The Relationship of Suicide Death to Baker Act Examination, Client Characteristics and Service Use Patterns

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Executive Summary

Suicide is the eleventh leading cause of death across all ages in the United States. Florida had the third highest number of suicide deaths among all states in 2005 with over 2,300 deaths (CDC WISQARS, 2008; Kung, Hoyert, Xu, & Murphy, 2008). In Florida, it was the tenth leading cause of death in 2005, ranking as high as the second leading cause of death for 25-34 year olds in the state (CDC WISQARS, 2008).

Risk factors for death by suicide include being male, having a diagnosis of depression and/or a substance use disorder, and having made a previous suicide attempt (CDC WISQARS, 2008; Conwell et al., 1996). Protective factors which have been shown to decrease the likelihood of death by suicide include engagement in effective mental health and substance abuse treatment services, restricted access to lethal means, and cultural beliefs which discourage suicide (Appleby, 1992; SPRC, 2001).

Florida's mental health statute regarding acute and involuntary care (The Baker Act), allows for involuntary examinations for up to 72 hours with evidence of mental illness and harm/neglect to self or others. Medicaid enrollment data analysis for the state of Florida indicate that almost half of the 125,000 Baker Act examinations which occur annually are for those who are Medicaid enrolled for at least a portion of the year in which their involuntary examination occurs and a disproportionately large number of these exams are accounted for by a relatively small group of people. Medicaid enrollees who have had a Baker Act examination in the past year are three times more likely to die by suicide than enrollees with no examination (Becker et al., 2005).

This study was aimed at providing a better understanding of the Medicaid funded services and the extent to which they were used by those who died by suicide, as well as an examination of service patterns and how they were related to this negative outcome. Lack of service use for those who were enrolled in Medicaid and died by suicide would suggest problems with diagnosis and/ or access to key services. Use of certain services that are related to suicide may suggest the need to more carefully address (or assess for) suicide for individuals accessing such services and/or address issues with the services themselves. The goal of this study was to identify these issues in a way that will allow AHCA to use Medicaid funds in such a way that contributes to reductions in suicides.

Method

This study used archival data analyses, an online survey, and interviews to gather data. The following data sets were used for the archival data analyses: Florida Department of Health data on deaths by suicide, involuntary Baker Act examinations data, and Medicaid service claims data. A study-designed instrument was utilized for online surveys and interviews. An online survey invitation was sent to mental health professionals affiliated with Baker Act receiving facilities or related training. Additionally, two members of the study team conducted face-to-face interviews with mental health professionals from four Baker Act receiving facilities.

Archival Analyses

There were 7,128 deaths in Florida in the three-year period from 2004 through 2006 that were ruled suicides by a medical examiner. One thousand, one hundred and forty-seven of these individuals (16.09%) experienced at least one involuntary examination in the four years preceding their death. The number of involuntary examinations for this subset of individuals ranged from 1 to 29.

There were 474 (6.65%) individuals continuously enrolled in Medicaid for the year prior to their death by suicide. Of these 474 people, 231 were identified as having at least one Medicaid claim for a service related to serious mental illness (SMI) or severe emotional disturbance (SED) and 243 in the group who did not have SED or SMI related services. People in the SED/SMI group were significantly younger and more likely to be female than those in the non-SED/ non-SMI group.

Of the 474 people continuously enrolled in Medicaid in the one year prior to their death by suicide, the number of involuntary examinations in the four years prior to death by suicide ranged from 1 to 17. Forty-one percent of these people continuously enrolled in Medicaid from 2004 through 2006 who died by suicide had at least one involuntary examination in the four years prior to their death. There are two interesting groups within this forty-one percent: a) people with a long history of many involuntary examinations and b) those who have involuntary examinations quite close in time to their death. For example, there were 84 people with at least one involuntary examinations were within 180 days of their death by suicide, 46 of these involuntary examinations were within 60 days, 28 within 30 days, 11 within 14 days, three within seven days and two within four days.

There were 134 children (age 10 through 17) who died by suicide during the three years, with 22 of these children enrolled in Medicaid for the entire three years. This is another group in need of additional study, with the goal of learning more about the factors related to their deaths by suicide.

