Denver Health's Hospital Transformation Program (HTP) Application Overview to Aid Community Member Review

Since 1860 Denver Health has provided care for Denver residents, especially, as our mission states, providing, "access to quality preventative, acute and chronic health care for all citizens of Denver regardless of ability to pay." Indeed almost 50% of our net patient service revenue is from Medicaid reimbursement. We are deeply embedded in the community and fully committed to serving Denver-area health needs.

Denver Health's primary goals for HTP are to bring its extensive quality improvement capacity and institutional weight to bear in partnership with the community to meet pressing population needs. Fundamentally, the Community Health and Neighborhood Engagement (CHNE) processes revealed the need for better access and linkages to patient-centered medical, behavioral, and social care resources. For this HTP application, DH chose required and elective outcomes in direct response to needs identified via DH participation in the CHNE. For instance, behavioral health has been a salient theme in CHNE work, and multiple interventions proposed here address component issues. Specialty care access is a second community priority, thus we have chosen to increase e-consults to improve timely specialty care. CHNE participants also noted that disparities in peoples' broader social needs are drivers of poor health outcomes. Consequently, the proposed screening and referral-supports interventions are intended to narrow those disparities for hospital patients.

Health Care Policy and Financing (HCPF) has laid out a number of goals for the HTP program, including improving patient outcomes and experiences while reducing costs and preparing for value-based payments. Another goal is to foster increased community collaborations to better meet community needs. We will meet these goals in the following ways:

1) Denver Health will engage in care re-design that culminates in improved internal processes and communications, including enhanced discharge planning that incorporates linkages to community resources to better meet patient social, behavioral and medical care needs.
2) Denver Health has a broad strategy for diversity, equity and inclusion, and for HTP in particular, we will use data analytics to empower DH to identify and mitigate health inequities.
3) While data show Denver Health is already an excellent steward of Health First Colorado dollars, we will work toward further improvements. First, we will reduce readmissions. Second, we will expand access to e-consults, thereby reducing specialty care costs while concomitantly improving specialty care access. Third, we will ensure our emergency department continues and expands its use of alternatives to opioids, thus reducing rates of costly, community-wide substance use disorders and preventable overdose deaths. Lastly, we will expand our capacity to address social needs, which will ultimately reduce downstream healthcare costs.
4) Denver Health will continue to express our commitment to community partnerships through work with the Metro Denver Partnership for Health, Colorado Access, Mental Health Centers of Denver (MHCD), Colorado Coalition for the Homeless and the Mile High Health Alliance.

We appreciate your review of our application and welcome any feedback you have to offer. Below is a list of our planned HTP interventions and related HTP metrics (the link here provides metric specifications from HCPF). The subsequent pages show our **HTP application**, followed by our **Intervention Proposals,** starting with a Table of Contents on page 17 to aid review of more detailed interventions. If you would like to discuss, please indicate so via the e-mailed survey. Again, we greatly appreciate your partnership.

	State-wide Required Metrics						Local Metrics			
Intervention	SW-PH1 Length of Stay	SW-RAH1 Readmissions	SW-CP1 Social Needs	SW-BH1 Discharge Planning	SW-BH3 ALTOs	SW-COE1 Hospital Index	RAH1 Appoint Prior to Discharge	COE1 Summary of Care to PCP	PH1 Well Visits	COE3 e-Consults
Patient-Centered Length of Stay Reduction	X									
Patient-Centered Readmission Reduction		X								
Integrating Social Care into Inpatient Care Delivery			X							
Improving Discharge Planning, Especially for Patients with Behavioral Health Diagnoses		X	X	X			X	X	X	
Ensuring Emergency Department ALTOs Provision					X					
e-Consults for Timely Specialty Care Access										X
Ensuring Hospital HTP Performance through Continuous Quality Improvement	X	X	X	X	X	X	X	X	X	X

Hospital Transformation Program

Hospital Application

1. Please use the space below to provide an executive summary clearly articulating how the hospital will advance the goals of the Hospital Transformation Program (HTP):

- Improve patient outcomes through care redesign and integration of care across settings;
- Improve the patient experience in the delivery system by ensuring appropriate care in appropriate settings;
- Lower Health First Colorado (Colorado's Medicaid Program) costs through reductions in avoidable hospital utilization and increased effectiveness and efficiency in care delivery;
- Accelerate hospitals' organizational, operational, and systems readiness for value-based payment; and
- Increase collaboration between hospitals and other providers, particularly Accountable Care Collaborative (ACC) participants, in data sharing and analytics, evidence-based care coordination and care transitions, integrated physical and behavioral care delivery, chronic care management, and community-based population health and disparities reduction efforts.

The executive summary should:

- Succinctly explain the identified goals and objectives of the hospital to be achieved through participation in the HTP; and
- Provide the hospital's initial thinking regarding how the HTP efforts generally can be sustainable beyond the term of the program.

Response (Please seek to limit the response to 750 words or less)

Denver Health and Hospital Authority (DH) is a fully integrated and comprehensive safety-net healthcare system, principally comprised of a 555 bed hospital, a Level 1 Trauma center, Federally Qualified Health Centers, school-based health centers, city and county emergency response services, and public health services.

Each of these essential services share commitment to Denver Health's combined core values of excellence, compassion, relentlessness, stewardship, and learning—values that help DH align with "True North"—The Denver Health directive (that accords with its mission) to "change the world by transforming the health of our patients and community." The Hospital Transformation Program provides targeted, structured objectives that will help Denver Health maintain its focus on True North.

Denver Health's primary goals for HTP are to bring its extensive quality improvement capacity and institutional weight to bear in partnership with the community to meet pressing population needs. Fundamentally, the Community Health and Neighborhood Engagement Processes revealed the need for better access and linkages to patient-centered medical, behavioral, and social care resources. For this HTP application, DH chose its required and elective outcomes in direct response to needs identified via DH participation in the community health and neighborhood engagement process (CHNE). For instance, behavioral health has been a salient theme in CHNE work, and multiple interventions proposed here address component issues. Specialty care access is a second community priority, thus we have chosen to increase e-consults to improve timely specialty care. CHNE participants also noted that disparities in peoples' broader social needs are drivers of poor health

outcomes. Consequently, the proposed screening and referral-supports interventions are intended to narrow those disparities for hospital patients. By partnering with the community to achieve these quality improvements, we will adopt each of the five Hospital Transformation Program goals, namely:

1) Denver Health will engage in care re-design that culminates in improved internal processes and communications, including enhanced discharge planning. Necessary processes will be redesigned to assure that each inpatient visit includes systematic social needs screening and subsequent resource referrals. A DRG-by-DRG approach to reducing length of stay and hospital readmissions will enhance processes and communications while patients are in the hospital and as they prepare to leave. The discharge process will also be enhanced to better support transitions to follow-up care, whether that is with primary, specialty, SNF or behavioral health care providers.

2) DH will enhance the patient experience through ongoing, continuous quality improvements to provide exceptional, timely, effective, efficient, equitable, and patient-centered care. For example, efficiency will be enhanced by providing patients follow-up appointments before they are discharged from the hospital resulting in timelier follow-up care. Learning from literature and best practices, DH will seek to incorporate more effective strategies to reduce readmissions and unnecessary care. Equitable, patient-centered care will be afforded by engaging patients and patient advisory groups in our redesign processes. We will maintain oversight of our efforts with analytics that will empower DH to identify and mitigate ethnic, socioeconomic, and other health inequities.

3) Our hospital index (Prometheus) data indicate we are currently performing well in terms of potentially avoidable care. Still, we will continue to monitor Prometheus data for quality improvement opportunities. Work in four areas will further help reduce Health First Colorado costs. First, we will reduce readmissions. Second, we will expand access to e-consults, thereby reducing specialty care costs while concomitantly improving specialty care access. Third, we will ensure our emergency department continues and expands it use of alternatives to opioids, thus reducing rates of costly, community-wide substance use disorders and preventable overdose deaths. Lastly, we will expand our capacity to address social needs, which will ultimately reduce downstream healthcare costs.

4) Denver Health, with its own capitated Health First Colorado medical plan, is well advanced in its readiness for value-based payments. The DH HTP Executive Steering Committee adds system-wide leadership to support a learning culture to thrive in the context of value-based payment.

5) Under the umbrella of the Metro Denver Partnership for Health, and through meetings with the Region 5 RAE, Colorado Access, the HTP pre-program period has already resulted in unprecedented collaboration among metro-region hospitals and RAEs. That cooperation has facilitated joint strategies for community engagement, as well as plans to collaborate to meet selected HTP objectives. DH will continue to develop these and other partnerships and link to appropriate community resources to achieve the selected outcomes. Denver Health already maintains Enhanced Clinical Partner contracts with Colorado Access, allowing our federally qualified health centers to assume the bulk of RAE care coordination responsibilities for patients assigned to Denver Health. Our chosen HTP metrics will more directly link the hospital to the RAE, so that the RAE can monitor discharge data, appointments to the next level of service, referrals to community services, and other patient supports. By integrating the aforementioned interventions, DH will simultaneously improve patient outcomes and experiences, while implementing cost-saving care redesigns.

In terms of longer-term sustainability, the HTP program benefits from the leadership of the Chief Quality Officer. This person will help assure viable measures and interventions, once validated and refined, will be documented and consolidated into sustainable workflows. Toward the conclusion of the HTP program, the Medical Director of Clinical Data, Quality and Analytics will also migrate HTP metrics to other patient safety and quality dashboards for longer-term quality control. In addition to creating the infrastructure for maintaining internal improvements, we also anticipate HTP will result in improved connections to regional social, behavioral and medical providers. Maintance of these connections will be afforded in part to the technology that will be developed to link these services, especially in the form of health information exchanges.

2. Please provide the legal name and Medicaid ID for the hospital for which this Hospital Application is being submitted, contact information for the hospital executive, and a primary and secondary point of contact for this application.

Hospital Name: Denver Health and Hospital Authority

Hospital Medicaid ID Number: 05011002

Hospital Address: 770 Bannock St., Denver CO 80204

Hospital Executive Name: Thomas MacKenzie, MD, MSPH

Hospital Executive Title: Chief Quality Officer

Hospital Executive Address: 601 Broadway St. MC 0278, Denver, CO 80204

Hospital Executive Phone Number: 303-602-2773

Hospital Executive Email Address: Thomas.MacKenzie@dhha.org

Primary Contact Name: Stephanie Phibbs, PhD, MPH

Primary Contact Title: Associate Scientist, Research and HTP Coordinator

Primary Contact Address: 601 Broadway St. MC 1914, Denver, CO 80204

Primary Contact Phone Number: 303-602-5103

Primary Contact Email Address: Stephanie.Phibbs@dhha.org

Secondary Contact Name: Allison Sabel, MD, MPH

Secondary Contact Title: Medical Director of Clinical Data, Quality and Analytics

Secondary Contact Address: 601 Broadway St. MC 3240, Denver, CO 80204

Secondary Contact Phone Number: 303-602-2771

Secondary Contact Email Address: Allison.Sabel@dhha.org

3. a. Please use the space below to describe the planned governance structure for the hospital's HTP engagement and how it will align with the hospital's overall project management capabilities. A description of the governance structure that will be put in place to support the hospital's HTP engagement;

Response (Please seek to limit the response to 250 words or less)

Since August 2019, Denver Health's Executive HTP Steering Committee has been meeting to oversee HTP engagement. This committee, chaired by Chief Quality Officer, includes Denver Health's CEO, and the Medical Director of Clinical Data, Quality and Analytics, the Director of Public Health, the Chief of Ambulatory Care Services, the Chief Operations Officer, the Director of Emergency Medicine, as well as the Director of Reimbursement, Financial Services who sits on the CHASE board, Lean facilitators and a manager from the Center for Addiction Medicine.

This executive-led initiative spanning the breadth of DHHA services is well positioned to oversee program progress and designate and delegate HTP goals and objectives to one of many existing or newly formed workgroups. Clinical champions, departmental experts, external support partners, and community stakeholders engaged in these workgroups will provide unique ideas for implementation and sustainability to help ensure longitudinal success. The DH Executive Steering Committee for HTP can also designate where Lean System Improvement resources will be used to support intervention development. Denver Health's Lean Systems Improvement (aka, "Lean" or "Lean team") is yet another essential part the HTP governance-think-tank. The Lean team helps advance organizational strategic priorities through structured lean events—interactive workshops aimed at addressing specific problems and programmatic improvement.

Various program components are combined by a dedicated program coordinator who manages the Hospital Transformation Program. The HTP coordinator acts as a liaison between the steering committee, specialized internal workgroups and Lean resources, as well as external partners including HCPF, the RAEs and other external partners. This coordinator also assures that programmatic activities and interventions track with HTP requirements, and that corresponding reports are timely, thorough, and accurate.

b. How the planned structure has been adapted to the needs and unique experiences of the hospital and how it will ensure successful oversight of the hospital's HTP engagement;

Response (Please seek to limit the response to 250 words or less)

DH's HTP structure is built on heavy executive-level engagement to ensure clinical leadership and subject matter experts are involved in developing, executing, and maintaining HTP interventions. These leaders can also guarantee Denver Health's existing patient and family advisory committee and the community health services community board are both composed of over 50% patients and integral to long-term HTP success.

Distinctive assets for Denver Health are its Lean Management Resources; they have been instrumental in developing initial HTP plans. Lean has already facilitated a Vertical Value Stream Analysis that combines executive and clinical leadership. That Lean initiative finalized metric selection and delegated substantive responsibilities to appropriate individuals and workgroups. Follow-up Lean events have included a readmission rapid planning event, and more specific improvement events are scheduled in the areas of discharge planning and readmission reduction. These events typically include a completion plan and call for progress reports at 30, 60 and 90 day intervals.

