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### Medical Home Access Effect on Recidivism Rates of the Inner City Juvenile Detention Population

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Medical Home Access on Recidivism Rates of Inner City Juvenile Detention Population

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Submitted as Partial Fulfillment for the Doctor of Nursing Practice Degree

Regis University

December 15, 2017

## MEDICAL HOME INFLUENCE ON RECIDIVISM

### **Abstract**

This is an overview of the DNP project that was used for the writer's Doctor of Nursing Practice degree. The project focus is the population at Gilliam Youth Services Center, the juvenile detention center that serves Denver County, Colorado. The project's objective was to provide resources to the residents that are served by Gilliam, in the form of access to a medical home. The assessment attempted to provide data to show that there is a need for an intervention to provide this population with the resources and benefits that the services of a medical home provide.

*Keywords:* juvenile detention, recidivism, medical home, DNP capstone project.

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**Medical Home Access on Recidivism Rates of Inner City Juvenile Detention Population**

The Doctor of Nursing Practice DNP project practice issue revolved around the patient population that is served at Gilliam Youth Services Center (GYSC), the juvenile detention center that serves Denver County, Co. This population along with the general adolescent population in Denver and the State of Colorado were the subjects of the population assessment that was conducted as part of this project. Although the statewide information from the 2004 Colorado Health Survey indicated that 90 % of Colorado adolescents had access to health care, this was still short of the 2010 healthy people goal, this survey was looking at the mainstream of Colorado youth. We know that youth from minority and impoverished communities have less resources than their more affluent counterparts in other parts of the state. The population served at Gilliam had a larger percentage of minorities than the statewide DYC population. Due to the increased risk of this population, in regard to socio economic status and being in the minority statewide there is a need to provide more resources to this population who traditionally do worse in all areas when compared to their Caucasian counterparts. (SB 94 Annual Report FY 2012-2013). It is also known that adolescents that are placed in detention are disproportionately male minorities with special education disabilities. It is in part of this that youth involved with the courts due to school related behavior and discipline problems become part of the problem known as the school – to – prison pipe-line. (Mallett, 2012).

The assessment model framework that was used to guide this assessment is that of the Comprehensive School-Linked Strategies for Children and Families. The strategies identified in this framework use broad-based to build individual skills and local opportunities which have been shown to improve access to education, health care, and human services; and combine, coordinate, and align community resources and systems. This strategy has been used in

numerous communities to have the communities work together with their available resources to decide together on what is important within their communities and how they can, collaboratively, work to fix/improve those issues that were collectively identified. For the population that was identified for assessment it was necessary for them to be engaged in any initiative that was geared toward leading to any sustainable positive change. This model called on the community to be guided to identify issues of concern and then provided the community with the tools to explore, design and implement changes that would be sustainable. (retrieved from ncrcl.org)

The choice of population was relevant due to the problem that would be addressed in the DNP project. The problem statement was that there were adolescents that were admitted to Gilliam Youth Services Center, the juvenile detention center that served Denver County, who did not have an identified medical home or primary care provider. This was a common problem among youth in detention along with being a population at risk as noted by the Committee on Adolescence (2011) who noted that “Youth in the juvenile correctional system are a high-risk population who, in many cases, have unmet physical, developmental, and mental health needs. The health needs of these youth are commonly identified when they are admitted to a juvenile facility.” They went on to say that ‘continuity between community and the correctional facility would be crucial.’ It was noted by Gallagher & Dorbin (2007) that juvenile detention facilities represent an excellent opportunity to intervene with the greatest number of high-risk youth, also that, there was no doubt that young people who enter detention centers were underserved and at greater risk for health problems than their adolescent counterparts in the general community. It was also noted by Mallett (2012) that from what was known about the school-to-prison pipe-line, a pivotal time for youthful offenders was at first contact and intakes. Mallett went on to suggest that coordination of education, disability needs and this author added, medical home services,

could impact the effect that disability may have had on the youth and working together with the adolescent and family could decrease future delinquent behaviors that could lead to detention. As noted by Abram & Teplin (2003) research suggests that much more often than the general population they (youth in juvenile detention) were challenged by mental disorders along with co-occurring abuse of alcohol and other substances. The reason for looking at the general population of adolescents in Denver was to be able to make a comparison between those adolescents in the general population and those within the juvenile justice system. As noted above it was known that those in the juvenile justice system were at higher risk and so should have had more access to services, but that did not happen. This at-risk population of adolescents ended up having less access. In a study conducted by Mallett (2012) it was noted that in one of the impoverished communities looked at in his study, due to school district resources, there was a back log of up to 12 months to even get an assessment in the schools and that even after an assessment many youths were not identified as having a learning disability, although there was significant data to support such a diagnosis. Mallett (2012) made the statement that ‘It seems that minority adolescents not only were overrepresented in the youthful offender population, but also were less likely to be identified with a learning disability. It brings to question if these youth had at least the same access as their counter parts in the general population would they be a part of the juvenile justice system? Hein, et. Al (1980) noted that there is a large segment of the teen population that still do not have access to health care. This was shown to be true where over 10% of youth surveyed in the 2004 Colorado Child Health Survey did not have health care coverage. The neediest young people were frequently those who had the fewest economic and social alternatives. In an article by Blum (1998) he suggested that a model that understands the risks and protective factors in relationship to development and places those factors within community

norms and cultural values within the communities where adolescents live was needed. The DNP project's type of a comprehensive Strategy would provide this type of a model.