Analysis of Medicaid claims data showed that inpatient services were the major contributor to the total institutional cost (see Appendix B) for the people 100% enrolled in Medicaid in the year prior to their death by suicide. Other institutional costs (nursing home and hospice) contributed to the total user cost in each cohort. Targeted case management was the major contributor to the Community Behavioral Health Claims for this group. Also, medical claims that were not mental health-related were also a major contributor to the total cost per Medicaid service user.

Surveys and Interviews

The study team identified the following five themes from both the online survey and the face-to-face interview responses: respondent characteristics, assessment of suicidality, the availability of community mental health services and substance abuse services at discharge, continuing education and in-service training related to suicide, and public education on suicide prevention and suicide issues.

The vast majority of respondents were employed full time at a Baker Act receiving facility. Most were psychiatric nurses, licensed mental health counselors, and licensed clinical social workers. Respondents indicated the use of a variety of assessment measures for suicidality at intake and discharge. Staff's perceptions of community services (i.e., mental health services, substance abuse treatment) for discharged clients were that availability is inadequate. Responding to the availability of community mental health services for clients upon discharge from their facility, almost half said community service availability was less than adequate or not adequate. Over two-thirds of respondents thought that the availability of substance abuse treatment services for clients upon discharge from their facility was less than adequate or not adequate.

The majority of online (76.2%; n=116) and interview (91%; n=20) respondents noted that their facility offered in-service or continuing education trainings for its employees. Over a third of online respondents and over half of interviewees reported that their facility conducted educational activities for the public related to suicide prevention or other suicide related issues.

Background

Suicide is a serious public health problem. According to the most recent statistics from the Centers for Disease Control and Prevention [CDC] Web-Based Injury Statistics Query and Reporting System, [WISQARS], (2008), suicide is the eleventh leading cause of death across all ages in the United States, claiming 32,637 lives in 2005. Suicide ranks second highest for persons 25-34 years of age and third highest for persons aged 10-24 years (CDC WISQARS, 2008). In 2004, almost 179,000 American's were hospitalized for a non-fatal suicide attempt (Owens, Myers, Elixhauser, & Brach, 2007). In Florida, suicide was the tenth leading cause of death during 2005, ranking as high as the second leading cause of death for 25-34 year olds in the state (CDC WISQARS, 2008). Florida had the third highest number of suicide deaths among all states in 2005 with over 2,300 deaths (CDC WISQARS, 2008; Kung, Hoyert, Xu, & Murphy, 2008). Over 8,600 Florida residents were hospitalized for a non-fatal suicide attempt in 2006 (Kung et al., 2008). The number of Florida deaths by suicide from 2001 through 2006 are presented in Table 1 by age range of individuals (Florida Department of Health, Office of Vital Statistics, 2007).

Table 1: Florida Deaths by Suicide — 2001–2006											
Age Range	2001	2002	2003	2004	2005	2006					
10 to 14	18	12	4	16	19	4					
15 to 24	191	194	195	207	206	200					
25 to 34	318	277	303	283	293	293					
35 to 44	440	481	479	471	430	422					
45 to 54	480	523	462	548	520	538					
55 to 64	279	300	323	339	339	401					
65+	564	544	526	516	499	551					
Annual Total	2290	2331	2292	2380	*2308	*2410					
*Annual total varies	from column t	otal due to dea	aths by suicide	under 10 years	s or unknown a	ige data.					

Recent statistics show an alarming increase of suicides among girls ages 10 to 14 in the year 2004 in the U.S., an increase of over 75% from the previous year (CDC WISQARS, 2008). While suicide rates for all Americans between the ages of 10 and 14 had decreased between 1990 and 2003, suicide in girls and boys aged 15–19 years increased from 2003 to 2004. The CDC also noted that hanging rates more than doubled for girls between the ages of 10 and 14, and rose by almost 50% in 15–19 year old girls in 2004.

