IMPROVING HENRICO COUNTY'S MENTAL HEALTH SERVICE DELIVERY:

A POLICY ANALYSIS

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HONOR STATEMENT

On my honor as a student, I have neither given nor received unauthorized aid on this assignment.

DISCLAIMER

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency. All errors are my own.

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KEY TERMS

Emergency Custody Order (ECO): An emergency custody order is designed to provide immediate, but short-term, intervention for individuals experiencing a mental health crisis who:

a. may be at risk of harming themselves or others and;
b. are unwilling or unable to seek treatment voluntarily.

An ECO requires law enforcement to take custody of the individual in question until they are evaluated by a mental health professional. These evaluations determine if the individual meets the criteria for a TDO.

Temporary Detention Order (TDO): A temporary detention order is a legal order that authorizes the involuntarily hospitalization of an individual experiencing a behavioral health crisis. A TDO requires law enforcement to retain custody of the individual in question and oversee their transportation to an appropriate treatment facility.

Civil TDO: TDOs involving members of the community in temporary custody of law enforcement.

Forensic TDO: TDOs involving individuals incarcerated in Henrico County Jail East and Jail West.

ACRONYMS

CRC: Crisis Receiving Center

ECO: Emergency Custody Order

TDO: Temporary Detention Order

PDH: Parham Doctor's Hospital

EXECUTIVE SUMMARY

This analysis is centered on temporary detention orders (TDO) in Henrico County, which are legal orders authorizing the involuntary hospitalization of persons determined to pose a threat to themselves or others. TDOs require law enforcement to retain custody of the individual in question and oversee their transportation to an appropriate treatment facility.

However**, due to the state-wide shortage of behavioral health resources and increases in 911 calls with a mental health nexus, it is difficult for the Henrico County Police Division to locate available treatment facilities to accommodate individuals under TDO**. First, the shortage of available treatment centers and mental health professionals in Virginia has led to increased wait times for individuals seeking treatment. My analysis demonstrates that the average wait time between the imposition of a TDO and placement in treatment is an estimated 33 hours. These substantial wait times are a costly and time-consuming burden. In total, the county spent $740,994 on overtime pay for TDO coverage in 2022. Further, long periods of custody take police officers off the road for an extended period of time while waiting for treatment facilities to become available. This results in a diminished capacity for the Henrico County Police Division to respond to situations in the community.

Existing research shows that a well-established network of crisis stabilization centers can promote positive outcomes for individuals experiencing a behavioral health crisis. When these facilities are accessible, police departments can more efficiently transport individuals to receive the treatment they require.

In addition to letting present trends continue, this report examines two policy alternatives that Henrico County may adopt to place individuals experiencing a behavioral health crisis into high-quality, professional care as quickly as possible:

1. Establish a 23-hour crisis receiving center: a facility designed for short-term treatment and assessment to determine whether admission to an inpatient facility is necessary.
2. Establish a full continuum of care facility: a facility that includes a crisis receiving center and a crisis stabilization unit with beds for up to 15 days of in-patient treatment.

The expected outcomes of these policy options are evaluated against four criteria: average wait time, care capacity, five-year total cost, and administrative feasibility. These criteria were selected in accordance with the client's requests.

Based on the findings of this report, **Henrico County should seek approval from the Board of Supervisors to establish a 16,000 square foot full continuum of care facility designed to meet the needs of individuals who experience mental health challenges.**

PROBLEM STATEMENT

According to the code of Virginia, a temporary detention order (TDO) is a legal order that authorizes the involuntary hospitalization of persons determined to pose a threat to themselves or others. Henrico County currently executes between three and ten TDOs each day, during which law enforcement is required to retain custody until the individual is accepted by a mental health treatment facility (*Va. Code § 37.2-809*, 2023).

Due to the state-wide shortage of behavioral health resources and increases in 911 calls with a mental health nexus, it is difficult for the Henrico County Police Division to locate available treatment facilities to accommodate individuals under TDO. This results in a reduction in the quality of care received by the person in custody and creates an undue burden on the police.

The shortage of available treatment centers and mental health professionals in Virginia has led to increased wait times for treatment. The client's primary concern is that these wait times reflect a poor quality of care for individuals experiencing a behavioral health crisis. Henrico's police officers often spend hours, and even days, in the emergency rooms of area hospitals maintaining custody of individuals under TDO until an available behavioral health treatment facility is located.

Substantial wait times pose a costly and time-consuming burden. In 2022, the county spent $740,994 on overtime pay for TDO coverage (K. Johnson, personal communication, September 2022). Further, long periods of custody take police officers off the road, resulting in a diminished capacity for the Henrico County Police Division to respond to situations in the community.

Such challenges have made it difficult for Henrico County to uphold its mission to promote dignity, recovery, and self-sufficiency for individuals with mental illness (*Henrico County Mental Health & Developmental Services*, n.d.). In response, the county is seeking to adopt a progressive treatment approach that minimizes the role of police and facilitates rapid placement in high-quality professional care.

CLIENT OVERVIEW

The client of this report is Henrico County Local Government. Henrico County is located in Virginia, outside the city of Richmond. With a population of over 330,000, Henrico County is the fifth most populated county in the Commonwealth (*Henrico County, Virginia Population*, 2023). According to their mission statement, "In partnership with our residents, Henrico County Government is dedicated to enhancing the quality of life for all our residents" (*Henrico County*, n.d.). Thus, the county is committed to providing exceptional public services to its residents, which includes public safety and health and human services pertaining to community mental health.

The Henrico County Police Division is tasked with ensuring public safety to the 330,076 civilians who reside in the county. Their vision is "to be cutting edge public-safety leaders dedicated to equality and civic trust," while their mission is to "provide innovative and collaborative police services for a safe and thriving Henrico" (*Henrico County Police Division*, n.d.)

Major Kimberly Johnson, Deputy Chief of Police—Support Services Bureau, is the primary point of contact for the student-client relationship required of the Applied Policy Project. Major Johnson holds a master's degree in Public Administration with a concentration in Public Policy from the University of Nebraska and a bachelor's degree in Safety and Risk Management from Virginia Commonwealth University. She earned Level V in Henrico County's Leadership Development Program, the FBI LEEDA Trilogy Award, and two Chief's Eagle Awards during her service with Henrico (*Henrico County Police Division*, n.d.)

Client Goals:

1. To improve the quality of treatment provided to individuals suffering from mental health crises in the community.
2. To minimize the amount of time persons in a behavioral health crisis are in police custody. This, ideally, will minimize the trauma associated with temporary detention.
3. To shorten the wait time between the execution of a TDO and placement in psychological treatment.

PROBLEM BACKGROUND

With nearly one in five U.S. adults living with some form of mental illness, the United States has among the highest rates of mental health crises in the world. Depression, the most common mental disorder, impacts an estimated 300 million people worldwide (Shanosky et al., 2021). Other common forms of mental illnesses include anxiety disorders, bipolar disorders, schizophrenia, post-traumatic stress disorder (PTSD), and co-occurring substance use disorders and addiction. While these illnesses have existed for centuries, the United States government only recently began considering mental health a public policy issue, signified by the passage of the National Mental Health Act of 1946 (Pellowski, 2013).

Historically, mental illnesses have been associated with stigmas of shame, poor morality, and insanity (Parcesepe & Cabassa, 2013). Individuals suffering from mental health issues were commonly ostracized by society and institutionalized in insane asylums, where they were subject to inhumane treatments like shock therapy and bloodletting (Soreff & Bazemore, 2006). Over time, treatment conditions improved as society learned more about mental health. In the latter half of the 20th century, insane asylums were gradually replaced by community-based mental health centers that sought to provide evidence-based treatment. Modern community-based mental health treatment centers are often operated by local or state governments, non-profits, or private hospitals and offer a range of services including therapy, crisis intervention, and support groups (Roth, 2021; Yohanna, 2013).

Unlike physical medical emergencies, mental health emergencies (i.e., those that require first-response intervention) are typically responded to by law enforcement rather than medical professionals (Waters, 2021). By default, police officers work on the frontlines of mental health emergencies because there is no other entity designated to provide first-response intervention in these situations. Thus, 911 is the most commonly used resource for mental health emergencies; an estimated 20 percent of police calls for service involve an individual experiencing some form of mental health crisis (Abramson, 2021). However, police departments often feel ill-equipped to provide adequate mental health services, as these crises often require more time, expertise, and resources than available to individual departments.

Today, Americans are generally more open to conversations and policies surrounding mental health, although some stigma remains. According to a survey by the American Psychological Association, 87 percent of Americans agree that having a mental health disorder is “nothing to be ashamed of” (Bethune, 2019). As a result of this paradigm shift, issues surrounding mental health are being taken more seriously than ever before. State and local governments across the county have begun reimagining the mental health care structure. This project’s client, Henrico County, is among the many localities in the county exploring ways to better serve citizens suffering from mental illnesses.

Mental Health Intervention: Local Procedures

The current line of procedure for handling individuals experiencing a mental health crisis is summarized as follows:

A police officer encounters a person who appears to have a mental illness and may be in need of emergency evaluation for hospitalization or treatment. At this point, an emergency custody order (ECO) may be executed if deemed necessary.

Per Code of Virginia 37.2-808, the criteria for an ECO are met if the officer has probable cause to believe the person:

1. Has a mental illness and there exists a substantial likelihood that, as a result of that mental illness, the person will, in the near future:
    a. Cause serious physical harm to himself or others as evidenced by recent behavior causing, attempting, or threatening harm and other relevant information, if any; or
    b. Suffer serious harm due to his lack of capacity to protect himself from harm or to provide for his basic human needs;
2. Is in need of hospitalization or treatment; and
3. Is unwilling to volunteer or is incapable of volunteering for hospitalization or treatment (*Va. Code § 37.2-809*, 2023).

