An Evaluation of the Grand Response Access Network on Demand Model (GRAND Model): Evidence of Effective Outcomes

June 2022

For

GRAND Mental Health,
Certified Community Behavioral Health Clinic (CCBHC),
Oklahoma

Report By

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Executive Summary

This report presents the findings of an independent evaluation of GRAND Mental Health's (GRAND) Grand Response Access Network on Demand Model (GRAND Model), with the purpose of establishing the evidence-base for producing the following outcomes: reduce inpatient hospitalizations among adult GRAND clients, increase service utilization among adult GRAND clients, produce cost savings from decreased inpatient hospitalizations and to law enforcement.

GRAND is a 501c(3) non-profit organization, Certified Community Behavioral Health Clinic (CCBHC), that has provided integrated mental health, physical health, and substance abuse services to adults and children in Northeast and Northcentral Oklahoma since 1979. In 2015, GRAND leadership became increasingly concerned about the growing number of inpatient hospitalizations among their clients and identified the need for a lower level of care for people experiencing a mental health crisis. To meet this goal, the GRAND Model was developed. Its three parts are: 1) Urgent Recovery Centers (URC) that provide 24/7 crisis stabilization services; 2) iPads with the GRAND Model integrated support access app that are distributed to GRAND patients, first responders, hospitals, and other community partners in order to provide instant access to a GRAND therapist anytime, anywhere; and 3) all iPad and crisis calls are answered by fully trained, engaged, and awake clinicians who are on-site at a URC. These three service delivery elements must be present to replicate or reproduce the GRAND Model's outcomes.

The methodology for the program evaluation consisted of documents review, interviews with GRAND leadership and staff, and secondary data analysis and verification. Compared to the baseline year 2015 --

- Inpatient hospitalizations among GRAND adult clients at any Oklahoma psychiatric hospital fell from 959 (2015) to 66 (2021), a reduction of 93.1%.
- Inpatient hospitalizations among GRAND adult client at Wagoner Hospital fell from 841 (2015) to 0 (2021), a reduction of 100%.
- Inpatient bed days among GRAND adult clients at Wagoner Hospital fell from 1,115 (2015) to 0 (2021), a reduction of 100%.
- From 2016-2021, decreases in inpatient hospitalizations saved more than $62 million dollars.
- The number of adult clients served increased by 163.5% from 4,326 (2015) to 11,401 (2021).
- Law enforcement in seven counties saved 576 days in time spent transporting clients.
- Law enforcement in seven counties saved over $718,000 from reductions in time and distance and spent transporting clients.

The evidence from this evaluation unequivocally shows that the GRAND Model has been exceedingly effective at reducing inpatient hospitalizations, increasing outpatient service utilization, and producing cost savings for GRAND and law enforcement. Additionally, as GRAND serves a predominantly rural population, the GRAND Model show strong evidence that it works for the unique needs of rural communities. The outcomes seen by GRAND are likely unattainable without the same pieces in place – multiple URCs, mental health devices for clients and community partners, and awake crisis clinicians who answer the calls onsite from the URC. Together, these elements have produced unbridled access to mental health care by creating multiple levels of care that provide the least restrictive level of care possible that is best for the individual.

I. INTRODUCTION

About GRAND Mental Health

GRAND Mental Health (GRAND), formerly called Grand Lake Mental Health Center, is a 501c(3) non-profit organization that has provided integrated mental health, physical health, and substance abuse services to adults and children in Northeast and Northcentral Oklahoma since 1979. GRAND serves a predominantly rural, 12-county catchment area[1] that has an estimated 480,000 people living across 10,000 square miles. GRAND offers outpatient services that include individual, family, and group therapy, case management services, and medication management services; a community integration program that provides extra support to those who need it to live successfully in the community; 24/7 crisis services; wraparound services for children, youth, and families; the Oklahomans Learning to Direct Their Own Recovery (OLDR) wraparound program for persons age 60 and older that assists with development of natural and community supports to assist in reducing isolation and loneliness; a children's and adolescents' program that provides extra support to be successful at home, school or in their community; emergency detention and inpatient psychiatric care at Wagoner Hospital; and treatment for mental health disorders and co-occurring mental health and substance use disorder or trauma. GRAND is certified and funded in part by Oklahoma Department of Mental Health and Substance Abuse Services and certain programs are CARF Accredited (Commission on Accreditation of Rehabilitation Facilities).

In 2015, GRAND leadership became increasingly concerned about the growing number of inpatient hospitalizations among their clients and identified the need for a lower level of care for people experiencing a mental health crisis. That year, 841 adults served by GRAND received inpatient psychiatric services at Wagoner hospital. In addition, law enforcement officers and Emergency Departments (EDs) were overwhelmed with responding to mental health cases and providing crisis interventions, activities for which they are not fully trained. When police encountered someone experiencing a mental health crisis, they often spent significant time transporting the person to the nearest ED, only to endure long hours waiting in the ED, all of which took them away from performing public safety duties. Likewise, ED staff were diagnosing mental illnesses and signing Emergency Detention Orders in order to discharge patients more expeditiously from the ED bed. These patterns resulted in individuals being admitted to inpatient facilities when a lower level of care may have been more appropriate, people filling jails and courts who did not belong there, and increased costs for GRAND and its community partners. In response to this problem, GRAND undertook a series of bold steps to radically transform their mental health care system to better meet the needs of individuals anywhere, anytime and the Grand Response Access Network on Demand Model (GRAND Model) began to take shape.

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[1] GRAND serves Craig, Delaware, Kay, Mayes, Noble, Nowata, Osage, Ottawa, Payne, Pawnee, Rogers, and Washington counties.

