Program Title: Collaborative Approach to Care at UC Health Greeley Hospital

Organization: North Range Behavioral Health

Program Abstract *(50 words max, please)***:**

To assist in treating the entire patient, physically and mentally, we embedded a team of our own behavioral health professionals in the Emergency Department of our local hospital. The UC Health Greeley Hospital Report was built to provide insight into how the partnership is improving client outcomes and reducing cost.

Program Description (*Include program development, program information, staffing requirements, pertinent data and start-up costs.*)*: *Please limit to 2 pages, and remember to address all criteria specified.*

Different facets of health care are often isolated and treated in silos which can make it difficult for a physician to diagnose and effectively treat the patient holistically when one type of health care problem can be related to another. This issue is exacerbated in a fast-paced environment such as an Emergency Department (ED). Historically, ED personnel were not fully aware of all levels of care available for a behavioral health patient in the community. Since behavioral health professionals are better equipped to assess the appropriate level of care more accurately, North Range Behavioral Health embedded a small team of clinical staff to work alongside other UC Health Greeley Hospital doctors in the ED for cases such as these.

The UC Health Greeley Hospital Report was then conceived to assess the benefits and costs of establishing such a partnership before considering expanding the program to other hospitals. The embedded team records data when they have contact with the patients and that data is cross referenced with client profiles in our Electronic Health Record (EHR). The report includes a dashboard of visuals for each of the following:

- **Client Summary:** displays counts of clients that were seen in the ED and what episodes and guarantors they have in our EHR if any. Also highlights how many of the clients we see from UC Health are new to us.

- **Service Summary:** displays counts of services instead and categorizes them by program so that the user could easily decipher what kind of care these clients are most often receiving. Also includes the number of services that were provided to new clients.

- **Cost/Benefit Analysis:** provides financial insight to compare how much the program is saving vs costing the agency as a measure of progress for the executives and board members. This is an estimation of how much is saved when clients are diverted to more appropriate lower levels of care, avoiding the cost of being admitted inpatient. The estimation is calculated using joint probabilities, expected value, and opportunity cost methodologies. These savings and the revenue gained from new clients are compared against the cost to employ our embedded team of five full time staff positions.

Our goal in creating this tool was to be able to measure:
1. The efficacy of the embedded team
2. And the financial benefit of having the embedded team

The ability to measure these two goals at any point in time is imperative to tracking progress and contributes to telling the whole story, serving as a testimony to their success. As a result, The UC Health Hospital Report was innovatively designed to allow users to dynamically interact with the visualizations. This includes filtering data relevant to their questions and analyzing various perspectives needed to prove efficacy or financial benefit such as what the financial impact is for adults compared to children.

The client experience is exponentially improved when healthcare is cohesive both physically and mentally because the physical problems could be a result of behavioral problems. Clients are being diverted to resources that are more relevant to their needs and therefore are more effective in their recovery. This leads to better patient outcomes and less risk of relapsing. Improved client care also translates to a reduction of expenses for our agency, the region, and the client since they become less dependent on the emergency room and more in charge of their own healthcare with the help of our other programs. The report can measure this by allowing us to observe the dispositions of clients over time.

Having individuals that are trained to understand our processes embedded inside of the hospital also means that there are less communication barriers between us and the hospital. Since they are collecting and storing their own set of data, we can compare that against the data that we have in our EHR when clients are admitted. The report allows us to see if there are any discrepancies between the data sets and where communications can be improved.

North Range's executive team and board members found the report useful to refer to clear statistics that are easier to evaluate over time instead of relying on subjective measures of the progress being made. Being able to utilize this documentation can result in better chances for funding opportunities, which allow agencies like ours to continue supporting these important programs that are prioritizing superior client care.

On a scheduled basis, the data from UC Health is uploaded to our data warehouse and imported into our Business Intelligence (BI) tool, Tableau for visualization and analysis. We match the client names and date of birth to our EHR data and pull in information from the residential admission forms to make comparisons. The cost of employment was provided to us as a monthly average from our accounting department and the savings was calculated by summing the difference in service charge from a higher level of care to a lower one. The revenue of services from new clients was also included. This is a process that can be applied to any new program that an agency is implementing.

This program is already an enhanced clinical solution to isolated patient care, but the UC Health Greeley Hospital Report tool is also a scalable technical solution to supporting the success of the program. After reviewing the results with North Range's executive team and board members, we are pleased to reveal that our embedded team is making a significant impact on client experiences as well as the financial burden on the cost of care. As a bonus, the clinicians that are embedded have reported that they find much joy in the work they do and prefer to be a part of this mission even when other internal career opportunities present themselves. As a result of what this report reveals, we do plan to replicate this solution in other hospitals as well.