The neediest young people are frequently those with the fewest economic and social alternatives. Juvenile detention facilities offer a unique environment where these adolescents at high risk for medical problems could be identified and treated. In the same article Hein, et.al (1980) was speaking about how providers were the youth's advocate: health could broadly be defined as including the creation of a safe, health-promoting environment where the provider extends themselves beyond the immediate needs of the youth to setting up follow-up care in the community. In creating this type of an environment, the provider also would develop the client-provider relationship where teaching about health and prevention could take place. This was the type of a system that this underserved and vulnerable population needed to mature into successful adults.

The place where the patient population was located was Gilliam Youth Services Center (GYSC), the juvenile detention center that served Denver County, Colorado. Gilliam was one of twelve facilities operated by the Colorado Division of Youth Corrections. The population of the Division of Youth corrections was used to compare to the subset of that population that was found at Gilliam. These Division of Youth correction adolescents were also compared to the general adolescent population in the Denver Metro area, as well as Colorado. Gilliam was in the inner city of Denver in the historic Five Points Neighborhood. This area had a high minority concentration of mostly Hispanic and African American citizens. The area was very impoverished, had a high crime rate and high concentration of low performing schools. The population that was served by Gilliam came from all parts of the city, many sharing the same low income, poor schools and minority make up of those around Gilliam. Realize that there were



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areas of town that were more heavily concentrated with Hispanics (North & South West Denver) along with areas more heavily concentrated with African Americans (Northeast & far Northeast Denver). The common denominator of these areas was the poverty, low performing schools and lack of health access.

Although this area was changing due to gentrification the population that used to call this area home were slowly being pushed out due to no longer being able afford to live there. The new population of people that were moving in were more affluent and had also called on city hall to do something about the crime in the neighborhood. This made the sentencing harder and made these adolescents more likely to end up in the juvenile justice system. The areas where these adolescents came from have social systems that were not the most positive or socially acceptable such as gangs.

There were many different gang fractions in Denver and they all seemed to be at odds with each other. When speaking to the residents in Gilliam they felt a need to belong to some gang, to belong to something, and for the safety that belonging to a gang provided. This was a problem due to the gangs not promoting positive outcomes for its members. The gangs were responsible for much of the crime, violence and demise of the communities that these adolescents called home.

Many of these clients did not have a regular medical care provider that they saw in the communities where they lived. In many cases a large percentage had not had any contact with the healthcare community in over a year or since last being in detention.

The focus population of this project was adolescents, who either had or were eligible for Medicaid or CHP+, that were admitted to Gilliam Youth Services Center and did not have an identified medical home or primary care provider. This was a common problem along with

being a population at risk as noted by Committee on Adolescence (2011) who noted that “Youth in the juvenile correctional system were a high-risk population who, in many cases, had unmet physical, developmental, and mental health needs. The health needs of these youth were commonly identified when they were admitted to a juvenile facility.” This was realized with the youth that were admitted to Gilliam as many did not get follow up on medical issues until they are were detention. It had been noted by Gallagher & Dorbin (2007) that juvenile detention facilities represent an excellent opportunity to intervene with the greatest number of high-risk youth, there was no doubt that young people who enter detention centers were underserved and at greater risk for health problems than their adolescent counterparts in the general community. It had been noted that adolescents that come from a lower socioeconomic status along with having environmental influences such as the increased rate of high-risk adolescent behaviors that influence their health and if they access health care. As noted by Abram & Teplin (2003) research suggested that much more often than the general population they (youth in juvenile detention) were challenged by mental disorders along with co-occurring abuse of alcohol and other substances, which were very real issues with this population.

Samuel (2014) suggested that adolescent males are generally less likely to utilize mental health services which was especially true among those involved in the juvenile justice system. He went on to say that with these findings that reveal that there is a mental health stigma of ineffective treatment, fear and shame from peers and mistrust of mental health providers as barriers to service utilization that we must create a system that could provide the needed care to this population avoiding these noted barriers. It was the opinion of this author the services and relationship found in the services of a medical home, these barriers could be mitigated.

The previous studies reviewed population assessment data that would be ideal, which was found that it could be the actual population at Gilliam. Therefore, this population was identified for this project.

### **Plan of project:**

The data for the DNP project came from a survey that was completed for each admission to Gilliam during the study period. This survey assessed if a resident had a primary care provider, had medical insurance (public or private) or if eligible to have Medicaid or CHP+. The survey was developed by the Health Communities program and was used after approval for its use was granted by the administration of clinical services of the Division of Youth Corrections along with its research department. Other assessment data that were useful was the 2011 Youth risk Behavior Survey which showed how students in Colorado reported on risks that they engaged in.

