up for the focus group may not show up, we will recruit a total of 12–13 participants for each of the focus groups.

All focus groups will be conducted in English. Given the small number of focus groups, conducting them all in English will be the most efficient way to collect valid and reliable qualitative information from individuals who represent a relatively large subset of enrollees. Because a single focus group could be misleading, it is better to have multiple focus groups with individuals sharing similar characteristics to allow for interpretation of the information collected based on the extent to which themes are consistent within and between groups.

Urban Institute researchers will be responsible for focus group recruitment and will establish a secure FTP site to obtain the Masterfile that Montana will share with SSS for both focus group recruitment and the beneficiary survey. These lists will only be accessible by trained Urban Institute staff involved in recruitment. Researchers will determine the desired demographic composition of focus groups, based on information available in Montana's quarterly reports submitted to CMS on HELP.

Experienced Urban Institute recruiters will invite individuals from the list of targeted prospective participants using a pre-written recruitment script. They will recruit by telephone and email (if available) until the target number of participants is obtained for each group. In addition, participants will be informed that they will receive a $60 payment in appreciation for their participation and to offset expected costs such as transportation or childcare, as well as a note that could be given to an employer explaining why the participant is taking time off from work (whenever needed). Close to the day of the focus group, Urban Institute recruitment staff will make follow-up reminder calls and send emails to individuals who agreed to participate in the focus groups, confirming the date, time, and place for the focus groups, and also confirming their participation.

Focus Group Sessions

Urban Institute researchers will arrange for venues in the cities of Helena, Billings, Havre, and at the Blackfeet Indian Reservation, where the focus groups will be held. The space will be easily accessible by public transportation, if possible, and have adequate privacy so a candid discussion can be conducted and recorded without background noise. The venue will include a table, enough chairs for the focus group participants, facilitator, and note taker, and access to a restroom. Examples of possible meeting space include a conference room at a Federally Qualified Health Center, a local library, or a community organization meeting hall.

Each focus group will last approximately 90 minutes (but not more than 2 hours), which will include time to review the focus group processes and obtain informed consent from participants. An experienced, senior Urban Institute researcher will facilitate each of the six focus groups per visit. A junior Urban Institute researcher will take written notes on an encrypted password-protected laptop during the sessions. In addition, if participants agree, we will use a digital recorder to create an audio recording of each focus group. Urban Institute staff will not transcribe the audio files verbatim in the sense that they

will not capture phrases where the participant is thinking, irrelevant conversations between participants, or discussion where someone is interrupted by something outside the focus group. However, the written notes will capture the complete discussion in response to the focus group questions in the participants' own words, and the recordings will be used to confirm the notes for accuracy and to clarify any areas where written notes may be missing or unclear. All audio recordings and focus group notes will be uploaded directly onto the SSS-SDC, with access limited to only those project staff with a need to use these data.

The focus group facilitator will lead the discussion following the moderator's guide, which contains broad, open-ended questions to prompt group discussion and response. The goal is for the facilitator to create an environment that allows the group to discuss topics naturally but, at the same time, systematically, following the structure of the moderator's guide. This will ensure that each group covers a consistent set of topics relevant to the subgroup of enrollees represented, as set out in **Table III-2** above.

B. Analytic Approach

1. Analysis of Informational Interview Notes

Upon completion of each site visit, we will compile and clean notes from our informational interviews in preparation for analysis using qualitative analytic software (e.g., NVivo), which will facilitate organizing the large amounts of information we will have gathered so that major topics, common themes, and contrasting points of view can be readily identified and analyzed on topics of interest linked to our research questions. A custom coding structure for the analytic software, developed for the HELP evaluation, will be used. As mentioned, audio recordings of interviews will be used to clarify and confirm our written notes.

2. Analysis of Focus Group Notes

After each round of focus groups, notes taken during the focus groups will be cleaned and organized following the coding scheme developed for the analysis of informational interview data. Notes will be supplemented as needed by audio recordings of focus groups, and verbatim quotes from the recordings will be excerpted to augment the analysis. Then, by each topic area, we will assess whether participants' viewpoints reflected a majority opinion, a minority opinion, or an opinion of a single individual.

Analyzed focus group data will then be combined with data from informational interviews. In both of our analyses of data from the informational interviewees and the focus groups, findings will be presented in aggregate form only for memorandums, presentations, and reports summarizing evaluation findings. No data will be presented in such a way that individuals can be identified. No personal identifiers will be printed in the conduct of analysis. In addition, any statistical summaries of focus group participant characteristics will be sufficiently aggregated to protect individuals from identification.

C. Timeline and Products

Several products will be derived from the evaluation's qualitative analyses. Case study memos based on each of the two site visits will be prepared. We will also present findings from the qualitative analyses in the two Interim Evaluation Reports and the Summative Evaluation Report, and in webinars. State officials will have the opportunity to review and give feedback on draft products before they are presented to the public, and will be invited to participate in webinars. More specifically:

- Memos based on our findings from the first site visit and the first round of focus groups will be prepared. As noted, we plan to conduct this work in June/July 2017, with draft memos reporting findings approximately 2 months after the site visit and focus groups conclude.

- Site visit and focus group findings from the first site visit and first round of focus groups would also be presented in Interim Evaluation Report #1, a draft of which is due November 2017. A webinar based on Interim Evaluation Report #1 is expected to be conducted 1 month after submission.

- Memos based on our findings from the second site visit and second round of focus groups will also be prepared. Assuming we conduct the second site visit and second round of focus group in June 2018, we would produce draft memos approximately 2 months after the site visit and focus groups conclude.

- Site visit and focus group findings from the second rounds of site visits will also be presented in Interim Evaluation Report #2, which is due November 2018. A webinar based on Interim Evaluation Report #2 is expected to be conducted 1 month after submission.

- Findings from the first and second rounds of site visits and focus groups would be included in the Summative Report, which is due January 2019. A webinar based on the Summative Report is expected to be conducted 1 month after submission.

IV. Beneficiary Survey and Descriptive Analyses

A number of other states are looking to expand Medicaid through a Section 1115 demonstration and are considering policies similar to those in Montana. The beneficiary surveys and descriptive analyses will inform the overall evaluation and offer insights that may be used to support Medicaid waiver programs under the ACA. For instance, CMS is interested in exploring various policy design options related to cost-sharing among Medicaid beneficiaries, benefit design options and structure, and the disenrollment consequences for non-payment premiums for individuals above 100 percent of the FPL. The beneficiary surveys provide the opportunity to explore program design options beyond those being used under HELP. Additionally, the beneficiary surveys constructed under the HELP evaluation will provide CMS with a set of core questions to support cross-state comparisons in other evaluations.

The beneficiary surveys and descriptive analyses will enable the evaluation team to gain a better understanding of beneficiaries' experiences under HELP.

A. Overview of Surveys

To address the objectives described above, we will conduct two beneficiary surveys: a survey of current HELP enrollees and a survey of HELP disenrollees. Each of these surveys is identified in **Table IV-1**, along with a brief description of the survey design and content. The surveys will be fielded twice during the evaluation period, once in 2017 and once in 2018, in order to assess changes in beneficiary understanding of and experience with the HELP program.

Table IV-1. Overview of Beneficiary Surveys		
	Type of Survey	
	Current Enrollee	**Disenrollee**
Objectives of Survey	Assess beneficiary understanding and current experience with the HELP program and policies	Assess beneficiary understanding and experience while in HELP, access to care after leaving HELP, and satisfaction with HELP
Sample	Currently enrolled beneficiaries	All individuals above 100% of FPL who did not pay their premiums after 90 days and individuals who disenrolled for all other reasons
Topics Covered in Survey	• HELP enrollment • Health insurance before HELP • Premiums and copayments • Affordability • Emergency room • Health care access • Satisfaction • Demographic characteristics	• Experiences after leaving HELP • Premiums and copayments • Affordability • Emergency room • Health care access • Satisfaction • Demographic characteristics

B. Survey Sampling, Design, and Fielding

1. Sampling

Table IV-2 (below) shows the proposed sample sizes for the enrollee and disenrollee surveys in Montana. The column entitled "Members Selected into Sample" shows the numbers of subjects to be selected for inclusion in the two samples in order to achieve the target numbers of completed responses. These computations assume a minimum 32 percent response rate among the selected subjects, consistent with past experience in the overall target population. In total, we propose to identify an overall sample population of 4,374 individuals. Based on recent estimates of the disenrolled

population in Montana[11], we expect that the underlying number of disenrollees will be small, and we do not expect that the sampling frame will necessarily contain more than 2,000 individuals. Therefore, while we propose to sample up to 2,187 disenrollees, if there are fewer than 2,187, we will include all of them in the sampling frame for that group to meet our target of 700 completed responses.