During this same time, GRAND was awarded a federal Certified Community Behavioral Health Clinic (CCBHC) Planning Grant from the Substance Abuse and Mental Health Services Administration (SAMHSA) in 2015 to improve behavioral health outcomes and increase access to services through integrated partnerships. Oklahoma was one of 24 states to receive a CCBHC Planning Grant, and in December 2016, Oklahoma became one of eight states selected for the CCBHC demonstration program. On April 1, 2017, the demonstration status formally began for Oklahoma and the prospective payment system (PPS) rate was activated. With the help of the planning grant and demonstration status, GRAND was able to make critical investments in staffing, technology, and other resources needed to transform mental health and substance use disorder care for Oklahoma residents. These investments enabled GRAND to more quickly fund, resource, and build the necessary partnerships to develop the three components that would become the GRAND Model, the formation of which was already in motion prior to CCBHC status.

Purpose of the Evaluation

The purpose of this evaluation was to conduct an independent assessment of the GRAND Model in order to establish its evidence base for effectively producing the following outcomes: reductions in inpatient hospitalizations among adult GRAND clients, increased service utilization among adult GRAND clients, cost savings from decreased inpatient hospitalizations, and cost savings to law enforcement. The evaluation was conducted by the National Association of State Mental Health Program Directors Research Institute (NRI), which is a non-profit, 501c(3), unbiased and independent mental health research agency (www.nri-inc.org).

II. METHODOLOGY

Interviews

Fourteen interviews were conducted with the GRAND Executive Team, the MyCare CEO, crisis clinicians and shift supervisors, other clinical positions, and law enforcement partners. The purpose of the interviews was to understand and define the GRAND Model and its implementation. Interviews were semi-structured, conducted virtually with Microsoft Teams, and lasted an average of 50 minutes. At least one designated notetaker from the NRI team was on each interview and interviews were recorded following consent. Verbal information about the GRAND Model was also shared with NRI during biweekly project meetings, to include clarifying details, sharing updates, or reiterating key take-aways.

Document Review

GRAND provided NRI with a variety of historical and current documents about different phases and parts of the GRAND Model. The documents included newspaper articles, presentations from professional conferences and meetings, and grant proposal narratives. Documents were reviewed by the evaluation team to provide background, context, and additional understanding of the GRAND Model.

Secondary Data Analysis and Verification

GRAND collects and maintains critical data specific to inpatient hospitalizations, outpatient services, and cost savings and this allowed for a robust program evaluation of the outcomes before and after the implementation of the GRAND Model. Baseline data from 2015 was compared to the most recent year of available data collected since implementation, either 2020 or 2021, depending on the indicator.

The hospital data provided to NRI were deidentified and included information on the bed days, number of patients, and contracted and overage amounts. GRAND's inpatient hospitalization data come from a combination of direct reporting from Wagoner Hospital to GRAND, patient self-report, and (OHCA) Medicaid claims to include all unique psychiatric hospitalizations in Oklahoma. GRAND compares the claims data to a historical list of GRAND patients and if the client has an open GRAND chart at time of admission to the hospital, they are included as a client who went inpatient, regardless of whether or not they were actively receiving outpatient services. The data presented here includes all psychiatric hospitalizations in Oklahoma among GRAND adults that occurred from April 1, 2015 to December 31, 2021. GRAND notes that since the 2015 inpatient number only include 9 months of data, it is likely underreported by approximately 100-130 clients, based on 2016 numbers from January 2016 to March 31, 2016. Specific to data from Wagoner Hospital, GRAND maintains a meticulous log of clients who received inpatient care at that site and that log is compared to the OHCA claims data.

Police cost savings data come from seven counties (Craig, Delaware, Nowata, Mayes, Ottawa, Rogers, and Washington). GRAND has police partnerships in all 12 counties, but consistent and comparable data were only available from these seven. The number of minutes and number of miles saved are calculated based on the difference between the nearest URC and Wagoner hospital, multiplied by the number of trips. Trips are tied to specific admissions across several logs (e.g., VIOC Admit log, VURC Admit log, GRC admit log, and crisis enrollment). Cost savings are based on a per mile reimbursement rate of 0.54 and an average hourly officer salary rate of $20.53.

III. EVALUATION FINDINGS

Description of the GRAND Model

The GRAND Model has three parts --

1. URCs that provide 24/7 crisis stabilization services.

2. iPads with the GRAND Model integrated support access app ("mental health devices") are distributed to GRAND patients, first responders, hospitals, and other community partners in order to provide instant access to a GRAND therapist anytime, anywhere.

3. All iPad and crisis calls are answered by fully trained, engaged, and awake clinicians who are on-site at a URC.

These three components work in tandem to form the GRAND Model and all must be present to replicate or reproduce the model. Although iPads are central to the GRAND Model, the GRAND Model is *not* a traditional telehealth program and *not* a tablet-facilitated co-responder model. Rather, the iPads are a "service amplifier" that function as part of an open-access, integrated care model that also includes the care access app, URCs, and on-site crisis staffing model.

Urgent Recovery Centers for 24/7 Crisis Stabilization Support

In January 2016, GRAND opened its first URC in Vinta, OK to provide 24/7 crisis stabilization services in a less restrictive environment than an inpatient facility[2] (see Appendix A for a timeline of model development steps). In recognition of a gap in services in which those seeking crisis care had to be discharged after 23 hours and 59 minutes or admitted to an inpatient facility, GRAND developed the idea of an urgent behavioral health crisis care center that offered an alternative placement from arrest, the Emergency Department, or inpatient hospitalization and accepted voluntary admissions, walk-ins, and drop-offs from law enforcement. Upon discharge, clients are offered an iPad with the integrated support access app for post-discharge crisis intervention and support.