### **Review of research literature**

The Youth Risk Behavior Survey was selected systematically with probability proportional to enrolment in grades 9 through 12 using a random start. This survey had a 40-school sample. The ethnic breakdown of the sample was 5.2% African American, 26.9% Hispanic and 61% White which is much different from the ethnic breakdown of the Gilliam population. Another useful data set was that gained from the 2004 Colorado Child health Survey which was a telephone interview of 124 questions and a sample size of 997. Although not an exact correlation to the population of Gilliam these two data sets gave an idea of the risks and health issues faced by the total population of Colorado's children. The personal experience of the clinical practitioner at Gilliam was used to provide a report of the actual cases that were

dealt with on a day to day basis. Although both studies looked at numerous topics and asked many different questions on their individual surveys the DNP project analysis looked at only a selected few of the health indicators available.

According to the data presented in the 2011 Colorado Youth Risk Behavior Survey (CYRBS) 21.9% of those surveyed felt sad or hopeless every day for two or more weeks or had stopped doing a usual activity in the previous 12 months. Of this 21.9%, 14.8 % had seriously considered suicide and 11.4% had a plan.

The 2004 Colorado Child Health Survey (CCHS) reported that 28.5% of those it surveyed had some degree of difficulty with emotions, concentration, behavior or getting along with others. Of this 28.5%, 65% received no type of counseling or treatment. From the writer's personal experience, the percentage of resident's coming into detention with some type of mental health issue was much higher. Due the stigmatism that has been attached to many mental health conditions many of these either don't get treatment or start treatment due to their involvement in the juvenile justice system.

The CYRBS was the only data set of the two that reported on alcohol and drug usage as it was a survey of high school students. It reported that 19.4% of students reported having their first alcoholic beverage prior to age 13 years old. 36.4% had at least one drink in the previous 30 days. 22.3 % had consumed more than 5 drinks in a couple of hours in the previous 30 days. The survey reported that 39.5% of the students had used marijuana at least once in their life with 9% using for the first time before age 13 years old and 22% reporting have used during the last 30 days. Also, a problem that had been emerging was that of prescription drug abuse, oxytocin, etc., without a prescription 19.6% reporting had used.

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This writer found that the sexual health categories were of interest due to the engagement in sex at an early age could lead to mental health issues due to the emotional involvement of sex. Of the students surveyed 40.8% had engaged in sex at some time in their young lives. 13.2% reported have 4 or more different sex partners in their lives, 31.8% reported having more than one partner in the previous 3 months. Of those that were sexually active 25.8% reported using alcohol or drugs before engaging in their last sex encounter. 70.8% reported using a condom the last time they had sex, which means that 30% did not use a condom.

At Gilliam, all admits were offered a STD screening that uses a urine sample to screen for gonorrhea and chlamydia. The writer witnessed an unofficial positive rate of just about 10%. It is also important to consider that most of the population of Gilliam came from both Northeast and Northwest Denver metro areas which were the two highest prevalence areas of gonorrhea & chlamydia in the State of Colorado. (2013 CDPHE)

Both surveys looked at the amount of physical activity that the participants engaged in. The CYRBS reported that 53.1% reported having at least 60 minutes per day on at least 5 of the previous 7 days of physical activity. There were 10.6% who reported not having any days with 60 minutes of physical activity in the last 7 days. The CCHS reported that 26.9% of those answering the survey had less than 5 hours per week of physical activity with 21% watching more than 3 hours of television/computer games per day. The CCHS was the only one to report on health insurance coverage. It reported that 89.6 % had health care coverage although an impressive rate, it fell short of the Healthy People 2010 goal of 100%. It also showed that 86.6% had an identified primary care provider which was short of the Healthy People 2010 goal of 96%. With these rates being found in a phone conducted interview of 997 participants it was the opinion of the writer that the population served by Gilliam would have much worse numbers in

all categories. The use of the project survey tool would provide the actual numbers for the Gilliam population.

The data presented here had weaknesses for the population that it is being applied to. This is general adolescent data for the state of Colorado. The population of a juvenile detention facility was more of the demographics of an inner-city school population with more of a concentration of minorities and those from a predominantly impoverished socioeconomic status.

The project looked at the mental health categories that included depression, alcohol & drug usage and mental health treatment. The project looked at sexual health and physical health. Lastly, the project looked at the number of those that had access to health care services along with their perception and satisfaction of the care that was received.

For the DNP project, there was raw data obtained that could identify more specific risks and information about ethnic and socioeconomic status association with the obtained data. For the information that was presented there was a clear need for health support and education that could be provided to this population by having access to and making use of a medical home, having a primary care team. The focus of this project was to work towards all the population of Gilliam having access to a medical/health care home. A medical home is more than having a primary care provider, or having a psychiatrist that prescribes your medications while in placement which was the case with many the youth that were admitted to Gilliam. A medical home is not a building, house or hospital, but a team of providers that provides quality and cost-effective health care that would include mental health, education services and assessments to identify needed resources. A medical home is a family –centered approach that provides comprehensive, continuous, coordinated, accessible, compassionate and culturally –competent care. (HCPF Jan. 2013) The project was also to connect these same residents with a medical

home in their communities that they would be able to develop a lasting relationship with. There were a couple of community partners that were investigated to collaborate with to make all of this a reality. The Center for African American Health was one that was worked with to develop specific health related programming focused at the population. They were instrumental in getting those that were eligible for Medicaid or CHP+ through the application process and covered.