A law enforcement officer who has probable cause to believe that a person meets the criteria for emergency custody must take that person into custody and transport them to be assessed for the need for treatment. Once a decision is made to place a person under ECO, the officer must notify Henrico Area Mental Health and Behavioral Services, who conducts an evaluation to determine if the individual needs emergency treatment. The majority of these evaluations occur at Henrico's Crisis Receiving Center (CRC), which is based at Parham Doctors' Hospital (PDH) Campus Emergency Department (K. Johnson, personal communication, September, 2022).

Once the individual has been evaluated, there are three possible outcomes:

1. **Temporary Detention is Recommended**
2. Voluntary Hospitalization is Recommended
3. Hospitalization is Not Recommended

In the event that a TDO is issued, the responding officer must maintain custody of the individual until they can be transferred to a treatment facility. **This is the point, in the current line of procedure, at which the problem arises.**

In the event that a TDO is not recommended– that is, either voluntary hospitalization is recommended or hospitalization is not recommended– the individual is discharged from police custody. It is important to note that, depending on the results of the initial mental health evaluation, not all ECOs become TDOs. For the sake of this analysis, TDO data is used because it is the most common point at which the focal problem of this analysis arises.

To reiterate, it is difficult for Henrico County to accommodate the needs of citizens experiencing behavioral health crises, especially those under TDO. This is difficult for two primary reasons:

The Shortage of State-wide Mental Health Resources

The Commonwealth of Virginia is currently experiencing a shortage of available mental health treatment staff and facilities. There are currently eight behavioral health hospitals spread across the state, but these facilities are functioning at limited capacity. In July of 2021, as a result of staffing issues related to COVID-19, the Virginia Department of Behavioral Health and Developmental Services closed five of its eight behavioral health facilities to all admissions. As of March 2023, about ten percent of state hospital beds remain closed– in total, there are 2,124 state hospital beds, but 226 of those are not in service and are not likely to be reopened due to staffing shortages (K. Johnson, personal communication, September 2022). Of the remaining beds, priority is given to forensic TDOs (those involving persons currently incarcerated in a jail or prison) since they cannot be placed in private hospitals, therefore further limiting access to state hospital beds for everyone else.

Although the state is working to reopen the remaining beds, the lack of mental health professionals in the state limits the number of patients that can be accepted (Masters, 2022). Currently, Virginia ranks 39th in the United States for access to mental health care. An estimated 38 states have more licensed behavioral health professionals per capita than Virginia (Konrad, 2022). Further, 61 percent of Virginia's licensed behavioral health professionals are 55 and older, thus nearing retirement age (Konrad, 2022; Masters, 2022). Each of these factors contributes to the shortage of mental health resources across the state. Since there are not enough hospital beds, treatment centers, or mental health professionals available, it is difficult for Henrico to find an available treatment center to accommodate individuals under TDO. This situation is not unique to Henrico– all other counties in Virginia are experiencing the negative effects of these shortages. Therefore, localities often must compete for openings at the eight state hospitals (K. Johnson, personal communication, October 2022).

The Increase in Behavioral Crisis 911 Calls

In the past five years, the county has seen a 20 percent increase in 911 calls with a mental health nexus. They currently receive between 8 to 10 calls for service per day involving individuals experiencing a behavioral health crisis (K. Johnson, personal communication, September 2022). As a result, there is an increased demand for mental health treatment in Henrico County, yet it is difficult for the county to locate available treatment facilities to accommodate this demand.

CONSEQUENCES OF THE PROBLEM

Excessive Wait Times for Treatment

Delayed access to mental health treatment during crises can exacerbate an individual's symptoms and prolong their distress (DeAngelis, 2021). The shortage of available treatment centers and mental health professionals in Virginia has led to increased wait times for individuals under TDO. When a TDO is executed, the Henrico Police Division's mental health staff must locate an available treatment center. Unfortunately, an estimated 70 percent of individuals under TDO in Henrico County experience wait times between one hour and greater than one week before they are placed in treatment (K. Johnson, personal communication, September 2022). When individuals experiencing a mental health emergency must wait excessive periods of time to receive the care they need, their mental health conditions often deteriorate further. The current average wait time for individuals under TDO in Henrico County is estimated at 33 hours (see Appendix A).

Excessive Time in Police Custody

Individuals under TDO must remain in police custody until they are placed in a treatment facility (*Va. Code § 37.2-809*, 2023). Police officer presence can be associated with feelings of anxiety, discomfort, and even trauma for certain individuals. These consequences are often exacerbated for individuals experiencing a mental health crisis, resulting in a poor quality of care during the wait time between TDO imposition and treatment placement (K. Johnson, personal communication, September 2022).

Strains in the Police Division's Resources

The lack of accessible treatment facilities places a costly and time-consuming burden on officers who must remain with the individual until they are hospitalized for treatment. As previously mentioned, law enforcement officers are required to oversee mental health transports for all individuals under TDO. In 2022, the county spent $740,994 on overtime pay associated with TDO coverage (K. Johnson, personal communication, September 2022). Further, these mandatory transports take police officers off the road for an extended period of time as they wait for treatment facilities to become available. This results in a diminished capacity for the Henrico County Police Division to respond to situations in the community.

POLICY CONSIDERATIONS

Any proposed change to the TDO continuum of care must consider the expected TDO demand, the expected wait time between TDO imposition and treatment placement, and the expected duration of a mental health crisis, summarized below:

Expected TDO Demand

Each policy proposal in this analysis will consider the expected volume of TDOs executed by Henrico County. Figure 1 displays the TDOs served by Henrico County in 2022, which is the most precise data available (K. Johnson, personal communication, September 2022).

Figure 1, 2022 TDO Data

Month	Civil TDO's	Forensic TDO's
Jan	66	1
Feb	66	3
Mar	63	2
Apr	68	2
May	69	6
Jun	61	1
Jul	68	4
Aug	65	3
Sep	61	6
Oct	52	1
Nov	55	0
Dec	62	2
Annual Total:	756	31

Civil TDO: TDOs involving members of the community in temporary custody of law enforcement.
Forensic TDO: TDOs involving individuals incarcerated in Henrico County Jail East and Jail West.

Given that 787 TDO's were served in 2022, if trends continue, Henrico should expect an average of 2.16 TDO's per day. However, due to extended wait times, the client notes there have been multiple occasions this year with between eight and eleven TDOs in police custody (K. Johnson, personal communication, October 2022). As requested by the client, the policy alternatives in this analysis will be designed to serve a minimum capacity of eleven TDOs at any given time.

The Expected Wait Time Between TDO Imposition and Treatment Placement

Each policy proposal in this analysis will aim to expedite the time between the imposition of a TDO and placement in treatment. This will be measured by the average wait time criterion in this analysis (see p. 20). According to client-provided approximations, of the 787 individuals served in 2022:

- Approx. 30% were accepted to treatment immediately

- Approx. 20% were placed in treatment within 12 hours
- Approx. 30% were placed in treatment within 48 hours
- Approx. 15% were placed in treatment within a week
- Approx. 5% were placed in treatment in greater than a week

To estimate the status quo average wait time, this analysis weighs the midpoint estimate of each brackets based on their respective proportions:

- "Accepted to treatment immediately" assumes a 0 hour wait time.
- "Within 12 hours" assumes a 6 hour wait time.
- "Within 48 hours" assumes a 24 hour wait time.
- "Within a week" assumes a 84 hour wait time.

For greater than a week, ten days was deemed a reasonable estimate by the client:

- "Greater than a week" assumes a 240 hour wait time.

The Expected Duration of a Mental Health Crisis

Each policy proposal in this analysis will aim to accommodate individuals under TDO for the duration of their mental health crisis. This will be measured by the care capacity criterion in this analysis (see p. 20). The necessary length of time in treatment varies by individual, but is estimated as follows (K. Johnson, personal communication, February 2023):

Estimated Time in Care	< 23 hours	24 hours – 15 days	< 15 days
Proportion of Cases	60%	30%	10%

EVIDENCE ON POTENTIAL SOLUTIONS:

Police Intervention: Who Should Respond to Mental Health Crises?

It is commonly argued that the potential for violence necessitates police presence in psychiatric emergencies. In fact, over 60 percent of Americans believe that individuals with mental illness are more likely to commit acts of violence than the average member of society (Fazel et al., 2009). This perception, regardless of its veracity, contributes to the complexity of this policy area – while some argue that police are not best suited to provide mental health interventions, others feel that it is unsafe to rely on unarmed mental health professionals (DeAngelis, 2021; Rockett, 2020; Rueve & Welton, 2008). At the intersection of the mental health and policing policy arena lies the debate as to whether the police *should* respond to behavioral health crises. Failure to mention this argument would be amiss, as it is a foundational element of police reform efforts. However, in keeping with the scope of the Applied Policy Project, this analysis will function under the assumption that the police will continue to play a role in behavioral crisis interventions for the foreseeable future.

National Guidelines for Behavioral Health Crisis Care

In early 2020, the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) released national guidelines for behavioral health crisis care outlining three main pillars of service that all localities should aim to achieve (M. Hogan et al., 2020):

1. Someone to call
2. Someone to respond
3. Somewhere to go

The first pillar is 911 by default. The second pillar tends to fall in the purview of police officers. Typical responses include dispatching officers with crisis intervention training and implementing "co-responder" models. The literature on these models will be outlined in the subsequent section. The third pillar, somewhere to go, requires a well-funded and maintained network of crisis stabilization facilities that provide an alternative to prison or emergency departments for individuals experiencing behavioral health crises (M. Hogan et al., 2020). As previously mentioned, there is a shortage of these kinds of facilities across the state of Virginia. In response, Tucson, Arizona, and a few localities in Virginia have begun imposing their own creative solutions, which are also outlined in the subsequent section.