The HTP coordinator will attend various workgroups and keep the steering committee apprised of programmatic achievements, as well as barriers that the steering committee can help alleviate.

c. Specifically, how the structure will ensure management and transparency and engage members of impacted populations and community partners;

Response (Please seek to limit the response to 250 words or less)

Engagement of stakeholders and impacted community members will be facilitated by various mechanisms. Stakeholders will be invited to relevant workgroup meetings and Lean events. When appropriate, Denver Health will include the voice of the customer in planning events through qualitative engagement of the impacted population before and during planning events, or by engaging the Patient Family and Advisory Committee to provide recommendations and insights. The community and neighborhood engagement baked into the HTP program gives voice to patients and stakeholders who can comment on program plans and progress.

d. The overall project management structure of the hospital, including how it is organized into operational, clinical, financial, and other functions, and how it will be leveraged to support the hospital's efforts under the HTP and the governance of those efforts;

Response (Please seek to limit the response to 250 words or less)

The HTP Steering Committee coalesces operational, clinical, and financial leadership to provide ongoing executive review, guidance, and support for the HTP program. The attached organizational chart identifies the degree of oversight provided by this committee. As the program further develops, the HTP Steering Committee Charter will be updated as additional committees are identified to support HTP outcomes.

e. How the hospital's project management structure is aligned with the hospital leadership structure; and

Response (Please seek to limit the response to 250 words or less)

Denver Health's Hospital Transformation Program Steering Committee is chaired by and includes most of the executives who orchestrate this initiative. Again, please see the attached organizational chart identifying executive oversight.

f. The current state of centralized reporting capabilities for the hospital.

Response (Please seek to limit the response to 250 words or less)

DH data and information are available for end-user extraction through numerous tools (e.g., reports, dashboards, and user-defined reporting) catering to users' skill sets. For example, operational reporting tools will enable front-line clinicians and operational managers to access metadata. The electronic health record SlicerDicer, a self-service research and analytics reporting tool, allows physicians ready access to clinical data customizable by patient attribute selection for data exploration. Executive Operational Dashboards are available both within our Electronic Medical Record (Epic) and web-based (within Tableau) for operational oversight and reporting. Members of DH's data analytics, data science and informatics, and health services research staff have access to all of these tools as well as analytic software (e.g., SAS) to manipulate the underlying metadata and data structures for tailored queries. The Medical

Director of Clinical Data Quality and Analytics is on Denver Health HTP Executive Committee to assist the organization in utilizing available data sources to maximize DH HTP performance.

4. Please use the space below to describe the hospital's plan for continuing Community and Health Neighborhood Engagement throughout the hospital's HTP participation. A detailed plan is not required. Instead, hospitals can outline a high-level approach to CHNE going forward, including, for example, the stakeholders to be engaged and the types and frequency of activities to be used. Hospitals should consult the Continued Community and Health Neighborhood Engagement document, which can be found on the HTP webpage, to ensure their planned activities fulfill program requirements.

Response (Please seek to limit the response to 500 words or less)

To address some of the most intractable determinants of hospital over-utilization, and to promote optimal community health, a community-wide, collaborative population-health response is required. Developing and nurturing community-wide partnerships are, therefore, essential elements of our HTP application. Collaborations with other regional hospitals, Regional Accountable Entities, local public health, mental health, community health centers, primary care providers, regional emergency medical and trauma services advisory councils (RETACs), long-term service and support (LTSS) providers, consumer advocates and advocacy organizations, and community-based organizations all sit at the intersection of biomedical systems and the whole of population health.

Fortunately, the Denver Metro Region has a number of venues where many of these partners are already convening. For instance, the Metro Denver Partnership for Health (MDPH), skillfully facilitated by the Colorado Health Institute, has already supported hospitals in a number of ways in the HTP pre-program period. MDPH is a collective effort led by the six local public health agencies serving the seven-county Denver Metro area, including Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas and Jefferson counties. Hospital partners in the Public Health-Health Systems Collaboration within MDPH include Centura Health, Children's Hospital Colorado, Denver Health, Health One, National Jewish Hospital, SCL Health, and UC Health. Already CHI has helped the Metro Denver Area collaborate to fulfill HTP requirements and simultaneously nurtured community-wide efforts. Such collaborations are integral to a social health information exchange and to discussions about how to bridge public and clinical health care.

Similarly, Denver Health appreciates Colorado Access's Regional Accountable Entity role in Region 5. Colorado Access has been convening local hospital representatives, CORHIO, and HCPF on a regular basis, supporting important dialogues about the HTP program. Working together in the future to include an even broader dialogue with a range of physical and behavioral health providers as well as individual members will be very helpful.

The Mile High Health Alliance brings together Denver's leaders in health, human and social organizations – public, private and nonprofit alike, to make all our systems work to "…make Denver the healthiest place to live, work, and play." Denver Health was a founding member of MHHA and appreciates their work to address a range of urgent needs including specialty and behavioral health access, and for consistently advancing members' voices.

The Hospital Transformation Program includes three levels of community health and neighborhood engagement: reporting on stakeholder engagement; semi-annual community advisory committee meetings; and an annual public engagement meeting. Taking into account existing forums, our plans for engagement for these three levels include:

1. To meet with key stakeholders regularly, including intervention delivery partners such as the RAEs, Colorado Coalition for the Homeless, MHCD, other collaborating health care systems, and the Department of Human Services. Because Denver Health is an integrated delivery system, with inpatient, outpatient, behavioral health, emergency response, and public health sectors, program success will also rely on cross-organizational stakeholder engagement. Quarterly reporting on this type of engagement will come from committee and other meeting notes, or summaries of email or phone communications.

2. Out of respect for the community, and in the interest of maximizing population health, hospitals in the Denver Metro region have been collaborating under the Metro Denver Partnership for Health (MDPH) for over a year. Additionally, Colorado Access took initiative to invite these same hospitals to group discussions regarding how to best collaborate with the RAE. The time invested in these collaborations has been fruitful, with hospitals agreeing to partner in fulfilling the semi-annual community advisory meeting requirements. Colorado Access allows hospitals to invite Provider Improvement Advisory Committees (PIAC) and Member Improvement Advisory Committees (MIAC) to an annual meeting in order to gain input on hospital plans that are relevant to the Accountable Care Collaborative program. A joint PIAC and MIAC meeting would include both outpatient providers and Health First members. The Mile High Health Alliance also brings together important constituents relevant to HTP, e.g., human services, federally qualified health centers, and social services. The second meeting required for the year will therefore be accomplished in partnership with MHHA and/or Denver Health's own Patient Family Advisory Committee. Evidence of this engagement will be provided through meeting notes.

3. Both HTP and the Hospital Community Benefit Accountability, House Bill 19-1320 include a requirement for an annual public meeting. Because many of the interventions for HTP are related to priorities identified in the Community Health Needs Assessment for the Community Benefits legislative requirements, Denver Health's Department of Government Relations will conduct annual public meetings to meet these requirements jointly. Alternatively, or additionally, hospitals could also collaborate to conduct an annual meeting within the MDPH collaboration. Evidence of this meeting will be provided in the form of meeting minutes, as well as advertisements for that meeting.

5. As part of continuing Community Health Neighborhood Engagement (CHNE), hospitals must share a draft of their application with stakeholders to allow them the opportunity to provide feedback for hospitals' consideration. This Public Input process must last at least 10 business days, with an additional 5 business days alloted to hospital review and response to any Public Input received. Hospitals must submit applications by **[DATE]**, but hospitals may resubmit revised applications with revisions based solely on feedback from the Public Input process by **[DATE]**. The Department of Health Care Policy & Financing will also make submitted applications public once applications are complete and approved by the review board. Please refer to the Ongoing CHNE Requirements document on the Hospital Transformation Program website for a list of key stakeholder categories. At a minimum, the stakeholders should include those who engaged in or were invited to engage in the CHNE process.

Has the Public Input process been completed and does this draft incorporates any potential revisions based on that public feedback:

☒ Yes

☒ No

Please enter the dates of your proposed or completed Public Input timeline. If you have not yet completed your Public Input process by the initial submission deadline of April 30, 2020, please fill in proposed dates. You will need to fill in the actual dates when you resubmit your application at the conclusion of the Public Input process by May 21, 2020. Please use **mm/dd/yyyy** format.

Proposed Public Input Period : <u>2/10/2021</u> to <u>2/28/2021</u>
Proposed Hospital Review of Public Input Period: <u>3/1/2021</u> to <u>3/31/2021</u>

Actual Public Input Period : ___ to ___
Actual Hospital Review of Public Input Period: ___ to ___

If you answered no to the above question and your submission is subject to change based on an ongoing Public Input process, please note that you must turn in your revised application by May 21, 2020. After incorporating your Public Input process changes, applicants are required to submit both a clean and a red-lined version of the Hospital Application to aid HTP review staff in identifying the Public Input based changes compared to your initial submission.

Please use the spaces below to provide information about the hospital's process for gathering and considering feedback on the hospital's application.

Please list which stakeholders received a draft of your application and indicate which submitted feedback.

Response (Please seek to limit the response to 250 words or less)

In partnership with other regional hospitals, Denver Health worked with Colorado Health Institute to jointly disseminate individual hospital HTP draft applications to stakeholders included in the 2019 contracted community health and neighborhood engagement (CHNE) process.

Adams County Health Alliance   Meghan Prentiss

AllHealth Network   Cynthia Grant

Aurora Health Alliance   Mandy Ashley

Boulder County Health Improvement Collaborative Morgan McMillan

Broomfield FISH   Dayna Scott

Center for African American Health Deidre Johnson

Center for Health Progress   Christopher Klene

City and County of Denver   Tristan Sanders

Colorado Access, Daniel Obarski, Molly Markert

Colorado Children's Campaign   Erin Miller

Colorado Coalition for the Homeless Brian Hill

Colorado Community Health Alliance, Hanna Thomas, Jessica Rink

Colorado Criminal Justice Reform Coalition Terri Hurst

Colorado Cross-Disability Coalition   Julie Reiskin, Dawn Howard

Community Health Centers   Multiple representatives from the metro region

CORHIO   Morgan Honea, Kate Horle

Denver Public Health Jessica Forsyth, Kellie Teter

Denver Regional Council of Governments   Ron Papsdorf, Jayla Sanchez-Warren

Douglas County Health Alliance   Wendy Nading

Every Child PediatricsJessica Dunbar

Hunger Free ColoradoSandy Nagler, Brett Reeder

InnovAge   Beverley Dahan

Jefferson Center for Mental Health Don Bechtold

Jefferson County Public Health   Kelly Kast, Melissa Palay

Mile High & Foothills RETAC Bill Clark

Mile High Health Alliance   Dede de Percin, Karen Trautman, Alyssa Harrington

Signal Behavioral Health   Heather Dolan

Tri-County Health Department   Emma Goforth, Heather Baumgartner

Please explain how the draft application was shared and how feedback was solicited.

Response (Please seek to limit the response to 250 words or less)

Front Range hospitals have collaborated to engage community stakeholders in providing feedback regarding hospital applications. Colorado Health Institute, on behalf Metro Denver Partners for Health, distributed an email on February 10, 2021 to each community stakeholder. This email included an invitation to provide feedback on Front Range hospital HTP applications, including links to each of these applications. The email also included a survey link to identify the degree to which different community partners would like to be involved in specific HTP areas, as well any general or hospital-specific feedback the stakeholder wants to provide. To allow opportunities for further dialogue, the survey also asks if respondents to indicate if they would like to receive follow-up from specific systems to discuss additional input. Community participants were given four weeks to provide feedback; we incorporated that feedback during the month of March, 2021 and finalized our application by April 1, 2021.

With a bulleted list, please list the shared stakeholder feedback and explain if any changes were made to the application based on the feedback. If no changes were made, please explain why. If the same or similar feedback was shared by more than one stakeholder, please list it only once.

Response (Please seek to limit the response to 500 words or less)

- TBD

Please consult the accompanying Intervention Proposal before completing the remainder of this application.

6. Please use the space below to identify which statewide and local quality measure(s) from the [HTP Measure List on the Colorado Hospital Transformation Program website](#) the hospital will address for each Focus Area.

Hospitals have the option to replace a local measure with a statewide priority. Each statewide priority will be worth 20 points and, if selected, the points for each remaining local measure will be equal to the remaining total required local measure points divided by the number of local measures, greatly reducing the risk associated with those measures.

As applicable, please identify the Statewide Priority your hospital is pursuing as a part of the HTP Hospital Application:

☐ SP-PH1 – Conversion of Freestanding EDs

☐ SO-PH2 – Creation of Dual Track ED

Please note that hospitals are required to complete the accompanying Intervention Proposal for the statewide priorities identified above.

The selections should align with the hospital's improvement priorities and community needs. As a reminder, hospitals must adhere to the following requirements when selecting quality measures:

- Large hospitals (91+ beds) will be accountable for six statewide measures, totaling 60 points and a minimum of four local measures, which will account for 40 points. Points per local measure will equal 40 divided by the number of local measures selected.
- Medium hospitals (26-90 beds) will be accountable for six statewide measures and a minimum of two local measures. If two local measures are selected, statewide measures will total 75 points, and local measures will account for 25 points. Points per local measure will equal 25 divided by the number of local measures selected. If three local measures are selected, then statewide measures will total 67 points and local measures will account for 33 points. Points per local measure will equal 33 divided by the number of local measures selected. If four or more local measures are selected, then statewide measures will then total 60 points and local measures will account for 40 points. Points per local measure will equal 40 divided by the number of local measures selected for four or more local measures.
- Small hospitals (<26 beds) excluding critical access hospitals will be accountable for six measures (statewide or local) to account for 100 points. Points per each measure will equal 100 divided by the number of measures selected.
- Critical access hospitals will be accountable for six measures (statewide or local) and will have their risk for measures reduced by 40%.