Another community partner was a local health clinic that was managed by practitioners from the University Hospital that were open to accepting new patients to provide services as a medical home. These were a couple of examples of what was envisioned to be just the beginning of a network of providers that would serve the population of the Gilliam residents. The plan was to develop a referral base for these residents from Gilliam where they could be sent to have the services and resources of a medical home. By having a team of care givers, the other health issues identified by this data could then be addressed. An assessment of the benefits of these interventions was realized as the DNP project progressed. One of the measurable objectives was to look at the number of school days missed prior to detention and compare to days missed after having contact with the services of a medical/health care home. Another outcome was the pre- and post-intervention scores on the KIDSCREEN self-assessment tool. Ultimately it was envisioned that there would be a reduction in the rate of recidivism, this was not being measured in the project due to the inconsistencies of how recidivism data is collected from state to state.

**The PICO problem question is:**

How did the access of a medical/health care home affect the outcomes of youth who were involved in the juvenile justice system, in particularly juvenile detention? Did access to these services decrease days lost in school and increase self-assessment scores of these same adolescents?

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P- Adolescents that were admitted to Gilliam Youth Services Center that had no identified medical home or primary care provider.

I- Adolescents that had or were eligible for Medicaid or CHP+ but had no identified medical home or PCP. Provided education regarding medical home services and resources to both the youth and their parent/guardian. With this information provided support & information for them to secure healthcare coverage and make connections for them to ultimately secure a medical home. This was done by a referral/connection being made by the GYSC clinic staff to the 'Healthy Communities' Family Health Coordinator. A comparison was made between the residents that were connected with a medical home and those that were not at six months after initial admit. This comparison was going to look at school attendance and self-assessment health status scores for the two different groups

O- There would be an increase number of adolescents at Gilliam that utilize the resources of 'Healthy Communities' and ultimately would have an identified medical home and PCP. This would influence the rate of recidivism for those same adolescents, although this would not be measured in this project.

The literature also pointed out that there was racial and gender difference of which youth received mental health services in the community. There was built into the research an assessment of the need for and access to mental health services in the population at Gilliam. The goal was to provide services to this population that better served them than what was being practiced.



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The direct practice issue was that the youth who came into this juvenile detention facility had ongoing health and mental health needs that were not being met in the communities where they lived. This was identified by the author's personal experience serving this population. An indirect issue was that these same youth, for the most part, were eligible for or already had Medicaid or CHP+. With this type of public health care coverage, the services and resources of a medical home were supposed to be afforded to them. It was the intention that by educating both the youth and their guardians that they would make use of these resources. This indirect issue was identified by researching the benefits available to youth who have Medicaid or CHP+. The Committee on Adolescence (2011) has noted that "Youth in the juvenile correctional system are a high-risk population who, in many cases, have unmet physical, developmental, and mental health needs. The evidence needed to continue with this project was provided with data provided by a survey that was administered to all youth on admission to assess Medicaid /CHP+ status or eligibility, PCP and medical home. The implementation of this tool was the first data collection for this project. This was followed by referral to the 'Healthy Communities' program which assisted in the application process to be assigned a medical home provider. The next data collection was the completion of the KIDSCREEN health status self-assessment by the youth and their guardian as to their health status. This was done pre-& post being provided access to a medical home provider. The goal was to provide the youth with a set referral time of an appointment to meet with their new medical home provider prior to discharge from detention. For the population that has been identified for assessment it was necessary for them to be engaged in any initiative that was geared toward leading to any sustainable positive change. The Comprehensive School-Linked Strategies for Children and Families model calls on the community to be guided to identify issues of concern

and then provides the community with the tools to explore, design and implement changes that will be sustainable. In this model, a type of a teen advisory board could be used. This could be done in a manner to ask the teens and their parents what services/resources that they would need to have provided by a medical home to be successful in the community. At the time the services that were offered were those that Medicaid had identified as being needed. To provide services in a patient centered manner it would be needed to ask both the youth and their parents as to what resources would best serve them. Realize this would require multiple agencies to not only work together but to also focus on serving the patient to the best of their collective ability. In another article that was reviewed entitled ‘Leading Improvement in Population Health’, spoke of how focusing on population health would require a new leadership approach. The project adolescent detention population was a unique group that needed to be treated from a person/patient –centered standpoint. This meaning to ask the patient what their needs were and to listen to them when developing treatment models. For this population, there may be found situations where they face in the community that the author had never thought of how to address. By inquiring with them directly providers can jointly, with the youth, parent and other professionals address these situations. This same article talked about new mental models for leading population health requiring leaders to blend the best of their capabilities, which they called co-production. They defined that as forming productive relationships with community partners and with patients, families and the broader population. By addressing the needs of this adolescent population in this manner it would truly make the care given not only patient centered but also person centered looking at the needs of the individual and tailoring care to those needs. This was how care should be provided for all patients. Not looking at them as if one size fits all, but being willing to adjust to fit the individual or population being treated. It