Crisis Intervention Training: The CIT Model

Crisis Intervention Training (CIT) is the most common approach to improving police response to behavioral health crises. The CIT model was piloted in Memphis, Tennessee in the 1980's and has since become the standard practice for police-based crisis intervention in the community. At its core, CIT is a 40-hour curriculum available to police departments across the country. This program trains officers to identify behavioral health crisis signs, teaches de-escalation tactics, and prioritizes treatment-based solutions opposed to jail time (Dupont et al., 2007). To date, some variation of CIT training has been adopted by an estimated 3,000 police departments across

47 states (Balfour et al., 2020). Henrico County adopted the Memphis model in 2009, and today, every single Henrico police officer is CIT trained.

When the CIT model was developed forty years ago, the community policing climate was different—communities had more trust in officers and simultaneously experienced less mental health crises. There was little evidence initially to support the adoption of CIT, but due to its increasing popularity, scholars have since attempted to gauge its effectiveness. Currently, the evidence is conflicting. Some scholars have found positive impacts associated with CIT initiatives, while others cite little to no improvements.

Many researchers hold that CIT training has little empirical support and is not an evidence-based practice, especially due to its varying outcomes and overreliance on self-reported data (Peterson & Densley, 2018; Taheri, 2016; Tully & Smith, 2015). For example, a 2016 meta-analysis concluded that CIT did not improve officer safety or decrease the amount of arrests associated with behavioral crises (Taheri, 2016). Another study found that a majority of officers did not feel their CIT training gave them sufficient knowledge of their community's mental health resources (Tully & Smith, 2015). Lastly, a rigorous literature review found that about two thirds of studies reported no significant increases in officers' feelings of preparedness after CIT training (Peterson & Densley, 2018).

Other studies show positive outcomes associated with CIT programs and hold that it benefits law enforcement, mental health professionals, and the community more broadly (Balfour et al., 2020; Compton et al., 2014; Ellis, 2014; Rogers et al., 2019). For example, research shows that CIT programs improve officers' knowledge about mental illness and attitudes toward those suffering (Ellis, 2014). Further, CIT training has been proven to increase the likelihood that an individual will be referred to treatment rather than being arrested (Compton et al., 2014). Additionally, officers who are CIT trained are more likely to de-escalate crises using verbal redirection rather than force (Rogers et al., 2019). More recent research expands on these findings, showing that CIT training has the most positive effect on officers who take the course voluntarily rather than as a requirement. For example, a study found that officers who receive training voluntarily demonstrate more effective de-escalation skills and make better-calibrated referral decisions—these effects are even stronger when the officer has at least five years of experience (Balfour et al., 2020).

Lesson 1: Crisis Intervention Teams are likely a step in the right direction, but fail to address the lack of available treatment facilities

Co-Responder Teams

A co-responder team is another common solution to the behavioral health crisis, in which a behavioral health clinician responds to crisis calls in tandem with law enforcement. The Los Angeles Police Department piloted this model in 1990, which has since been widely adopted in the United Kingdon and Canada (White & Weisburd, 2018). While the specific functions of this model vary across localities, common forms include teams that ride and respond together, teams that arrive separately, and teams where the officer responds in-person and the clinician responds via phone or video call. Additionally, some localities opt to have officers and clinicians wear plainclothes and drive unmarked vehicles, while others remain in uniform.

Research on the effectiveness of these kinds of programs is mixed. Some studies have found that the "ride together" model is effective in dense, urban populations with high mental health call volumes. Reports show that co-responder teams in urban localities have seen up to a 57 percent successful engagement rate across the hundreds of individuals referred to case management (*Community Response Team Annual Report*, 2019). Further, these programs can lead to a statistically significant decrease in arrests, while lessening the amount of time officers spend responding to behavioral health crises in the field. Specifically, the co-responder team in Douglas County, Colorado, was found to save over $65,000 on jail diversions alone—in one year, 200 individuals received treatment who would have otherwise been sent to jail (Garcia, 2022). However, the efficacy of these programs widely varies depending on the local context; specifically, the availability of mental health resources in the community as well as the level of synergy between local police departments and treatment facilities (*Community Response Team Annual Report*, 2019; Wankum, 2019).

Lesson 2: While co-responder models can have positive impacts, they typically function best as one component of a larger crisis response system that requires access to treatment facilities.

Tucson, Arizona: A Case Study

One of the most well-established crisis intervention teams in the U.S. functions in Tucson, Arizona, which provides a continuum of care to individuals at all stages of mental health crises: from early intervention, stabilization, and aftercare (M. F. Hogan & Goldman, 2021). This system works directly with the local police department to offer over-the-phone counseling services, schedule therapy appointments, and, when necessary, respond to calls in the field. The team intercepts 911 calls related to mental health crises and receives about 10,000 calls per month involving citizens experiencing suicidal thoughts and substance use crises (Richmond, 2022). Of these calls, 80 percent are reported to be solved over the phone by referring the individual to a mental health clinic, as the state's Regional Behavioral Health Authority requires all local mental health clinics to report available appointment slots to the MCT (Balfour et al., 2020; M.F. Hogan & Goldman, 2021; Richmond, 2022).

When crises cannot be resolved over the phone, the staff is able to dispatch one of its 16 mobile crisis teams to provide on-support and transportation to a crisis stabilization center if necessary. The teams use GPS technology, similar to the ones used by Lyft and Uber, to track MCT's location and status to optimize driving routes and shorten response times (Balfour et al., 2020). This technology can identify the status of nearby teams —that is, when the last intervention began, and how close the team is to finalizing their current encounter. The app also assists with continuity of care by transmitting any relevant clinical information from the crisis line dispatcher to the MCT so that the teams can offer individualized care (Balfour et al, 2020; M.F. Hogan & Goldman, 2020).

Arizona's well-established network of crisis stabilization centers facilitates this program's success. The state has dozens of centers, the largest of which is the Crisis Response Center, a public facility that offers inpatient psychiatric care and ongoing treatment (Balfour et al, 2020). Dispatchers note that its location, being connected to an emergency department, allows for smooth and timely transports. As a result, the Tucson's CRC makes it much easier for law

enforcement to bring individuals to treatment rather than jail – the facilities are able to book new patients in around ten minutes, as opposed to the hours it often takes to book an individual in the county jail (M.F. Hogan & Goldman, 2020).

Tucson also has co-responder teams that aim to intervene with high-risk individuals before their situation escalates to a crisis. By dispatching officers and mental health professionals in plain clothes, these individuals work in tandem to conduct homeless outreach and mental-illness wellness checks in areas with higher substance use disorder rates. As a result, the city has seen around a 20 percent decline in civil disturbance arrests and instances in which police officers have to respond to mental health crises (Balfour et al, 2020; M.F. Hogan & Goldman, 2020).

Lesson 3: A well-established network of crisis stabilization centers is key.

Facilities in Virginia: Western Tidewater and Loudoun County

In order to accommodate their crisis intervention needs, Region 5 (located in Coastal Virginia) is in the process of creating their own facility, the Western Tidewater Crisis Receiving Center. In an interview with the facility, the client learned that this facility has three components:

1. Crisis Intervention Team Assessment Center (CITAC) where the police can bring people under ECO for their initial evaluation;
2. a "23-hour" recliner facility for TDOs, known as a Crisis Receiving Center (CRC); and
3. a 16-bed Crisis Stabilization Unit (for TDOs requiring intensive treatment for up to 15-days) (K. Johnson, personal communication, January 2023).

Additionally, on October 6th, 2022 Loudoun County Supervisors officially requested $16.1 million from the state to cover the construction and furnishing costs of a regional Crisis Receiving and Stabilization Facility. While the facility is in the planning stage (as of March, 2023), it is estimated to be around 16,000 square feet with a 36 patient capacity (Greene, 2022). Loudoun County did not respond to an interview request.

Lesson 4: Other localities in Virginia have begun developing their own crisis stabilization centers.

POLICY ALTERNATIVES

This report analyzes three policy options that the Henrico County may adopt to improve the handling of individuals experiencing a behavioral health crisis. The following policy alternatives are under consideration: maintain the status quo, establish a 23-hour crisis receiving center, and establish a full continuum of care facility. The client notes that a center exceeding 15 days would be legally and fiscally infeasible for Henrico and thus will not be considered in this analysis.

To reiterate, Henrico County aims to promote dignity, recovery, and self- sufficiency in the lives of individuals experiencing the effects of mental illness. The county is seeking to implement a progressive treatment concept that minimizes the role of the police and places individuals in high-quality, professional care as quickly as possible.

Alternative 1: Status Quo

The first alternative is to maintain the status quo. As previously outlined, the process of involuntary hospitalization currently functions as follows:

1. Police respond to a 911 call for an individual experiencing a behavioral health crisis. In the event that an individual is determined to be a danger to themselves or others, the individual is placed in police custody.
2. Law enforcement executes an ECO, under which the individual must receive an initial mental health evaluation. Law enforcement officers are required to maintain custody until a determination has been made about treatment and next steps.
3. If the individual is determined to require involuntary hospitalization, a TDO is executed. A TDO requires law enforcement to ensure the individual is transported to an available treatment facility.

Under current protocol, law enforcement officers bring individuals under ECO to the Henrico Crisis Receiving Center to be evaluated for mental illness. The center is based in the emergency room at Parham Doctors Hospital (PHD), conveniently located across the street from Henrico's Public Safety Building. This center operates as a private-public partnership between PHD and Henrico's Crisis Intervention Team, which includes representatives from the Police Division, Henrico Fire, the Sherriff's Office, and Henrico Area Mental Health and Developmental Services.