- Pediatric hospitals will be accountable for five statewide measures, totaling 50 points and a minimum of five local measures, which will account for 50 points. Points per local measure will equal 50 divided by the number of local measures selected.
- Respiratory specialty hospital(s) will be accountable for four statewide measures and a minimum of four local measures. If four measures are selected then statewide measures will total 56 points and local measures will account for 44 points. Points per local measure will equal 44 divided by the number of local measures selected. If five or more measures are selected, then statewide measures will total 50 points and local measures will total 50 points. Points per local measure will equal 50 divided by the number of local measures selected.

Please use the unique identification code from the Performance Measures List (which is available on the HTP website) to identify your selected measures. For example, the measure "30 Day All Cause Risk Adjusted Hospital Readmission" should be listed as SW-RAH1.

Response (Please format the response as a numbered list)

Selected State-Wide Metrics Include:

1. SW-RAH1 Adult 30-day all cause risk adjusted hospital readmission rate

2. SW- CP1 Social needs screening and notification and referral to appropriate entity and RAE

3. SW-BH1 Collaboratively develop and implement a discharge and notification process with the appropriate RAEs for patients with a mental illness or SUD as primary or secondary dx

4. SW-BH3 Using alternatives to Opioids (ALTO's) in hospital ED's

5. SW-COE1 Hospital Index (Prometheus)

6. SW-PH1 Severity Adjusted Length of Stay

Local Metrics Selected Include:

1. RAH1   Follow up appointment with a clinician made prior to discharge and notification to the Regional Accountable Entities (RAE) within 1 business day

2. COE1: Increase the successful transmission of a summary of care record to a patient's primary care physician or other healthcare professional within one business day of discharge from an inpatient facility to home

3. PH1: Increase the Percentage of Patients who had a Well-Visit within a Rolling 12-month Period.

4. COE3: Implementation/Expansion of e-Consults

7. Please use the space below to identify all of the hospital's proposed interventions. Following each listed proposed intervention, please identify which of the measures from the response to Question 6 will be addressed by that intervention. Please list the unique identification code listed in response to Question 6 to identify the applicable measures and please format your response in accordance with the following example:

1. Intervention Name
    a. Measures: SW-RAH1, RAH2

Response (Please format the response as a numbered list)

1. Patient-Centered Length of Stay Reduction Intervention

  a. Measures: SW-PH1 Severity Adjusted Length of Stay

2. E-Consults for Timely Specialty Care Access

  a. Measures: COE3 Implementation/Expansion of e-Consults

3. Integrating Social Care into Inpatient Care Delivery

  a. Measures: SW-CP1 Inpatient Social Needs Screening, Referral and Notification

4. Patient-Centered Readmission Reduction Intervention

  a. Measures: SW-RAH1 Adult 30-day all cause risk adjusted hospital readmission rate

5. Improving Discharge Planning, Especially for Patients with Behavioral Health Diagnoses

  a. Measures: SW-BH1, SW-RAH1, SW-CP1, RAH1, COE1, PH1

(SW-BH1 Collaboratively develop and implement a mutually agreed upon discharge and notification process with the appropriate RAEs for eligible patients with a mental illness or SUD as primary or secondary dxs; SW-RAH1 Adult 30-day all cause risk adjusted hospital readmission rate; SW-CP1 Social needs screening and notification and referral to appropriate entity/community resource and RAE; RAH1 Follow up appointment with a clinician made prior to discharge and notification to the Regional Accountable Entities (RAE) within one business day; COE1 Increase the successful transmission of a summary of care record to a patient's primary care physician or other healthcare professional within one business day of discharge from an inpatient facility to home; PH1 Increase the percentage of patients who had a well-visit within a rolling 12-month period)

6. Ensuring Emergency Department ALTOs Provision

 a. Measures: SW-BH3 Using Alternatives to Opioids (ALTOs) in Hospital Emergency Departments: 1) Decrease Use of Opioids, 2) Increase use of ALTOs a. SW-RAH1 Adult 30-day all cause risk adjusted hospital readmission rate

7. Ensuring Hospital HTP Performance through Continuous Quality Improvement

a. Measures: SW-RAH1, SW-PH1, SW-COE1, SW-BH1, SW-BH3, SW-CP1, COE3, RAH1, COE1, PH1

(SW-RAH1 Adult 30-day all cause risk-adjusted hospital readmission rate; SW-PH1 Severity Adjusted Length of Stay; SW-COE1 Hospital index (Prometheus); SW-BH1 Behavioral health discharge planning; SW-BH3 Using alternatives to opiods (ALTOs) in hospital ED; SW-CP1 Social needs screening and notification and referral to appropriate entity/community resource and RAE; COE-3 Implementation/Expansion of e-consults; RAH1 Follow up appointment with a clinician made prior to

discharge and notification to the Regional Accountable Entities (RAE) within one business day; COE1 Increase the successful transmission of a summary of care record to a patient's primary care physician or other healthcare professional within one business day of discharge from an inpatient facility to home; and PH1 Increase the percentage of patients who had a well-visit within a rolling 12-month period.)
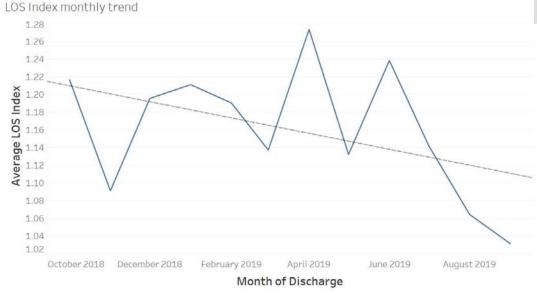
Denver Health Hospital Transformation Program Intervention Proposals

Patient-Centered Length of Stay Reduction Intervention

1. **Name of Intervention:** *Patient-Centered Length of Stay Reduction Intervention*

2. **Measure Selection:**
   - SW-PH1 Severity Adjusted Length of Stay

3. **Intervention Description & Rationale: (Including intervention description and how it advances goals of HTP in 1,000 words or less)**

   Length of stay is an indicator impacted by diverse factors, including things such as remote discharge barriers, hospital aquired conditions and inefficient internal processes. Denver Health started a length of stay improvement operational excellence initiative in 2018. Initially they divided patients into two groups, complex and non-complex patients; quality improvement efforts were unable to change the Length of Stay. Revising their approach with enhanced communications and appointment of new leadership that focused on select DRGs has led to significant improvements.

LOS Index monthly trend

   Dedicated hospital leadership with data-driven foci on improvement opportunities identified issues such as the need for primary care provider availability. Once identified, Ambulatory Care Services partnered to establish a hospital transition clinic. This clinic allows timely access to a primary care provider for patients who don't have or may not want to establish care in the community health centers. Denver Health has also partnered closely with Vivage and Colorado Coalition for the Homeless to help assure safe discharge plans for more complex patients. Additional interventions have been implemented to reduce length of stay around vaginal deliveries and c-sections, behavioral health conditions and uncomplicated sepsis, with more details provided below in question 7.

   Despite these improvements to date, additional opportunities for improvement are proposed here for HTP, under the Patient-Centered Length of Stay Intervention composed of two primary strategies. First, we will review previous intervention areas, analyzing data by line of business to identify additional improvement opportunities for the Medicaid Fee for Service population in particular. Second, we will use a data-driven approach to examine opportunities for improving length of stay in the following departments: Medicine,

Ortho, General Surgery, Neurosurgery and Bariatrics. Together, these strategies, along with performance data from the state will help drive ongoing improvements.

This intervention will advance the goals of the Hospital Transformation Program in a number of ways. First, this intervention will improve both patient outcomes and experience by ensuring analytics and evidence-based care are optimized to identify opportunities for improvement. Community partnerships are also critical for providing safe discharge plans, and we will continue to partner, for instance, with Colorado Coalition as they develop more housing options and with Vivage Long Term Care facilities. In addition to our capitated line of business that steeps us deeply in the value-based payment experience, this DRG-by-DRG focus also aligns with value-based payment initiatives, such as bundled payments.

4. **How the intervention and any selected local quality measures to be addressed by the intervention were selected based on identified community needs, including how they align with identified significant behavioral and physical health needs and / or service capacity resources and gaps, including related to care transitions and social determinants of health**

   Length of Stay is a state-wide, required metric with our intervention based on local evidence of efficacy. However in the CHNE, quantitative data did reveal Denver Health previously had over a five-day length of stay. Additionally, qualitative community member feedback revealed concern for patients with chronic disease or behavioral health issues, populations that also have more discharge barriers and more complex issues related to longer lengths of stay. The DRG-by-DRG intervention approach proposed here has, and will further address, populations of community concern. Additional interventions, including discharge planning and social needs screening and referral interventions, proposed elsewhere in this application will complement this DRG-by-DRG approach.

   How the population of focus aligns with identified community needs?
   Consistent with populations identified in the CHNE, participants highlighted patients with chronic disease and those with complex economic, physical and behavioral issues that make safe, timely discharges difficult. As stated previously working to reduce LOS, creating interventions based on whether patients were complex did not work, but complex patients will be addressed within this DRG-by-DRG approach.

   How the proposed intervention will leverage available medical and / or social resources and partners.
   Denver Health has a long history of cooperating with local service providers. As a large fully-integrated health care system, we have a variety of meetings and collaborations internally and externally. The coordinator for the DRG-focused intervention is part of our transitions of care workgroup led by an outpatient Director of Service for Internal Medicine, helping assure we leverage outpatient resources as needed. Along with the work of the Metro Denver Partnership for Health, our collaboration with Colorado Access, Colorado Coalition for the Homeless, and Vivage, we have many opportunities to coordinate organizational and regional resources to decrease patient length of stay.

5: Evidence Base Documentation

   5a. (choose highest level of available evidence)—

☐ **1. Randomized Control Trial (RCT) level evidence**
☐ **X 2. Best practice supported by less than RCT evidence**
☐ **3. Emerging practice**
☐ **4. No evidence**

5b: If you selected 1,2, or 3 from above, please summarize the evidence base (academic , professional or otherwise), including data, citations. If no evidence, please explain why this intervention is being proposed (Describe in 1500 words or less):

5. Consistent with the Insitute for Healthcare Improvement's document, *Achieving hospital-wide patient flow (Rutherford et al., 2020),* Denver Health has effectively decreased patient length of stay through improved patient flow. As stated above, Denver Health started a length of stay improvement operational excellence initiative in 2018. Continuous quality improvement efforts revealed important lessons that help evolve best practices. Denver Health learned devising interventions for "complex" and "non-complex" patients was not a strategy for changing the Length of Stay. Instead, enhanced communications and appointment of new leadership, with a focus on interventions by DRG has realized significant improvements as shown in the previous graph. The *Patient-Centered Length of Stay Reduction Intervention* proposed here will involve ongoing quality improvement work to continue reducing lengths of stay among the applicable populations.

   We also recognize LOS can be decreased with improved discharge planning processes. Because collaborative discharge plans are another required metric for HTP, and we anticipate the majority of our patients qualifying for this intervention, continuous quality improvement in discharge planning processes may also contribute to reduced LOS (Schefft, Lee, Munoz, 2020).

6: Intersection with Statewide Initiatives:
6a: Does this intervention intersect with ongoing statewide initiatives, e.g., Behavioral Health Task Force, Affordability Road Map, IT Road Map, HQIP, ACC, SIM Continuation, Rx Tool, Rural Support Fund, SUD Waiver, Health Care Workforce, Jail Diversion, Crisis Intervention, Primary Care Payment Reform (Yes or No) : No
6b: If it does intersect, identify applicable statewide initiatives and how the hospital will ensure alignment with existing work (750 words or less) : N/A

7. **Historical experience by hospital or partner organization with intervention or target population to support intervention success (500 words or less):**

   As described previously, our DRG by DRG quality improvement approach has yielded significant improvements. Examples of DRG-focused quality improvement PDSAs include the following:

   1.   Creating a hospital transition clinic and enhancing access to primary care for patients discharged without an established primary care provider.

   2.   LOS reductions for patients with vaginal deliveries and c-sections.

   3.   Creating standard work to reduce LOS for the inpatient population who have diagnoses including: schizophrenia, bipolar and major depressive disorder.

   4.   Creating standard work for reducing length of stay patients with uncomplicated sepsis.

8. Existing Intervention

  8a. Is this an existing intervention (y/n) Y

  8b. If yes, please explain how we will leverage existing programs, i.e., existing programs is the best approach for meeting needs of the community identified in the CHNE, and that the project will be enhanced to meet HTP goals. (limit response to 1,000 words or less)

As stated earlier, addressing average length of stay is a successful, ongoing executive-level initiative at Denver Health. Sophisticated analyses have already been conducted to support a number of interventions that are in place. We will review those analyses for any obvious disparities by line of business and racial/ethnic groups to identify and address opportunities for improvement, focusing especially on DRGs with longer than expected LOS.

9. Partnership & Documentation

Documentation: existing RAE BAA, and letter of support from RAE- N/A

Partner Organization Name	Type of Organization	Does the hospital have previous experience partnering with this organization? (Y/N)	Organization's role in intervention leadership and implementation (high level summary)
Colorado Coalition for the Homeless	Community Health Center	Yes	Coordination of care for shared patients

Citations

Rutherford, P., Anderson, A., Kotagal, U., Luther, K., Provost, L., Ryckman, F., & Taylor, J. (2020). *Achieving Hospital-wide Patient Flow (Second Edition)*. Retrieved from Boston, Massachusetts: http://www.ihi.org/resources/Pages/IHIWhitePapers/Achieving-Hospital-wide-Patient-Flow.aspx

Schefft, M., Lee, C., & Munoz, J. (2020). Discharge Criteria Decrease Variability and Improve Efficiency. *Hospital Pediatrics*. doi:10.1542/hpeds.2019-0244

1. **Name of Intervention**: *e-Consults for Timely Specialty Access Expansion*

2. **Measure Selection:**
   - COE3 Implementation/Expansion of e-Consults

3. **Intervention Description & Rationale: (Including intervention description and how it advances goals of HTP in 1,000 words or less)**

   Denver Health has long provided access to specialty care for patients who are insured through Colorado's Medicaid Program, Health First Colorado. DH has an ongoing executive-level initiative to expand and improve specialty care access, including new capacity added by the opening of the Denver Health Outpatient Medical Center building.   As part of this initiative, DH has allocated significant resources to improving provider templates, streamlining the referral and scheduling processes, improving patient flow, and maximizing the patient experience while in those clinics.