Initially located in a secure lobby inside of the GRAND Vinta clinic, and outfitted with comfortable reclining chairs, a microwave, and vending machines, this urgent care center accepted anyone who needed crisis services to include walk-ins and police drop-offs. It was staffed by a licensed mental health professional (LMHP), a registered nurse (RN), two recovery support specialists. Since then, the Vinta URC has moved to its own building and two more URCs have opened in Pryor, OK (2018) and Stillwater, Ok (2019) for a total of three in the GRAND catchment area. *"After the first center opened, the dominoes fell, recidivism reduced, the Department of Corrections saw less people, and our clients got better,"* said Jeff Hunter, President of MyCare.

iPads with the GRAND Model Integrated Support Access App

In January 2016, GRAND began to distribute HIPAA-compliant iPads with a special GRAND Model integrated support access app to a small group of community partners (law enforcement and hospitals), high-risk clients discharging from the URC, and GRAND therapists and staff. Referred to as "mental health devices," these iPads work in single-app mode and only run the GRAND Model integrated support access app called App Solution. Prior to this time, GRAND had been using Facetime on iPads to provide some client services, but "it became a problem

[2] Initially these centers were called Intensive Outpatient Centers (IOCs). In 2019, Oklahoma statutes and standards related to Medicaid billing allowed for the certification of the IOCs as URCs. Since 2020, the three IOCs in the GRAND Model have been referred to as URCs.

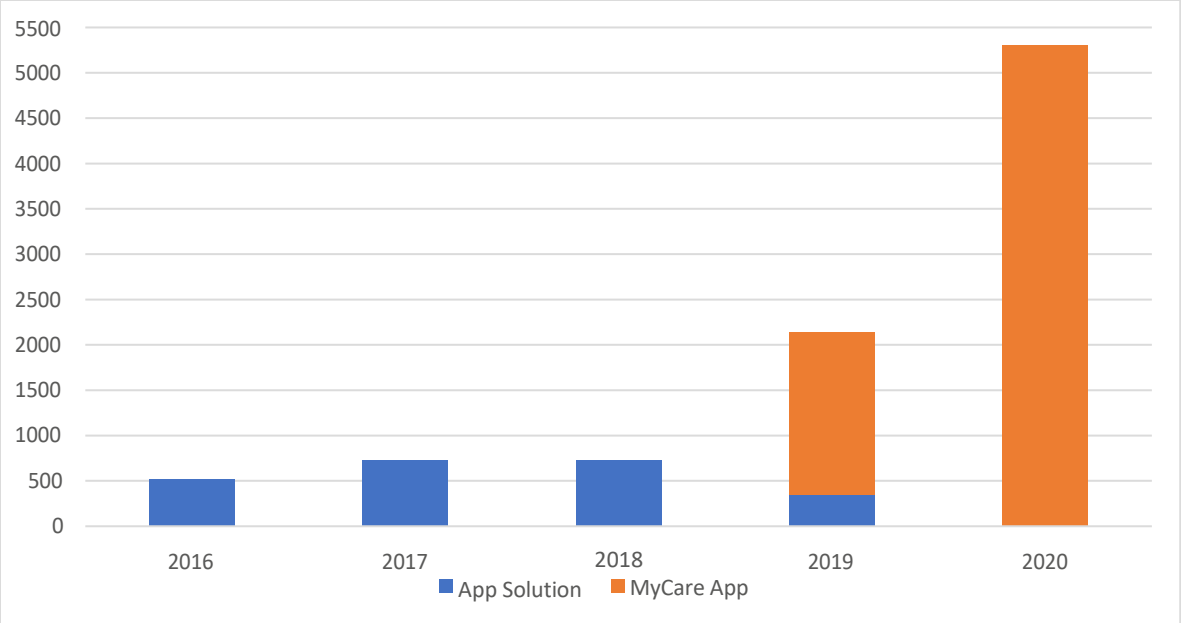
versus a solution" because clients would forget their log-in email addresses, there were questions over HIPAA requirements and compliance, Facetime used a lot of data that was charged to the client's plan, and there were audio-visual delays in rural areas. These experiences led GRAND to design and architect their own app, App Solution, to better meet their needs.

GRAND soon sought to refine App Solution and in late 2017, they partnered with MyCare Integrated Software Solutions, LLC (MISS) to improve upon the current iteration of App Solution and provide iPad management services. The next version of the app was called the "MyCare App" and was loaded onto mental health devices beginning in May 2019. Through this partnership, MISS took on the risk of data, meaning all call data, GPS data, law enforcement data, hospital data, etc. go through the app to eliminate privacy and data sharing barriers. Regarding connectivity for the mental health devices, GRAND is classified as a first responder by their current carrier AT&T. The first responder designation provides greater bandwidth, greater connectivity, and priority connectivity during outages.

The primary feature of both the App Solution and MyCare App is a large crisis button that connects instantly to a GRAND therapist anytime of the day as well as functions that track, monitor, and coordinate their care needs, appointments, and outcomes all in one place. With the MyCare App, GRAND staff gained more functionality to see appointments, monitor caseloads, work with other care team members, make assignments, track screenings and assessments and manage documents, such as ROI's, consent forms, treatment plan acknowledgement forms and others. The staff can also use the app in conjunction with the GRAND electronic health records system to see medications and a client report card that tracks progress towards goals and outcomes. The report card provides key health indicators such as blood pressure, medication adherence, cholesterol, hemoglobin A1c (to screen for, diagnose, and monitor diabetes), and other essential health benefit information. A fundamental piece of the report card is the toxicology lab test that reveals whether the client is taking prescribed medication (i.e., Medication Adherence Testing "MAT"). This is critically important, as clients not following their medication regimens can be identified early before circumstances escalate to a crisis.