Predictors and Risk Factors

Given that suicide stems from a complex system of biopsychosocial factors in which age, culture, race, symptomotology, genes, region, etc., interact to form suicidal vulnerabilities, prediction of suicide remains an illusive endeavor at this time (Bongar, 2002). Nonetheless, research has helped to identify a number of key risk factors associated with suicidality that can help guide the clinical assessment of suicidality. These key factors include previous suicide attempts, seriousness of previous suicide attempts, diagnoses for depression and/ or substance abuse, acute episodes of illness, living alone, being socially isolated, the experience of a social or relational loss, and a history of self-injury (Appleby et al., 1999; Brown, Bongar, & Cleary, 2004; Suicide Prevention Resource Center [SPRC], 2001).

Along with depression, being widowed and physically ill are particularly important risk factors for suicide among elderly men, who while making up only 13% of the population, account for almost 20% of total suicides annually (Conwell et al., 1996; National Institute of Mental Health [NIMH], 2004). While women are more likely to attempt suicide, almost four times as many men die by suicide as a result of their tendency to use more violent methods such as firearms or hanging rather than poisoning, for example (Bisconer & Gross, 2007; CDC WISQARS, 2008). Suicide rates are also higher for Whites than non-Whites (Conwell et al., 1996) with White males accounting for 72% of suicides in 2001 (NIMH, 2004). Research also shows that men are less likely than women to seek help from a mental health professional when experiencing extreme suicidal urges (Booth & Owens, 2000). Many suicidal acts are impulsive, some with less than five minutes between the decision to attempt suicide and the actual attempt (Simon et al., 2001).

People who find themselves in need of inpatient psychological treatment tend to be at increased risk for suicidal behaviors, especially for the few weeks following hospital discharge when they may feel a sudden loss of support, renewed exposure to the problems in their home environment, and remain vulnerable to the distress caused by their psychological and emotional symptoms (Deisenhammer, Huber, Kemmler, Weiss, & Hinterhuber, 2007; Goldacre & Seagroatt, 1993; Meehan et al., 2006). Studies have shown a considerable vulnerability for death by suicide during the first week (Appleby et al., 1999; Deisenhammer et al., 2007) and second week (Meehan et al., 2006) post psychiatric inpatient discharge. Any history of mental illness treatment however, including past psychiatric hospitalizations (Pirkis, Burgess, & Jolley, 1999), should be viewed as an indicator of an increased suicide risk (Harris & Barraclough, 1997).

While the literature suggests that risk for suicide decreases as time after discharge elapses (Meehan et al., 2006), one study found that patients with affective disorders are still at risk for dying by suicide for up to one year postdischarge (Goldacre & Seagroatt, 1993). Oquendo et al. (2002) found that in the two years following hospitalization for depression, patients were severely undertreated for the illness, including those who had a previous suicide attempt. Much research has shown that not only does a diagnosis of major depressive disorder put a person at higher risk of dying by suicide, (American Psychiatric Association [APA], 2003), but that suicide is as preventable as depression is treatable (Niernberg, Gray, & Grandin, 2001).

Other mental health disorders carry high risks of suicide (Hunt et al., 2006; Tondo, Isacsson, & Baldessarini, 2003). Personality disorders such as borderline personality disorder (Links, Gould, & Ratnayake, 2003; McCormick et al., 2007), antisocial personality disorders (Links, Gould, & Ratnayake, 2003), and bipolar disorder especially during the depressive stage (Tondo et al., 2003) present a major risk for suicide (Hawton, Houston, Haw, Townsend, & Harriss, 2003). Hunt, Kapur, Windfuhr, et al. (2006) found that 20% of those who died by suicide not only had schizophrenia, but they also had high rates of depression and substance abuse. One case-controlled study found that hospitalized patients with a personality disorder were more likely than other hospitalized patients to have made a suicide attempt immediately before their admission and display continual clinically-relevant suicidal behavior within the 24 hours after admission (Ahrens & Haug, 1996).

Of the over 30,000 people in the U.S. who die by suicide each year, an estimated 20–35% abuse alcohol or were drinking at the time of their death (U.S. Department of Health and Human Services [U.S. DHHS], 2007). In a longitudinal study, Beck and Steer (1989) found that individuals with alcoholism are five times more likely to die by suicide than individuals without alcoholism. Some reasons for this correlation may be that alcohol impairs judgment and lowers inhibitions, and importantly, the depressive effects of alcohol can trigger or exacerbate an already present mood disorder (Caplan, 2001). Research has demonstrated a strong association between co-morbid alcohol disorders and suicide (Henriksson, Aro, Marttunen, & Heikkinen, 1993). Cornelius, Salloum, Day, Thase, & Mann (1996) found that among individuals with alcoholism and major depression who had been psychiatrically hospitalized, almost 40% had made a suicide attempt in the week prior to admission, with most patients reporting that they drank more heavily on the day of their attempt.