Our general aim is to quantify characteristics of the target populations with a reasonable amount of precision. For example, the margin of error in estimating a population proportion from either sample (enrollees or disenrollees) would be no more than 3.7 percent. This calculation assumes an underlying population proportion of 50 percent, the most conservative assumption (i.e., requiring the largest sample) for computing margin of error in sample estimation. If the underlying population proportion is closer to 20 percent, then the margin of error in estimating it would be approximately 3 percent.

These sample sizes would also allow reasonably accurate comparisons of proportions between subgroups. For example, we would have approximately 80 percent power to detect a difference of 10 percentage points or more between urban and rural beneficiaries at the 95 percent level of significance. This calculation assumes approximately equal numbers of respondents from urban and rural environments, and population proportions of 55 percent and 45 percent in the two groups, respectively.

Table IV-2. Survey Sample Details and Allocation, by Survey Instrument and Respondent Groups				
Survey Instrument	**Sampling Details**	**HELP Respondent Groups**	**Members Selected into Sample**	**Projected Completed Responses**
HELP Enrollee	Sample includes individuals who have been enrolled in HELP for at least 3 months at the time of sample construction	Enrollees	2,187	700
HELP Disenrollee	Sample includes those who were recently disenrolled from HELP[12] either voluntarily or due to premium non-payment	Disenrollees	Up to 2,187	700
TOTAL			4,374	1,400

Note: Estimates assume a 32% response rate.

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[11] http://dphhs.mt.gov/Portals/85/Documents/MedicaidExpansion/HELP%20Act%20Oversight%20Committee%20Report%20FINAL7_15_2016.pdf

[12] Ideally, we would like to include those who disenrolled from HELP in the last 6 months. The sampling frame may need to be adjusted depending on the initial size of that disenrollee population at the time of the data extraction.

Montana's HELP enrollment and disenrollment files for the 2015, 2016, 2017, and 2018[13] calendar years will be used to identify current and previous HELP beneficiaries in the sampling frame. These data are expected to include the following items:[14]

- Name
- Mailing address
- Date of enrollment
- Date of disenrollment
- Type of disenrollment (i.e., voluntarily disenrolled, non-payment, etc.)
- Phone number(s)
- Email address(es)

From the sampling frame, SSS data analysts and statisticians will draw random samples from both the enrollee and disenrollee populations.

2. Survey Instrument Design

The process employed to ensure the production of high quality beneficiary questionnaires is shown in **Figure IV-1**. In order to best identify and prioritize policy priorities, the evaluation team consulted with CMS policy experts. These discussions were the starting point for the development of the federal beneficiary survey and directly contributed to the survey design of all versions of the beneficiary survey. This collaborative approach, coupled with a detailed examination of previously vetted and fielded beneficiary surveys, guided the survey development process. During the survey development, the federal evaluation team expects to adjust the survey instruments based on comments and feedback from relevant stakeholders including the public, CMS, SSS survey experts, the State of Montana, and any results from cognitive pretests of the survey instrument (See Figure IV.1). This iterative approach to survey development helps ensure that input from all interested and affected parties of the HELP demonstration is taken into consideration.

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[13] 2018 data only will be used in Wave 2 of the survey.
[14] The inclusion of these variables is subject to what is available from Montana's administrative data.

Figure IV.1: Federal Beneficiary Survey Development Process
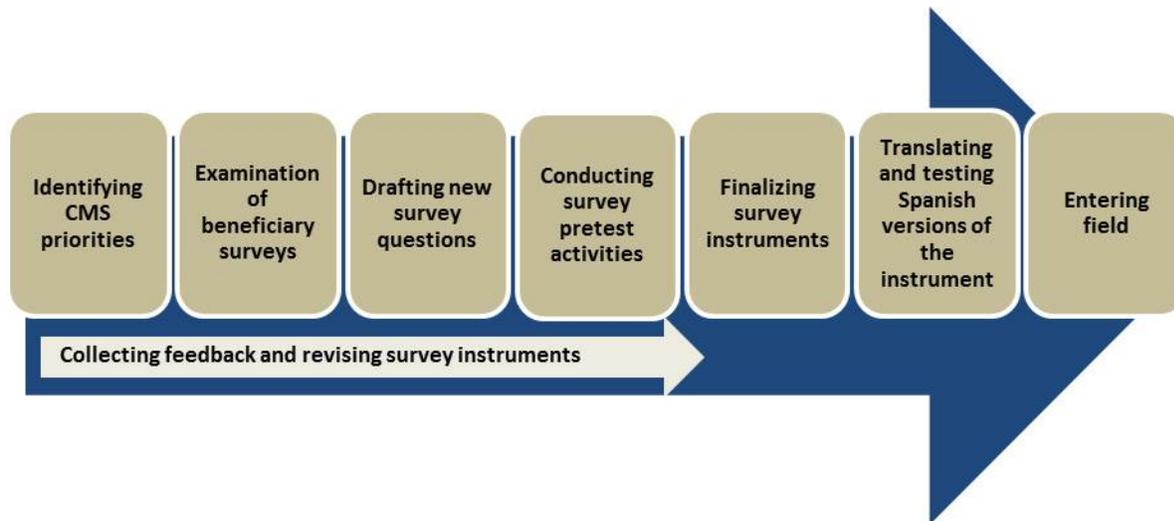
Survey/Questionnaire Development

We conducted a detailed examination of previously vetted and fielded beneficiary surveys.[15] Information gathered from this review, such as the domains and survey items identified, was used to guide the development of the survey instruments for the HELP evaluation. The federal beneficiary surveys for the Healthy Indiana Plan 2.0 provided the core set of questions that was modified for the federal HELP plan beneficiary surveys.

Domains and a description of questionnaire items included in each domain are presented in **Table IV-3**.

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[15] The following are among the surveys included in this review: Consumer Assessment of Healthcare Providers and Systems (CAHPS); CAHPS Qualified Health Plan Survey; Nationwide Medicaid CAHPS Survey; CAHPS Supplemental Items for Adult Questionnaires (CAHPS Healthy Plan Survey 4.0); Behavioral Risk Factor Surveillance System (BRFSS); National Health Interview Survey (NHIS); Iowa Wellness Plan; Healthy Indiana Plan 1.0 Beneficiary Surveys: Enrollee; Healthy Indiana Plan 1.0 Beneficiary Surveys: Leaver; Healthy Indiana Plan 2.0 Beneficiary Surveys: HIP Basic; Healthy Indiana Plan 2.0 Beneficiary Surveys: HIP Plus; Healthy Indiana Plan 2.0 Beneficiary Surveys: Never member, no POWER account contribution made; Healthy Indiana Plan 2.0 Beneficiary Surveys: Leaver; Federal Healthy Indiana Plan 2.0 Beneficiary Surveys: Enrollees; Federal Healthy Indiana Plan 2.0 Beneficiary Surveys: New Enrollees; Federal Healthy Indiana Plan 2.0 Beneficiary Surveys: Disenrollees and Lockouts.

Table IV-3. Domains Included in Questionnaires	
Domain	**Description**
Beneficiary Understanding	Beneficiary understanding of the HELP program with regard to premiums and copayments (including emergency room copayments), premium credits, and premium non-payment consequences
Beneficiary Experience	Beneficiary experiences in the HELP program with regard to enrollment, payment of monthly premiums and copayments (including emergency room copayments), access to care, affordability, and satisfaction with HELP
Affordability	Perceptions of the cost of copayments and/or monthly premiums, concerns about needing to make payment(s), and cost as a barrier to health care services
Access to Care	Barriers to care and use of health care services in the last 6 months or since participant left HELP; items also ask about access issues associated with individual types of care (including emergency room care); This domain also examines access to care before enrolling in the HELP plan
Demographic Characteristics & Health Status	Federal poverty level, gender, age, education level, race/ethnicity, and employment status, health status

C. Survey Administration and Data Collection

Survey administration will be managed by the SSS Survey Operations Group. The SSS Survey Operations Group will use SSS' Corporate Study Management System (CSMS) to manage and track all communications and responses across the survey sample. The surveys will be administered in two waves. The data collection periods for both Wave 1 and Wave 2 of the beneficiary surveys will occur over two separate 12-week periods.