Developed in 2011, the center aims to "promote mental health recovery by connecting patients with community resources and avoiding unnecessary hospitalizations and incarcerations" (Lacey, 2018). Unfortunately, being based in an located in an emergency room makes it difficult to avoid unnecessary or prolonged hospitalizations because initial screenings are conducted by a licensed physician. This poses a complicated dilemma: in the likely event that the individual is medically cleared (i.e., is determined to have no physical health risk), physicians cannot legally discharge patients from their care until an approved facility of temporary detention for behavioral health treatment is located. The emergency room is not designed to offer mental health services that these crises necessitate, but instead functions as an intermediary until an appropriate treatment facility can be located. Unfortunately, as previously discussed, it is extremely difficult to locate

an available facility in a timely manner. As a result, patients requiring mental health treatment must remain in the emergency room accompanied by a law enforcement officer – oftentimes from hours, to days, and even weeks— until custody is accepted by an approved facility.

Alternative 2: Establish a Public Henrico Mental Health 23-Hour Crisis Receiving Center

The second policy alternative is to establish a public Mental Health Crisis Receiving Center (CRC). This CRC would function as a temporary holding facility through which intake, evaluations, and short-term treatment are provided within a 23-hour window. This facility would be operated and maintained by Henrico Mental Health & Developmental Services in cooperation with the Henrico Police Division, enabling law enforcement to immediately transfer custody of individuals to a licensed psychiatrist. The proposed 23-hour operating time was selected to avoid licensure requirements for inpatient facilities offering overnight stays. This policy alternative would provide immediate treatment and temporary care until:

a. The mental health crisis is de-escalated, stabilized, and discharged with a treatment plan within 23 hours, or;
b. a long-term facility is located for those who require inpatient treatment exceeding 23 hours.

Under this policy alternative, law enforcement must transfer custody to a long-term facility for the estimated 40 percent of individuals who require treatment exceeding 23 hours (see pg. 12). As previously mentioned, locating an available facility is often difficult and time consuming. This alternative is not positioned to completely eliminate that barrier.

Establishing a 23-hour public CRC would, however, circumvent the initial hospitalization phase that occurs via Henrico County's current public-private partnership with PDH. There is an incentive to do so given that:

a. The majority of individuals experiencing a behavioral health crisis necessitate treatment from a physiatrist, not a physician;
b. emergency room physicians evaluate and treat medical conditions pertaining to physiological, not psychological health;
c. per the status quo, physicians cannot legally release patients under their care to a 23-hour psychiatric facility, even in the event that the individual is medically cleared. As a result;
d. the average length of time subjects under TDO are in officer's custody in the emergency room is at an all-time high— lasting multiple days and beyond a week in some cases.

Implementing a 23-hour public CRC would require building, furnishing, and staffing a new facility. An estimated 29 full-time employees must be hired: six registered nurses, five licensed mental health professionals, three family support partners, eight direct support professionals, five case managers, one clinical supervisor, and one on-demand psychiatric prescriber. Additionally, the County must determine a location for the CRC, by either building a new facility or renovating an existing building. It is important to note that County Manager John Vithoulkas, a key stakeholder, prefers new construction for this facility.

Alternative 3: Establish a Full Continuum of Care Facility

The third policy alternative is to establish a full continuum of care mental health facility in Henrico County. A full continuum of care facility offers the same immediate treatment and temporary care as the 23-hour facility, but also adds an additional level of intensive care for up to 15 days. The proposed 15-day operating time was selected to avoid stringent licensure requirements that arise for inpatient facilities offering stays exceeding 15 days.

The incentive to establish an overnight treatment facility arises from Henrico County's desire to provide high-quality mental health care. This facility would provide temporary care until:

a. The mental health crisis is deescalated, stabilized, and discharged with a treatment plan within 15 days, or;
b. a long-term facility is located for those who require inpatient treatment exceeding 15 days.

Under this policy alternative, law enforcement must transfer custody to a long-term facility for the estimated ten percent of individual requiring treatment beyond 15 days (see pg. 12). This alternative is not positioned to completely avoid the limited access to treatment barrier.

Implementing a full continuum of care facility would require building, furnishing, licensing and staffing a new facility. An estimated 40 full-time employees must be hired: ten registered nurses, eight licensed mental health professionals, four family support partners, eight direct support professionals, six case managers, one clinical supervisor, and one on-demand psychiatric prescriber. Similar to Alternative 2, the county would have to establish a location to house this facility—either through renovation or new construction. In addition, this facility would be subject to accreditation and licensure by the Virginia Department of Behavioral Health and Developmental Services.

EVALUATIVE CRITERIA

The expected outcomes of the aforementioned policy alternatives are evaluated against four criteria: average wait-time, care capacity, cost, and administrative feasibility. The status quo serves as the baseline for comparison in this analysis. These criteria were selected in accordance with the client's requests.

Each evaluative criteria and their scoring methods are as follows:

Average Wait Time:

This analysis estimates the average wait time associated with each alternative, which is defined as the time between the imposition of a TDO and placement in psychological treatment. An effective policy will shorten the average wait time between the imposition of a TDO and placement in treatment at all stages. There are two primary stages considered:

1. **Stage 1:** Stage one refers to the initial wait time between the imposition of a TDO and placement in treatment.
2. **Stage 2:** Stage two refers to the wait time when transferring individuals to a hospital who require treatment lasting greater than 23 hours and 15 days, for Alternative 2 and Alternative 3 respectively.

Scoring Method:

For every hour of wait time, 0.05 points will be deducted from a maximum score of three points. This scale encompasses a possible range between zero and sixty hours, as determined to be reasonable by the client (K. Johnson, personal communication, January 2023). 60 hours of wait time will correspond to the lowest possible score of zero, while zero hours of wait time will correspond to highest possible score of three. This scoring system was selected so that points are deducted proportionally and uniformly across each alternative.

Care Capacity:

This analysis estimates the proportion of mental health cases that are stabilized and discharged during each alternative's operating time. To reiterate, the operating times of these facilities range between 23 hours and 15 days. An effective policy will result in mental and physical stabilization during a behavioral health crisis for the greatest number of individuals served in-house (i.e., without having to transfer custody to an alternative treatment center). For example, consider Alternative 2, the 23-hour facility: if an individual needs treatment for longer than 23 hours, then they must be transferred elsewhere under this alternative. This criterion attempts to capture the capacity of each alternative to meet the mental health demand while considering the duration of treatment.

Scoring Method:

The estimated care capacity for each alternative is assigned a score between zero and three based the proportion of mental health cases served. This scale was selected because it reflects the degree to which each facility can meet patient demand. By multiplying the estimated proportion of patients the facility can treat (e.g., .6 for 60 percent) by three, a scale is created where a score of zero represents no capacity to meet demand, a score of 1 represents the ability to meet one-third of demand, and so on.

Cost Estimate:

This analysis estimates the five-year total cost associated with each alternative in terms of their net present value. The following costs are considered:

1. *Building Costs:* the estimated expenses associated with the construction of a building including materials, labor, equipment, and other related costs.
2. *Operating Costs:* the estimated ongoing expenses associated with the day-to-day operations of each alternative.
3. *Cost Savings:* the reduction in the amount of money spent on each alternative as compared to the status quo. The potential cost savings are twofold:
    a. Foregone private-public partnership costs (per the status quo CRC located at PDH);
    b. Reduction in annual officer overtime pay associated with the status quo level of wait time.

It is relevant to note that the overtime pay associated with TDO's is a potential cost saving if a system is implemented that reduces the total amount of time individuals spend in officer custody.

Cost-Related Assumptions:

1. Building costs are amortized over 40 years to reflect that the building will have a useful life beyond the year in which it is constructed (*Tennessee Board of Regents*, 2023).
2. All costs are adjusted for a three percent inflation rate beginning in year 1 (*Congressional Budget Office*, 2023).
3. Costs are provided in terms of their net present value, subject to a five percent discount rate beginning in year 1 (*US Discount Rate*, 2023).
4. The five-year total costs are rounded to the nearest hundred thousand to avoid false precision. Any unrounded cost estimate serves the purpose of providing a final cost estimate to the highest degree of accuracy allowed by the constraints of this analysis.

Scoring Method:

For every one million dollars in cost, 0.05 points will be deducted from the three point maximum score. This scale encompass a possible range between zero and sixty million dollars, which reflects the typical range of costs for related policy interventions (Stephenson et al., 2022). This scoring system ensures that points are deducted proportionally and uniformly across each alternative.

Administrative Feasibility:

The administrative feasibility analysis considers Henrico County's capacity to implement and deliver each policy alternative. In this context, implementation considerations refer to factors that must be taken into account when implementing each of the alternatives. These considerations include logistical factors (e.g., licensure requirements) and potential risks that may impact the success of policy implementation.

Scoring Method :

For every identified implementation consideration, 0.5 points will be deducted from the three point maximum score. This scale encompasses a possible range between zero and six implementation considerations, determined retroactively based on the discovered range. This

scoring system ensures that points are deducted proportionally and uniformly across each alternative.

Total Scores:

To allow for a holistic evaluation, the two measures of effectiveness and administrative feasibility are weighted equally at 25 percent, contributing to a total of 75 percent of the recommendation. Cost is projected in dollars, and will be weighted at 25 percent of the recommendation. Scores are assigned proportionally for each evaluative criteria on a three point scale, with zero representing the lowest possible score. The most preferable estimates will receive the highest score. The policy with the highest total score across the four criteria is recommended to the client.

ALTERNATIVE 1 PROJECTIONS: MAINTAIN THE STATUS QUO

Wait Time Assessment

An effective policy will shorten the average wait time between the imposition of a TDO and placement in psychological treatment. In order to conduct a wait time assessment, it is necessary to know the total number of TDOs served by the Henrico Police Division and their associated average wait times. Figure 1 displays the TDO data from 2022, which is the most complete and recent data available (K. Johnson, personal communication, January 2023). Using a midpoint-average calculation, this analysis determined an average wait time of 33 hours associated with the status quo (see Appendix A) which corresponds to a score of 1.35 points (see Appendix E).