Prevention

Protective factors are thought to be key in preventing suicide (Appleby, 1992). Such factors include effective clinical care for mental, physical, and substance abuse disorders, restricted access to lethal means of injury and suicide, and cultural or religious beliefs that discourage suicide (SPRC, 2001). Since research has shown that many people who have died by suicide had recently been in contact with the health care system, this may be a population to be targeted for prevention (Hunt, Kapur, Shaw et al., 2006; Pirkis & Burgess, 1998).

The literature suggests that a significant portion of people who have died by suicide have had prior contact with the health care system, with almost 75% having seen a primary care provider in the year before their death (Appleby et al., 1999; Luoma, Martin, & Pearson, 2002). Through a systematic review of the literature related to suicide and contact with the health care system, Pirkis and Burgess (1998) found that not only is contact with a general practitioner common among those who recently died by suicide, but these physicians then have a unique role to play in suicide prevention. Other studies have found a need for training among general practitioners focused on suicide risk assessment (Appleby, Amos, Doyle, & Tomenson, 1996; Rutz, von Knoring, & Walinder, 1989). It has also been shown that even a brief training on suicide prevention for general hospital personnel increased the staff's knowledge about suicidality and confidence when handling patients who were suicidal (Berlim, Perizzolo, Lejderman, Fleck, & Joiner, 2007). It is critical that such training be updated regularly in order to remain effective (Links & Hoffman, 2005).

About a quarter of suicide victims had been in contact with the mental health care system in the year before their death (Appleby et al., 1999; Luoma et al., 2002), but at the time of their suicide or attempt, most people were not in contact with a general practitioner nor a mental health clinician (Owens, Booth, Briscoe, Lawrence, & Lloyd, 2003; Suominen, Isometsa, Ostamo, & Lonnqvist, 2002). These findings suggest a need for greater continuity of care for this population. A patient's follow-up after contact with mental health services plays a key role in the prevention of suicide (Burgess, Pirkis, Morton, & Croke, 2000). A Finnish study noted that one third of their subjects did not see a health care provider in the month following their suicide attempt due to lack of aftercare referral (Suominen et al., 2002). Upon discharge from a mental health facility, a period of vulnerability as noted above, further engagement with mental health, and substance abuse services if appropriate (Caplan, 2001), is critical (Deisenhammer et al., 2007; Meehan et. al., 2006).

The process of risk assessment within both inpatient and outpatient settings is an important aspect of any treatment regimen, especially for individuals identified as having suicidal behaviors or ideation (Bongar, 2002; Sullivan & Bongar, 2006). Assessment tools such as the Minnesota Multiphasic Personality Inventory [MMPI]-2, Rorschach Inkblot Test, Beck Depression Scale and Beck Hopelessness Scale, Scale for Suicide Ideation, Suicide Intent Scale, and the Thematic Apperception Test, have commonly been used by clinicians to assess a patient's risk of suicide (Sullivan & Bongar, 2006). Though assessment instruments are a valuable resource in helping to unearth potential risk factors, Bryan and Rudd (2006) suggest that the face-to-face clinician interview be at the core of any comprehensive assessment protocol, while data collected via the use of actuarial instruments such as those mentioned above be integrated into the assessment process as supplemental information. Sullivan and Bongar (2006) recommend taking a comprehensive approach to risk assessment that includes the use of routine psychological testing; the utilization of reliable and valid suicide risk assessment measures; comprehensive psychodiagnostic evaluation; obtaining a complete psychobiosocial history, and documentation of suicide risk assessment, in conjunction with an ongoing assessment of suicide that overlays the entire process of treatment.