1. Survey Administration

The beneficiary surveys will be administered to beneficiaries through a multi-modal data collection approach that includes U.S. Priority Mail, telephone follow-up with non-responders, and a web survey option. The web option will be optimized to ensure that survey participants can complete the online questionnaire on computers or mobile devices (e.g., cell phones, tablets, etc.). The percentage of respondents who will complete the survey via the web is dependent on whether the contact information in the enrollment files includes viable email addresses for members. We expect approximately 10 percent of survey questionnaires to be completed online.

All survey materials and questionnaires will be available in Spanish and English. Bilingual interviewers will also be available at the SSS Telephone Research Center (TRC).

Survey participants will receive a cover letter inviting them to participate in the online survey, which will be accompanied by a hardcopy version of the beneficiary survey and a prepaid return envelope. Non-respondent participants will receive a maximum of two reminder cards and two paper mail-in surveys accompanied by a prepaid return envelope. Telephone follow-up will occur as appropriate throughout the 12-week data collection period.

Interviewers will contact participants and attempt to complete the survey via telephone with non-respondents after the second questionnaire reminder is sent. The SSS TRC will make up to 10 calls per non-respondent to attempt to collect the survey data. During the entire telephone follow-up period, respondents who already have completed the questionnaire and returned it by mail or completed it online will be suppressed from telephone interviewing.

The SSS Survey Operations Team CSMS is instrumental to the successful administration of large-scale and complex studies. The CSMS provides the ability to assign a unique Survey ID number to sample members, consistently track survey participation, identify who should obtain which reminders (mailings or telephone), when those reminders should be disseminated, and whether any dispositions occur (i.e., complete return received, no return, mail returned as undeliverable, mail returned marked "deceased," etc.).

The CSMS will automatically schedule callbacks, and allow an interview to be resumed at a later date, if necessary. The system is also designed to accommodate multiple questionnaire versions so that the appropriate version is used based on the respondent's tracking number.

2. Data File Processing and Creation

All completed surveys are returned to the SSS TRC. Questionnaires completed online and via telephone will be subject to programmed Quality Control procedures to ensure data have been captured correctly. Mail survey data will be dual-entered and adjudicated where there are discrepancies. This ensures all returned surveys are accounted for within 24 hours of receipt and allows comparisons between the SMS database of returned mail surveys to the SMS database of scanned surveys to ensure quality control.

The SSS data processing team will produce cleaned survey data files for the SSS data analysis team after the completion of the data collection period. The data cleaning/validation process will include the identification of out-of-range responses, incorrect skip patterns, and other standard procedures that will help ensure data quality and accuracy. All data will be housed and analyzed in a Federal Information Security Management Act (FISMA)-compliant data enclave in the SSS-SDC.

D. Analytic Approach

For each of the surveys conducted as part of the evaluation, the final product from the survey implementation will be an SAS file of cleaned and edited survey responses. These SAS analytic data files will be accompanied by their corresponding documentation (codebook, data file contents, univariate frequencies, etc.). Analytic files containing beneficiary-identifying and program participation data gathered from HELP enrollment and disenrollment files will be linked to individual survey responses. Frequency distributions will be generated for each item. The research team will examine these

frequencies to determine whether response categories should be collapsed in order to make analyses more robust.

Based on each of these files, the research team will develop preliminary tabular analyses. The analytical approach and statistical methods will maximize the ability to address the key evaluation questions and draw inferences from findings. Initial analyses will consist of univariate and bivariate statistics. Descriptive analyses will be conducted to examine differences in survey responses with respect to characteristics such as:

- Health status,

- Education level,

- Income level.

1. Comparisons between Wave 1 and Wave 2

The descriptive analyses will also include comparisons between Wave 1 and Wave 2 of the federal beneficiary survey.

To allow optimal comparisons between Wave 1 and Wave 2, the survey instruments will not be subject to substantive revisions (if any). However, the evaluation team recognizes that several factors may impact the extent of changes to the survey, including: Office of Management and Budget (OMB) feedback and the timing of approval, public comments and any additional comment period(s), and any potential shifts in CMS priorities. Assuming we are able to track beneficiaries across survey years, we plan to draw samples *without* replacement for the two waves. That is, those who were part of the sample for Wave 1 will be excluded from the sampling frame in Wave 2. We will perform tests of differences between proportions across the two waves.

2. Limitations

As with all survey data, the data from the beneficiary surveys are based on self-reported information and are, therefore, subject to reporting error. Further, the sample is selected based on enrollment status as classified in the enrollment files, which may or may not be current/accurate as of the survey field date. The evaluation team will aim to pull the survey sample as close to the survey field date as possible.

E. Timeline and Products

Several products will be developed from the evaluation's beneficiary surveys[16] and descriptive analyses. Dedicated memos reporting on the each of the beneficiary survey waves will be prepared. Beyond those memos, findings from the beneficiary survey and descriptive analyses will be included in the Interim Evaluation Reports and the Final Summative Reports, and in webinars. More specifically:

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[16] The final beneficiary survey data collection is under review for approval by the Office of Management and Budget and is subject to 60-day and 30-day public comment periods.

- A Survey Methodology Report outlining the beneficiary survey target population, sample size and sample allocation, the questionnaire development process, the survey administration process, and the descriptive analyses.

- Two memos will be produced after each survey wave based on our descriptive analyses and population comparisons. We expect to field the surveys in June 2017. Draft memos will be produced approximately 3 months after the survey data collection period ends in August 2017.

- The beneficiary surveys and descriptive analyses will also be presented in the Interim Evaluation Report #1, a draft of which is due by November 2017. A webinar based on the Interim Evaluation Report #1 would be conducted 1 month after submission.

- The beneficiary surveys and descriptive analyses will also be presented in the Interim Evaluation Report #2, a draft of which is due by November 2018. A webinar based on the Interim Evaluation Report #2 would be conducted 1 month after submission.

- Findings from the first and second waves of the beneficiary survey will be included in the Summative Report, a draft of which is due January 2019. A webinar based on the Summative Report would be conducted 1 month after submission.

V. Impact Analyses

The goal of the impact analyses is to assess the extent to which Montana's Medicaid expansion, including HELP, has led to changes in health insurance coverage as well as changes in health care access and use, health care quality, and health behaviors and outcomes. The impact analyses will seek to address four core research questions:

- What are the impacts of Montana's Medicaid expansion as compared to not expanding Medicaid eligibility under the ACA?

- What are the impacts of Montana's Medicaid expansion as compared to a Medicaid expansion under the ACA without a demonstration?

- What are the impacts of Montana's Medicaid expansion as compared to a Medicaid expansion under the ACA with a demonstration using different strategies?

- Do the impacts of Montana's Medicaid expansion vary for important population subgroups (e.g., by age, income, parent status, geography)?

In addressing the first question, we will provide insight into how the changes in Montana, including the changes under HELP, compare to estimates of what would have happened if Montana had not expanded Medicaid. Addressing the second and third questions will provide insight into how the changes in Montana, including under HELP, compare to estimates of what would have happened if, instead of HELP, Montana had implemented the ACA Medicaid expansion without using a demonstration or by using a demonstration with different expansion strategies, respectively. The estimates of the counterfactuals for what would have happened in Montana in the absence of HELP (discussed below) will be drawn from the actions of the states that followed different paths under the ACA's Medicaid expansion: those states that have not expanded Medicaid, those states that have expanded Medicaid

without a demonstration, and those states, such as Montana, that have expanded Medicaid with a demonstration.

In addition to the analysis of the overall impacts of Montana's Medicaid expansion, we will assess the impacts of two specific components of HELP: copayments for most services (excluding preventive services and drugs) and disenrollment for non-payment of premiums for those above 100 percent FPL. These analyses will address two key research questions:

- Do members who face higher copayments for services use those less frequently or less intensively?

- Does the provision that beneficiaries with higher incomes can be automatically disenrolled for non-payment of premiums result in extended spells of uninsurance?