Care Capacity Assessment

An effective policy will result in mental and physical stabilization during a behavioral health crisis for the greatest number of individuals served in-house (i.e. without having to transfer custody to a hospital or other alternative treatment center).

In order to project the care capacity criterion, we must know the percentage of patients who are stabilized and discharged at the PDH CRC the status quo, without being transferred elsewhere. This is highly variable and contingent upon the number of bed openings in the PDH behavioral health unit at any given time, as well as the qualifications of the attending medical professional (i.e. physician versus psychiatrist). With these factors in mind, an estimate was provided by the current CRC staff. According to their records, 14 percent of patients are stabilized and discharged without requiring a custody transfer to an alternative treatment center (K. Johnson, personal communication, March 2023). It is important to note, however, that this is a rough estimate, not a verified figure. Nonetheless, an estimate of 14 percent corresponds to a score of .42 points (see Appendix E).

Cost Estimate:

Annual Private-Public Partnership Costs: $420,000
Henrico County contributes $420,000 annually toward the costs of operating the Crisis Receiving Center (K. Johnson, personal communication, January 2023). This is a verified figure.

Annual Overtime Costs Associated with TDO Coverage: $740,994
As previously mentioned, the status quo is associated with an increase in officer overtime pay. This is a direct result of extended wait times: that is, the time in which individuals subject to TDO remain in police custody until being placed in treatment. According to client-provided projections, the county spent $740,994 on overtime pay for TDO coverage in 2022 (K. Johnson, personal communication, September 2022).

Total Cost Associated with Status Quo: $1,160,994
It costs Henrico County $1,160,994 per year to maintain the status quo (See Appendix B).

Total Five Year Cost Estimate:$5.5 Million

To project the total cost of Alternative 1, this analysis amortizes the costs over a five year operating period using a five percent discount rate and a three percent inflation rate (Economic Outlook…, 2023; US Discount Rate, 2023). The five year projected cost of maintaining the status quo is estimated at $5,481,562.44 (see Appendix B). This corresponds to a score of 2.73 total points (see Appendix E).

Administrative Feasibility Assessment:

Maintaining the status quo is the most administratively feasible policy alternative as compared to Alternative 2 and Alternative 3 when solely considering technical capacity and available resources. Under current protocol, law enforcement officers bring individuals under ECO to a private-public CRC to be evaluated for mental illness and the need for hospitalization. The center is based in the emergency room at PDH, conveniently located across the street from Henrico's Public Safety Building. Since the center's opening in 2011, Henrico has employed the financial and logistical resources necessary to maintain operation. As such, there are no additional personnel needs or administrative tasks required to maintain the status quo since the PDH CRC is currently operating in full effect.

However, the status quo yields substandard results while imposing additional burden on law enforcement staff. As such, stakeholders representing Henrico County are actively advocating for policy change. The following quotes from personal communication with stakeholders illustrate the issues being raised about the current system.

"It is not a matter of if, but when, we will need to make a change."
– Major Kimberly Johnson, Henrico County Police Division.

"While delays in treatment are incredibly difficult for the individual experiencing the mental health crisis, these delays often create significant stress, absences from work, and increased frustration for the family and loved ones of the individual in crisis."
– Daniel Rigsby, Henrico Area Mental Health & Developmental Services

Even with the current demand for change, which represents one feasibility consideration, maintaining the status quo is still the most feasible option in this analysis. Thus, the administrative feasibility associated with the status quo is ranked high in this analysis, with a corresponding score of 2.50 points (see Appendix E).

ALTERNATIVE 2 PROJECTIONS: 23-HOUR CRC

Wait Time Assessment

An effective policy will shorten the average wait time between the imposition of a TDO and placement in psychological treatment at all stages. This analysis determined an average wait time of 4 hours associated with Alternative 2 (see Appendix A). This corresponds to a score of 2.78 total points (see Appendix E). These calculations considered two stages:

Stage 1: Stage one refers to the wait time between the imposition of a TDO and placement in the CRC. Given that 787 TDO's were served in 2022, if trends continue, Henrico should expect an average of 2.16 TDO's per day. However, the client notes that there have been "multiple occasions this year with 8-11 TDOs in police custody" (K. Johnson, personal communication, October 2022). Thus, the center should have the capacity for up at least 11 TDOs. Assuming the 23-hour CRC is built with enough capacity, it is likely that a 23-hour facility could meet the TDO demand for behavioral health crisis intervention and treatment each day. If police officers immediately transfer custody of individuals under TDO to a centrally located 23-hour CRC, there is likely a very short wait time associated with this alternative in the initial stage. Since it takes less than 40 minutes to drive across Henrico County from the furthest point, this analysis predicts that it will take approximately 30 minutes on average to place individuals into this type of facility for treatment.

Stage 2: Stage two refers to the wait time when transferring individuals who require treatment lasting greater than 23 hours to a hospital. This stage of treatment essentially reverts to the status quo conditions, as it requires individuals be transferred to an alternative facility at the end of their 23-hour stay in the CRC.

Care Capacity Assessment

An effective policy will result in mental and physical stabilization during a behavioral health crisis for the greatest number of individuals served in-house (i.e. without having to transfer custody to a hospital or to an alternative treatment center). To reiterate, any individual who is not stabilized and discharged within the 23-hour operating time must be transferred to another hospital. The estimated duration of mental health crises are as follows (K. Johnson, personal communication, February 2023):

Estimated Time in Care	< 23 hours	24 hours – 15 days	< 15 days
Proportion of Cases	60%	30%	10%

Using these estimates, this analysis determined that 473 total individuals, or 60 percent, will be stabilized and discharged by the 23-hour CRC per year without requiring a transfer (see Appendix C). This corresponds to a score of 1.80 total points (see Appendix E).

Cost Estimate:

Building Cost Estimate: $8 Million

If Henrico County were to build a 23-hour CRC, it would be around 12,000 square feet (K. Johnson, personal communication, February 2023). To project the cost of building a 23-hour CRC facility, this analysis uses projections for a similar facility Loudoun County, Virginia. On October 6th, 2022, Loudoun County Supervisors officially requested $16.1 million from the state to cover the construction and furnishing costs of a regional Crisis Receiving and Stabilization Facility. While the facility is in the planning stage (as of April 2023), it is estimated to be around 16,000 square feet with a 36 patient capacity (Greene, 2022). Thus, this analysis first determined the cost per square foot to build a facility, and scaled the estimate from 16,000 square feet to 12,000 square feet (see Appendix B). In addition, Loudoun County tends to have higher construction costs compared to the rest of Virginia. To account for these differences, this analysis uses a cost of living adjustment to estimate the cost of building this facility in Henrico (See Appendix B) (*Cost of Living in Henrico County, Virginia*, 2023; *Cost of Living in Loudoun County, Virginia*, 2023). Using this formula, the upfront construction costs for a 12,000 square foot CRC in Henrico County are estimated around $8 million (see Appendix B). These projections were validated by local construction professionals (President ACE Electric, personal communication, March 2023).

Annual Operating Cost Estimate: $5.7 Million

Loudoun County estimated that it will cost $11.51 million annually to operate their 16,000 square foot facility (Greene, 2022). First, this analysis scales that figure with respect to 12,000 square feet. Next, a cost-of-living adjustment is used to estimate the cost of operating this facility in Henrico as compared to Loudon. The annual operating costs for a 12,000 square foot CRC in Henrico County are estimated around $5.7 million (see Appendix B).

Annual Personnel Cost Estimate: $2.6 Million

An estimated 29 full-time employees must be hired to execute the day-to-day functions of a 23-hour crisis receiving center (K. Johnson, personal communication, December 2022):

- Six registered nurses
- Five licensed mental health professionals
- Three family support partners
- Eight direct support professionals
- Five case managers
- One clinical supervisor
- One psychiatric prescriber

Using average full-time salaries, the personnel costs of Alternative 2 were calculated at around $2.6 million per year (See Appendix D). These costs are included in the annual operating costs, and thus are not to be double counted. However, they are provided for detail.

Annual Cost Savings Estimate: $1 Million

The estimated cost savings associated with Alternative 2 is estimated at about $1 million per year. This accounts for foregone private public operating costs as well as the estimated reduction in annual officer overtime pay associated with the 28.7 hour reduction in average wait time (between the status quo estimate of 33 hours and Alternative 2's projected 4.3 hour wait time) (see Appendix B).

Total Five-Year Cost Estimate: $22.8 Million

To provide a total cost estimate for Alternative 2, this analysis amortized the costs over a five year operating period using a five percent discount rate and a three percent inflation rate. This analysis assumes that the facility would begin operation one year after approval (year 1) to account for construction time. Although the center will likely operate longer than five years, these projections provide a starting point that reflects the capacity of this analysis (note: since the formulas are provided, the client can expand the estimates beyond five years if desired). Because this would be a semi-permanent structure, this analysis amortizes the building costs over 40 years (*Tennessee Board of Regents*, 2023). Based on these calculations, the five-year projected cost of implementing a 23-hour crisis receiving center are estimated around $22.8 million (See Appendix B). This estimate corresponds to a score of 1.86 total points (see Appendix E).

Administrative Feasibility Assessment:

Given its capacity and size, the administrative feasibility of establishing a 23-hour CRC falls in between the status quo and Alternative 3. A 23-hour CRC would require a substantial level of technical capacity, funding, staffing, and resources as compared to maintaining the status quo. For Henrico to provide this facility it must meet the following qualifications:

1. Licensed by DBHS as a provider of Crisis Stabilization Services
2. Credentialed with the individual's Medicaid MCO for individuals enrolled in Medicaid managed care or the Fee of Service (FFS) contractor for individuals in FFS.
3. Employees must be trained according to DBHS requirements
4. Follow all general Medicaid provider requirements (DMAS, 2021; D. Rigsby, personal communication, March 2023).