   Additionally, electronic consultations (e-consults) are a tested, evidence-based mechanism of increasing timely specialty care access. An e-consult allows a primary care provider to request a specialists' input on a treatment plan without requiring a patient to have a face-to-face visit with a specialist. Traditionally, a primary care provider submits a referral through an established referral pathway and then the specialist provides advice or an opinion that the primary care provider receives and acts on. This intervention focuses especially on the use of e-consults to improve access to specialty care.

   The proposed intervention will advance the goals of the Hospital Transformation Program (HTP) through timely access to specialty care, improving the patient experience, decreasing unnecessary health care expenditures, and ensuring better health outcomes.

4. **How the intervention and any selected local quality measures to be addressed by the intervention were selected based on identified community needs, including how they align with identified significant behavioral and physical health needs and / or service capacity resources and gaps, including related to care transitions and social determinants of health**

   How the population of focus aligns with identified community needs

   The need for increased specialty care access in Colorado is widely recognized. In a 2019 report, the Colorado Health Institute wrote, "Medicaid patients forgo an estimated 486,000 specialty care visits annually." (Colorado Health Institute, June 2019) The need for increased specialty care access was also expressed by participants in Denver Health's HTP CHNE, esp. by the Mile High Health Alliance (MHHA). The MHHA, in which DH participates, established the Mile High Specialty Care Network in recognition of the need to improve specialty care access.

   How the proposed intervention will leverage available medical and / or social resources and partners.
   Interventions implemented by DH, including e-consults to address specialty care demand, is an efficient way of leveraging existing specialists to serve more patients. The new Denver Health Outpatient Medical Center

building, telehealth expansion and other strategies described above should further expand specialty care access.

Evidence Base Documentation

5a. (choose highest level of available evidence)—

- ☐ **1. Randomized Control Trial (RCT) level evidence**
- ☐ **X 2. Best practice supported by less than RCT evidence**
- ☐ **3. Emerging practice**
- ☐ **4. No evidence**

5b: If you selected 1,2, or 3 from above, please summarize the evidence base (academic , professional or otherwise), including data, citations. If no evidence, please explain why this intervention is being proposed (Describe in 1500 words or less):

Across the United States, despite state specialty access standards, (Ndumele, Cohen, & Cleary, 2017) patients who have Medicaid Coverage or who are uninsured persistently lack access to timely specialty care. Though there is a great demand for specialty care, specialists are often unwilling to accept new publicly insured patients from the 2013 Medicaid Expansion. (Timbie, Kranz, Mahmud, & Damberg, 2019) In one study in Los Angeles, patients referred to gastroenterology or urology had to wait over nine months for an appointment, with some primary care providers so frustrated they referred patients to the emergency department to expedite specialty care for their patients. (Barnett, Yee, Mehrotra, & Giboney, 2017) Right here in Colorado, CHI estimates Medicaid patients forego 486,000 specialty visits annually. (Colorado Health Institute, June 2019)

E-consults were successfully used to improve timely access to specialty care across 3,000 primary care providers in Los Angeles. (Barnett et al., 2017) In 2015, these 3,000 providers generated 12,000 e-consults each month. Specialty providers generally resolved e-consults within a day, and a quarter of the e-consults were resolved without a specialist visit. (Barnett et al., 2017)   Similarly, the Colorado Health Institute estimates about 26 percent of Colorado's unmet demand for specialty care could be addressed using an e-consult, though this varies by specialty.(Colorado Health Institute, June 2019) Furthermore the use of e-consults is also thought to help increase primary care provider expertise, so they may be able to decrease the number of referrals that need to be sent.

In a study by Knox et al. (2020), Research has shown several factors contribute to the success of e-consults. (Knox, Murphy, Leslie, Wick, & Tuot, January 10, 2020) Existing primary care provider and specialist relationships were the strongest facilitator of e-consults.   Electronic Health Record technology integration was also important.   Other factors considered included leadership and project management support as well as compatibility with internal and external incentives, such as time and payment.

The existing relationships between Denver Health primary care and specialty providers and the shared EHR technology supports e-consults. As other safety net providers like the Colorado Coalition for the Homeless connect through Epic to Denver Health, they can also make these referrals. Denver Health has expanded e-consult access, and has seen a reduction in wait times in those specialties over time. Additional e-consult

expansions proposed here will further improve access to care. DH executives have also reached out to other institutions to learn from progress they made with similar goals. One healthcare system that was particularly helpful was the University of Texas Medical Branch. Denver Health has since adapted many of UT's policies and technological advancements to inform its own improvement. Additionally, DH has aligned internal metrics with Vizient benchmarking data to provide a better picture of how its specialty access compares to other national organizations. This specialty access dashboard will be a critical CQI tool we can use to monitor our intervention.

6: Intersection with Statewide Initiatives:
6a: Does this intervention intersect with ongoing statewide initiatives, e.g., Behavioral Health Task Force, Affordability Road Map, IT Road Map, HQIP, ACC, SIM Continuation, Rx Tool, Rural Support Fund, SUD Waiver, Health Care Workforce, Jail Diversion, Crisis Intervention, Primary Care Payment Reform (Yes or No) : Yes
6b: If it does intersect, identify applicable statewide initiatives and how the hospital will ensure alignment with existing work (750 words or less) : N/A

Denver Health will outreach to the Colorado Hospital Associaton to identify any areas of intersection between this e-consult intervention and CHA's work to expand and retain specialty care workforce.

7. Historical experience by hospital or partner organization with intervention or target population to support intervention success (500 words or less):

Since April 2018, specialty care access has been improving at Denver Health overall, including for Medicaid Fee-for-Service Patients. For instance between April 2018 and October 2020, overall median lag time for new patient with Health First Colorado fee-for-service insurance decreased from 39 days to 28 days, with especially large decreases in appointment lag times for clinics including: Audiology, Endocrinology, Neurology, and Orthopedics (Hand, Hip, Knee, and Sports Non-Operative). One primary strategy for improving access has been e-consults. Just between 2019 and 2020 e-consults have increased from 477 to 1949, and we plan to further extend this strategy in the post-COVID era.

Denver Health has also been a partner granting access to specialty care for external providers, including the Colorado Coalition for the Homeless. Based on literature and conversations with organizations that have been successful at improving patient access to specialty care, Denver Health is confident in crafting a robust approach. Crucially, DH created alignment and buy-in from its physician leadership and executive staff, thus assuring that this is an institutional priority. DH mirrored internal data and key performance indicators to Vizient benchmark data, which allow for comparisons with similar health systems nationwide. Hence Denver Health can more quickly focus resources on areas that are not meeting benchmarks. DH has crafted policy around provider template development in order to maximize capacity and flexibility for patient scheduling. Not only has this allowed DH to optimize existing Epic technology, it has created simplified processes for the appointment center and reduced scheduling errors. All of these experiences put Denver Health at the threshold of improving specialty care access through ongoing quality improvement, including e-consult expansion.

8. Existing Intervention
8a. Is this an existing intervention (y/n) Y

8b. If yes, please explain how we will leverage existing programs, i.e., existing programs is the best approach for meeting needs of the community identified in the CHNE, and that the project will be enhanced to meet HTP goals. (limit response to 1,000 words or less)

Demonstrate why use of an existing intervention is the best approach

The existing intervention has been successful and when extended, and complemented with other evidence-based ways of increasing care specialty care access will be anhanced.

How will the project be enhanced to meet HTP Goals?

As part of the transition into the new Outpatient Medical Center, Denver Health is conducting a full QI review of specialty clinic operations. The focus of this review will be to ensure providers and staff are working at the top of their scope of practice and that patients receive the care they need in an efficient and effective manner.

9. **Partnering Organizations and Letter of Partnership: N/A**

Citations

Barnett, M. L., Yee, H. F., Mehrotra, A., & Giboney, P. (2017). Los Angeles Safety-Net Program eConsult System Was Rapidly Adopted And Decreased Wait Times To See Specialists. *Health Affairs, 36*(3), 492-499. doi:10.1377/hlthaff.2016.1283

Colorado Health Institute. (June 2019). *Colorado's Unmet Demand for Specialty Care And the System We Need to Meet It*. Retrieved from https://www.coloradohealthinstitute.org/sites/default/files/file_attachments/Telligen%20Specialty%20Care%20Access%20Report.pdf

Knox, M., Murphy, E. J., Leslie, T., Wick, R., & Tuot, D. S. (January 10, 2020). e-Consult Implementation Success: Lessons From 5 County-Based Delivery Systems. *Am J Manag Care, 26*(1), e21-e27. Retrieved from https://doi.org/10.37765/ajmc.2020.42149

Ndumele, C. D., Cohen, M. S., & Cleary, P. D. (2017). Association of State Access Standards With Accessibility to Specialists for Medicaid Managed Care Enrollees. *JAMA Internal Medicine, 177*(10), 1445-1451. doi:10.1001/jamainternmed.2017.3766

Timbie, J. W., Kranz, A. M., Mahmud, A., & Damberg, C. L. (2019). Specialty care access for Medicaid enrollees in expansion states. *Am J Manag Care, 25*(3), e83-e87.

Integrating Social Care into Care Delivery

1. **Name of Intervention**: *Integrating Social Care into Care Delivery*

2. **Measure Selection:**

   - SW-CP1 Social Needs Screening and Notification

3. **Intervention Description & Rationale: (Including intervention description and how it advances goals of HTP in 1,000 words or less)**

   As defined by the World Health Organization, the Social Determinants of Health (SDoH) are "the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries." (World Health Organization) As outlined in the Denver Health Community Engagement Strategy, many conditions requiring hospitalization are linked with more "up-stream" social determinants of health, e.g., neighborhood safety, social norms, racism, housing, food and transportation costs and availability.

   The HTP outcome, *social needs screening and notification*, is distinct from social determinants of health. While SDoH interventions focus on systemic social and economic conditions, e.g., graduation rates, "interventions to address *social needs* are done at the individual level to mitigate unique acute social and economic challenges."(American Hospital Association, 2019)[,pg.4] As a provider for over 160 years in Denver, Denver Health (DH) has long understood the importance of addressing social needs among the population it serves. Hence DH proposes *Integrating Social Care into Care Delivery*, an intervention informed by the Centers for Medicare and Medicaid Services (CMS) Accountable Health Communities (AHC) Model (Billioux, Verlander, Anthony, & Alley, 2017) and the National Academies of Sciences, Engineering, and Medicine 2019 consensus report entitled, "Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health." [1]

   For the proposed intervention, Denver Health will leverage its significant experience in social needs screening and referral to implement patient social needs screening, patient referral to appropriate service entities, and RAE reporting:

   I. DH will consolidate its experiences (described under number 7 below) to develop standardized inpatient social needs screening and referral protocols to address the five core social needs domains that are required under HTP and consistent with AHC: housing instability, food insecurity, transportation problems, utility help, and interpersonal safety.
   II. Denver Health will build referral tools so the RAE will be notified of referrals, and so our tools will link to a social health information exchange network once one is developed in the Denver region.
   III. DH will continue to participate in community conversations within Metro Denver Parthnership for Health (MDPH), and the Office of e-Health Initiatives, to align and optimize technology, and to identify and address relevant resource needs.

   The Integrating Social Care into Care Delivery intervention will advance the goals of the HTP in several ways. First, this intervention will improve patient outcomes and reduce costs, for example providing patient

medically tailored meals has shown to be related to reduced readmissions. This intervention will also involve considerable community-wide collaboration as we work to identify and address patient socal health needs.

4. **How the intervention and any selected <u>local quality measures</u> to be addressed by the intervention were selected based on identified community needs, including how they align with identified significant behavioral and physical health needs and / or service capacity resources and gaps, including related to care transitions and social determinants of health**

Denver Health commissioned the Colorado Health Institute (CHI) to create a DH community engagement strategy for 2019-2024. Their summary report included input from over 170 stakeholders engaged through interviews, focus groups, and surveys to identify community priorities. Two overarching priorities were identified in their report including: 1. Behavioral health needs, and 2. Social and economic barriers to health. Consistent with lowering economic opportunity, participants indicated a need to lower social and economic barriers to health, explicitly calling out housing, food insecurity and transportation. These focus areas were confirmed and extended in Denver Health's HTP Community and Health Neighborhood Engagement (CHNE) work. For example, the CHNE indicates a need to increase WIC and SNAP enrollment and to address housing insecurity.

How the population of focus aligns with identified community needs?
Denver Health is conducting social needs screening in one pediatric clinic and in our emergency departments as part of the Accountable Health Communities (AHC) partnership with the Denver Regional Council of Governments.   The AHC screener includes five domains of social needs, i.e., housing instability, food insecurity, utility needs, interpersonal violence, and transportation needs. Of the 16,000 patients screened at well child care visits in one pediatric clinic, 34% identified at least one health-related social need, with the highest portion screening for food insecurity (21%), followed by living situation (9%), transportation (9%), utilities (7%), and interpersonal violence (<0.01%). Screening patients in the Denver Health Emergency Room has revealed even greater social needs. As is appropriate for a screening tool, the social needs screening and referral processes will be applied to the entire population, consistent with HTP metric requirements.