A. Data Needs and Sources

1. Overall Impacts of Montana's Medicaid expansion

The analysis of the overall impacts of Montana's Medicaid expansion requires information for residents of Montana and comparison states on health insurance coverage, health care access and use, health care affordability and quality, and health and health behaviors. Data are needed for the period prior to and following HELP implementation for the overall population targeted by HELP in Montana and a similar population in the comparison states as well as for key population subgroups (e.g., by age, income, parent status, and, where available, geography). We will focus on 2016–2017 as the post-HELP period. The pre-HELP period will vary across data sources (discussed below), and will range from 2011 to 2015. As is discussed below, sensitivity analyses will be conducted to assess the extent to which differences in the years included in the pre-HELP period influence the impact estimates. We will exclude 2014 from the analyses as a transition year associated with the ACA's marketplace roll out and Medicaid expansions in many states. We will also treat 2016, the first year of HELP, as a transition year for Montana. For the population for this analysis, we will focus on low-income adults 19 to 64 years old, as they are the core population targeted by HELP.[17]

To meet these needs, the analysis of the overall impacts of Montana's Medicaid expansion will rely on data from three federal surveys: the American Community Survey (ACS)[18], the Behavioral Risk Factor Surveillance System (BRFSS),[19] and, if the relevant data are released in time for the evaluation, the Current Population Survey (CPS)[20] (**Table V-1**). The ACS, which provides the largest state samples for

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[17] For consistency across the surveys, we will exclude from the analysis individuals who live in group quarters or are active duty military. Where possible, we will also exclude pregnant women.

[18] For more information on the ACS, see https://www.census.gov/programs-surveys/acs/.

[19] For more information on the BRFSS, see http://www.cdc.gov/brfss/.

[20] For more information on the CPS, see http://www.census.gov/programs-surveys/cps.html. There were significant modifications to the health insurance questions in the CPS in 2014 (which provides data for calendar

assessing health insurance coverage of any federal survey, will be used to examine changes in health insurance coverage and self-reported health status. The BRFSS, which provides a richer set of outcome measures for relatively large state samples, will be used to examine changes in health care access and affordability, quality of health care, and health behaviors and health outcomes.[21] Finally, the CPS, which primarily collects data on labor force issues, will be used to address two outcomes not available in the ACS or BRFSS—changes in continuity of health insurance coverage over the year and out-of-pocket health care spending.

The pre-HELP periods will vary across the three surveys. For the ACS and BRFSS, the pre-HELP period will cover 2011–2015, although not all questions are asked in all years in the BRFSS. In particular, Montana included a new optional module with additional health care access and affordability questions in 2013 and may or may not include that optional module in future years of the survey.[22] For the CPS, which had a major change in the health insurance questions in the 2014 survey (which provides data for 2013), the pre-HELP period will be limited to 2013–2015. We will include follow-up data through 2018 whenever possible.

The outcome measures to be examined include measures that capture circumstances at the time of the survey (e.g., current health insurance coverage, whether the respondent has a usual source of care), and measures that are based on circumstances over the past 12 months (e.g., health insurance coverage over the past 12 months, whether the respondent had a routine check-up in the past 12 months). In 2016, the first post-HELP year, that 12-month look-back period will capture time in both 2015 and 2016 for individuals who were interviewed in January to November 2016. As a result, estimates of the impacts of HELP for 2016 will underestimate the first year impacts of HELP. A full understanding of the implications of the Medicaid expansion on those outcomes will not be possible until subsequent post-HELP years, when individuals are reporting on a full-year after HELP implementation.

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year 2013), including the addition of measures of monthly coverage. As of yet, the new, more detailed data have not been released.

[21] We will rely on measures from the core BRFSS questionnaire as well as questions from BRFSS optional modules, as long as Montana and at least some of the comparison states participate in those optional modules over the study period.

[22] To date, Montana has not repeated the health care access optional module. If Montana does not include the health care access optional module in the 2017 or 2018 BRFSS, we will not be able to include those outcomes in the impact analyses.

Table V-1. Outcome Measures for Overall Impacts of Montana's Medicaid Expansion		
Outcomes to be Examined	**Examples of Empirical Measures (not all measures are available from all data sources)**	**Primary Data Sources**
Health insurance coverage	Current health insurance status; Type of health insurance coverage; Churning in health insurance coverage over the past 12 months	ACS, CPS
Access to and use of health care	Has a personal doctor; Had a routine checkup in the past 12 months; Had a dental care visit in the past 12 months	BRFSS
Barriers to obtaining health care, including barriers due to costs of care and transportation	Delayed getting needed care due to difficulty getting an appointment in the past 12 months*; Delayed getting needed care due to a lack of transportation in the past 12 months*; Went without needed doctor care due to cost in the past 12 months	BRFSS
Health care spending and health care affordability	Out-of-pocket health care spending (including for premiums) over the past 12 months; Medical debt*	BRFSS, CPS
Quality of health care	Receipt of preventive services (flu shots, cancer screenings) in the past 12 months; Satisfaction with care over the past 12 months*	BRFSS
Health behaviors and health outcomes	Self-reported health status; Days in which physical or mental health was "not good"; Tobacco use	BRFSS

*Based on questions from the BRFSS health care access optional module, which was fielded by Montana in 2013 and has not yet been fielded in the post HELP period.

2. Impacts of Copayments and Disenrollment Provisions

If included in the evaluation, the analysis of the impacts of the copayments and disenrollment provisions will rely primarily on administrative data from the state (**Table V-2**). In particular, claims and encounter data will be used to measure selected utilization and spending outcomes hypothesized to be affected by copayment provisions. Enrollment and eligibility data will be used to measure the effect of disenrollment provisions on the share of months in the observation period that a beneficiary spends enrolled in HELP. In each analysis, the key variables for identifying HELP members exposed to a particular set of program rules (copayments, disenrollment) will come from state administrative data, which may be maintained outside of the claims data system. Specifically, we will rely on a state-provided data on income relative to poverty, which determines the copayments and disenrollment protections that apply to a member.

Table V-2. Outcome Measures for Impacts of Copayments and Disenrollment Provisions under HELP		
Analysis	**Examples of Empirical Measures**	**Data Sources**
Impacts of copayments	Any inpatient stay, inpatient days, any non-preventive ambulatory care visit; number of non-preventive ambulatory care visits; any preventive ambulatory care visit; number of preventive ambulatory care visits; any non-emergent ER visit (NYU algorithm); number of non-emergent ER visits; any emergent ER visit; number of emergent ER visits; any specialist visits; number of specialist visits; number of prescription fills	Enrollment data; claims data; beneficiary income and cost-sharing data
Impacts of disenrollment provisions	Number of months per year enrolled	Enrollment data; beneficiary income data

B. Analytic Approach

1. Overall Impacts of Montana's Medicaid expansion

Evaluation Framework: Difference-in-Differences Models

The analysis of the overall impacts of Montana's Medicaid expansion will rely on a quasi-experimental difference-in-differences (DD) framework that uses a comparison group to provide an estimate of the counterfactual for what would have happened in Montana in the absence of HELP.[23] We will consider three scenarios for the counterfactual: (1) what would have happened if Montana had not expanded Medicaid under the ACA; (2) what would have happened if Montana had expanded Medicaid under the ACA without using a demonstration; and (3) what would have happened if Montana had expanded Medicaid under the ACA using different strategies. **Table V-3** summarizes the broad list of states to be considered as part of the comparison group for each of the counterfactuals. As discussed further below, the ability to match Montana to other similar states will be limited by the states available within each counterfactual group.

In addition to considering the full set of possible comparison states for each counterfactual, we will also examine subgroups of those states that more closely match Montana in the pre-HELP period. For the

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[23] Difference-in-differences models are a standard approach for assessing policy and program changes when random assignment experiments are not possible, including other CMS evaluations. For example, the Urban Institute research team for the HELP evaluation is currently using DD methods as part of the evaluations of State Innovation Models (SIM) Initiatives (with RTI) and state Financial Alignment Initiatives (with RTI) and as part of a Robert Wood Johnson Foundation-funded evaluation of the Affordable Care Act.

analyses that rely on the BRFSS and CPS, where we are not able to identify sub state areas, the matching will be limited to state-level measures for the pre-HELP period, focusing on the states that are most similar, with respect to Medicaid income eligibility levels for parents and childless adults and to the trends in health insurance coverage rates for adults in the pre-HELP period. For the analyses that rely on the ACS, where we do have access to data for sub state areas, we will match on the above factors, as well as local area characteristics, including characteristics of the local population (e.g., share with a college degree), the local economy (e.g., local unemployment rate), and local health care system (e.g., primary care physicians per 10,000 population) during the pre-HELP period. The resulting groups of comparison states (for BRFSS and CPS) and comparison communities (for ACS) that are a closer match to Montana in the pre-HELP period will be used as a second set of comparison areas.