For GRAND clients, the purpose of the mental health devices is to provide them with the services they need, when and where they need them. Clients opt in to receive a mental health device and typically collect it during an in-person office visit when treatment plans and documents are signed, or at time of discharge from an URC. Clients do not have to use a mental health device to be served by GRAND, but the overwhelming majority of GRAND clients currently participate. In 2016, 516 mental health devices were assigned to clients (Figure 1). In 2020, the number of mental health devices assigned to clients was 5,302. This change represents a 927.5% increase in the number of clients who received a mental health device from 2016 to 2020.

Figure 1. Number of Mental Health Devices Assigned to Clients Before and After the MyCare App, 2016-2020



First responders have also received mental health devices from GRAND as part of the GRAND Model. GRAND pays for all iPads for law enforcement as well as the associated data plans, so that cost would not be a barrier to them participating in the GRAND Model. With these devices, justice partners could now access a therapist 24/7 during a suspected mental health call or to get support of their own. During these calls, therapists provide consultation, crisis intervention and stabilization, resource information, and referrals to best meet the needs of the individual. An advantage of this co-responder approach is that the therapist does not need to ride along with the officer or meet them on-site, which eliminates many safety, logistical, and liability concerns. Data from GRAND show that as of December 2019, 846 mental health devices were deployed to first responders and 395 to GRAND staff. By December 2020, these numbers had increased to 1,108 mental health devices deployed to first responders and 980 to GRAND staff.

Interviews with law enforcement revealed that the mental health devices have increased officer confidence in responding to mental health calls, "*Everybody [police] loves the iPad! Because we are not trained psychiatrists, going into a mental health setting without it is a little uncomfortable… without it, civilians in crisis would probably not get the help they need. The situation would get resolved, but they would be getting the preventative help that they need to keep the issue from happening again. There would be more repeat offenders without it [GRAND Model].*"

Since the GRAND Model has been implemented, GRAND has also placed mental health devices at visible locations on local college campuses and in museums, libraries, and other community locations as a means to reach anyone in need of mental health services.

iPad and Crisis Calls are Answered by Trained Staff that are Awake and On-Site at the URC

For any iPad or mobile technology crisis response program to work, the calls have to be immediately answered every time and result in tangible help (versus providing an empathetic ear only). The need to answer and respond in a quick, dependable, and helpful manner is equally critical whether the crisis call is coming from a patient or a community partner (i.e., law enforcement officer). If a mental health crisis call goes unanswered or does not provide sufficient support, the caller is unlikely to utilize that service again or recommend it to others. As such, in the GRAND model, crisis calls are answered by trained clinicians who are awake and working at the URC. Leadership at GRAND say this clinician model is "non-negotiable" and a necessary component of the GRAND Model. Jeff Hunter, President of MyCare said, "*We have other companies that use the MyCare app and have different clinician models, some ring a clinician sleeping at home. They likely won't get our same outcomes. To make it work, you have to have someone trained on the other end who answers every time."*

To ensure that there are no missed calls, MyCare developed a complex call hunt group that makes use of a specific ring order, waiting room and call-back feature. However, the goal is to have all calls answered with 1-3 rings and staff are held accountable for missed calls. Calls first ring to therapists, then a trained Recovery Support Specialist, with nurses and the unit coordinator as the last tier. A Crisis Shift Supervisor reported, "*We answer within 1-3 rings and the priority is answering the call because we can't see them like we can the people on the unit. There is safety net upon safety net so we don't miss calls. We've been given resources for everything and there are no excuses. Any excuse for not answering an iPad has been removed. We made sure of it."*

Outcomes

Reductions in Inpatient Hospitalizations

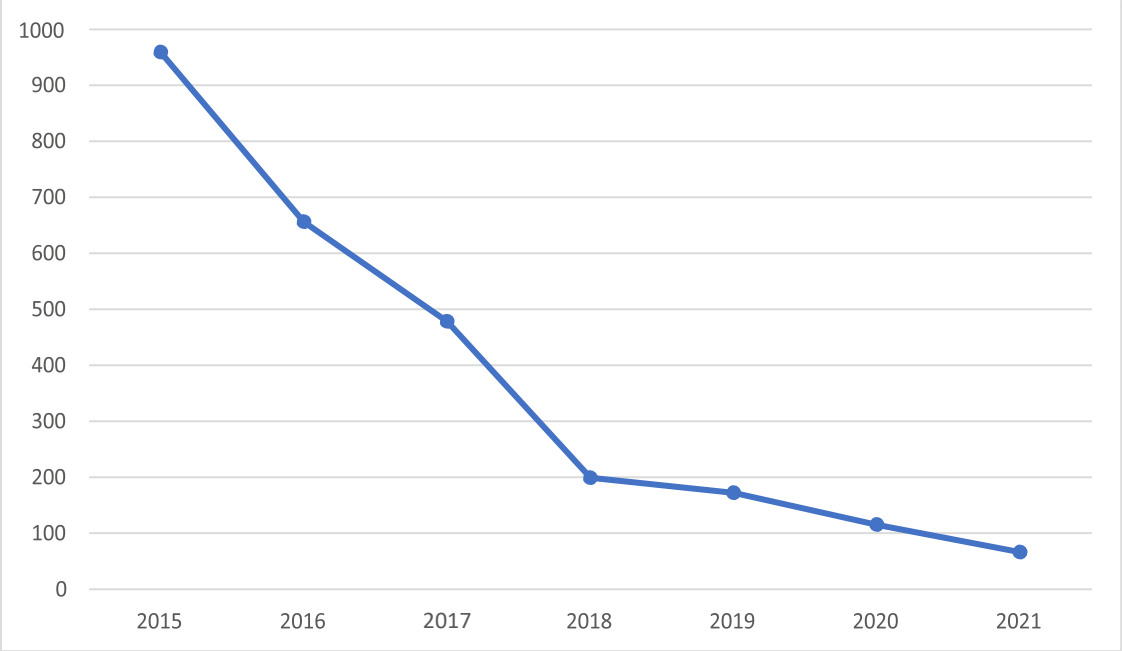
Three data sources and indicators were used to assess inpatient hospitalizations and are listed below. The data are all longitudinal, starting with 2015 as the baseline for before the GRAND Model was implemented.