Thus, there are a total of four implementation considerations associated with this alternative, for a score of 1 point (see Appendix E).

ALTERNATIVE 3 PROJECTIONS: FULL CONTINUUM OF CARE

Wait Time Assessment

An effective policy will shorten the average wait time between the imposition of a TDO and placement in psychological treatment at all stages. This analysis determined an average wait time of .5 hours associated with Alternative 3 (see Appendix A). This estimate corresponds to a score of 2.98 total points (see Appendix E). These calculations considered two stages:

Stage 1: Stage one refers to the wait time between the imposition of a TDO and placement in the full continuum of care facility. To reiterate, given that 787 TDO's were served in 2022, if trends continue, then Henrico should expect an average of 2.16 TDO's per day. However, the client notes that there have been "multiple occasions this year with 8-11 TDOs in police custody" (K. Johnson, personal communication, October 2022). Thus, the center should have the capacity for up at least 11 TDOs. Assuming the full continuum of care facility is built with enough capacity, it is likely that a 23-hour facility could meet the demand for behavioral health crisis intervention and treatment each day. Thus, if police officers immediately transfer custody of individuals under TDO to a centrally located full continuum of care facility, then there is likely a very short wait time associated with this stage of care. Since it takes less than 40 minutes to drive across Henrico County from the furthest point, this analysis assumes that it will take about 30 minutes on average to place individuals in treatment (see Appendix A).

Stage 2: Stage two refers to the wait time to transfer individuals to a hospital for individuals who require treatment lasting beyond the capabilities of the stabilization unit. This stage of treatment essentially reverts to the status quo conditions, as it requires individuals be transferred to an alternative facility at the end of their 15-day stay in the full continuum of care facility.

Care Capacity Assessment

An effective policy will result in mental and physical stabilization during a behavioral health crisis for the greatest number of individuals served in-house (i.e., without having to transfer custody to an alternative treatment center). The estimated duration of mental health crises are as follows (K. Johnson, personal communication, February 2023):

Estimated Time in Care	< 23 hours	24 hours – 15 days	< 15 days
Proportion of Cases	60%	30%	10%

Using these estimates, this analysis determined that 709 total individuals, or 90 percent, will be stabilized and discharged by full continuum of care facility each year without requiring a transfer (see Appendix C). This estimate corresponds to a score of 2.70 total points (see Appendix E).

Cost Estimate:

Building Cost Estimate: $10.7 million

To project the cost of building a full continuum of care facility, this analysis uses projections created by the Department of Mental Health, Substance Abuse and Development for a similar

facility Loudoun County, Virginia. On October 6th, 2022, Loudoun County Supervisors officially requested $16.1 million from the state to cover the construction and furnishing costs of a regional Crisis Receiving and Stabilization Facility. While the facility is in the planning stage (as of March 2023), it is estimated to be around 16,000 square feet with a 36 patient capacity (Greene, 2022). It is relevant to note that Loudoun County, Virginia is located in the Washington D.C. metropolitan area, which tends to have higher construction costs compared to the rest of Virginia. Henrico County is located in the Richmond metropolitan area, which tends to have slightly lower construction costs. To account for these differences, this analysis uses a cost of living adjustment to estimate the cost of building this facility in Henrico (see Appendix B) (*Cost of Living in Henrico County, Virginia*, 2023; *Cost of Living in Loudoun County, Virginia*, 2023). Based on these calculations, the construction costs for a 16,000 square foot facility in Henrico County is estimated around $10.7 million.

Annual Operating Cost Estimate: $7.6 million

As previously mentioned, Loudoun County estimated that it will cost $11.51 million annually to operate their 16,000 square foot full continuum of care facility (Greene, 2022). This analysis uses a cost-of-living adjustment to estimate the cost of operating this facility in Henrico as compared to Loudoun (see Appendix B). It is not necessary to scale this estimate based on the building size given that both facilities would be the same size. Based on these calculations, the annual operating costs for a 16,000 square foot facility in Henrico County is estimated around $7.6 million (see Appendix B).

Annual Personnel Cost Estimate: $3.6 Million

An estimated 40 full-time employees must be hired to execute the day-to-day functions of a full continuum of care facility (K. Johnson, personal communication, December 2022):

- Ten registered nurses
- Eight licensed mental health professionals
- Four family support partners
- Ten direct support professionals
- Six case managers
- One clinical supervisor
- One psychiatric prescriber

Using average full-time salaries, the personnel costs of Alternative 3 were estimated around $3.6 million per year (see Appendix D). These costs are included in the annual operating costs, and thus are not to be double counted. However, they are provided for detail.

Annual Cost Savings Estimate: $1.2 Million

The estimated cost savings associated with Alternative 3 is around $1.2 million per year. This accounts for foregone private public operating costs as well as the estimated reduction in annual officer overtime pay associated with the 32.5 hour reduction in average wait time (between the status quo estimate of 33 hours and Alternative 2's projected .5 hour wait time) (see Appendix B).

Total Five-Year Cost Estimate: $31.6 Million

To provide a total cost estimate for Alternative 3, this analysis amortized the costs over a five-year operating period using a five percent discount rate and a three percent inflation rate

(*Congressional Budget Office*, 2023; *US Discount Rate*, 2023). This analysis assumes that the facility would begin operation one year after approval (year 1) to account for construction time. Although the center will likely operate longer than five years, these projections provide a starting point for necessary implementation considerations. Because this would be a semi-permanent structure, this analysis amortizes the building costs over 40 years (*Tennessee Board of Regents*, 2023). The five-year projected cost of implementing a full continuum of care facility is estimated at approximately $31.6 million (see Appendix B). This estimate corresponds to a score of 1.42 total points (see Appendix E).

Administrative Feasibility Assessment:

Establishing a full continuum of care facility is the least administratively feasible policy alternative as compared to the status quo and Alternative 2. As such, it is ranked low in this analysis. This alternative would require the greatest level of technical capacity, funding, staffing, and resources. Additionally, there are several stringent licensure requirements associated with any facility allowing for overnight stays. For Henrico to provide this facility it must meet the following qualifications:

1. Licensed by DBHS as a provider of Residential Crisis Stabilization Services
2. Credentialed with the individual's Medicaid MCO for individuals enrolled in Medicaid managed care or the Fee of Service (FFS) contractor for individuals in FFS.
3. Employees must be trained according to DBHS requirements
4. Be licensed to provide ASAM 3.5 or 3.7-WM services by DBHS
5. Follow all general Medicaid provider requirements (D. Rigsby, personal communication, March 2023; *Early Intervention Manual*, n.d.).

The most notable difference in licensure requirements is that this facility requires a Residential Crisis Stabilization Services License because it allows for overnight stays. On the other hand, Alternative 2 only requires a Crisis Stabilization Services License because patients can only stay in care up to 23-hours. The former license is accompanied by more stringent legal requirements. In total, there are five implementation considerations associated with this alternative, for a score of .50 points (see Appendix E).

OUTCOMES MATRIX

This outcomes matrix summarizes each policy alternative's projected outcomes based on each evaluative criteria. Scores are assigned for each evaluative criteria on a three point scale, with zero representing the lowest possible score. The best (or most preferable) estimate will always receive the highest score. Appendix E outlines each score calculation.

	Alternative 1: Maintain the Status Quo	**Alternative 2: Establish a 23-hour CRC**	**Alternative 3: Establish a Full Continuum of Care Facility**
Wait Time Assessment: *Score and Rank*	33 hours Low, 1.35 points	4.3 hours Medium, 2.78 points	.5 hours High, 2.98 points
Care Capacity Assessment: *Score and Rank*	14% Low, .42 points	60% Medium, 1.80 points	90% High, 2.70 points
Cost Estimate: *Total Cost over 5 Years* *Score and Rank*	$5.5 Million Low, 2.73 points	$22.8 Million Medium, 1.86 points	$31.6 Million High, 1.42 points
Administrative Feasibility: *Score and Rank*	High, 2.50 points	Medium, 1 point	Low, .50 points
Total Points:	7	7.44	**7.60**

RECCOMENDATION

Based on this analysis, **Henrico County should establish a 16,000 square foot full continuum of care facility designed to meet the needs of individuals who experience mental health challenges.** The following rationales show why establishing a full continuum of care facility represents the most promising means by which Henrico County can improve its handling of individuals experiencing mental health crises:

1. Alternative 3 stands out as the most effective policy option in terms of wait time and care capacity, which the client has identified as a priority (K. Johnson, personal communication, September 2022). Most notably, the average estimated wait time associated with this facility is 32.5 hours shorter than the status quo and 3.8 hours shorter than Alternative 2. Additionally, this facility is projected to treat and discharge 90 percent of its patients without requiring that they be transferred elsewhere, whereas Alternative 1 and Alternative 2 are projected at only 14 and 60 percent respectively.
2. With an estimated total cost of $31.6 million over a 5-year period, this policy option is the most expensive alternative considered in this analysis. However, Henrico is actively pursuing funding support from the Commonwealth of Virginia for this facility. As of March 2023, it appears that the state may be willing to award Henrico a $2 million grant (K. Johnson, personal communication, January 2023). In addition, Gov. Glenn Youngkin's staff has indicated they plan to submit a budget amendment for $48.6 million to fund five new crisis centers across the state (Greene, 2022). Assuming that each of the five centers receive equal funding, Henrico could receive $9.7 million. Receiving $9.7 million in addition to the potential $2 million grant would substantially offset the cost to Henrico to implement this policy alternative. Thus, cost is not as substantial a burden as it may initially appear.
3. Relevant stakeholders such as the County Manager, the Police Division, and Henrico Area Mental Health & Developmental Services are on board with the proposal.
4. Other localities, such as Loudoun and the Tidewater region of Virginia, have begun considering and implementing similar facilities. Henrico can look to these localities for inspiration and guidance to facilitate a smooth implementation process.