was hoped that implementation of an advisory board as noted in this article with this project population sometime after this program would influence a change in the way that services would be provided to them. The outcomes and study variables for this project were those of the number of missed school days of the study participants which is a measure that will be of interest to those that may want to duplicate these efforts in other detention centers. This was also a measure of interest for the resident participants. There was also an added self-assessment of health status that would be done pre-& post having a medical home so that the participants could see their own change in self-assessment as related to having their health needs met.

The nursing theory used as basis for this project was that of Leininger's Culture Care Theory. Leininger noted that this theory was created due to "Nurses needing in-depth knowledge of cultures with anthropological view and in-depth, culturally based care phenomena. I held that care was the essence of nursing and had meaning within cultural context." (2002). She went on to explain that today the theory is known for its broad holistic, yet culture specific focus to discover meaningful care to different cultures. As previously noted, this author saw this inner city adolescent population of juveniles as a unique culture of their own. The central purpose of this theory was to provide diverse and universal culturally based care factors influencing the health, well-being, illness, or death of individuals and groups. This population was looked at and listened to, to provide the best comprehensive care possible. (Leininger, 2002).

### **Goals of the project:**

Short term goals of the project:

- For the resident and guardian to understand what resources were associated with a medical home.

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- For the resident to be assessed as to eligibility for Medicaid or CHP+.
- For the resident to be referred to agency that would assist in making application for Medicaid or CHP+.
- For resident to be awarded coverage of Medicaid or CHP+, to be referred to and appointment set up to make initial visit to a medical/health care home. This would include follow up to ensure that initial visit was completed.

Long term goals of the project:

- Resident & medical home would form a trusting relationship in regard to healthcare provision.
- Resident would make use of as many medical home resources as needed.

Impact of the project:

- The resident and their parent would have an increased score on the post survey of self-assess health status.
- Resident would display increased academic success as compared to baseline.
- Resident would have a reduced recidivism rate, although was not measured in this project.
- Would increase the access to health care of youth who had been held in detention.

The independent variables for the project, the intervention, was to educate both the resident and the guardian of the benefits and resources that were afforded with a medical home. The provision of information and education of the services available through the 'Healthy Communities' program to both the client and parent/guardian. This information would lead to a referral to the Family Health Coordinator who then would connected the client to a culturally appropriate medical home. In Colorado, Healthy Communities combined the best aspects of the

Early and Periodic Screening, Diagnosis and Treatment (EPSDT) Outreach, administrative Case Management program, and CHP+ outreach into one model to better meet the needs of the clients served. HCPF (2010). The program included the services of a Family Health Coordinator. This would lead to making an assessment as to the resident's eligibility for Medicaid or CHP+.

The dependent variable, the outcome, was if eligible then a referral would be made to get them assigned to a medical home provider. The clients served at GYSC would have an identifiable medical home and PCP by the time they were discharged. If not set up with a medical home, they would at least have a referral to see the Family Health Coordinator who would assist them in securing a medical home. Included in this would be follow up to ensure that initial contact was made with the medical home.

Antecedent variables: Having previous experience with the healthcare system that may have been less than favorable such as feeling as if they were disrespected or stereotyped by the provider. This may have been an insensitive mental health type of diagnosis that went against the established cultural norms. Also in this category of variables were lower socioeconomic status along with environmental influences such as the increased rate of high-risk adolescent behaviors that influence health.

### **Sample and Participant data**

The study measures that were to be assessed were the difference in pre & post self and parental rating of health status. This was done with a short questionnaire that was completed by both the resident and their guardian that assessed how both felt about the youth's holistic health status. The tool that was used was developed by the investigator to provide data as previously noted. There was also an assessment of the recidivism rate between the subjects that have a medical home and those that do not after a 6-month study period. Both measurements were

generic health status measures, looking at health interventions as noted by Kane & Radosevich (2011). These variables and the measures were decided on due to the goal of the intervention being to keep youth in the community and not in detention, reducing the rate of recidivism. This was realized due to services being provided through resources of a medical home that would eliminate or reduce the effects of crisis that escalate to the point that a youth was placed in detention. The ideal sample population for this project was 100 youth who were admitted to Gilliam over a six-month period. The sample size was determined due to an average stay for a resident being about 18 days. During this time, the project gathered information about the youth's self-reported health status and made assessments of their access to health care services. The hope was that it would be found that those who get a secured medical home and use its services would have a reduced recidivism rate as an outcome.