How the proposed intervention will leverage available medical and / or social resources and partners.
In 2019 Denver Health was awarded funds from the Colorado Department of Health and the Environment (CDPHE) to participate in the Community Resource Inventory Services for Patient e-Referral (CRISPeR) program. CRISPeR allowed DH to implement closed-loop referrals with outside community partners, beginning with organizations that offer diabetes prevention programs. Linking this or other referral technology to a social health information exchange, a concept supported by the Governor's Office of eHealth Innovation, would be ideal. If each hospital system linked their referral technology to a social health information exchange, CBOs would be able to log into one system and receive and respond to referrals from organizations in various systems. Our referral technology would also need to accommodate different community organizations' capacity to work with hospitals and address patient needs. For instance, some agencies may want to provide services directly while patients are in the hospital or being discharged, others may want to receive faxes or electronic referrals that they respond to, and others may just want their information listed as a resource. Recognizing the need to coordinate region-wide hospital referrals to community organizations, Denver Health is a member of the Metro Denver Partnership for Health social health information exchange workgroup. By working in coalition we intend to find ways to partner with

human services and community organizations to best address patient needs with available resources, while also helping use our joint voice to advocate for additional resources as community needs become apparent.

5: Evidence Base Documentation

5a. (choose highest level of available evidence)—

- ☐ **1. Randomized Control Trial (RCT) level evidence**
- ☐ **X 2. Best practice supported by less than RCT evidence**
- ☐ **3. Emerging practice**
- ☐ **4. No evidence**

5b: If you selected 1,2, or 3 from above, please summarize the evidence base (academic , professional or otherwise), including data, citations. If no evidence, please explain why this intervention is being proposed (Describe in 1500 words or less):

The highest level of available evidence is "Best practice supported by less than RCT evidence."

In 2019 the National Academies of Sciences, Engineering, and Medicine published a consensus report in entitled, "Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health." This report recommends five complimentary activities to "…facilitate the integration of social care into health care: awareness, adjustment, assistance, alignment, and advocacy."

- *Awareness* corresponds with screening
- *Adjustment* refers to accomodating known needs by improving care delivery processes
- *Assistance* corresponds to individual referral and service provisions to address identified needs
- *Alignment* and *Advocacy* both "…relate to roles that the health care sector can play in influencing and investing in social care resources at the community level." (National Academies of Sciences, 2019)

The National Academies consensus report also recommends using digital infrastructure that is interoperable between health care and social care organizations (National Academies of Sciences, 2019), a recommendation consistent with Colorado's oft-cited social health information exchange white paper (2018 draft available at http://www.coprevent.org/2018/12/social-health-information-exchange.html).

While the National Academies report provides a useful overarching framework, the details of how assistance is provided to patients matters. For instance, in an unpublished study of three Denver healthcare institutions that referred patients to food insecurity resources, <12% of eligible families enrolled in SNAP benefits. Initial qualitative data showed people who were referred were both confused and dissatisfied with multiple handoffs in the referral process. This has led to more recent pilot intitiatives to create real-time linkages to human services so patients can submit a SNAP application at the time a need is identified. This experience is consistent with other areas, namely substance use interventions, where timely, warm hand-offs are crucial.(D'Onofrio & Degutis, 2010)

In addition, both public and private healthcare agencies have devised expedient ways to provide food assistance by offering medically tailored meals to patients upon discharge.(Green & Kelly; Japsen, 2019) Similarly, the Denver Health Medical Plan (DHMP) is partnering with Project Angel Heart to provide medically tailored meals for dual-eligible Medicare-Medicaid beneficiaries. Project Angel Heart has been

approached by several Regional Accountable Entities to provide medically tailored meals to Medicaid fee-for-service beneficiaries, and Denver Health patients may be eligible for these services.

Denver is also facing a crisis in affordable housing. The 2019 Point in Time survey reported 5755 people experiencing episodic homelessness and 1158 people experiencing chronic homelessness in metro Denver.(Metro Denver Homeless Initiative, 2019) Starting in 2016, Denver City and County innovated to mitigate this crisis by creating a social impact bond project that pooled municipal resources with eight private investors.(Cunningham et al., 2019) That initiative funded long-term supportive housing for 250 of the most vulnerable chronically homeless Denver residents. The project explicitly intended to …disrupt the 'jail-to-street cycle,' offer permanent housing, and [provide] access to supportive services." That initiative has been successful, with most clients staying housed and funders getting a return on their investment by decreasing overall taxpayer costs.

Interpersonal safety is a third priority need for DH patients. In 2018 the United States Preventive Services Task Force (USPSTF) review considered whether to include social risk screening and counseling as a clinical preventive service, and of all the domains reviewed, USPSTF concluded there is the most evidence to recommend screening for interpersonal safety. (Krist, Davidson, Ngo-Metzger, & Mills, 2019) Fortunately, Denver Health is connected with local agencies expert in alleviating interpersonal violence, including the RoseAndum Center. Denver Health's own Outpatient Behavioral Health Services is also a resource for addressing interpersonal safety needs.

The literature suggests partnerships and collaborations to further improve connections with community resources can be accomplished. Importantly, we aim to do this work consistent with national guidance, creating a community that is woven together to support patients' greatest social needs with trusted relationships and interoperable technology.

6: Intersection with Statewide Initiatives:
6a: Does this intervention intersect with ongoing statewide initiatives, e.g., Behavioral Health Task Force, Affordability Road Map, IT Road Map, HQIP, ACC, SIM Continuation, Rx Tool, Rural Support Fund, SUD Waiver, Health Care Workforce, Jail Diversion, Crisis Intervention, Primary Care Payment Reform (Yes or No) : Yes
6b: If it does intersect, identify applicable statewide initiatives and how the hospital will ensure alignment with existing work (750 words or less) :

This intervention aligns with the Accountable Health Communities Model, the governor's Office of eHealth Initiatives and the Colorado Department of Public Health and the Environment's CRISPeR grant. Denver Health has collected nearly half of the screenings for the AHC program. Denver Health has also been a consistent partner in regional discussions regarding social health information exchange. Our Chief Medical Information Officer, Ann Boyer, and Art Davidson a Denver Health Consultant and leader in the state-wide CRISPeR initiative, participate with the Office of eHealth Intiatives. Denver Health is steeped in this conversation and anticipates aligning efforts both internally and externally to optimize community connections and patient health.

7. **Historical experience by hospital or partner organization with intervention or target population to support intervention success (500 words or less):**

Denver Health is highly engaged in quickly developing national, regional, and local conversations related to social needs and social determinants of health and has extensive experience coordinating patient referrals

throughout the organization. This intervention will cull experiences from the following to formulate this HTP intervention:

- DH sits on committees within the governor's Office of e-Health Initiative, focused on building out inter-operable social health information exchange technology.

- Denver Health also participates in the Metro Denver Partnership for Health convening of health systems to discuss regional considerations for social needs screening and referral.

- DH has over a 10-year history of working in partnership with other health care systems, linking patients to community services, and creating closed-loop referrals. Ten years ago Denver Health went from having no means of tracking referrals, to expedited workflows and community collaboration with Early Intervention Services. Early tobacco intervention service protocols became a model for referral tracking in Epic; DH now uploads automated tobacco cessation referrals directly to the Colorado QuitLine. These processes are built into Epic to ensure closed-loop referrals

- Denver Public Health and Ambulatory Care Services are partnering with CDPHE on a CDC grant to integrate social health information exchange technology into Epic through CRISPeR, allowing for closed loop community referrals, consistent with the inter-operable recommendations from the National Academies.

- Denver Health also partners with the Denver Regional Council of Governments (DRCOG), with their Accountable Health Communities Model (AHCM) cooperative agreement with the Centers for Medicare and Medicaid Services. As the bridge organization, DRCOG coordinates a consortium of medical providers and community referral resources to identify and address the health-related social needs of Medicare and Medicare beneficiaries to improve quality of care and reduce health care costs. Denver Health outpatient services has completed over half of all the social needs screenings conducted by the consortium. The AHC screening tool, which is consistent with the five domains required by the HTP, is now deployed in both the DH adult and pediatric ED settings

- In the inpatient setting, nurses currently screen patients for social needs including some of the required HTP domains. This standard work will need to be further systematized and linked with new technology to meet HTP requirements.

- Additionally, Denver Health Ambulatory Care Services has partnered with the DH Epic team to build out its "social determinants of health wheel" to provide a visual display of patient social needs screening results.

8. Existing Intervention
8a. Is this an existing intervention (y/n) N

8b. If yes, please explain how we will leverage existing programs, i.e., existing programs is the best approach for meeting needs of the community identified in the CHNE, and that the project will be enhanced to meet HTP goals. (limit response to 1,000 words or less)

9. **Partnership & Documentation** – N/A

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Patient-Centered Readmission Reduction Intervention

1. **Name of Intervention:** *Readmission Reduction Intervention*

2. **Measure Selection:**
    *   **SW-RAH1** Adult 30-day all cause risk adjusted hospital readmission rate

3. **Intervention Description & Rationale: (Including intervention description and how it advances goals of HTP in 1,000 words or less)**

    Hospital readmission rates at Denver Health are impacted by a host of factors, including patient medical and social conditions. Borrowing from the success Denver Health recently experienced in reducing length of stay, it will engage hospital leadership in a DRG-by-DRG continous quality improvement approach for reducing readmissions. This means, we will analyze data department by department to find and address opportunities for readmission reduction. An initial Lean Systems Improvement event held in September 2020 created two multidisciplinary teams that will initially focus on reducing readmissions among patients with heart failure or diabetes. The two teams will engage the voice of the patient-customer to create program plans for reducing readmissions and explore systemic improvements to internal processes, community partnerships, discharge planning, and telehealth modalites. Lessons from these initiatives will be extended as applicable to other departments.

    The *Readmission Reduction Intervention* will advance the goals of the HTP in several ways. First, this intervention will improve both health outcomes and patient experience by ensuring analytics and evidence-based care are optimized to identify opportunities for improvement. Continuing and expanding community partnerships, e.g., Colorado Coalition for the Homeless, and Mental Health Centers of Denver will also be critical for providing safe discharge plans.   This DRG-by-DRG focus also aligns with value-based payment initiatives, such as bundled payments.

4. **How the intervention and any selected <u>local quality measures</u> to be addressed by the intervention were selected based on identified community needs, including how they align with identified significant behavioral and physical health needs and / or service capacity resources and gaps, including related to care transitions and social determinants of health**

    Readmission reduction is an HTP required statewide metric, and quantitative and qualitative data from Denver Health's community health and neighborhood engagement (CHNE) processes help inform improvement efforts. CMS 2019 readmission methodology analyses using Colorado Hospital Association data demonstrate the top reasons for all-payer readmissions (in descending order): psychoses, septicemia, nutrition and miscelaneous metabolic disorders, untreated alcohol and other drug misuse, heart failure/shock, diabetes. Internal data also show that readmissions are 50% higher among patients who have not established primary care; similarly, compared to patients who are stably housed, patients experiencing homelessness are twice as likely to be readmitted to Denver Health.

    Qualitative data from the CHNE process correspond with these quantitative data.   During CHNE discussions, populations with chronic diseases and comorbid mental health and substance use concerns were consistently highlighted. The DRG-by-DRG approach proposed here will address conditions of community concern, essentially creating pilots for interventions that can be spread more broadly once the interventions are developed in a single context. For instance, if patients with heart disease can have virtual hospital

appointments at home, those technologies and related protocols can then be adapted to other contexts. Additional interventions—such as discharge planning, social needs screening, and referrals for support services—proposed elsewhere in this application will complement this DRG-by-DRG approach.

How the population of focus aligns with identified community needs?
Consistent with populations identified in the CHNE, participants highlighted the needs of patients with chronic disease and complex economic, physical, and behavioral issues. The DRG-by-DRG approach proposed here will, in turn, address patients with different conditions and levels of complexity.

How the proposed intervention will leverage available medical and / or social resources and partners.
Denver Health has a long history of cooperating with local service providers. As a large fully-integrated health care system, DH engages in a variety of internal and external meetings and collaborations that support transitions of care, for example our work with the Colorado Coalition for the Homeless. Partnering with community partners to address social needs as discussed previously will also help reduce readmissions. We will also utilize existing internal quality improvement workgroups, including one dedicated to "transitions of care." This workgroup, led by the outpatient Director of Service for Internal Medicine, will help Denver Health ensure outpatient resources are leveraged as needed. Additional outside resources will be leveraged based on the needs articulated during quality improvement work, including recommendations obtained through community and/or patient engagement.

5: Evidence Base Documentation

5a. (choose highest level of available evidence)—

- ☐ **1. Randomized Control Trial (RCT) level evidence**
- ☐ **X 2. Best practice supported by less than RCT evidence**
- ☐ **3. Emerging practice**
- ☐ **4. No evidence**

5b: If you selected 1, 2, or 3 from above, please summarize the evidence base (academic, professional or otherwise), including data, citations. If no evidence, please explain why this intervention is being proposed (Describe in 1500 words or less):

Evidence-based interventions for reducing readmissions have included a number of approaches, including an overarching interdisciplinary workflow, more targeted diagnoses, and social-need-specific foci. Epic has a guidance document entitled, "reducing readmisions using a comprehensive cross-discipline workflow."(Epic) Health care systems that have incorporated this guidance have shown significant readmission reductions, including a 30% reduction in 30-day readmissions for heart failure in one, and a 35% reduction in seven-day readmissions in another.(Epic) Workflow redesigns yield protocols that assure admission assessments are easily visible to clinical care teams and support collaborative disharge planning.(Epic)   Analytics that identify patients at highest risk of readmission are used to organize the allocation of resources, such as medication reconcilliation by pharmacists and case management support.(Epic) Predictive analytics of readmission data are also used in provider rounding to guide discussions with patients regarding specific readmission risks, and to devise actions patients can take to mitigate these risks. Virtual post-discharge home visits are also incorporated into the care of patients at highest risk of readmission.