Table V-3. Comparison Groups for Overall Impacts of Montana's Medicaid Expansion		
Counterfactual	**Definition of Comparison Group**	**Preliminary List of Potential Comparison States**
What if: Montana expanded Medicaid under the ACA without a demonstration	Similar persons in states that expanded Medicaid under the ACA without a demonstration in January 2014 or later	AK, AZ, CO, DE, IL, KY, LA, MD, MA, NV, NM, NY, ND, OH, OR, RI, VT, WV
What if: Montana expanded Medicaid under the ACA with different strategies	Similar persons in states that expanded Medicaid using different strategies in January 2014 or later	AR, IA, IN, MI, NH, PA
What if: Montana did not expand Medicaid under the ACA	Similar persons in states that have not expanded Medicaid under the ACA as of the follow-up period for the study	AL, FL, GA, ID, KS, ME, MS, MO, NE, NC, OK, SC, SD, TN, TX, UT, VA, WI, WY

Note: The early expansion states are excluded from the analysis since the early expansion would contaminate the pre-HELP period. The set of comparison states may change over time as states change their ACA expansion decisions.

Once we have identified the group of comparison areas (either states or communities) for each counterfactual, we will identify individuals in those areas who are similar to individuals Montana using propensity score weighting. By reweighting the comparison group to more closely match the characteristics of the Montana sample, the goal is to reduce the potential for omitted variable bias in the impact estimates due to unmeasured differences between the two groups. Under this approach, we would estimate models that compare Montana enrollees to the comparison area samples as a function of the observable demographic and socioeconomic characteristics of the individual and his/her family and, for the ACS analysis, the characteristics of his/her community. **Table V-4** provides a preliminary list of the explanatory variables to be included in the propensity score models. In addition to including these measures, we will also include interactions between these measures to capture as many of the differences between the populations in Montana and the comparison states as possible.

Using the estimates from the regression models, we will estimate the propensity score (PS) for each individual in the sample (i.e., the predicted probability that the individual is from Montana). By using inverse probability weighting based on the propensity scores [defined as PS/(1-PS)], residents of the comparison states who are more similar to Montana residents receive larger weights, while those who are less similar to Montana residents receive lower weights. The propensity score reweighting pulls the distribution of weighted comparison group members closer to that of Montana, increasing the comparability between Montana and its comparison groups. In implementing the reweighting of the comparison groups to match Montana, we will explore alternative methods, including the use of entropy balancing (Stata command *ebalance*).[24]

Table V-4. Preliminary List of Explanatory Variables To Be Included in the Propensity Score Models	
Explanatory Variable	**Survey**
Age	ACS, BRFSS, CPS
Gender	ACS, BRFSS, CPS
Race/ethnicity	ACS, BRFSS, CPS
Citizenship status	ACS, CPS
Speaks English well or very well	ACS
Marital status	ACS, BRFSS, CPS
Educational attainment	ACS, BRFSS, CPS
Presence of children under 18 in the household/family	ACS, BRFSS, CPS
Work status	ACS, BRFSS, CPS
Household/family size	ACS, BRFSS, CPS
Household/family income	ACS, BRFSS, CPS
Household owns/rents home	ACS, BRFSS, CPS
Household members per room implies crowded housing	ACS
Always wears seatbelt in car (proxy for attitudes toward risk)	BRFSS
Resides in urban area	ACS
Interview month	BRFSS, CPS
Interview mode	BRFSS

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[24] See J. Hainmueller and Y. Xu. "ebalance: A Stata Package for Entropy Balancing," Journal of Statistical Software, August 2013, Vol. 54, Issue 7.

Table V-4. Preliminary List of Explanatory Variables To Be Included in the Propensity Score Models	
Explanatory Variable	**Survey**
Community characteristics (e.g., population characteristics, economic factors, provider supply)	ACS

Note: The local community will be defined based on the Public Use Microdata Areas (PUMAs) used in the ACS.

The propensity score weighting would be implemented separately for each of the comparison groups and any variations in those comparison groups (e.g., the narrower set of states that are more similar to Montana in the pre-HELP period). This will ensure that we identify individuals who are most similar to Montana residents within the context of each of the analyses. We will assess the resulting comparison groups by comparing the distribution of the propensity scores and of the covariates between Montana and the comparison groups to ensure that the resulting distributions are similar (i.e., "balanced"). Observations from the comparison group that have propensity scores that are smaller than the smallest propensity score in the Montana sample will be excluded from the analysis.

Empirical Model and Estimation Approach

The core empirical model for the DD analysis can be written as:

$$Outcome_{ist} = \beta_1 Y2016_t + \beta_2 Y2017_t + \beta_3 Y2018_t + \beta_4 HELP_s + \beta_5 (HELP_s * Y2016_t) \\ + \beta_6 (HELP_s * Y2017_t) + \beta_7 (HELP_s * Y2018_t) + X_{ist}\beta_8 + Z_{st}\beta_9 + \varepsilon$$

Where Outcome is the outcome of interest for individual *i* in state *s* and time *t*; *Y*2016, *Y*2017, and *Y*2018 are year dummies for the post-HELP period relative to the pre-HELP period; *HELP*2 takes the value one for individuals from Montana and is zero for individuals in the comparison group; ***X*** is a vector of individual and family characteristics, and ***Z*** is a vector of area-level variables (for the ACS analyses only). $\beta_5, \beta_6,$ and β_7, the coefficients on the interaction terms between HELP2 and year, provide the DD estimates of the impact of Montana's Medicaid expansion on the outcome in the specific post-HELP year. For simplicity, we will estimate ordinary least squares (OLS) models but will also assess the robustness of the findings using alternative functional forms for discrete outcomes (e.g., logit and probit).[25] **Table V-5** summarizes the outcomes to be examined and the estimation methods that will be used. The variables included in the propensity score models (outlined in **Table V-5**) would also be included in the regression models as a further control for differences between the residents of Montana and the comparison states. **Appendix Tables V-1 to V-3** provide examples of the tables that will be used

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[25] The initial analyses will rely on OLS and logit. For outcomes that are in the tails of the distribution (e.g., rare events that occur for less than 5 percent of the sample or common events that occur for more than 95 percent of the sample) we will also estimate probit models.

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to summarize the findings from the impact analyses for the overall population based on OLS models. Similar tables will be prepared for estimates based on alternate estimation methods.

Table V-5. Preliminary List of Empirical Measures and Estimation Methods		
Outcomes	**Primary Data Source (Likely availability during study period)**	**Estimation Methods**
Insurance coverage		
Had health insurance coverage at the time of the survey	ACS (2011-2018)	OLS, logit, and, potentially, probit
Had employer-sponsored insurance at the time of the survey	ACS (2011-2018)	OLS, logit, and, potentially, probit
Had health insurance coverage for all of the past 12 months	CPS* (2013-2018)	OLS, logit, and, potentially, probit
Had health insurance coverage at some point over the past 12 months	CPS* (2013-2018)	OLS, logit, and, potentially, probit
Health care access and use		
Has a personal doctor	BRFSS (2011-2018)	OLS, logit, and, potentially, probit
Had a routine checkup in the past 12 months	BRFSS (2011-2018)	OLS, logit, and, potentially, probit
Had a visit to a doctor or other health professional in the past 12 months	BRFSS (2013, potentially 2017 or 2018)	OLS, logit, and, potentially, probit
Had a dental visit in the past 12 months	BRFSS (2012, 2014, 2016, and likely 2018)	OLS, logit, and, potentially, probit
Barriers to obtaining health care		
Went without needed doctor care because of costs in the past 12 months	BRFSS (2011-2018)	OLS, logit, and, potentially, probit
Did not take medication as prescribed because of costs in the past 12 months	BRFSS (2013, potentially 2017 or 2018)	OLS, logit, and, potentially, probit
Lack of transportation was most important reason delayed getting needed medical care in the past 12 months	BRFSS (2013, potentially 2017 or 2018)	OLS, logit, and, potentially, probit

Table V-5. Preliminary List of Empirical Measures and Estimation Methods		
Outcomes	**Primary Data Source (Likely availability during study period)**	**Estimation Methods**
Difficulty getting an appointment was most important reason delayed getting needed medical care in the past 12 months	BRFSS (2013, potentially 2017 or 2018)	OLS, logit, and, potentially, probit
Health care spending/health care affordability		
Had out-of-pocket health care costs greater than $500/$1000/$2000 in the past 12 months	CPS (2013-2018)	OLS, logit, and, potentially, probit
Has medical bills that are being paid off over time	BRFSS (2013, potentially 2017 or 2018)	OLS, logit, and, potentially, probit
Quality of care		
Received flu vaccine in past 12 months	BRFSS (2011-2018)	OLS, logit, and, potentially, probit
Satisfied with health care that has received	BRFSS (2013, potentially 2017 or 2018)	OLS, logit, and, potentially, probit
Had emergency department or urgent care visit for asthma in past 12 months (overall and among those with asthma)	BRFSS (2011, potentially 2017 or 2018)	OLS, logit, and, potentially, probit
Health behaviors and health status		
Current smoker/tobacco user	BRFSS (2011-2018)	OLS, logit, and, potentially probit
Tried to quit smoking in past 12 months	BRFSS (2011-2018)	OLS, logit, and, potentially, probit
Self-reported health status	BRFSS (2011-2018)	OLS, logit, and, potentially, probit
Any days in the past 30 days when physical health was not good	BRFSS (2011-2018)	OLS, logit, and, potentially, probit
Any days in the past 30 days when mental health was not good	BRFSS (2011-2018)	OLS, logit, and, potentially, probit
Has an activity limitation due to health issues	BRFSS (2011-2018)	OLS, logit, and, potentially, probit

* The CPS provides data on current insurance coverage and coverage for each of the prior 15 months.