Another outcome that was measured was that of the youth's & parent's self-assessment of the youth's health status that was assessed through the KIDSCREEN pre-& post intervention survey. The intervention that was provided was that of the knowledge of the services of a medical home that would be provided through having eligibility for Medicaid and CHP+. The youth and their parent/guardian were given a short pre-intervention survey to assess what they self-assessed what the youth's health status was. The intervention of information about the resources available with a medical home as well as the referral to and at least initial visit to a medical home was to be completed. Once having experience with a medical home, the post-intervention survey was to be administered. Since it was the same survey questions on both surveys the experimental design was that of a paired design, measuring the same information under different conditions, that of before knowledge and experience of a medical/health care home and after having knowledge and experience of a medical/health care home. The statistical

test that was appropriate for this study was that of a paired t-test, one tailed. The hypothesis for this project was that youth with medical home access would have a higher self-assessment health status score than that of youth who did not have medical home access. The plan was that the data would substantiate this hypothesis and would lead not only to Gilliam but the Division of Youth Corrections to implement providing this type of assessment and referral for all detained youth in the system. The findings that were generated were presented both in text and with tables and graphs that would show demographics of the youth and their parents. The project showed whether the youth were from familial homes, foster care or some other out of home placement. The data had the actual names of the participants stripped and were given unique identifier that only the investigator had access to which participant belonged to which data. This information was kept in a locked file cabinet which was in a locked treatment room of the Gilliam clinic that has limited access. The locked file cabinet was only accessible to the clinic staff.

Potential threats to the validity of this project was that the data had low statistical power. The author struggled with being able to figure out how many subjects were needed for there to be statistical significance with the information gained from the project. Another threat was, if historical data was used from the TRAILS data base, that the information that being sought could be missing or could have been inaccurately input. This would add a question to its validity. There was also the question of, does having access to a medical home have any influence on the outcomes of self-health status assessment, recidivism would be answered. The long-term outcomes were anticipated to be decreased recidivism. A threat to the reliability was, would the same results be gained in a different population of youth. Inner city Denver, where the population of Gilliam comes from, was a much different population than a detention center that serves predominantly upper-middle class youth from two parent Caucasian families. It was

interesting to see if the results would be able to be replicated in other settings of detention centers.

More planning for the statistical power will need to be done which will include using this study design along with this analysis strategy to decide what type of sample size to have. The current sought sample size of 50-100 which was obtained within a few months as the average admit rate at Gilliam was 75-100 youth per month. Realizing that in this number there may be up to 50% readmits, which was only counted once in the study. With this sample size, there could be an effect size of .40, an alpha of 0.05 and a power of 0.98. There was a need to solicit aid of more statistical experience for the final analysis for this project. Missing data from the study was handled by trying to minimize it as much as possible.

Once a youth was identified as eligible for Medicaid or CHP+ they were followed up and encouraged to get a referral and attend at least the initial visit with a medical home provider. This happened while the youth was in detention which on the average is 18.2 days. At that point the post assessment was given with the same questions as the pre-assessment at which time the study was over.

There would be opportunity to have subsequent studies that can look at the recidivism rates and school success after the resources of a medical home have been utilized for some specified amount of time. The conceptual model that was used for this project was to assess first where the resident at Gilliam was at when it comes to current health access status upon admit to detention. Some of the hypothesized states at admit were that they were in some type of crisis, had low self or parental evaluation of health state (which included both physical & mental health that included behavioral health). Other issues may have involved low academic success and high recidivism.



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The treatment given was that of an assessment of the eligibility for Medicaid and CHP+. In this phase, there was also education to both the resident and their parent/guardian of the resources available through Medicaid & CHP+ in regard to the services and resources associated with a Medical Home. Through this, there was connections made to the available resources as well as referrals to a Medical Home that included setting up initial appointments. There was follow up made to ensure that the resident followed through with the appointments that were made. The envisioned outcomes were that of the residents understanding the available resources associated with a medical home. That they would access and use the resources of a medical home. That this usage would result in increased self/parent evaluation of health status and decreased recidivism. Please see the visual of the conceptual and logic models in the appendix.

### **Study Time line:**

The proposed timeline for this project was as follows. The project fell behind of its originally planned timeline. You will see the actual dates of the different activities.

Use of KIDSCREEN assessment tool, approval received November 2014

Finalized agreement with Healthy communities, Verbal agreement received

Project plan approval by DNP Chair & Board, received November 4, 2014

Submitted for IRB approval    December 1, 2014

Submitted for DYC Research Approval December 15, 2014

Study Data collection began, February 2015 thru May 2015

Analysis of collected data, June 2015 thru July 2015

Final Draft report ready for review, August 20, 2017

Final project presentation, December 15, 2017

### **Market Risk Analysis**

The market and risk analysis of this project was addressed above but will now be specifically looked at with comments on each of the suggested elements suggested in the rubric.

#### **The SWOT of the project is as follows:**

Strengths: were the assessment of the supporting literature that showed there was a need to provide health care services for the chosen study population of youth involved in the juvenile justice system, in particularly those that were involved in juvenile detention. Another strength came from the literature that said this same population received a high percentage of their care in detention which leads one to think that if these needs could be met in the community where the youth lived perhaps there would be a reduced recidivism rate due to not being in crisis because of lack of care.