Under the overarching organization of multidisciplinary workflows, targeted medical and social interventions are needed to reduce readmissions. More than one intervention for patients with heart failure, for example, has proven effective at reducing readmissions. Rupper et al. conducted a review of medication adherence interventions that reported several effective components associated with a 10% reduction in readmissions. (Ruppar, Cooper, Mehr, Delgado, & Dunbar-Jacob, 2016) Interventions included: patient education and monitoring, multi-disciplinary care team management, algorithm based treatment plans, and post discharge support by phone or video visits. Consistent with the CHNE concerns regarding social needs, providing medically tailored meals post discharge for patients with heart failure has also shown promise in reducing readmission rates.(Hummel et al., 2018) Notably, internal analyses of Denver Health Medical Plan patients with heart failure who are provided medically tailored meals through an arrangement with Project Angel Heart post-discharge trend toward being less likely to be readmitted within 30 days. These interventions to reduce heart failure readmissions will be reviewed and assessed for applicability to Denver Health's circumstances.

Patients with diabetes are another segment of the population that is at increased risk for readmission. One study of over one million inpatient admissions shows a 17% increased risk of readmission among patients with diabetes. (Enomoto, Shrestha, Rosenthal, Hollenbeak, & Gabbay, 2017) Interventions to reduce this readmission risk have been successful. For instance, 30-day readmissions can be reduced by ~30% when a specialized diabetes team is involved with inpatient diabetes care, and the engagement of this team within the first 24 hours is associated with shorter lengths of stay as well. (Bansal et al., 2018) Other research has shown inpatient diabetes management service decreased initial 30-day readmissions, and ongoing co-management decreased readmissions from 25% to 14%.(Mandel et al., 2019) Drincic et. al. describe different models for creating a glucose management program in an institution, including different staffing options. For instance an endocrinologist can provide specialized diabetes support as a traditional consultant, or act as a leader of a multi-disciplinary team, a system-wide quality improvement initiative, and/or a virtual glucose management service. (Drincic, Akkireddy, & Knezevich, 2018) Advanced care providers and pharmacists can also play a role in improving glucose management, as can computerized provider order entry protocols. Drincic's review provides a menu of options that can be tailored for any institution working to reduce readmissions among patients with diabetes. (Drincic et al., 2018)

As Denver Health engages in the DRG-by-DRG approach, lessons learned in one area can be applied to other areas. For instance, interventions to improve medication adherence, discharge planning and/or follow up care for patients with diabetes and heart failure can be applied to other circumstances.(Henke, Karaca, Jackson, Marder, & Wong, 2017) (Ha Dinh, Bonner, Clark, Ramsbotham, & Hines, 2016) (Lainscak et al., 2013)

6: Intersection with Statewide Initiatives:

   6a: Does this intervention intersect with ongoing statewide initiatives, e.g., Behavioral Health Task Force, Affordability Road Map, IT Road Map, HQIP, ACC, SIM Continuation, Rx Tool, Rural Support Fund, SUD Waiver, Health Care Workforce, Jail Diversion, Crisis Intervention, Primary Care Payment Reform (Yes or No) : No
   6b: If it does intersect, identify applicable statewide initiatives and how the hospital will ensure alignment with existing work (750 words or less) : N/A

7. **Historical experience by hospital or partner organization with intervention or target population to support intervention success (500 words or less):**

In 2014, DH partnered with Epic Software Systems (an EHR vendor) and others to embark upon a multiyear, $175 million dollar IT investment as part of DH's Long Range Strategic Plan. DH has built technology to tightly integrate patient safety and quality systems that support learning health system activities. We can leverage this technology to build out predictive models to further systematize interventions to reduce readmission rates.

Both the heart failure and diabetes intervention workgroups that will initiate our QI work in readmissions fall within Denver Health's quality improvement infrastructure. These workgroups are also supported by our Lean Quality Improvement Department to help structure our improvements.

The DH Endocrinology team has implemented a number of quality improvement measures for hospitalized patients with diabetes including the development of EHR provider protocols and order sets, standardization of diabetes education materials, Certified Diabetes Educator support, and most recently use of continuous glucose monitors to manage patients with diabetes who are in covid-19 isolation. Hospital-based staff including Hospitalists and inpatient nurses at DH have championed improvement efforts including establishment of a protocol for non-ICU treatment of diabetic ketoacidosis. The DH Ambulatory Care Services Diabetes QI Committee, which has been in existence for over 20 years, is a multidisciplinary team that has implemented processes to increase standard of care diabetes practices, decrease provider inertia, and encourage joint decision making behaviors. An interdisciplinary group with representation from each of these existing teams will be formed for the proposed intervention.

The Healthy Hearts (HH) program acts as the quality improvement core for the Cardiology division at Denver Health. The team consists of one RN covering the inpatient services, Cardiac Rehab and core outpatient clinic staff, as well as the most clinically active Cardiologists and Advanced Practice Providers. Healthy Hearts' mission is to facilitate successful transitions in care and improve self-efficacy among hospitalized Cardiology patients. Essential activities of the HH team include identifying new Heart Failure (HF) patients utilizing an EHR-based tool, performing disease-specific education with patients and arranging post discharge follow-up. The inpatient RN will meet patients in the hospital, identify deficiencies related to resources or health literacy, and actively attempt to mitigate these deficiencies. For example, a new HF patient might receive two days of education related to HF-specific medications and dietary coaching, meet their outpatient Cardiac Rehab therapist, receive assistance enrolling with the Colorado Quitline, and leave the hospital with a Cardiology appointment and knowing how to use their new scale and blood pressure monitor. The HH team recently secured funding from the Denver Health Foundation to provide more than 400 automated blood pressure monitors and digital scales to hospitalized Cardiology patients. For patients with transportation issues, the HH team recently established a partnership with Dispatch Health to provide post-acute "BridgeCare" visits in the patient's home. The HH team is ideally positioned to ensure the success of the proposed intervention.

Denver Health's quality improvement efforts have identified diabetes and heart failure as initial DRGs as foci for improvement. As these initial areas make strides in readmission reduction, other teams will be formed and coordinated in a similar way to address additional DRGs. These new teams will be able to adapt or adopt interventions created by other workgroups, while also formulating new interventions specific to their DRG.

8. Existing Intervention

    8a. Is this an existing intervention (y/n) N

    8b. If yes, please explain how we will leverage existing programs, i.e., existing programs is the best approach for meeting needs of the community identified in the CHNE, and that the project will be enhanced to meet HTP goals. (limit response to 1,000 words or less)

9. Partnership & Documentation

Documentation: N/A

Partner Organization Name	Type of Organization	Does the hospital have previous experience partnering with this organization? (Y/N)	Organization's role in intervention leadership and implementation (high level summary)

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Analysis of Controlled Trials. *Journal of the American Heart Association, 5*(6). doi:10.1161/JAHA.115.002606

Improving Discharge Planning, Especially for Patients with Behavioral Health Diagnoses

1. **Name of Intervention:** Improving Discharge Planning Intervention

2. **Measure Selection:**
   - SW-BH1 Collaboratively develop and implement a mutually agreed upon discharge and notification process with the appropriate RAEs for eligible patients with a mental illness or SUD as primary or secondary dxs
   - SW-RAH1 Adult 30-day all cause risk adjusted hospital readmission rate
   - SW-CP1 Social needs screening and notification and referral to appropriate entity/community resource and RAE
   - RAH1 Follow up appointment with a clinician made prior to discharge and notification to the Regional Accountable Entities (RAE) within one business day
   - COE1 Increase the successful transmission of a summary of care record to a patient's primary care physician or other healthcare professional within one business day of discharge from an inpatient facility to home
   - PH1 Increase the percentage of patients who had a well-visit within a rolling 12-month period.

3. **Intervention Description & Rationale: (Including intervention description and how it advances goals of HTP in 1,000 words or less)**

   Ensuring successful inpatient and ED discharges is critical for the health and safety of patients. The *Collaborative Discharge Planning Intervention* proposed here will fulfill the required state-wide HTP metric: behavioral health collaborative discharge planning process and notification to the Regional Accountable Entity (RAE) and related measures listed above. This intervention entails identifying eligible Denver Health (DH) patients 18 years or older who are discharged from the hospital or emergency department (ED) with a principal or secondary diagnosis of mental illness or a substance use disorder. Denver Health estimates this will encompass about 70% of our discharges. Denver Health's implementation plan will include using Lean process improvement facilitation to develop milestones and improved processes, seeking patient consent where needed, and engaging the RAE and relevant community partners to create collaborative discharge planning processes that intentionally match available resources to individual patients and appropriate segments and/or population risk profiles.   Better discharge processes and transitions of care can reduce hospital readmission rates (SW-RAH1). The discharge planning process will include creating follow-up care appointments to appropriate resources prior to discharge (RAH1). For patients who newly establish primary care through this discharge follow-up, they will be embedded into Denver Health ambulatory care and benefit from efforts there to improve well visit rates (PH1).   DH will explore how to leverage its health information exchange partner, CORHIO, to send the hospital's admit, discharge, and transfer information to the RAEs (COE1).   Referrals or activities resultant from social needs screening will also be displayed in the discharge summary (SW-CP1). Consistent with continuous quality improvement principles, ongoing intervention modifications may be necessary to impact other HTP outcomes such as readmission rates, or to accommodate evolving needs of DH staff, community, and patients alike.

   This intervention will advance the goals of the HTP by improving patient outcomes, and by ensuring that integration of care occurs across appropriate settings. Within the HTP framework, we are organically accelerating Denver Health's readiness for value-based payments with the intention to reduce costs. Furthermore, we are highlighting the collaboration among our community partners via data sharing and

analytics, evidence-based care coordination and care transitions, integrated physical and behavioral health care delivery, and chronic care management.

4. **How the intervention and any selected <u>local quality measures</u> to be addressed by the intervention were selected based on identified community needs, including how they align with identified significant behavioral and physical health needs and / or service capacity resources and gaps, including related to care transitions and social determinants of health**

How the population of focus aligns with identified community needs?
Denver Health commissioned the Colorado Health Institute CHI) to create a community engagement strategy for 2019-2024. (Colorado Health Institute, December 2018) In their report, CHI summarized the input of over 170 stakeholders engaged through interviews, focus groups, and surveys to identify community priorities. Two priorities were identified in their report including: 1. Behavioral health, and 2. Social and economic barriers to health. That report specifically identified a need for DH to provide better access to and navigation of behavioral health services, to provide early childhood and youth mental health services, and substance use services. This focus area was confirmed and extended in the HTP community and health neighborhood engagement (CHNE) activity conducted in the Spring of 2019.

While chronic disease and pregnancy account for some of the highest rates of admissions, interventions to support patients with substance use disorders (SUDs) are also indicated. In the HTP CHNE report, alcohol use disorder (AUD) was identified as the number-one reason for inpatient admission among Colorado Medicaid patients with four or more hospital visits in the previous year. AUD was the second-highest reason for admission to an ED among this same population. Community input suggested that this issue may be commonly overlooked, and participants reported limited ability to monitor or measure AUD prevalence.

Trauma – treated or untreated – was also frequently cited as an outstanding health issue for many of the HTP priority populations, especially individuals experiencing homelessness and those with comorbid behavioral health and substance use concerns. But behavioral health issues cut across populations, including youths, people with disabilities, and the elderly. Similarly, patients may have had adverse childhoood events or histories of depression, personality disorders, etc. In community meetings, underlying, potentially undiagnosed behavioral health issues were identified as drivers of high utilization of care. Therefore, this intervention will address a primary need identified through the CHNE process.

Access to care was also noted as a barrier in the CHNE process, especially to specialty care. Among people who had Medicaid Fee for Service insurance and were discharged from Denver Health in 2020, 79.3% of Mom and Baby discharges had follow up appointments made prior to discharge and 91% were established in primary care. Among patients who were discharged outside Mom and Baby, 34.1% had follow up appointments made at DH prior to discharge, and 46% were established in care at Denver Health. By creating a follow-up appointment for patients we create a bridge to outpatient services that may also help prevent readmisions.   Also, once this population is embedded in primary care, they are incorporated into outpatient quality improvement efforts that focus on boosting well visit care, an initiative consistent with the RAE KPIs.

<u>Citation:</u>

1. Colorado Health Institute, *Denver Health and Hospital Authority Developing a 2019-2024 Community Engagement Strategy.* December 2018.

5: Evidence Base Documentation

5a. (choose highest level of available evidence)—Best Practice

- ☐ **1. Randomized Control Trial (RCT) level evidence**
- ☐ **x2. Best practice supported by less than RCT evidence**
- ☐ **3. Emerging practice**
- ☐ **4. No evidence**

5b: If you selected 1,2, or 3 from above, please summarize the evidence base (academic , professional or otherwise), including data, citations. If no evidence, please explain why this intervention is being proposed (Describe in 1500 words or less):

In their report on behavioral healthcare approaches, the Advisory Board (2011a) articulates concerns with unmet behavioral health needs: people with behavioral illness have unnecessary ED visits, longer lengths of stay, and are more likely to be disengaged from treatment recommendations. The Advisory Board concludes that it is not enough to identify behavioral health concerns; they must be treated and supported as well. The report references a study that found improved medication engagement among Medicaid patients with schizophrenia could save $106 million in inpatient acute care costs (2011a). A recent study estimates that the cost of care for people with mental health diagnoses can be 60-75% greater than those for the population at large (Advisory Board, 2013). When those patients present in the ED, the Advisory Board recommends taking a proactive approach that seizes opportunities to establish high-quality transitions of care. ED clinicians can thereby foster strong partnerships with community providers to offer a ready continuum of community care when the patient is discharged.

In order to transition patients to community-based services, it is essential to first understand why they utilize the ED (Advisory Board, 2019b). For many, a shortage of behavioral health professionals leaves them without any options for treatment outside of acute care. Some patients are reticent to seek help due to lingering stigma or because they are uncertain of insurance coverage and costs of care.   Increasing access to appropriate, timely outpatient behavioral health treatment is critical to reducing unnecessary behavioral health-related acute care visits.