Sensitivity Analyses

An important concern with quasi-experimental designs is the possibility of unmeasured differences between Montana and the comparison groups on dimensions other than the form of the intervention that are not controlled for in the analysis. If those differences exist and are associated with the outcomes of interest, the impact estimates would be biased. We will minimize such potential bias by controlling for a wide range of measures in the propensity score model (described above) and in the regression analyses, and by estimating models based on different groups of comparison states. We will also explore the impacts of including different years in the pre-demonstration period (e.g., 2011–2013, 2013 only). Findings from the sensitivity analyses would be reported using variations on **Appendix Tables V-1 to V-3**. Finally, to assess the scope of any remaining omitted variable bias, we will use "bounding" methods developed by Oster (2015) to examine the potential changes in the impact estimates that would occur if we were able to control for any remaining unmeasured differences between Montana and the comparison groups.

Subgroup Analyses

Beyond the analyses of the overall impacts of Montana's Medicaid expansion, we will examine the impacts of Montana's Medicaid expansion on important subgroups of the population, including by age, family income, and parent status.[26] The specific subgroups to be examined will be determined by the available data and the sample sizes in each of the surveys. We will also use difference-in-difference-in-differences (DDD) models that include interactions between the HELP2 dummy variable and population subgroups to estimate differences in the impacts of Montana's Medicaid expansion across key population groups (e.g., between parents and childless adults, between younger and older adults). The findings here will inform our understanding of heterogeneity in the impacts of Montana's Medicaid expansion.

Appendix Tables V-4 to V-6 provide examples of the tables that would be used to report the DD estimates (which provide estimating of the impacts for each subgroup separately) and the DDD estimates (which provide estimates of the relative impacts for the different subgroups). The comparison states, model specification, and estimation methods for the subgroup analyses would be informed by the sensitivity analyses conducted for all adults.

Appendix Table V-7 provides a preliminary summary of the models to be estimated under this component of the evaluation.

Defining Income

In order to limit the analysis to the population that is targeted by HELP, we will need to estimate the income level for the health insurance unit (HIU) used to determine program eligibility in Montana. This is a challenge in federal survey data, as the surveys do not always capture all of the information needed to

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[26] Unfortunately, we will not be able to replicate the TPA exemption criteria in the federal surveys as many of the needed variables (e.g., medical frailty, exceptional health care needs, and inadequate provider networks in the local area) are not available in the surveys.

construct the specific eligibility unit and to determine income for that eligibility unit. For the ACS and CPS, the surveys provide detailed household relationship information and individual income information that can be used to approximate the Medicaid HIUs and the income for that unit. For those two surveys, we can identify adults in the sample who likely meet the income eligibility standard under the Medicaid expansion of HIU income at or below 133 percent of the FPL, as well as subgroups of that population (e.g., with income between 100 percent and 133 percent of FPL, with income at or below 50 percent of FPL). By contrast, the BRFSS only provides information on annual household income and only provides that information by a limited number of categories (e.g., less than $10,000, $10–15,000, $15–20,000, $20–25,000, $25–35,000, $35–50,000, $50–75,000, $75,000 or more). While we will use those data to conduct analyses by income groups (e.g., adults in households with income below $25,000), we will also use the ability to construct both HIU and household income measures in the ACS to use the ACS as a bridge to impute measures of HIU income relative to poverty in the BRFSS. Specifically, we will use the ACS to estimate regression models of HIU income relative to poverty as a function of household income and characteristics of the individual, including age, sex, race/ethnicity, education, marital status, household size, homeownership, and urban/rural status of place of residence for each year.[27] We will use the coefficients from that model to predict HIU income relative to poverty for each year's BRFSS sample. We will check the imputation process by comparing the HIU distribution in the BRFSS to that of the ACS, and by comparing the characteristics of the adults in the HIUs with income at or below 133 percent of the FPL in the ACS and the BRFSS.[28] For the analyses using the BRFSS, we will estimate models using both the reported household income categories and the imputed HIU income categories.

Limitations of the Empirical Approach

As with all quasi-experimental analyses, we will work to reduce the potential that our impact estimates incorporate omitted variable bias; however, in the absent of random assignment, it is not possible to completely eliminate the potential that omitted variable bias persists. We will use a "bounding" method developed by Oster (2015) to assess the potential scope of any remaining problems. Using Oster's method, we would estimate the potential effect of any omitted variables on the estimated impact of Montana's Medicaid expansion under different assumptions about the potential scope of omitted variable bias. If the upper-bound estimates under these different scenarios would lead to the same conclusions as drawn from our core analysis that would suggest that our results are robust to omitted variable bias. Beyond that basic limitation to the difference-in-differences model, we are also constrained by the available survey data sources, which limit the outcomes and population subgroups that can be examined. Of particular importance, the available survey data will not support the assessment of the impacts of the different components of HELP, such as the impacts of premiums and cost-sharing provisions. Further, the federal surveys, as with all surveys, are subject to measurement error, including reporting error by respondents. We would not, however, expect the measurement error

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[27] The variables to be included in the imputation regression model will be limited to those that are defined consistently across the ACS and BRFSS.

[28] We are currently using this method of relying on the ACS to aid in imputing ACA income categories in the BRFSS under the evaluations of the SIM Initiatives for CMS.

in the surveys to differ between Montana and other states. Finally, it is important to recognize that the timing of this evaluation is fairly early in the demonstration (2016–2018) and, thus, may not capture the ultimate effects of HELP were it to continue beyond the demonstration period.

2. Impacts of Cost-sharing Requirements

Evaluation Framework: Regression-Discontinuity

The cost-sharing requirements under HELP vary by a beneficiary's income relative to poverty. Those with incomes at or below 50 percent of the FPL pay fixed dollar copayment amounts per unit for most services, but do not face premiums. Those with incomes above 50 percent up to and including 100 percent of FPL pay the same fixed copayments but also pay premiums up to 2 percent of their incomes, with premium payments offsetting copayments up to 2 percent of income. Those with incomes above the poverty line pay premiums, and pay copayments consisting of 10 percent of the payment the state makes for each service rather than a flat copayment amount.[29] Individuals with income above 50 percent of FPL are subject to copayments up to 5 percent of their household income. In addition, members with incomes above poverty face disenrollment for failure to pay premiums and can only re-enroll after payment of arrears. Further, providers may deny services to beneficiaries above the poverty line if they do not pay copayments. These changes in cost-sharing requirements tied to specific cuts in the income distribution present an opportunity to employ a regression discontinuity (RD) design to measure the impacts of cost-sharing requirements on service utilization.