Weaknesses: There was no direct supporting evidence that there was a lack of medical home access or usage among this population, this was an assumption of the author that this project attempted to prove. There was also no direct evidence that having the services of a medical home would influence the rate of recidivism, which was also an assumption of the author.

Opportunities: That with the support to the hypothesis made by this project that all youth in Gilliam, the Colorado Division of Youth Corrections and all juvenile detention facilities would utilize the information provided by this project to implement similar services of insuring that the youth served related to community services that would support their success in the communities where they lived. This project also provided the opportunity to form relationships with other community support agencies and providers to better serve this study population.

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Threats: These could be attributed to change in the way that juvenile corrections and detention worked. There was a need to provide these extra services of doing the assessments, providing the referrals and follow up to youth who are no longer ‘officially’ under care but were back in their communities. Upper state administrators would need to buy in and be supportive of these changes to make them successful.

The needs for this project were minimal compared to the care that was currently given to the youth that enter detention. Upon admission, there was a medical intake that was completed with each youth by a member of the medical clinic staff. At the initial intake, the youth were questioned about any medical complaints that they may have had. They were asked if sick or injured, if they were on medications and if they would like to have a screening for sexually transmitted infections. They were also told how to access medical care during this initial medical intake meeting. At this point the study required that they be told about the study project, a call be placed to their legal guardian to obtain consent to participate and the initial assessment survey be administered. This process added approximately 5-10 minutes onto the initial medical intake process. Once identified as having no medical home access a referral was made to the Healthy Communities program which assisted in making the application for Medicaid or CHP+ if eligible and facilitated the connection and referrals to appropriate medical home providers.

The resources needed were those of the forms and the extra time required of the professionals that provided these services.

The stakeholders in this project were identified as the youth, their guardians & families, Gilliam and the Division of Youth Corrections, the Healthy Communities program, the individual medical home providers and the State of Colorado. These stakeholders would benefit from the successful completion and ultimate broader implementation of this project.

The project team consisted of the Gilliam medical clinic staff, the identified staff of the Healthy Communities program, the DYC research department and the created provider network.

In looking at the cost – benefit of this project the costs were minimal, being those that were already being expended in performing the regular duties of their current responsibilities. The benefits being afforded by the project were that the youth would have access to the services of a medical home, have a higher post self-health status assessment scores and have an overall reduced recidivism rate. When these outcomes would be realized the benefit to society would outweigh the minimal costs to provide this service.

### **Budget and resources:**

The only budgetary need for seen for this project was to have a statistician assist in the analysis of the data. This could have been available through the Division of Youth Corrections research department. Due to the lack of statistical significance of the data the statistician analysis assistance was provided through the instructor of the author's statistics class in the DNP program, which was free of additional charge. The Other costs of paper and copying were incurred by Gilliam's general budget. There were no other costs for resources anticipated.

### **Method:**

Once the project was submitted to the Institutional Review Board of Regis University for approval of research using human subjects the method and format of the project had to have some changes made. The IRB granted approval only if there would be limited youth contact due to them being a vulnerable population on multiple levels. They were juveniles, they were incarcerated being held against their will. They were also possibly being coerced to participate due to being in a correctional facility and possibly feeling as if they would be penalized for not

participating. The IRB having these concerns limited the studies contact with the youth to simply asking for permission to contact their parent/guardian to ask to be part of the study. The youth could be told about what a medical home was to gain consent to contact their parent or guardian.

Once consent from the youth was obtained to contact their parent or guardian a call was made to the parent/guardian to explain the study and gain consent to participate. Once consent was obtained the KIDSCREEN survey was completed by the parent/guardian either over the phone, with the interviewer reading the parent the question and marking for them, or by mailing the survey to the parent/guardian for them to complete and return.

All youth admitted to Gilliam were approached to be included in project during the study period. Once Study information was explained to both the youth and their guardian consent would be attempted to be obtained from both. The only exclusions would be those that have no guardian or youth consent, no insurance eligibility and those with no written & spoken English competence. The Healthy Communities project participation had to be confirmed due to the poor follow up noted by the parent/guardian of the youth in the project. Realizing that the Healthy Community's worker had other responsibilities for their job and that they were helping to make this DNP project a success certain agreements needed to be made. Realizing that Healthy Community's staff were not able to indefinitely follow up with subjects for participation. The following were agreed to: HC staff would attempt to contact participant three times once a referral was made. Once contacted, if follow up agreed would attempt three times. If no contact after three attempts the subject would be labeled 'Lost to Follow up'. Many of the potential participants to this project ended up as loss to follow up.

Due to the stipulations put forth by the IRB the youth survey was not able to be completed, only the parent's survey of their thoughts of their youth could be obtained. This limited the information gained to just that of the parent's impression and not that of the youth.