For patients who do find themselves in the ED, there are several strategies providers can use to decrease length of stay. These may include ED-based telehealth for psychiatric patients, crisis stabilization units to divert patients from the ED, and lowering the risk of ED visits through access to a behavioral health discharge clinic for transition to a more appropriate setting (Advisory Board, 2019a). For example, Atrium Health used telehealth and decreased the length of stay for behavioral health patients by 2.5 hours during a time when overall ED volume had increased by 37%. Diverting Intermountain Health patients to crisis stabilization units saved about two thirds of what an ED visit would cost and decreased behavioral health ED visits by 50% in one year. Finally, for patients discharged from the ED, Massachusetts General Hospital started a bridge clinic to offer same-day medication assisted treatment (MAT) for substance dependence; only about 10% of those patients were readmitted within 30 days.

Several programs for reducing behavioral health readmissions and hospital stays have been identified in the literature. The Program of Assertive Community Treatment (PACT) was developed in Wisconsin in the 1960s

and 1970s (Advisory Board, 2011b). It employed a team of psychiatrists, nurses, pharmacists, social workers, and occupational therapists to provide community-based treatment for people with severe mental illness. PACT patients had better health outcomes, lower healthcare costs, improved personal relationships, fewer legal problems, and reduced substance misuse. Those participants also showed a decrease in their average number of hospital days per year. That program could be modified to meet modern patient and institutional needs. For instance, Oklahoma PACT team clinicians are immediately notified when a participant is admitted to the ED or has law enforcement contact.

Massachusetts General developed a three-step model for reducing readmissions among people with SUDs (Wirth and Ogundimu, 2019). They first utilized a multi-disciplinary addiction consult team to address substance misuse during inpatient admission—which they estimate cut odds of readmission by 25%. Next, Mass General opened an ED-based walk-in center for SUD care; only 10% of their patient-clients are readmitted within 30 days. Finally, they developed strong relationships with their community mental health centers and peer recovery coaches, and incorporated the model into primary care clinics, which additionally reduced inpatient days by 9% and ED visits by 15%. Wirth and Ogundimu report that Massachusetts General highlighted the three pillars of their approach: engaged program champions who educated other hospital staff on substance use disorders and evidence-based treatment; same-day access to MAT; and education for all hospital employees to reduce bias.

Another study of San Francisco General Hospital implemented a discharge protocol for alcohol-dependent patients. That protocol included assessment and MAT when appropriate. (Wei, Defries, and Lozada et al., 2015) They discovered that the use of such protocols increased MAT from 0% to 64% and reduced readmissions from 23.4% to 8.2%. Additionally, all-cause visits to the ED within 30 days of discharge decreased from 18.8% to 6.1%.

Viggiano, Pincus, and Crystal (2012) conducted a literature review of care transitions interventions for patients discharging from psychiatric inpatient stays and proposed nine critical components for effective care transition programs.   Those components included prospective modeling, i.e. identifying those at greatest risk; authentically engaging the patient and family in the treatment plan; quality transition planning for the next level of care; identifying care pathways; ensuring resultant information is accessible to all clinical teams, including those who will be treating the patient after discharge; utilization of transition coaches or navigators; engaging providers with clear responsibilities and formal communication procedures; utilizing quality metrics and feedback on post-discharge outcomes to drive improvement; and sharing accountability for both benefits and risks (Viggiano et al. 2012).

Standardized practice guidelines were studied by Medves et al. (2010), for a literature review of the distribution and implementation of such practice guidelines in team-based healthcare settings. Of the 88 studies included in their review, 72.7% showed that the dissemination and adaptation of such standardized guidelines had statistically significant improvements in provider knowledge, practice outcomes, and cost savings. One well known example of standardized practice guidelines that influence behavioral health outcomes is the Zero Suicide protocol, originally adopted by Michigan's Henry Ford Health System (Coffey and Coffey, 2016). Zero Suicide is a program meant to change the culture of healthcare systems as well as adopt standardized practices to prevent patient suicide. The Henry Ford Health System saw suicides among their population drop by 80% and sustained this success for a decade, even though in the general population of Michigan, suicides increased during that time period.

Denver Health will incorporate lessons learned from the literature by adopting elements of effective programs, potentially in the form of collaborative practice guidelines. For instance, while Viggiano, Pincus, and Crystal (2012) discuss elements of successful discharges from psychiatric inpatient hospitals, many of the components they employ could be applicable to Denver Health's treatment of patients with behavioral health needs. Additionally, the success of San Francisco General Hospital's standardized discharge protocol encourages the use of similar guidelines for helping patients with behavioral health needs. The works of Medves et al. (2010) and Coffey and Coffey (2016) show that standardized practice guidelines are an effective way to impact the care of patients with behavioral health needs.

6: Intersection with Statewide Initiatives:

6a: Does this intervention intersect with ongoing statewide initiatives, e.g., Behavioral Health Task Force, Affordability Road Map, IT Road Map, HQIP, ACC, SIM Continuation, Rx Tool, Rural Support Fund, SUD Waiver, Health Care Workforce, Jail Diversion, Crisis Intervention, Primary Care Payment Reform (Yes or No) : Yes

6b: If it does intersect, identify applicable statewide initiatives and how the hospital will ensure alignment with existing work (750 words or less) ACC
Coordination related to the ACC will be accomplished through regular and ongoing meetings between Colorado Access and area hospitals. Further, Denver Health is an Enhanced Clinical Partner of the Colorado Access RAE. Therefore cross-departmental quality improvement efforts within Denver Health also provide regular touchpoints regarding ACC program developments.

7. Historical experience by hospital or partner organization with intervention or target population to support intervention success (500 words or less):

Denver Health has extensive experience with the target population, and discharge interventions. DH's experiences are bulleted here:

- The Center for Addiction Medicine (CAM) is an executive-sponsored initiative responsible for coordinating a broad range of addiction services, research and evaluation, education, and promotional efforts across the DH system and its community. CAM's vision is to be a compassionate model for the prevention and treatment of substance misuse, to transform lives, and to educate all. Directed by leadership from Denver Health's Outpatient Behavioral Health Services (OBHS) and Public Health Division, CAM is not a physical space, but an effort to ensure there is no wrong-door to optimized treatment services. One of the CAM co-directors sits on the regional PIAC for Colorado Access. The other is the director of OBHS. Both CAM co-directors are are well positioned to help develop additional standard work to support discharge plans in conjunction with inpatient care management teams.
- In 2014, DH partnered with Epic Software Systems (an EHR vendor) and others to embark upon a multiyear, $175 million dollar IT investment for Denver Health's Long Range Strategic Plan. DH has built technology to tightly integrate patient safety and quality infrastructures that support Learning Health System activities. DH will further leverage this IT infrastructure t improve care for patients with SUD and psychiatric conditions. Denver Health has access to most of the requisite data to manage this population, especially once clinical data are better organized and augmented with key social and behavioral risk metrics.
- Denver Health is just now moving to provide electronic data (ADT) feeds to the RAE via CORHIO which will support RAE notifications as required for this outcome.

- Colorado Access (COA), DH's primary RAE, does have prior experience with this target population, and based on that experience, it will support the success of the proposed initiative. Colorado Access receives CORHIO ADT feeds as well as periodic contacts from hospitals. This information enables COA to risk stratify to target interventions for those members who have complex medical issues. The COA management team provides members transitioning from hospital settings to lower levels of care with appropriate intervening transitions, including, but not limited to:

  a. Collaboration with hospital staff to uphold timely and member-focused discharge planning

  b. Development of member-driven care plans that incorporate current member status and needs, interdisciplinary team input, and historical-clinical information

  c. Submission of member referrals to support ease of access to services that remain consistent with identified member needs

  d. Care coordination activities designed to ensure sustained member access to care and reduce risk for future hospitalization

  e. Exchange of member information, clinical records, care plan goals, and care coordination activities to promote interdisciplinary service delivery

  f. Follow-up with member, provider, and hospital clinicians to ensure follow through with treatment activities and member success

- Colorado Access also manages behavioral health utilization closely to ensure that members with behavioral health needs are treated at the lowest level of care necessary for safety and efficacy
- The COA behavioral healthcare management team also works with hospitals and outpatient providers to enable seamless care for Colorado Access members
- To date, COA efforts have focused on transitions from inpatient care; Colorado Access does not currently receive timely notification of emergency department visits

8. Existing Intervention
8a. Is this an existing intervention (y/n) N

8b. If yes, please explain how we will leverage existing programs, i.e., existing programs is the best approach for meeting needs of the community identified in the CHNE, and that the project will be enhanced to meet HTP goals. (limit response to 1,000 words or less)

9. Partnership & Documentation- See Colorado Access letter or support

Documentation: existing RAE BAA, and letter of support from RAE

Partner Organization Name	Type of Organization	Does the hospital have previous experience partnering with this organization? (Y/N)	Organization's role in intervention leadership and implementation (high level summary)
Colorado Access	Regional Accountable	Yes	Developing and

	Entity		implementing collaborative discharge planning process with hospital

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Ensuring Emergency Department ALTOs Provision

1. **Name of Intervention**: *Ensuring Emergency Department ALTOs Provision*

2. **Measure Selection:**
   - SW-BH3 Using Alternatives to Opioids (ALTOs) in Hospital Emergency Departments

3. **Intervention Description & Rationale: (Including intervention description and how it advances goals of HTP in 1,000 words or less)**
   - *Intervention Description:*

   The Denver Health (DH) Center for Addiction Medicine (CAM) is an executive-sponsored initiative responsible for coordinating a broad range of addiction services, research and evaluation, education, and promotional efforts across the DH care continuum and the community. CAM's vision is to be a compassionate model for the prevention and treatment of substance misuse, to transform lives, and to educate all. Directed by leadership from Denver Health's Outpatient Behavioral Health Services (OBHS), public health and other departments, CAM is not a physical space, but an effort to ensure there is no wrong door to optimal treatment services.

   DH has extant programs that address patient behavioral health needs in the emergency department (ED). *Ensuring ED ALTOs Provision,* an intervention of continuous quality improvement (QI) is needed to improve upon and/or maintain program accomplishments related to alternatives to opioids (ALTOs) to reduce opioid prescription. Denver Health has significantly improved use of ALTOs over the last several years and, as this is a statewide required metric, we will continuously monitor and undergo continuous quality improvement activities, including establishing baseline rates and identifying any additional areas for improving outcomes in this area if needed.

   Advancing HTP goals

   Ensuring ED ALTOs Provision is consistent with HTP goals to improve patient outcomes—at both population and individual levels. Providing ALTOs will reduce population levels of opioid use disorder, ultimately resulting in net Health First Colorado savings. Substance Use Disorders (SUDs) are also known drivers of social needs and health disparities; at community and population levels ALTOs, along with other existing ED interventions such as MAT and SBIRT can convert disparity into equity by reducing substance misuse (Babor, Del Boca, & Bray, 2017; Bernstein, Bernstein, & Levenson, 1997; Force et al., 2018; Patnode et al., 2020; Taira, 2019).

   Quality improvements to Denver Health's SBIRT, MAT, and ALTOs emergency department programs will add value to DH healthcare and community-based support systems. As the DH Center for Addiction Medicine and the emergency department continue to incorporate new evidence for best practices, these programs and overall SUD care will continue to improve, and the value added will accordingly increase.

6. **How the intervention and any selected <u>local quality measures</u> to be addressed by the intervention were selected based on identified community needs, including how they align with identified significant behavioral and physical health needs and / or service capacity resources and gaps, including related to care transitions and social determinants of health**

Alignment with Community Needs

From both qualitative and quantitatve data generated via community health and neighborhood engagement efforts, behavioral health needs emerged as top priorities. Underlying and often undiagnosed behavioral health issues were called out as influencing high utilization of care. At DH, alcohol use disorder is a leading causes of hospital readmissions among high utilizers. Pain management is another of the most common reasons for ED visits, with up to 60% of super-users having a chief complaint related to acute or chronic pain. Rates of drug overdose deaths increased in Denver over 160% between 2000 to 2020, with deaths resulting from opioid overdose increasing from three to sixteen deaths per 100,000 persons.(Opioid Overdose Prevention Program) Denver Health has focused on a constellation of measures and outcomes to ensure the ED is an effective portal to behavioral health services, addressing this predominant CHNE priority.

How the population of focus aligns with identified community needs?

The DH emergency department is a de facto primary care provider for some sectors of the community, and is an entrée to needed inpatient care for others. At one point five percent of all SBIRT screens were positive for at least a moderate opioid use disorder (n>1000 patients). By ensuring continued use of ALTOs in the context of existing ED behavioral health services, Denver Health will both impact patients discharged from the ED and those who will be admitted to the hospital by way of the ED, thereby impacting a large proportion of its patient population.

How the proposed intervention will leverage available medical and / or social resources and partners.

Denver Health ED interventions are well established. For instance, the SBIRT program began 13 years ago and the Treatment on Demand MAT program is likewise an integrated part of ED services. The ALTOs rates at Denver Health exceed Colorado Hospital Association benchmarks.

Tremendous talent pools and collective momentum from CAM, OBHS, and ED champions can be leveraged to improve/expand the department's role in the continuum of care for substance misuse at DH. To date, Denver Health has partnered with agencies such as Behavioral Health Group, Denver Recovery Group, and the Harm Reduction Action Center to support Treatment on Demand services. These and other community-based resources can be further leveraged to support OUD populations.

5: Evidence Base Documentation

5a. (choose highest level of available evidence)—

- ☐ **1. Randomized Control Trial (RCT) level evidence**
- ☐ **X 2. Best practice supported by less than RCT evidence**
- ☐ **3. Emerging practice**
- ☐ **4. No evidence**

5b: If you selected 1,2, or 3 from above, please summarize the evidence base (academic , professional or otherwise), including data, citations. If no evidence, please explain why this intervention is being proposed (Describe in 1500 words or less):

This intervention builds on Denver Health's extensive investment in its quality improvement infrastructure. DH has a dedicated, evidence-based Lean Systems Improvement Department that could support improvements to ALTOs if Denver Health is below required benchmarks once they are established.