Empirical Models and Estimation Methods

The basic form of the sharp RD design (see Lee and Lemieux, 2010, for a discussion of the distinction between sharp and fuzzy RD designs) is a pooled regression including parents above and below a specific income-to-poverty cutoff, y^*, where y^* is either 0.5 or 1.0, depending on the analysis. The intuition behind this method is to predict the outcome variable at the cutoff using, respectively, the observations just below and just above the cutoff. The difference between the predictions made above the cutoff and the prediction made below the cutoff is the treatment effect. The RD design takes the form

$$OUTCOME = \alpha_0 + \beta_0(INCtoPOV - y^*) + \tau * [INCtoPOV > y^*] \\ + (\beta_1 - \beta_0) * [INCtoPOV > y^*] * (INCtoPOV - y^*) + \gamma \mathbf{X} + \epsilon$$

The coefficient τ measures the local average treatment effect of the specific cost-sharing requirement that begins at the threshold value y*, and the coefficients α_0, β_0, and β_1 are the intercept and slope coefficients for those below (0) and above (1) that threshold. The terms $[INCtoPOV > y^*]$ are 0/1 indicators that $INCtoPOV$ exceeds the threshold. The γ coefficients serve to control for differences in the observable demographic and market area factors ($\mathbf{X}$) that may influence outcomes independently

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[29] For all HELP members, combined premiums and copayments are capped 5 percent of quarterly income. Certain preventative services, including immunizations and medically necessary screenings, are exempt from copayments.

from the effects of cost-sharing requirements. As Lee and Lemieux (2010) show, a more robust form of this model uses a polynomial specification for the ($INCtoPOV$-y^*) terms, and this will serve as our base specification. In specifications measuring the effects of provisions taking effect at 51 percent of FPL (premiums), the sample will be restricted to beneficiaries between 0 and 100 percent FPL. For specifications measuring the effects of provisions taking effect at 100 percent of FPL (proportional copayments, disenrollment and non-payment penalties), the sample will be restricted to beneficiaries above 50 percent up to and including 133 percent FPL.

Empirical Models and Estimation Methods

The analyses of the impacts of cost sharing will examine the following outcomes (Y) derived from claims and other administrative data:

- Primary care visits, excluding exempt preventive services (any in year, number per year)

- Preventive care visits (any in year, number per year)

- Specialist care visits (any/number per year)

- Outpatient behavioral health care visits (any/number per year)

- Inpatient stays (any/number of stays/number of days per year)

- Non-emergent ER visits (any/number per year) as classified by NYU algorithm

- Emergent ER visits (any/number per year) as classified by NYU algorithm

- Prescription drug claims (any/number per year)

The analysis of the impact of the disenrollment (for non-payment of premiums) provision will also examine the probability of full-year enrollment and the number of months of enrollment in a year among those who ever enroll. An analysis of the impact of premiums themselves on enrollment would require data on all eligible but not enrolled Montanans, which is not available in administrative data.

Check on validity of RD design: The literature suggests several checks on the validity of the RD design. First, there is concern that beneficiaries whose incomes are near the premium/copayment cutoffs may know the value of the cutoff and may change their incomes in order to affect their cost-sharing responsibility, and bias the estimate of τ. The standard test for this source of bias is a test for discontinuities of the density of the eligibility variable (INCtoPOV) at the cutoff value. Assuming data on income are available in administrative data, if we see a significant spike in this density just below the values of 0.5 or 1.0, we would suspect that beneficiaries who are likely to use services have manipulated their income in order to lower their costs, and the difference we observe between them and those just above the cutoff would reflect differences in the underlying propensity to use the benefit rather than the effect of the restriction itself.

Limitations and Sensitivity Analysis for RD design: Aside from the concern that beneficiaries near the cutoffs can self-select into the treatment group by manipulating their incomes, a second concern is that the behavior of beneficiaries further from the cutoff value of .25 should not weigh heavily on the estimate of the treatment effect around the cutoff value. The restriction of the analysis samples to

limited ranges of income relative to the FPL and the use of a polynomial specification is intended to limit the effect of those with much higher or lower incomes. To verify that our findings are robust, however, we will estimate on subsamples closer to the cutoff (e.g., .25<INCtoPOV<.75 or .75<INCtoPOV<1.25). In general, the smaller the range of INCtoPOV, the higher the precision of the local treatment effect, but there is tradeoff in terms of precision, as the sample gets smaller. Lee and Lemieux (2010) provide a method for choosing the optimal "bandwidth" for this local analysis, which we will follow.

A third concern is that income is such a strong predictor of health care need that differences observed above and below the two threshold values really reflect the effect of income itself rather than the provisions being studied. Therefore, as another robustness check, we will also estimate models for outcomes not subject to copayments (e.g., immunizations and preventive screenings) as placebo tests.

C. Timeline and Products

The first deliverable for the impact analysis would be a memo on the selection of the comparison groups, which would be provided by May 2017 to allow for the inclusion of BRFSS data through 2015, which is the last year in the pre-HELP period. Beyond that deliverable, findings from the impact analyses will be included in the Interim Evaluation Reports and the Final Summative Evaluation Report, and in webinars. More specifically:

- An overview of the plans for the impact analyses for HELP would be included in the first Interim Evaluation Report, a draft of which is due by November 2017. A webinar based on Interim Evaluation Report #1 is expected to be conducted 1 month after submission.

- Early estimates from the impact analyses for HELP would be included in the second Interim Evaluation Report, a draft of which is due by November 2018. A webinar based on Interim Evaluation Report #2 is expected to be conducted 1 month after submission.

- Final estimates of the impact analyses for HELP would be included in the Final Summative Evaluation Report, a draft of which is due January 2019. A webinar based on the Final Summative Evaluation Report is expected to be conducted 1 month after submission.

VI. Summary of Appendices

- Supplemental Materials for Chapter IV
    - o Appendix IV.1: HELP Enrollee Survey
    - o Appendix IV.2: HELP Disenrollee Survey
- Supplemental Materials for Chapter V
    - o Appendix V.1: Overview of Federal Surveys: ACS, BRFSS and CPS
    - o Appendix V-2 to V-6: Examples of Tables
    - o Appendix V-7: Summary of Models to be Estimated

VII. Appendix Tables for Section V: Impact Analyses

Appendix Table V-1. Difference-in-differences estimates for outcomes for Montana relative to comparison groups based on states that did not expand Medicaid under the ACA, All low-income adults, 2011–2018

Outcome Measures	Model 1: All Relevant States			Model 2: States That More Closely Match Montana		
	Regression adjusted difference in differences	95% Confidence interval		Regression adjusted difference in differences	95% Confidence interval	
		Lower limit	Upper Limit		Lower limit	Upper Limit
Outcome [a]						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome [b]						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome						
2016						

Appendix Table V-1. Difference-in-differences estimates for outcomes for Montana relative to comparison groups based on states that did not expand Medicaid under the ACA, All low-income adults, 2011–2018

Outcome Measures	Model 1: All Relevant States			Model 2: States That More Closely Match Montana		
	Regression adjusted difference in differences	95% Confidence interval		Regression adjusted difference in differences	95% Confidence interval	
		Lower limit	Upper Limit		Lower limit	Upper Limit
2017						
2018						
Outcome						
2016						
2017						
2018						

Note: The total number of persons for Montana in 2012 is XX,XXX. Bold estimates indicate statistical significance at the p<0.05 level. An ordinary least squares model was used to obtain the impact estimates. A negative value indicates a greater decrease or a smaller increase in the outcome in the Montana relative to the comparison group, all else equal. A positive value indicates a greater increase or a smaller decrease in the outcome in Montana relative to the comparison group, all else equal. All outcomes are from the Behavioral Risk Factor Surveillance System unless noted otherwise.

[a] Outcome is from the American Community Survey. [b] Outcome is from the Current Population Survey.

Outcome Measures	Model 1: All Relevant States			Model 2: States That More Closely Match Montana		
	Regression Adjusted Difference in Differences	95% Confidence Interval		Regression Adjusted Difference In Differences	95% Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
Outcome [a]						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome [b]						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome						
2016						
2017						

Appendix Table V-2. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based on *States that Expanded Medicaid Under the ACA Without a Demonstration*, All Low-Income Adults, 2011–2018

Appendix Table V-2. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based on *States that Expanded Medicaid Under the ACA Without a Demonstration*, All Low-Income Adults, 2011–2018

Outcome Measures	Model 1: All Relevant States			Model 2: States That More Closely Match Montana		
	Regression Adjusted Difference in Differences	95% Confidence Interval		Regression Adjusted Difference In Differences	95% Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
2018						
Outcome						
2016						
2017						
2018						

Note: The total number of persons for Montana in 2012 is XX,XXX. Bold estimates indicate statistical significance at the p<0.05 level. An ordinary least squares model was used to obtain the impact estimates. A *negative* value indicates a *greater decrease* or a *smaller increase* in the outcome in the Montana relative to the comparison group, all else equal. A *positive* value indicates a *greater increase* or a *smaller decrease* in the outcome in Montana relative to the comparison group, all else equal. All outcomes are from the Behavioral Risk Factor Surveillance System unless noted otherwise.