- The number of GRAND Medicaid adult clients who went inpatient at any Oklahoma psychiatric hospital (except Wagoner Hospital), based on Oklahoma Medicaid claims data.
- The number of GRAND adult clients who went inpatient at Wagoner Hospital, regardless of payer source, based on admissions report data provided to CLMHC by Wagoner Hospital.
- The number of bed days among GRAND adult clients at Wagoner Hospital.

At baseline in 2015, a total of 959 adult GRAND clients spent time inpatient at any Oklahoma psychiatric hospital (Figure 2). In 2016, this number decreased to 656, meaning that 31.6% less

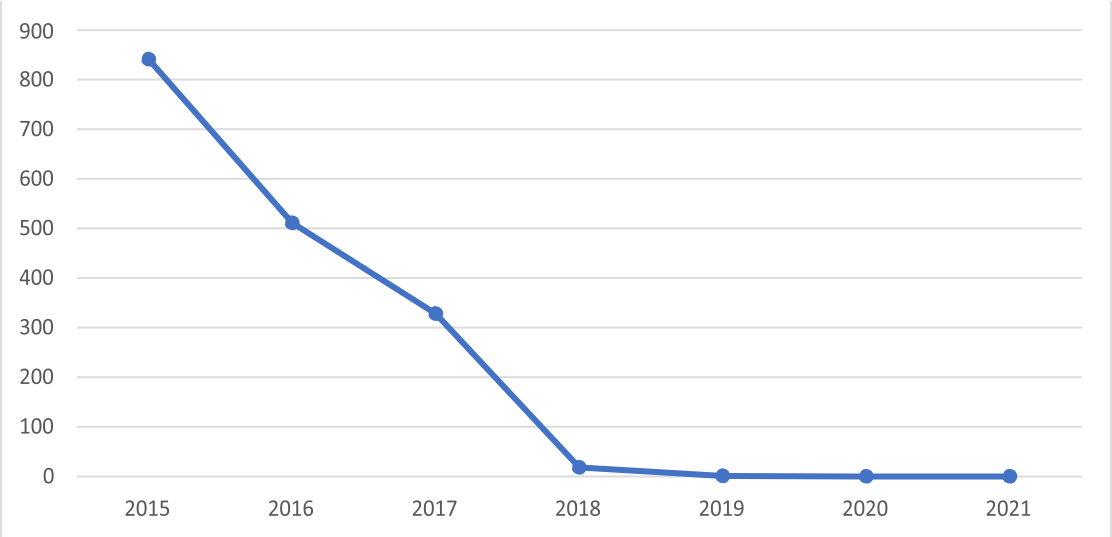
adult clients went inpatient in 2016 than 2015. In 2021, the number of adult clients who went inpatient further reduced to 66, representing a 93.1% reduction in the number of GRAND clients who went inpatient in 2015 compared to 2021.

Figure 2. Number of GRAND Adult Clients Who Went Inpatient at Any Oklahoma Psychiatric Hospital, 2015 - 2021



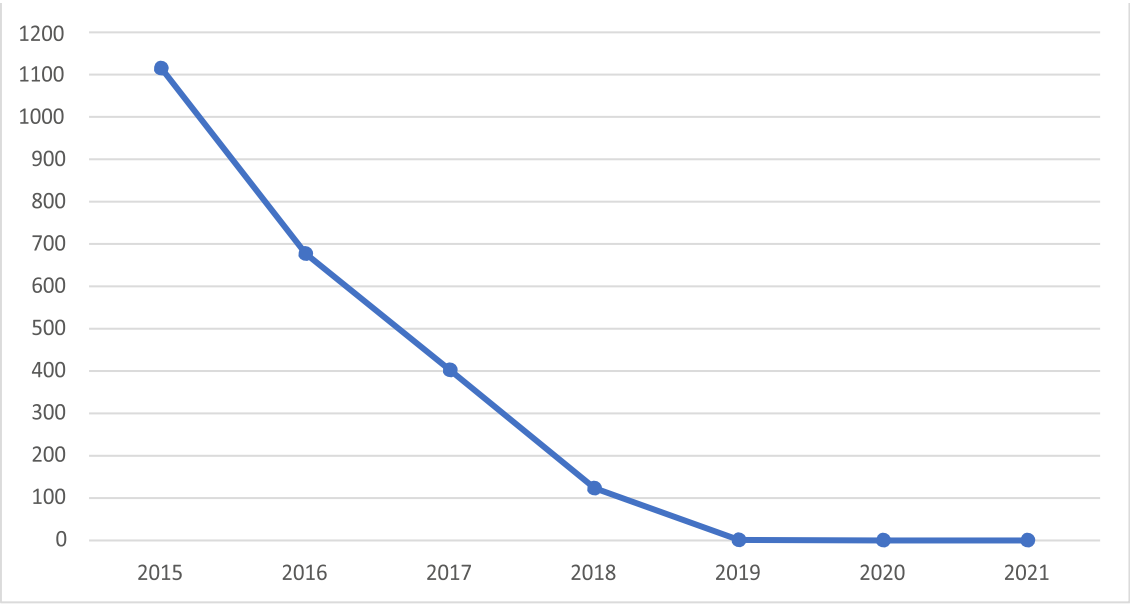
The majority of GRAND adult clients who require inpatient hospitalization go to Wagoner Hospital and reducing hospitalizations specific to this facility was an original goal of the GRAND Model. In 2015, 841 GRAND adult clients went inpatient to Wagoner Hospital (Figure 3). In 2016, the number of clients who went to Wagoner Hospital had decreased by 39% to 511. By 2019, the number had reduced by 99.9% to one (1) client. In both 2020 and 2021, zero (0) GRAND adult clients went inpatient to Wagoner Hospital.