IMPLEMENTATION

The Henrico County Police Division should share the findings of this report with County Manager John Vithoulkas and seek his feedback. He can set the agenda for a work session with the Board of Supervisors, where the board will view a presentation of the problem and policy proposal. In preparation for the meeting, representatives from the Police Division and Henrico Area Mental Health and Developmental Services should prepare a presentation to the Board that outlines their proposed policy change in detail. The Henrico County Board of Supervisors consists of five members that represent the five magisterial districts, and at least three votes are needed for ultimate approval (*Board of Supervisors - Henrico County, Virginia*, n.d.).

1. Brookland District: Daniel Schmitt
2. Fairfield: Frank Thornton
3. Tuckahoe: Patricia O'Bannon
4. Varina: Tyrone Nelson
5. Three Chopt: Thomas Branin

In accordance with Henrico County's budget process, the funding for the facility's operating costs must be incorporated into the county's general fund, whereas construction funding must be recommended and proposed through the Capital Improvement Plan—both overseen by the Office of Management and Budget. Both budgets are presented to the Board of Supervisors in the spring of each year and, if approved by the Board of Supervisors, become effective on July 1st of the same year.

Stakeholder Perspectives

In addition to the County Manager and the Board of Supervisors, the following perspectives warrant consideration:

Patients:
The individuals experiencing mental health crises are the primary stakeholders and target population of this policy. Their perspective is focused on receiving high-quality treatment for their conditions. When possible, many prefer to avoid or minimize their interactions with law enforcement amid the process. Rather, these individuals desire timely, professional care that is responsive to their needs, accessible, and affordable.

Families and Caregivers:
Families and caregivers are integral stakeholders in mental health related policies. They are concerned with the treatment and rehabilitation of their loved ones. Many also wish to be informed and involved in throughout the process, so open communication is key to providing satisfactory care.

Mental Health Care Providers:
Medical staff, including psychiatrists, psychologists, nurses, case workers, and other professionals hold another relevant perspective that warrants consideration. Their primary focus is providing evidence-based treatment for the community. Given the shortage of health care workers, they may also be concerned with burnout, short-staffing, and job satisfaction.

Henrico Area Mental Health and Developmental Services:
This department is the agency responsible for overseeing mental health and behavioral health services for the county's residents. Their role is to coordinate the county's provision of all mental health related services. Thus, they are a vital stakeholder in this policy implementation, as they will manage and monitor this facility.

Community Partners:
Any decision that alters the status quo should consider Henrico's existing private-public partnership with its service providers. These groups will need to be informed about any potential changes in service delivery as soon as possible.

Risks

The most notable risk is the presumption of liability the county will undertake if it builds a full continuum of care facility. Any facility delivering medical care may be held liable for potential failures including inadequate care, equipment malfunctions, and patient injury. To minimize their liability, Henrico should ensure their facility adheres to a high standard of care and safety protocols. They should maintain appropriate insurance coverage to protect themselves and their patients.

Next Steps

In the event that the proposal is approved by the Board of Supervisors, the following groups must be consulted to establish and move forward with an official implementation plan:

Henrico County Planning Department:
Consulting the Henrico County Planning Department is essential in the beginning phases of implementing the recommended full continuum of care facility, as they are responsible for managing and regulating land use development. The planning department can provide guidance on zoning while also advising on the necessary permits and approvals required for construction. Additionally, the planning department can provide guidance on any design requirements that need to be considered to ensure the center is consistent with Henrico's comprehensive plan.

Henrico Area Mental Health and Developmental Services:
As the primary entity responsible for delivering mental health services in the county, Henrico Area Mental Health and Developmental Services must provide guidance on the design, operation, and management of the facility. They can provide insights on local mental health challenges and offer recommendations on the appropriate treatment services that should be included in the facility. Additionally, the office can advise on staffing needs, licensure requirements, and other legal considerations that must be incorporated into the center's planning to ensure it can operate efficiently.

Henrico County Finance Department:
The Finance Department should be consulted early in the planning process to ensure that the project is financially feasible, as the department manages the county's financial resources. The

office can provide guidance on potential funding sources and financing options, including potential state and federal grants.

Henrico County Office of Management and Budget:
The Office of Management and Budget is tasked with preparing and monitoring the county's fiscal plan. They can offer financial management strategies for the project, as well as an official estimate for the facility cost.

Henrico County Department of General Services
The Department of General Services oversees all capital projects for the county, which are projects involving the construction of a new facility such as this one.

Henrico County Human Resources Department
The Human Resources Department will oversee the hiring of the staff necessary to run this facility. Given the state-wide shortage of mental health professionals, the hiring process should begin as soon as possible.

Appendix A:
Average Wait Time Calculations

Explanatory Note:

Of the 787 individuals served in 2022:

- Approx. 30% were accepted to treatment immediately
- Approx. 20% were placed in treatment within 12 hours
- Approx. 30% were placed in treatment within 48 hours
- Approx. 15% were placed in treatment within a week
- Approx. 5% were placed in treatment in greater than a week

To estimate the average wait time of the status quo, this analysis weighs the midpoint estimate of the following brackets based on their respective proportions:

- "Within 12 hours" assumes a 6 hour wait time.
- "Within 48 hours" assumes a 24 hour wait time.
- "Within a week" assumes a 84 hour wait time.

For greater than a week, ten days was deemed a reasonable estimate by the client:

- "Greater than a week" assumes a 240 hour wait time.

Alternative 1:

Estimated Wait Time (hours)	Proportion of Cases	Calculation
0	.30	.3*0 = 0
6	.20	.2*6 = 1.2
24	.30	.3*24 = 7.2
84	.15	.15*84 = 12.6
240	.05	.05*240 = 12
Total		33

Average Wait Time for Status Quo = **33 hours**

Alternative 2:

Average TDO's Per Day Calculation:

Henrico should expect an average of 2.16 TDO's per day:

787/ 365 (days per year) = 2.15616438

Stage 1 Calculation:

It takes approximately 40 minutes to drive across Henrico County. Thus, this analysis assumes that it will take approximately 30 minutes on average to place individuals in treatment at a centrally located CRC.

Stage 2 Calculation:

If staff begins looking for an alternative treatment facility immediately when an individual enters the 23-hour CRC, then it would be reasonable to subtract 23-hours from the status quo average wait time estimate:

33-23= 10 hours

Total Calculation:

When considering both stages of this alternative, we must note that any individual who is not stabilized and discharged within the 23-hour operating time must be transferred to a hospital. The estimated duration of mental health crises are as follows:

Estimated Time in Care	< 23 hours	24 hours – 15 days	< 15 days
Proportion of Cases	60%	30%	10%

Average wait time for Alternative 2:

Stage 1: .5 hours * (.6) = .3 hours
Stage 2: 10 hours * (.4) = 4 hours
.3 + 4= **4.3 hours**

Alternative 3:

Average TDO's Per Day Calculation:

Henrico should expect an average of 2.16 TDO's per day:

787/ 365 (days per year) = 2.15616438

Stage 1 Calculation:

It takes approximately 40 minutes to drive across Henrico County. Thus, this analysis assumes that it will take less than 30 minutes on average to place individuals in treatment at a centrally located full continuum of care facility.

Stage 2 Calculation:

If staff begins looking for an alternative treatment facility when an individual is first admitted to the full continuum of care facility, then it would be reasonable to subtract 15 days (360 hours) from the status quo estimate, as calculated below:

33-360= no wait time

However, it is not reasonable to assume there is 0 wait time associated with this stage, because we must account for transportation to a longer-term care facility. Given that:

- The nearest state-run mental health hospital is located 40 minutes from Henrico County in Dinwiddie, Virginia; and
- There are three private mental health hospitals located within 30 minutes of Henrico.

Assuming the likelihood of being placed at each of these facilities is equal:

(.5)(.25)+ (.5)(.25)+ (.5)(.25)+ (.66)(.25)= .54 hours
.54*60=32.4 minutes

Total Calculation: .

When considering both stages of this alternative, we must note that any individual who is not stabilized and discharged within the 15-day treatment period must be transferred to a hospital. The estimated duration of mental health crises are as follows:

Estimated Time in Care	< 23 hours	24 hours – 15 days	< 15 days
Proportion of Cases	60%	30%	10%

Average wait-time for Alternative 3:

Stage 1: .5 hours * (.9) = .45 hours

Stage 2: .54 hours * (.1) = .054 hours

.45 + .054 = **.5 hours**

Appendix B:
Cost Calculations

Alternative 1:

Year	Building Cost	Operating Costs	Cost Savings	Total Costs	Discount Factor	Net Present Value
1	0	$1,195,824	0	$1,195,824	0.952380952	$1,138,879.829
2	0	$1,231,699	0	$1,231,699	0.907029478	$1,117,186.879
3	0	$1,268,649	0	$1,268,649	0.863837599	$1,095,907.129
4	0	$1,306,709	0	$1,306,709	0.822702475	$1,075,032.708
5	0	$1,345,910	0	$1,345,910	0.783526166	$1,054,555.894
Total:						$5,481,562.44

The five-year projected cost of maintaining the status quo is estimated around **$5.5 Million.**

Alternative 3:

Building Cost Estimate:

To project the cost of building a full continuum of care facility, this analysis uses projections created by the Department of Mental Health, Substance Abuse and Development for a similar, 16,000 square foot facility Loudoun County, Virginia (Greene, 2022).