Service Utilization and Standards of Care

Because there is such a myriad of factors associated with suicidal vulnerabilities, the approach to treatment should be no less varied in order to maximize both the physical and psychological benefits of these services. For those suffering from affective disorders, maintenance of antidepressant medication is a crucial component in preventing suicide immediately following discharge from inpatient facilities (Goldacre & Seagroatt, 1993; Oquendo et al., 2002). Research shows that adult clients often dislike taking medication without accompanying counseling (Strike, Rhodes, Bergmans, & Links, 2006). Studies have also indicated that it is critical for children and adolescents to be monitored closely while on antidepressants during post-hospital discharge due to an association between the drug therapy and suicide attempts in this younger population (Olfson, Marcus, & Shaffer, 2006). Ellison (2001) similarly notes how unmonitored psychiatric medication has the potential to increase the risk of self-injurious behavior in adults, although much literature demonstrates that with adequate supervision, these medications can be an impetus to recovery.

A recent study found that for those individuals diagnosed with substance abuse disorders, higher engagement in substance abuse treatment, rather than psychiatric therapy, reduced the likelihood of a suicide attempt for one year after the end of treatment (Ilgen, Harris, Moos, & Tiet, 2007). As a result, these authors suggest that providers engage clients with substance abuse disorders in longer therapies in an effort to prevent suicide within this population (Ilgen et al., 2007). Caplan (2001) notes the advantages related to the services that managed care offers those with substance abuse problems who are at risk for dying by suicide. Such services include a flexible and receptive benefit structure and the availability of a wider range of services.

Standards of care and risk management in both inpatient and outpatient settings can offer a much needed guide to help the clinician identify and manage the numerous risk factors associated with suicidal behavior, as well as aid in the treatment process. Paired with the aforementioned ongoing risk assessment strategy (Sullivan & Bongar, 2006), outpatient procedures such as estimating risk, identifying the need for hospitalization, timely intervention of symptoms, psychopharmacology, access to individual and family therapy, and the provision of social support can be utilized in order to develop effective standards of care (Slaby, 1998). Likewise, standards of care within inpatient settings can overlap with outpatient settings, but also include clinical risk management strategies such as the development of a therapeutic contract, conducting an ongoing review of risks and benefits of inpatient care, comprehensive evaluations, and the development of a thorough treatment plan (Silverman, Berman, Bongar, Litman, & Maris, 1998).

Medicaid and SSI

Assistance for the basic needs of individuals and families with low incomes, children with disabilities, and adults and seniors can be funded through Supplemental Security Income (SSI). Furthermore, if one is eligible for SSI benefits, he/she is also eligible for Medicaid, a program funded by federal and state governments in order to provide medical care for uninsured individuals with low incomes or who have disabilities (United States Department of Health and Human Services [US DHHS], 2007). A disproportionate number of Medicaid beneficiaries have been diagnosed with or are being treated for a mental health disorder and are associated with a higher number of suicides and violence-related fatalities compared to those not receiving Medicaid (Cueller & Markowitz, 2007; Koroukian, Beaird, Duldner, & Diaz, 2007). Thus it has been suggested that consumers of these services be targeted for suicide prevention (Roy, 2001).

Medicaid enrollees are at further risk because mental health agencies often view their Medicaid status as transitional in that clients are more likely to move on and off Medicaid insurance coverage compared to those with private insurance (Barry & Thomas, 2005). The literature demonstrates that those enrolled in SSI who have been hospitalized for a mental health condition in the past year are four times more likely to die by suicide than SSI enrollees who were not hospitalized for mental health illness (Becker, Brown, Haynes, & Roggenbaum, 2005). Studies have shown that using Medicaid data as a tool for analysis provides a unique and beneficial opportunity to study the characteristics of the population enrolled because the ability to pay for selected services and medications should be equal (Strothers et al., 2005). This is not to suggest that the availability of services is equal for everyone enrolled in Medicaid, however. While Medicaid pays for medication, the implementation of formularies is such that it may restrict medication choice in ways that impact the course of illness, the likelihood of having a crisis, and therefore, the need for involuntary examination.