Figure 3. Number of GRAND Adult Clients Who Went Inpatient to Wagoner Hospital, 2015 – 2021



The number of inpatient bed days among GRAND adult clients at Wagoner Hospital followed the same dramatic decline pattern as the number of patients. In 2015, prior to the GRAND Model, GRAND patients collectively spent 1,115 bed days at Wagoner Hospital (Figure 4). Following GRAND Model implementation in 2016, the number of bed days reduced by 63.9% to 402 in 2017. As was observed in the number of clients who went inpatient, the number of bed days were one (1) in 2019 and zero (0) in 2020 and 2021.

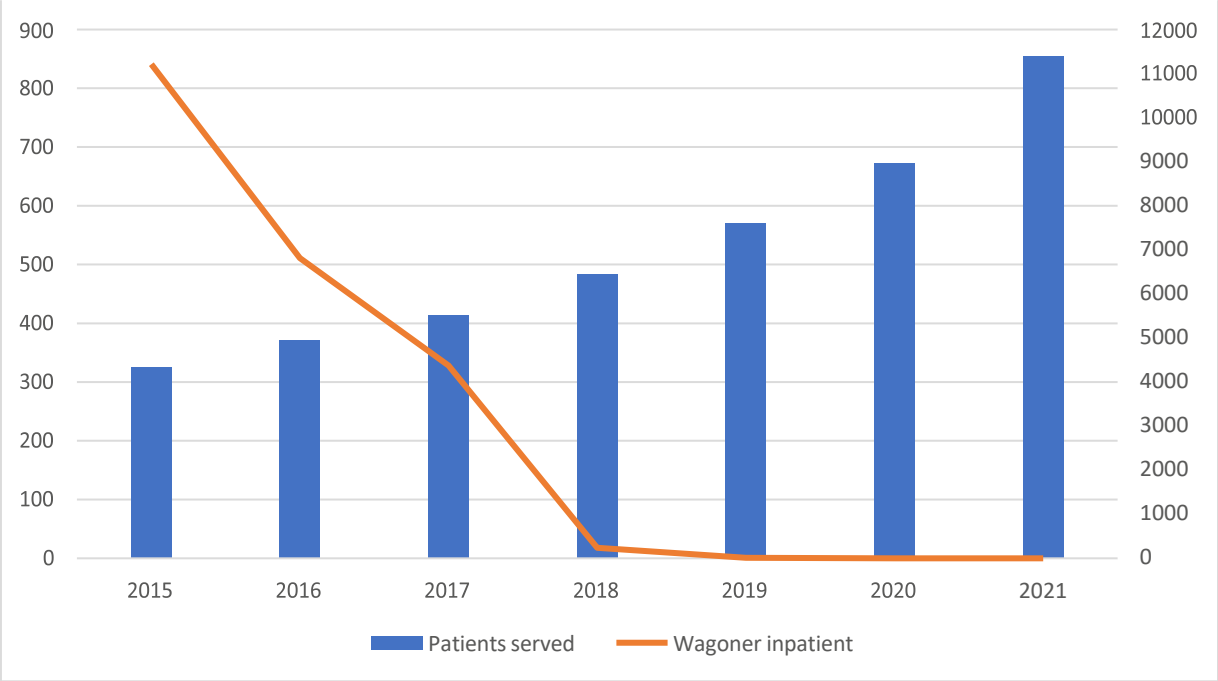
Figure 4. Number of Inpatient Bed Days at Wagoner Hospital Among GRAND Patients, 2015 - 2021



Increases in Outpatient Service Utilization

Since implementing the GRAND Model, GRAND has served nearly three times as many clients in 2021 (11,401) compared to 2015 (4,326). This is, in part, due to the 2019 expansion of GRAND from 7 counties to 12 counties, growth that was facilitated by the demonstrated success of the GRAND Model and the cost savings it had incurred. Figure 5 below shows the number of unique GRAND clients who received outpatient services, before and after the GRAND model, compared to the number who went inpatient to Wagoner Hospital.

Figure 5. Number of Unique Adults Served by GRAND and Number of GRAND Adult Clients who Went Inpatient at Wagoner Hospital, 2015 - 2021



Cost Savings from Reducing Inpatient Hospitalizations

Cost savings was measured by the estimated amount saved by decreasing inpatient stays among GRAND adult clients. Table 1 shows the estimated cost savings from reducing inpatient stays since the GRAND Model was implemented. Calculations are based on the number of clients that would have been expected to go inpatient each year (using the 2015 rate of 22% of GRAND adult clients going inpatient), subtracted by the number who actually did, multiplied by the 2012 inpatient rate of $6,700 per inpatient stay[3] and the yearly inflation rate. The data show that when compared to 2015, the savings from the decreased number of clients who went inpatient in 2016 was more than $3 million. In 2021, the cost savings from the decreased number of clients who went inpatient was estimated at $19.5 million. In total, the GRAND

[3] Hospitalizations Involving Mental and Substance Use Disorders Among Adults, 2012 (ahrq.gov)

Model has produced an estimated cost savings of estimated $62 million dollars by preventing inpatient hospitalizations.