[a] Outcome is from the American Community Survey; [b] Outcome is from the Current Population Survey.

Appendix Table V-3. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based on *Other States that Expanded Medicaid Under the ACA with a Demonstration*, **All Low-Income Adults, 2011–2018**

Outcome Measures	Model 1: All Relevant States			Model 2: States That More Closely Match Montana		
	Regression Adjusted Difference in Differences	95% Confidence Interval		Regression Adjusted Difference in Differences	95% Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
Outcome [a]						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome [b]						
2016						
2017						
2018						
Outcome						
2016						
2017						
2018						
Outcome						
2016						
2017						

Appendix Table V-3. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based on *Other States that Expanded Medicaid Under the ACA with a Demonstration*, All Low-Income Adults, 2011–2018						
Outcome Measures	**Model 1: All Relevant States**			**Model 2: States That More Closely Match Montana**		
	Regression Adjusted Difference in Differences	**95% Confidence Interval**		**Regression Adjusted Difference in Differences**	**95% Confidence Interval**	
		Lower Limit	**Upper Limit**		**Lower Limit**	**Upper Limit**
2018						
Outcome						
2016						
2017						
2018						

Note: The total number of persons for Montana in 2012 is XX,XXX. Bold estimates indicate statistical significance at the p<0.05 level. An ordinary least squares model was used to obtain the impact estimates. A *negative* value indicates a *greater decrease* or a *smaller increase* in the outcome in the Montana relative to the comparison group, all else equal. A *positive* value indicates a *greater increase* or a *smaller decrease* in the outcome in Montana relative to the comparison group, all else equal. All outcomes are from the Behavioral Risk Factor Surveillance System unless noted otherwise.

[a] Outcome is from the American Community Survey; [b] Outcome is from the Current Population Survey.

Appendix Table V-4. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based On *States That Expanded Medicaid Under the ACA Without a Demonstration, Low-Income Parents And Childless Adults*, 2011–2018

Outcome Measures	Parents			Childless Adults			Parents Relative To Childless Adults		
	Regression Adjusted Difference in Differences	95% Confidence Interval		Regression Adjusted Difference In Differences	95% Confidence Interval		Regression Adjusted Difference In Differences	95% Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit		Lower Limit	Upper Limit
Outcome [a]									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome [b]									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome									
2016									
2017									

Appendix Table V-4. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based On *States That Expanded Medicaid Under the ACA Without a Demonstration, Low-Income Parents And Childless Adults*, 2011–2018

Outcome Measures	Parents			Childless Adults			Parents Relative To Childless Adults		
	Regression Adjusted Difference in Differences	95% Confidence Interval		Regression Adjusted Difference In Differences	95% Confidence Interval		Regression Adjusted Difference In Difference In Differences	95% Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit		Lower Limit	Upper Limit
2018									
Outcome									
2016									
2017									
2018									

Note: The total number of persons for Montana in 2012 is XX,XXX. Bold estimates indicate statistical significance at the p<0.05 level. An ordinary least squares model was used to obtain the impact estimates. A negative value indicates a greater decrease or a smaller increase in the outcome in the Montana relative to the comparison group, all else equal. A positive value indicates a greater increase or a smaller decrease in the outcome in Montana relative to the comparison group, all else equal. All outcomes are from the Behavioral Risk Factor Surveillance System unless noted otherwise.

[a] Outcome is from the American Community Survey; [b] Outcome is from the Current Population Survey.

Appendix Table V-5. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based On *States That Expanded Medicaid Under the ACA Without a Demonstration, Low-Income Parents And Childless Adults*, 2011–2018

Outcome Measures	Parents			Childless Adults			Parents Relative to Childless Adults		
	Regression Adjusted Difference In Differences	95% Confidence Interval		Regression Adjusted Difference in Differences	95% Confidence Interval		Regression Adjusted Difference in Difference in Differences	95% Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit		Lower Limit	Upper Limit
Outcome [a]									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome [b]									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome									
2016									

Appendix Table V-5. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based On *States That Expanded Medicaid Under the ACA Without a Demonstration, Low-Income Parents And Childless Adults*, **2011–2018**

| Outcome Measures | Parents | | | Childless Adults | | | Parents Relative to Childless Adults | | |
| | Regression Adjusted Difference In Differences | 95% Confidence Interval | | Regression Adjusted Difference in Differences | 95% Confidence Interval | | Regression Adjusted Difference in Differences | 95% Confidence Interval | |
		Lower Limit	Upper Limit		Lower Limit	Upper Limit		Lower Limit	Upper Limit
2017									
2018									
Outcome									
2016									
2017									
2018									

Note: The total number of persons for Montana in 2012 is XX,XXX. Bold estimates indicate statistical significance at the p<0.05 level. An ordinary least squares model was used to obtain the impact estimates. A *negative* value indicates a *greater decrease* or a *smaller increase* in the outcome in the Montana relative to the comparison group, all else equal. A *positive* value indicates a *greater increase* or a *smaller decrease* in the outcome in Montana relative to the comparison group, all else equal. All outcomes are from the Behavioral Risk Factor Surveillance System unless noted otherwise.

[a] Outcome is from the American Community Survey. [b] Outcome is from the Current Population Survey.

Appendix Table V-6. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based on *Other States That Expanded Medicaid Under the ACA With a Demonstration, Low-Income Parents And Childless Adults*, 2011–2018									
Outcome Measures	Parents			Childless Adults			Parents Relative To Childless Adults		
	Regression Adjusted Difference In Differences	95% Confidence Interval		Regression Adjusted Difference in Differences	95% Confidence Interval		Regression Adjusted Difference in Difference in Differences	95% Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit		Lower Limit	Upper Limit
Outcome [a]									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome [b]									
2016									
2017									
2018									
Outcome									
2016									
2017									
2018									
Outcome									
2016									

Appendix Table V-6. Difference-in-Differences Estimates for Outcomes for Montana Relative to Comparison Groups Based on *Other States That Expanded Medicaid Under the ACA With a Demonstration, Low-Income Parents And Childless Adults*, 2011–2018

Outcome Measures	Parents			Childless Adults			Parents Relative To Childless Adults		
	Regression Adjusted Difference In Differences	95% Confidence Interval		Regression Adjusted Difference in Differences	95% Confidence Interval		Regression Adjusted Difference in Difference in Differences	95% Confidence Interval	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit		Lower Limit	Upper Limit
2017									
2018									
Outcome									
2016									
2017									
2018									

Note: The total number of persons for Montana in 2012 is XX,XXX. Bold estimates indicate statistical significance at the p<0.05 level. An ordinary least squares model was used to obtain the impact estimates. A *negative* value indicates a *greater decrease* or a *smaller increase* in the outcome in the Montana relative to the comparison group, all else equal. A *positive* value indicates a *greater increase* or a *smaller decrease* in the outcome in Montana relative to the comparison group, all else equal. All outcomes are from the Behavioral Risk Factor Surveillance System unless noted otherwise.

[a] Outcome is from the American Community Survey. [b] Outcome is from the Current Population Survey.

Appendix Table V-7. Preliminary Summary of Models To Be Estimated

Population Groups	Comparison Based on States That Have Not Expanded Medicaid Under the ACA				Comparison Based on States That Have Expanded Medicaid Without a Demonstration				Comparison Based on States That Have Expanded Medicaid with Other Premium and Beneficiary Engagement Demonstration			
	State Groups	Pre-Years	Income Measures	Estimation Methods	State Groups	Pre-Years	Income Measures	Estimation Methods	State Groups	Pre-Years	Income Measures	Estimation Methods
All low-income adults	All states	2011-2015	BRFSS reported and imputed	OLS & probit	All states	2011-2015	BRFSS reported and imputed	OLS & probit	All states	2011-2015	BRFSS reported and imputed	OLS & probit
		2013 only	BRFSS reported and imputed	OLS & probit		2013 only	BRFSS reported and imputed	OLS & probit		2013 only	BRFSS reported and imputed	OLS & probit
	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS
By age	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS
By income	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS
By parent status	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS
By urbanicity	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS	Subset of states	2011-2015	BRFSS imputed	OLS

Note: This assumes that the sensitivity testing would be conducted as part of the analyses for all low-income adults and all comparison states, with the findings from that work informing the state group, pre-years, income measures and estimation methods used in the subgroup analyses. For simplicity here, we assume that the sensitivity testing would lead to the subset of states, 2011–2013 pre-period, BRFSS imputed income and OLS estimation being our preferred approach.