Loudoun Facility Cost	Square Footage	Patient Capacity
$16,100,000	16,000	36

The 2023 cost of living indexes are estimated as:

Loudoun Cost of Living Index	Henrico Cost of Living Index
147.9	97.6

The percent change formula is used to make a cost of living adjustment from Loudon County to Henrico:

$$\frac{\text{New-Old}}{\text{Old}} * 100$$

Cost of Living Adjustment Calculations:

97.6-147.9= -50.3
-50.3/147.9=-.34
-.34*100=-34%

Applying this to the Loudoun County construction cost projection:

16,100,000*(1-.34) = **$10,626,000**

Cost per square foot in Henrico:

10,626,000/16,000= **$664.13**

Annual Operating Cost Estimate:

Loudoun County estimated that it will cost $11.51 million annually to operate their 16,000 square foot full continuum of care facility (Greene, 2022). Using the cost of living indexes above:

Cost of Living Adjustment Calculations:

11,510,000*(1-.34) = **$7,596,600**

Annual Cost-Savings Estimate:

1. Foregone private-public partnership operating costs: $420,000
2. Reduction in annual officer overtime pay: $755,813.88.

Officer overtime pay is a directly related to the alternative's average wait time, .5 hours. To project the potential cost saving associated with officer overtime pay for Alternative 3, the percent change formula is used with the status quo average wait time, 33 hours, as the baseline.

$$\frac{\text{New-Old}}{\text{Old}} *100$$

$$\frac{.5-33}{33} *100$$

$$=-98\%$$

The average wait time associated with the full continuum of care facility is approximately 98 percent lower than the status quo.

Applying this to status quo annual overtime pay:

740,994*(1-.98) = $14,819.88

The reduction in overtime pay is estimated as:

740,994-14,819.88= $755,813.88

The total estimated cost savings associated with Alternative 3 is **$1,175,813.88 per year.**

Total Cost Estimate:

To determine the total cost of Alternative 3, this analysis amortizes the costs over a five-year operating period using:

- a five percent discount rate (*US Discount Rate*, 2023)
- a three percent inflation rate (*Congressional Budget Office*, 2023)
- 40 year building cost (*Tennessee Board of Regents*, 2023)

Year	Building Cost	Operating Costs	Cost Savings	Total Costs	Discount Factor	Net Present Value
1	$273,620	$7,824,498	-$1,211,088	$6,887,029	0.952380952	$6,559,075.432
2	$281,828	$8,059,233	-$1,247,421	$7,093,640	0.907029478	$6,434,140.662
3	$290,283	$8,301,010	-$1,284,844	$7,306,449	0.863837599	$6,311,585.602
4	$298,991	$8,550,040	-$1,323,389	$7,525,643	0.822702475	$6,191,364.924
5	$307,961	$8,806,541	-$1,363,091	$7,751,412	0.783526166	$6,073,434.163
Total:						$31,569,600.78

The five-year projected cost of implementing a full continuum of care facility is estimated at approximately **$31.6 million.**

Alternative 2:

Building Cost Estimate:

- A 23-hour crisis receiving center would be around 12,000 square feet (K. Johnson, personal communication, March 2023).
- The cost per square foot to build a mental health facility in Henrico is estimated at $664.13 (see Appendix B, Alternative 3).

12,000*664.13= **$7,969,560**

Annual Operating Cost Estimate:

- Loudoun County estimated that it will cost $11.51 million annually to operate their 16,000 square foot full continuum of care facility (Greene, 2022).

Operating cost per square foot in Loudoun:

11,510,000/16,000=$719.38

Operating cost for 12,000 square foot facility in Loudoun:

719.38*12,000=$8,632,500

Operating cost for a 12,000 square foot facility in Henrico, using cost of living indexes (see Appendix B, Alternative 3):

8,632,500*(1-.34) = **$5,697,450**

Annual Cost-Savings Estimate:

1. Foregone private-public partnership operating costs: $420,000
2. Reduction in annual officer overtime pay: $644,664.78

Officer overtime pay is a directly related to the alternative's average wait time, 4.3 hours. To project the potential cost saving associated with officer overtime pay for Alternative 2, the percent change formula is used with the status quo average wait time, 33 hours, as the baseline.

$$\frac{\text{New-Old}}{\text{Old}} * 100$$

$$\frac{4.3-33}{} * 100$$

$$\frac{33}{} = -86.97\%$$

The average wait time associated with the 23-hour CRC is approximately 87 percent lower than the status quo.

Applying this to status quo annual overtime pay:

$$740{,}994*(1-.87) = \$96{,}329.22$$

The reduction in overtime pay is estimated as:

$$740{,}994-96{,}329.22=\$644{,}664.78$$

The total estimated cost savings associated with Alternative 2 is **$1,064,664.78 per year.**

Total Five-Year Cost Estimate:

To determine the total cost of Alternative 2, this analysis amortizes the costs over a five-year operating period using:

- a five percent discount rate (*US Discount Rate*, 2023).
- a three percent inflation rate (*Congressional Budget Office*, 2023).
- 40 year building cost (*Tennessee Board of Regents*, 2023).

Year	Building Cost	Operating Costs	Cost Savings	Total Costs	Discount Factor	Net Present Value
1	$205,216	$5,868,374	-$1,096,605	$4,976,985	0.952380952	$4,739,985.663
2	$211,373	$6,044,425	-$1,129,503	$5,126,294	0.907029478	$4,649,700.222
3	$217,714	$6,225,757	-$1,163,388	$5,280,083	0.863837599	$4,561,134.504
4	$224,245	$6,412,530	-$1,198,290	$5,438,486	0.822702475	$4,474,255.751
5	$230,973	$6,604,906	-$1,234,238	$5,601,640	0.783526166	$4,389,031.832
Total:						$22,814,107.97

The five-year projected cost of implementing a 23-hour crisis receiving center is estimated at **$22.8 million.**

Appendix C:
Care Capacity Calculations

Alternative 2:
Any individual who is not stabilized and discharged within the 23-hour operating time must be transferred to a hospital.

Estimated Time in Care	< 23 hours	24 hours – 15 days	< 15 days
Proportion of Cases	60%	30%	10%

As displayed above, an estimated 60% of individuals served will be stabilized and discharged within 23-hours.

To provide this figure as a whole number of individuals, I scale the 2022 total number of TDO's (787) to 60 percent:

787*(.60)=**472.2**

Thus, approximately 473 total individuals, or **60 percent**, will be stabilized and discharged by the 23-hour CRC per year without requiring a transfer.

Alternative 3:
Any individual who is not stabilized and discharged within the 15 day treatment period must be transferred to a longer-term care facility.

Estimated Time in Care	< 23 hours	24 hours – 15 days	< 15 days
Proportion of Cases	60%	30%	10%

As displayed above, an estimated 90 percent of individuals served will be stabilized and discharged within 15 days.

To provide this figure as a whole number of individuals, I scale the 2022 total number of TDO's (787) to 90 percent:

787*(.90)=708.3

Thus, approximately 709 total individuals, or **90 percent**, will be stabilized and discharged by the full continuum of care facility each year without requiring a transfer.

Appendix D
Annual Personnel Cost Calculations

Alternative 2:

Annual Personnel Cost Estimate:

An estimated 29 full-time employees must be hired to execute the day-to-day functions of a 23-hour crisis receiving center (K. Johnson, personal communication, December 2022):

- Six registered nurses
- Five licensed mental health professionals
- Three family support partners
- Eight direct support professionals
- Five case managers
- One clinical supervisor
- One psychiatric prescriber

Using average full time salaries, the personnel costs of Alternative 2 were calculated as:

Position	Per Shift	FTE's	Per Staff Costs (Salary and Fringe)	Total
Registered Nurse	2-2-2	6	$114,620	$687,720
LMHP	2-2-1	5	$96,938	$484,690
Family Support Partner	1-1-1	3	$71,113	$213,339
Direct Support Professionals	3-3-2	8	$55,100	$440,800
Case Manager	2-2-1	5	$75,459	$377,295
Director/ Clinical Supervisor (LMHP)	1	1	$100,900	$100,900
Psychiatric Prescriber	1-1-1	On demand	$350,000	$350,000
				$2,654,744

Alternative 3:

Annual Personnel Cost Estimate:

An estimated 40 full-time employees must be hired to execute the day-to-day functions of a full continuum of care facility (K. Johnson, personal communication, December 2022):

- Ten registered nurses
- Eight licensed mental health professionals
- Four family support partners
- Ten direct support professionals
- Six case managers
- One clinical supervisor
- One psychiatric prescriber

Position	Per Shift	FTE's	Per Staff Costs (Salary and Fringe)	Total
Registered Nurse	3-4-3	10	$114,620	$1,146,200
LMHP	3-3-2	8	$96,938	$775,504
Family Support Partner	1-2-1	4	$71,113	$284,452
Direct Support Professionals	3-4-3	10	$55,100	$551,000
Case Manager	2-2-2	6	$75,459	$452,754
Director/ Clinical Supervisor (LMHP)	1	1	$100,900	$100,900
Psychiatric Prescriber	1-1-1	On demand	$350,000	$350,000
				$3,660,810

Appendix E
Outcomes Matrix Scoring

The rationale for each score is as follows:

Average Wait Time Assessment (25% weight)
For every hour of wait time, 0.05 points is deducted from the total score.
Alternative 1: 3-(0.05*33)=1.35
Alternative 2: 3-(0.05*4.3)=2.78
Alternative 3: 3-(0.05*.5)=2.98

Care Capacity Assessment (25% weight)
The estimated care capacity for each alternative is scaled to a three point scale based on their projected care capacities:
Alternative 1: 3*(.14)=.42
Alternative 2: 3*(.6)=1.8
Alternative 3: 3*(.9)=2.7

Cost Estimate (25% weight)
For every million dollars in cost, 0.05 points is deducted from the total score.
Alternative 1: 3-(0.05*5.5)=2.73
Alternative 2: 3-(0.05*22.8)=1.86
Alternative 3: 3-(0.05*31.6)=1.42

Administrative Feasibility (25% weight)
For each feasibility concern, 0.5 points is deducted from the total score.
Alternative 1: 3-(0.05*1)=2.50
Alternative 2: 3-(0.05*4)=1.0
Alternative 3: 3-(0.05*5)=.50

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