Table 1. Estimated Cost Savings from Reducing Inpatient Hospitalizations Among GRAND Adult Clients, 2015 - 2021

Year	Estimated number who did not go inpatient	Estimated cost savings	Dollar value and inflation rate
2015	0	--	$1.03 (.12%)
2016	433	$3,088,971.58	$1.05 (1.26%)
2017	735	$5,353,145.77	$1.07 (2.13%)
2018	1,218	$9,067,379.14	$1.09 (2.49%)
2019	1,499	$11,340,797.83	$1.11 (1.76%)
2020	1,856	$14,193,384.33	$1.13 (1.23%)
2021	2,442	$19,445,639.46	$1.18 (4.70%)
Total estimated cost savings = $ 62,489,318.10			

Cost Savings to Law Enforcement

Table 2 below shows the total number of minutes and miles that were saved by law enforcement by transporting clients to the nearest URC instead of Wagoner Hospital, as was the standard procedure prior to the GRAND Model. The data are cumulative from January 4, 2016 through January 26, 2022 and only include counties that had consistent data. Calculations showed that among these seven counties, the GRAND Model has led to a savings of 13,831 hours, or 576 days, in time officers previously spent driving to Wagoner Hospital. The estimated cost of the saved mileages was $434,710.15 and $283,970.55 in officer time, for a total savings of $718,680.70.

Table 2. Cumulative Number of Minutes and Miles Saved by Law Enforcement Transporting Clients to a URC in Seven Counties, 2016 – January 2022

County	Minutes saved	Miles saved
Craig	315,240	278,462
Delaware	114,880	119,794
Nowata	18,576.8	17,880.8
Mayes	48,082	41,450
Ottawa	187,712	169,946.4
Rogers	53,508	51,861.6
Washington	91,920	125,624
Total	**829,918.8**	**805,018.8**

IV. DISCUSSION

The results of this evaluation unequivocally show that since its implementation in 2016, the GRAND Model has been exceedingly effective at reducing inpatient hospitalizations, increasing outpatient service utilization, and producing cost savings for GRAND and law enforcement. Additionally, as GRAND serves a predominantly rural population, the GRAND Model show strong evidence that it works for the unique needs of rural communities.

When compared to the baseline year of 2015 --

- Inpatient hospitalizations among GRAND adult clients at any Oklahoma psychiatric hospital fell from 959 (2015) to 66 (2021), a reduction of 93.1%.
- Inpatient hospitalizations among GRAND adult client at Wagoner Hospital fell from 841 (2015) to 0 (2021), a reduction of 100%.
- Inpatient bed days among GRAND adult clients at Wagoner Hospital fell from 1,115 (2015) to 0 (2021), a reduction of 100%.
- From 2016-2021, the decreases in inpatient hospitalizations produced a $62 million dollars cost savings.
- The number of unique adult clients served increased by 163.5% from 4,326 (2015) to 11,401 (2021).
- Law enforcement in seven counties saved 576 days in time spent transporting clients.
- Law enforcement in seven counties saved over $718,000 from reductions in time and distance and spent transporting clients.

Furthermore, data show that the GRAND Model was producing the desired outcomes within one year of its implementation in 2016. Compared to baseline data in 2015, data from 2017 show that –

- Inpatient hospitalizations among GRAND adult clients at any Oklahoma psychiatric hospital fell by 50% from 959 (2015) to 478 (2017).
- Inpatient hospitalizations among GRAND adult client at Wagoner Hospital decreased by 61%, from 841 (2015) to 328 (2017).
- Inpatient bed days among GRAND adult clients at Wagoner Hospital fell from 1,115 (2015) to 402 (2021), a reduction of 64%.
- From 2016-2017, decreases in inpatient hospitalizations resulted in savings of over $7.8 million dollars.
- The number of unique adult clients served increased by 27% from 4,326 (2015) to 5,515 (2017).

It should be noted that GRAND expanded its service delivery area from seven to 12 counties in 2019, yet the GRAND Model continued to produce positive outcome even with the growth in consumers served.

In addition to the formal outcomes presented here, there are likely other benefits of the GRAND Model that cannot be fully captured by data, some of which were discussed in interviews. For example, patients can experience trauma from hospitalizations and arrests/detention which are now being reduced and prevented. For those who voluntarily admit themselves to a URC, they are no longer beholden to mandatory time holds. In these cases, the client's focus can be on "getting better instead of getting out," a view which used to hamper patient treatment engagement and compliance. For those who end up arrested and booked, mental health treatment is rarely available to people in jail, and this can exacerbate breaks in medication compliance and services that further compound health problems. Information shared during interviews suggested universal satisfaction among respondents regarding the GRAND Model's ability to meet client needs and its potential to continue providing unbridled mental health services to anyone in need, at the level that is best for them. Relatedly, several respondents shared that the GRAND Model had likely reduced the prevalence of suicides and suicide attempts.

GRAND Philosophy Towards Service Delivery

Interviews and document review revealed that the development, implementation, and continued refinement of the GRAND Model was significantly shaped by five views towards service delivery. Although not formal components of the GRAND Model, these five characteristics created an environment that was conducive to its development.

1. <u>Embrace a rapid change model towards developing new processes and programs, wherein refinements and pivots can quickly occur to reach the best end product.</u>

Interviewees frequently discussed the rapid change model that was used by GRAND. This entails the continual evaluation and refinement of the various processes and components of its service delivery system to ensure GRAND was achieving the best outcomes possible for its clients. Leadership engages in an active continuous quality improvement process and believe, *"There are no dead ends, we just change to get around it or get past it."* Josh Cantwell, GRAND COO, said*, "Stop something if it's not working. Don't stick with it just because you were the ones who decided it."*

2. <u>Serve people in the least restrictive setting possible that provides them with the appropriate level of care; increase access to the care and services that people need, when and where they need them.</u>

The innovation behind the GRAND Model began with identifying a critical gap in available levels of care for patients experiencing a mental health crisis. To remedy this, the GRAND Model created new levels of care to better serve its clients - the URCs operate as an alternative placement between outpatient services and inpatient hospitalizations, crisis services are available on demand via the mental health devices, and the mental health devices enable patients to have access to their care team at all times. "*Access,"* said Larry Smith, CEO, "*is the secret to success."*

3. Implement an integrated care system towards mental health and substance use disorder treatment that includes physical health and ancillary supports, such as housing, in one place.