Involuntary Examinations

Most states have statutory language that allows for involuntary mental health examinations, which is also referred to as "emergency commitment." In order to initiate these involuntary examinations, most states require evidence of mental illness <u>and</u> harm to self, harm to others and/or self neglect. The length of time that the person may be held involuntarily varies but is typically only a few days (such as 72 hours in Florida, 96 hours in Missouri, etc.).

Florida's mental health statute is called Baker Act, named after Maxine Baker, the state representative and author of the original 1971 legislation. The Baker Act allows for involuntary examinations of up to 72 hours, with evidence of: a) mental illness, and b) harm to self, harm to others, and/or self neglect. Examinations may be initiated by law enforcement officers, mental health professionals, or judges and occur in Florida's more than 100 Baker Act receiving facilities. Amendments to the statute in 1982 and again in 1996 provide more explicit commitment criteria and require stronger informed consent in an effort to reduce involuntary civil commitments and to provide clients with the least restrictive care available in order to meet the needs of each individual (McGaha, Stiles, & Petrila, 2002; Peters, Miller, Schmidt, & Meeter, 1987).

A disproportionately large number of involuntary exams are accounted for by a relatively small group of people (Christy & McCranie, 2007). That is, while most people who have an involuntary examination only have one, there is a group that has more than one, including a group of people who have many. For example, 20% of people who had an involuntary examination in 2006 experienced more than one, with the range from 2 to 33. Twenty-eight percent of people who had an involuntary examination over the seven-year period from 2000 through 2006 had more than one involuntary examination. The range was from 2 to 105, with one individual with data that is considered an outlier having 295 involuntary examinations in the seven years.

Some of the people who have many involuntary examinations are enrolled in Medicaid at the time of some or all of their involuntary examinations. Repeated involuntary examinations for individuals enrolled in Medicaid suggest that these individuals may not be receiving adequate services necessary to avoid the crises that contribute to these involuntary examinations or that there are other supports lacking in their lives that contribute to this pattern (such as other needed social services, housing, social capital in general, etc.). One study found that having had an involuntary examination was a significant predictor of death by suicide and individuals enrolled in SSI who had an involuntary examination in the past year were three times more likely to die by suicide than enrollees with no involuntary examination (Becker et al., 2005).

Florida is the only state to maintain client level data on involuntary examinations (Christy, Kutash, & Stiles, 2006; Christy & McCranie, 2006; McGaha et al., 2002). While some states maintain aggregate counts of involuntary examinations, Florida's database is unique because it contains a record for each examination, with identifiers for individuals. This allows for analysis of characteristics of involuntary examination and persons subject to such exams, as well as linkages of these data to other data sets. Some research has warned against using suicide as a quality indicator of mental health services due to a variety of factors, including suicide rates being unstable and sometimes misidentified (Desai, Dausey, & Rosenheck, 2005). However, these same authors found evidence that a higher suicide risk is associated with some patient-level mental health care factors, suggesting a need to further research this population (Desai et al., 2005)

Further Research

In its report *A Guide to Public Health Research Needs, 2006–2015*, the Centers for Disease Control (2006) calls for the identification of the risk and protective factors associated with suicidal behavior particularly among vulnerable populations such as adolescents, those who are physically or mentally handicapped, and those living in rural areas. The CDC notes that there needs to be further examination of the connection between mental health and overall health and well-being in order to narrow existing health disparities in the United States (CDC, 2006). Researchers have called for further study regarding the risks and benefits that Medicaid provides to clients with serious mental illness (Dickey et al., 1996). While there has been much research on clients', as well as the public's, perceptions of involuntary admission to mental health facilities (Rogers, 1993; Gardner et al., 1999; Lauber, Nordt, Falcato, & Rossler, 2002), there remains a need for further study regarding the relationship of suicide and involuntary mental health examinations.

This study was aimed at gaining a better understanding of the services the Agency for Health Care Administration (AHCA) funds via Medicaid and the extent to which they were used (or not used) by those who died by suicide, as well as an examination of service patterns and how they were related to this negative outcome. Lack of service use for those individuals enrolled in Medicaid and who died by suicide might suggest problems with diagnosis and/or access to key services. Use of certain services that are related to suicide may suggest the need to more carefully address (or assess for) suicide for individuals accessing such services and/or address issues with the services themselves. The goal of this study was to identify these issues in a way that will allow AHCA to use Medicaid funds in such a way that addresses reductions in suicides.