**Results:**

Due to project design changes that were made to obtain IRB approval the study outcomes also changed. The IRB's requirement for limited youth contact, that being to only to gain consent to contact their parent or guardian, limited the data that could be gathered for analysis. The writer also found that there was poor follow up from the parent/guardian regarding this project. In interactions of this writer and the parents/guardians of these youth it was noted that the youth being in detention was one of many stressors put upon the parents and families at the time that the subject youth was in detention.

During the project period, all residents admitted to Gilliam were offered to participate. During the study period, there were 96 residents who agreed to participate. Of those 51-residents participated in the project. Of the 45 residents that agreed to participate but were not part of the study, 5 residents were Department of Human Services youth. These youths have the State as their legal guardian. This writer found that the caseworkers would not give consent for the youth to participate. This is an internal issue that could be solved by the State agreeing that this is a service that it should provide. There were also 21 residents Parent/Guardian were not able to be contacted, 2 resident's parent/guardian were SSO, 5 resident's parent/guardian declined to participate, and 12 resident's parent/guardian states that the resident had a PCP.

In the data analysis, it was found that there were only three participants that completed the project which was only 6% of the project population. This minimal completion rate resulted in

the P value of  $>.05$  for the variables tested. Due to only 2 participants completing both surveys comparison was not possible. P values for the variables were in the .50 and larger range, which meant that the results had a very high possibility of being to chance only and not as a result to any intervention of the study. The average number of admits of the participants in this study to Gilliam since initial participation out of the 51 initial participants was prior to study 2.61 admits, during study 0.71 admits, and since study completion 0.82 admits. The study was not able to provide the data that was planned due to the IRB constraints and the lack of follow up and participation by the parent/guardian.

### **Summary of Project**

The things that worked well with this project were partnering with the Healthy Communities project as well as educating the residents as to the importance of a medical home. At least these residents would have an idea of the services that were available to them. What didn't work in the project was needing to depend on parent/ guardian follow up. That the study design was as such that the IRB forbid any youth contact after initial consent to contact parent. Assuming that all would want to have the services and resources of a Medical Home. Needing to have the parent or guardian feel the necessity to have a Medical Home provider. Assuming that all would jump at the opportunity to have a provider.

There is a need for continued study and follow up on the Project since the juvenile detention population continues to be at higher risk for negative health outcomes more so than the general adolescent population. Health risks and problems need early intervention, due to many health and Mental health issues being identified in detention. With the Division of Youth Corrections seeking National Commission on Correctional Health Care accreditation, this project

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can serve as an opportunity to make connection to the community health system, which is a requirement of the accreditation.



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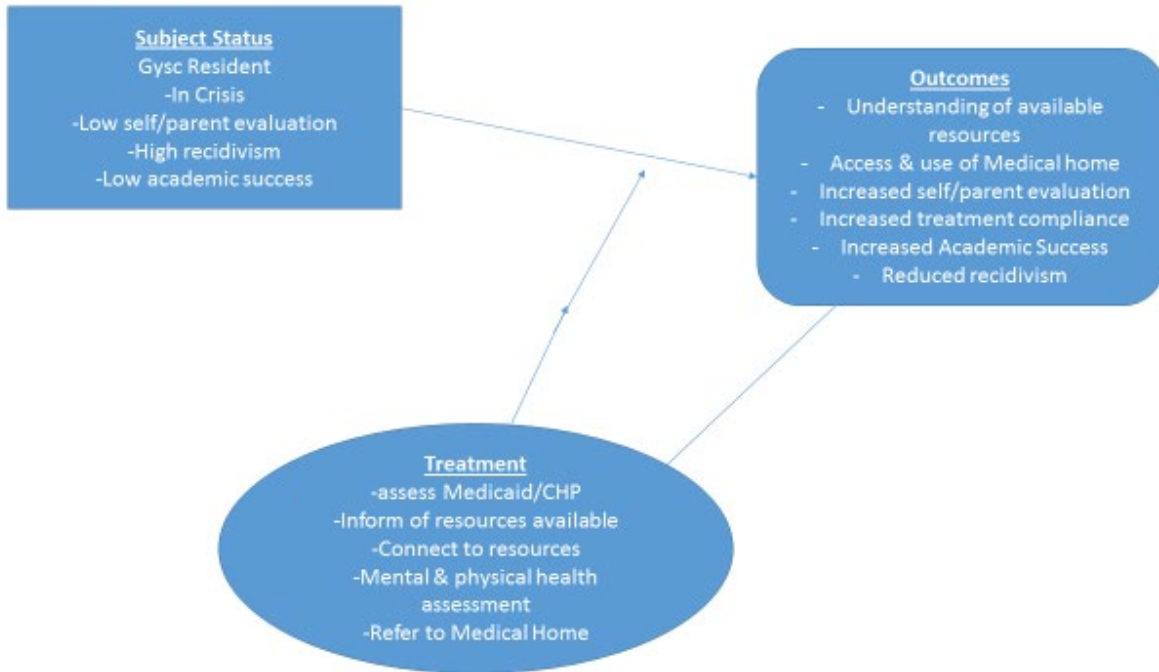
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## Conceptual Model



## Logic Model