ALTOs Efficacy
In 2017 the Colorado Hospital Association launched a six-month pilot program with ten participant Colorado hospitals. It implemented the Colorado Chapter of the American College of Emergency Physicians Opioid Prescribing and Treatment Guidelines, resulting in a 36% reduction in opioid administrations and increased usage of alternatives to opioids (ALTOs) by 31%.3 Denver Health was not a pilot site, however Denver Health's data regarding opioid and ALTOs administration were analyzed over time. Those analyses revealed a negative correlation between ALTOs and opioid administrations over time and demonstrated a linear increase in ALTOs agents, along with a linear decrease in opioid administrations. Denver Health decreased opioid administration by 19%, exceeding the Colorado Hospital Association's 15% reduction target. This evidence shows that an ALTOs program has been successful at DH; through *Ensuring ED ALTOs Provision*, we will work to continually monitor and further improve our performance as needed.

6: Intersection with Statewide Initiatives:
6a: Does this intervention intersect with ongoing statewide initiatives, e.g., Behavioral Health Task Force, Affordability Road Map, IT Road Map, HQIP, ACC, SIM Continuation, Rx Tool, Rural Support Fund, SUD Waiver, Health Care Workforce, Jail Diversion, Crisis Intervention, Primary Care Payment Reform (Yes or No) : No
6b: If it does intersect, identify applicable statewide initiatives and how the hospital will ensure alignment with existing work (750 words or less) : N/A

7. **Historical experience by hospital or partner organization with intervention or target population to support intervention success (500 words or less):**

    As described above, Denver Health has extensive experience with Lean Systems Improvement and ALTOs programs. Data from June 1, 2017 to June 30, 2019 revealed that DH increased ALTOs prescription and exceeded Colorado Hospital Association targets for reduced opioid prescription. *Ensuring ED ALTOs Provision* will focus on the improvement and maintenance of this critical initiative.

8. **Existing Intervention**
    8a. Is this an existing intervention (y/n) Y

    8b. If yes, please explain how we will leverage existing programs, i.e., existing programs is the best approach for meeting needs of the community identified in the CHNE, and that the project will be enhanced to meet HTP goals. (limit response to 1,000 words or less)
    Denver Health has been an ongoing partner to reduce opiate misuse in the community. The intervention implemented to date has afforded us success compared to the CHA benchmark, and we anticipate leveraging this work combined with needed continuous quality improvement efforts to achieve HTP benchmarks.

9. **Partnering Organizations and Letter of Partnership: N/A**

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Ensuring Hospital HTP Performance through Continuous Quality Improvement

1. **Name of Intervention**: *Ensuring Hospital HTP Performance through Continuous Quality Improvement*

2. **Measure Selection:**

    - SW-RAH1 Adult 30-day all cause risk-adjusted hospital readmission rate

    - SW-PH1 Severity Adjusted Length of Stay

    - SW-COE1 Hospital index (Prometheus)

    - SW-BH1 Behavioral health discharge planning

    - SW-BH3 Using alternatives to opiods (ALTOs) in hospital ED

    - SW-CP1 Social needs screening and notification and referral to appropriate entity/community resource and RAE

    - COE-3 Implementation/Expansion of e-consults

    - RAH1 Follow up appointment with a clinician made prior to discharge and notification to the Regional Accountable Entities (RAE) within one business day

    - COE1 Increase the successful transmission of a summary of care record to a patient's primary care physician or other healthcare professional within one business day of discharge from an inpatient facility to home

    - PH1 Increase the percentage of patients who had a well-visit within a rolling 12-month period.

3. **Intervention Description & Rationale: (Including intervention description and how it advances goals of HTP in 1,000 words or less)**

Intervention Description:

The Denver Health (DH) Hospital Transformation Steering Committee is comprised of executives and managers spanning the breadth of the organization relevant to HTP. To support this committee in ensuring Denver Health performance meets benchmarks for state-wide and local HTP metrics we propose the *Ensuring Hospital HTP Performance through Continuous Quality Improvement* intervention. This will be the monitoring and management system for HTP, inclusive of creating a HTP metrics dashboard that will be reviewed on at least a quarterly basis to identify needed areas of improvement. For instance, according to latest Prometheus data, Denver Health is in the "green." On closer inspection of these data we found vaginal and c-section deliveries were responsible for the highest proportion of potentially avoidable care. When explored further, we found tubal ligations performed at the time of c-sections were considered avoidable care, although this actually offers benefits to both patients and HCPF alike. For patients, doing these surgeries simultaneously allows patients to endure only one recovery period. For HCPF, this reduces the number of surgeries and inpatient stays. As shown in this example, monitoring data, and then performing more in-depth data analyses will allow the Steering Committee to identify whether and what further activities are indicated.

Advancing HTP goals

Ensuring Hospital HTP Performance through Continuous Quality Improvement is consistent with HTP goals to improve patient outcomes—at both population and individual levels, ultimately resulting in net quality of care

improvements and Health First Colorado savings. This dashboard can be built to display data by different community populations, e.g., race/ethnicity, to help advance HTP equity priorities as well.

4. **How the intervention and any selected <u>local quality measures</u> to be addressed by the intervention were selected based on identified community needs, including how they align with identified significant behavioral and physical health needs and / or service capacity resources and gaps, including related to care transitions and social determinants of health**

How the population of focus aligns with identified community needs?
This overarching dashboard will ensure the Steering Committee is apprised of progress on all the outcomes related to HTP consistent with CHNE needs as described in other parts of this application. Prometheus is the only unique metric included in this intervention, and because our highest potentially avoidable cost is in deliveries, this area aligns with maternal/child health priorities identified in the CHNE.

This overall dashboard will encompass all Health First Colorado fee-for-service patients who receive inpatient or emergency department care at Denver Health, thus aligning with all the HCPF populations, including the HTP populations of focus, i.e.,

- Individuals with significant health issues, co-occurring conditions, and / or high health care utilizers;

- Vulnerable populations including related to maternal health, perinatal, and improved birth outcomes as well as end of life care;

- Individuals with behavioral health and substance use disorders;

- Other populations of need, including those at-risk of being high utilizers to whom interventions could be targeted and populations that may not currently receive care in the hospital but are known to community organizations.

Again, we will pay particular attention to analyzing data by racial/ethnic groups to identify notable disparities.

How the proposed intervention will leverage available medical and / or social resources and partners.

The executive lead for HTP is Denver Health's Chief Quality Officer. The Medical Director of Clinical Quality and Data Analytics working under this executive has extensive data and analytic expertise to support development of an HTP dashaboard. Also under this executive, numerous quality improvement committees are available to provide clinical leadership for process improvements relevant to HTP. To provide additional detail on existing quality improvement resources:
- DH data and information are available for end-user extraction through numerous tools (e.g., reports, cubes, dashboards, and user-defined reporting) catering to users' skill sets. For example, operational reporting tools are available to access metadata to front-line clinicians and operational managers. The EHR SlicerDicer, a self-service research and analytics reporting tool, allows physicians ready access to clinical data customizable by patient attribute selection for data exploration. Tableau-based Executive Operational Dashboards are available for operational oversight and reporting. Members of DH's data analytics, data science and informatics, and

health services research staff have access to all of these tools as well as analytic software (e.g., SAS) to manipulate the underlying metadata and data structures for tailored queries.

- Examples of quality improvement workgroups, with clinical leadership, that have already started working on the Hospital Transformation Program, include: a hospital flow workgroup, a diabetes workgroup, a transitions of care work workgroup, a care coordination workgroup, and now a social determinants of health workgroup. These existing workgroups will be tapped to lead this work, and new workgroups will be formed as needed.

- Since 2005, DH has also relied on Lean process improvement methods as a core competency to design and implement quality improvement initiatives and other operational changes. Using specific Lean methods and tools, problem-solving teams -- made up of those who do the work -- are tasked with identifying customer-defined value, identifying waste, and developing standard work in order to improve processes. Leaders and staff observe, measure, and/or map out current-state processes to understand performance, both in terms of waste and value. They create action plans to improve processes and define leading and lagging metrics. Based on leading indicator performance, action plans are re-assessed and refined at 30, 60, and 90 days, effectively applying the scientific method to process improvement. This infrastructure has already been accessed to conduct a vertical value stream analysis relevant to HTP, and additional rapid planning events have been conducted or are planned to create implementation plans.

5. **Evidence Base Documentation**

   5a. (choose highest level of available evidence)—

   - ☐ **1. Randomized Control Trial (RCT) level evidence**
   - ☐ **X 2. Best practice supported by less than RCT evidence**
   - ☐ **3. Emerging practice**
   - ☐ **4. No evidence**

   5b: If you selected 1,2, or 3 from above, please summarize the evidence base (academic , professional or otherwise), including data, citations. If no evidence, please explain why this intervention is being proposed (Describe in 1500 words or less):

In the seminal Institute of Medicine publication, *Crossing the Quality Chasm,* quality was defined in terms of being safe, timely, effective, efficient, equitable and patient-centered (STEEEP). (Institute of Medicine (US) Committee on Quality of Health Care in America, 2001)
- Safe is defined as avoiding injuring patients with care;
- Timely means reducing harmful delays to care;
- Effective is defined as providing care that is based on scientific knowledge (to avoid inappropriate over and underutlization);
- Efficient means avoiding waste of resources and energy;
- Equitable means providing high quality care even for those who may not otherwise be able to afford it; and
- Patient-centered means providing care that is respectful and responsive to patient preferences.

Quality improvement literature describes the context for successful quality improvement practices, include a host of factors including, "hospital support and infrastructure for QI-integrated data systems, financial support

for QI, clinical integration, and information system capability."(Alexander, Weiner, Shortell, Baker, & Becker, 2006) As described above in the existing resources section, Denver Health possesses these components of successful quality improvement.

Still beyond these contextual factors, Peter Senge, in The Fifth Discipline, highlights the need for systems thinking and learning systems. (Senge, 2006) He promotes creating learning systems with the following dimensions: 1. Systems thinking, 2. Personal mastery, 3. The ability to identify and examine mental models, 4. Building shared vision, and 5. Having learning teams. Such a learning system is able to avoid creating solutions that result in problems elsewhere in the system, and encourages teams to look for cause and effect of systemic problems that are not always closely related in time and space. In his book, he encourages examining the interactions of systems that might contribute to a problem in order to find and address appropriate leverage points. It seems the HTP program points to these various intersections, for instance partnering with community stakeholders to address behavioral and social health care needs as well as high health care costs. Creating discharge summaries for patients with behavioral health conditions is one example where appropriate technology and behavioral health community partners intersect with hospitals. Meeting patients' social needs with linkages to services is yet another intersection of systems that HTP requires we bridge. With finite resources to meet patients needs we approach another nexus where "population medicine," the work of health care systems, meets "total population health," the domain of public health. (Kindig)   Our work with Denver Metro Partnership for Health, Regional Accountable Entities, the Office of eHealth Innovation, Health Alliances, and Patient and Community Advisory Councils as part of HTP all hold promise for examining and acting at the intersection of these systems. By creating a HTP dashboard we will support this learning organization, that welcomes different perspectives to dialogue and create optimal solutions, the fundamental approach we will embrace as part of this continuous quality improvement intervention.

6: Intersection with Statewide Initiatives:
> **6a: Does this intervention intersect with ongoing statewide initiatives, e.g., Behavioral Health Task Force, Affordability Road Map, IT Road Map, HQIP, ACC, SIM Continuation, Rx Tool, Rural Support Fund, SUD Waiver, Health Care Workforce, Jail Diversion, Crisis Intervention, Primary Care Payment Reform (Yes or No) : No**
> **6b: If it does intersect, identify applicable statewide initiatives and how the hospital will ensure alignment with existing work (750 words or less) : N/A**
> > The unique metric included in this intervention is the Hospital Index, a metric that was previously part of the HQIP program.

7. **Historical experience by hospital or partner organization with intervention or target population to support intervention success (500 words or less):**

   As described above, Denver Health has extensive experience data and analytics capacities and our experiences related to all but the Hospital Index are described elsewhere in this application. Taken from our HQIP report, we describe below our most recent experiences with HQIP:

   Denver Health (DH) established a multidisciplinary team to review our Prometheus results. A subgroup met with Jed Ziegenhagen and Mike Whitmanon on May 21, 2019 to review the Prometheus tool and verify our understanding of the tool. Jed indicated that in July 2019, diagnoses may be integrated into the Prometheus tool as well as updated data. We believe this would help us determine the most common diagnoses that triggered the PAC episode, e.g., DVT within pregnancy, and help us hone our strategy.

   The tool clearly shows that within DH's overall "green" Hospital Index score of 86.75, vaginal delivery, c-section, and upper GI endoscopy are the episodes with highest PAC costs. Approximately half of the total

PAC costs (47%) are attributed to vaginal and cesarean deliveries. This focused opportunity within womens' care coincides with internal discussions regarding clinical variability and longer than expected lengths of stay. Based on our initial manual chart abstractions, some of the Vaginal Delivery procedures were medically indicated while others were not. It is worth noting that only 20 episodes accounted for our highest PAC costs among our 5200 patients with vaginal deliveries. We are unsure if there are systematic delivery improvements that can be made to impact <0.4% of our population, but planned to investigate vaginal deliveries as an area for quality improvement and appreciates the data available from Prometheus.

8. **Existing Intervention**
   8a. Is this an existing intervention (y/n) N

   8b. If yes, please explain how we will leverage existing programs, i.e., existing programs is the best approach for meeting needs of the community identified in the CHNE, and that the project will be enhanced to meet HTP goals. (limit response to 1,000 words or less)

9. **Partnering Organizations and Letter of Partners- N/A**

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