Prior to becoming a CCBHC, GRAND was already invested in providing integrated mental health, substance use disorder, physical health care and this approach was incorporated into the GRAND Model. The first URC had a nurse who could assess a person's physical health on-site instead of sending them to the ED for physical health stabilization. They soon added a housing specialist to the team and brought other specialists to the URC as needed, "*the person is here and we can bring all the providers to them. Clients are here and available."* This approach has been replicated and built into other aspects of the GRAND Model so that GRAND can, "*treat the individual, their family, and the community they live in*."

4. Utilize an outcome-based approach, instead of a service-based approach to guide treatment.

GRAND approaches treatment delivery by looking at the outcome(s) they want to achieve. Indeed, the history of the GRAND Model began with the desire to reduce inpatient hospitalizations among adult clients. To do that GRAND looked at the population with the most barriers (i.e., transportation to appointments) and the poorest outcomes and developed services to overcome the challenges. Larry Smith emphasized the importance of "*treating to get specific outcomes for a client*" instead of "*treating to be able to bill for a service*," which is the more common approach among Community Mental Health Centers. "*Treating to get outcomes*," he said, "*requires a whole systems change and that's what we did with the GRAND Model.*"

5. Crisis prevention and intervention can be defined as building rapport and trust between clients and therapists, fostering connections, and reducing loneliness.

GRAND believes that crisis intervention does not have to look like a traditional crisis response wherein a traumatic or activating event that is considered a "crisis" needs to occur. Rather, crisis intervention is viewed as crisis prevention and clients are encouraged to use the crisis button even if it's not a traditional crisis and they just need to talk or have something small or mundane to share. A crisis shift supervisor shared that, "*They're used to people ignoring them and think something severe has to happen before they can call. Letting them know it's OK to call us because they want to share about their new puppy is trust building*." Indeed, reducing loneliness among clients was mentioned by several interview respondents as a key feature of the GRAND Model, "*a triggering factor of mental illness is loneliness and if you can take that away, you can reduce some symptoms and the mental health devices did this,"* said Jeff Hunter.

V. CONCLUSION

The findings from this program evaluation provide strong evidence that the GRAND Model reduces inpatient hospitalizations, increases service utilization, produces considerable cost

savings from reduced inpatient stays, and saves law enforcement time and money. The GRAND Model has been successful because its three components work seamlessly together to close critical service access gaps that existed in Oklahoma. The outcomes seen by GRAND are likely unattainable without the same pieces in place – multiple URCs, mental health devices for clients and community partners, and awake crisis clinicians who answer the calls onsite from the URC. Together, these elements have produced unbridled access to mental health care by creating multiple levels of care that are capable of providing the least restrictive level of care possible that is best for the individual. "*The magic that happens is the process that surrounds the app. The app is key and is necessary, but you have to have the process… the calls have to be answered every time and quickly. And the caller has to get help, it can't be empathy, it has to be problem solving*," said Josh Cantwell, "*Doing things the right way isn't always innovation. It's doing it in conjunction with ALL the steps done in the right way."*

Appendix A. Development Timeline of the GRAND Model

2008

- Oklahoma Department of Mental Health (DMH) creates a telehealth platform via a bridge system that was an open portal.

2009-2010

- GRAND leaves the DMH bridge system and moves to an Apple iOS system for telehealth.

2012

- GRAND applies for a SAMHSA Primary Behavioral Health Care Integration (PBHCI) grant.

2013

- GRAND receives a PBHCI grant award to provide services for Ottawa and Delaware Counties. The Year One award amount was $1,567,258 and the Year Two award amount was 1,406,858.

2014

- GRAND begins expanding integrated care services to Craig, Rogers, Mayes, Washington, and Nowata counties. The expansion of counties in GRAND's service continues through 2017.

2015

- January 2015 – Oklahoma begins to implement health homes, which was the foundation for the CCBHC model.
- Oklahoma applies for the CCBHC Planning Grant.

2016

- Oklahoma receives the CCBHC Planning Grant and GRAND partners with other CMHCs to participate in the grant.
- January 2016 – GRAND opens their first 24/7 Urgent Recovery Center in Vinita, OK.

- January 2016 – GRAND launches the iPad pilot program with the GRAND App solution to law enforcement officers, sheriff's departments, emergency rooms, and adult high-risk patients.

2017

- GRAND partners with MyCare Technologies to develop the next iteration of the app.
- January 2017 – GRAND is selected to participate in the CCBHC Demonstration Project.
- April 1, 2017 – GRAND initiates services as a CCBHC.
- August 2017 – GRAND implements "Crisis Hunt Groups" functionality to improve scalability of crisis telehealth solution
- GRAND continues to distribute iPads with the GRAND App solution to law enforcement, emergency rooms, and adult *post-hospitalization* patients. Expansion continues.

2018

- GRAND opens their second 24/7 Urgent Recovery Center in Pryor, OK.
- GRAND receives a CCBHC-E expansion grant

2019

- April 2019 – GRAND begins providing services to their expanded 12 county region.
- GRAND opens their third 24/7 Urgent Recovery Center facility in Stillwater, OK.
- By the end of 2019, GRAND has deployed iPads with the MyCare app solution to nearly *all* adult patients.

2020

- GRAND begins providing child and adolescent telehealth services after they become eligible for MyCare app services during COVID.
- GRAND receives first responder designation (FirstNet) to prioritize connectivity during power outages.
- September 2020 - GRAND adds a button on the iPads for first responders to use to debrief after a traumatic call or receive mental health care anytime.

2021-2022

- NRI conducts and publishes findings of an independent evaluation that show strong evidence that the GRAND Model reduces hospitalizations, increases outpatient services, and saves law enforcement time and money.