Research Questions

This study examined the patterns of services and how they related to death by suicide. Lack of service use for those who were enrolled in Medicaid and died by suicide might suggest problems with diagnosis and/or access to key services. Use of certain services that are related to suicide may suggest the need to more carefully address suicide for individuals accessing such services and/or address issues with the services themselves. The goal is to identify these issues in a way that allows AHCA to use Medicaid funds in such a way that addresses reductions in suicides.

The following three research questions were addressed.

- 1.) What were the involuntary examination patterns (e.g., proximity to death, frequency) for individuals enrolled in Medicaid who died by suicide?
- 2.) What were the Medicaid-reimbursed service costs for people who died by suicide?
- 3.) What are the perceptions of key stakeholders (e.g., Baker Act receiving facility staff) regarding involuntary examination and assessment, and community supports and services?

This study was approved by the University of South Florida Institutional Review Board (IRB) and was determined to be exempt from Florida Department of Health IRB review.

Method

This study used the following three approaches: 1) archival data analyses, 2) an online survey, and 3) interviews.

Archival Analyses

Archival analyses were conducted to address research questions one and two. The following data sets were used for the analyses:

- Florida Department of Health data on deaths by suicide 2004 through 2006
- Involuntary examinations data from 2001 through 2006
- Medicaid service claims data for 2001 through 2006

Approval for receipt and use of data from the "Deathmaster" file was received from the Florida Department of Health (DOH), Vital Statistics, which is the owner of these data. Data on persons who died by suicide in 2004, 2005, and 2006 were obtained from the DOH.

Survey Design and Content

A survey was developed (see **Appendix D**) to elicit the opinions of mental health professionals who work at or are affiliated with any one of the more than 100 designated Florida Baker Act receiving facilities (where involuntary examinations take place). The Louis de la Parte Florida Mental Health Institute [FMHI] study team developed the survey with input from two Baker Act facility administrators. Survey questions covered areas such as employment, demographics, general procedural issues related to suicide, opinions about treatment availability in the community, suicidality assessment tools, and educational opportunities related to suicide and suicide prevention for employees and the public. The survey included both closed and open-ended questions. A waiver of documentation of informed consent was approved by the USF IRB. The first few screens of the web-based version of the survey informed participants about key issues, such as the voluntary nature of their participation, the confidentiality of their responses, and the nature of their participation.

The survey was developed for use in an online and face-to-face interview. The online survey invitation was sent to mental health professionals that were identified through previous attendance at trainings related to Florida's mental health statute and/or was contained in a contact database of Baker Act Receiving Facility staff members. A total of 480 individuals were identified with valid e-mail domains and sent invitations to participate. The overall design and implementation procedures for the online survey were guided by a modified version of the Dillman Tailored Design Method (2007). There were three waves of e-mail contacts across a five-week period.

Interviews

Two members of the study team conducted face-to-face interviews with 22 mental health professionals from four Baker Act receiving facilities representing the east coast, central peninsula, southwest, and Panhandle of Florida. The survey items were used as a guide, with additional questions asked based on responses during the interview. Interview sites were chosen based on a number of criteria. The study team attempted to represent a broad geographical range within Florida by contacting facilities located in varied regions. In addition, Baker Act receiving facilities were also targeted based on their number of involuntary examinations, with facilities having a higher volume of involuntary examinations chosen. Repeated attempts to secure a fifth site in southeastern Florida were unsuccessful. Study team members recruited respondents for the study from these facilities, and spent between 15-45 minutes for each interview. Respondents were first explained the purpose of the research project and voluntary nature of their participation. Informed consent was received from staff members who volunteered to participate in the interview, and an additional consent was obtained for those willing to be tape-recorded. Those interviewed ranged from entry level staff members to supervisory or director level staff members. Interviews were recorded and transcribed.

Theme Development for Text Answers on Survey and Interview Responses

Both the online survey respondents and the face-to-face interview respondents were asked the same series of questions. The study team reviewed online surveys and interview responses for key words, phrases and concepts. Themes tended to emerge within the content of survey questions; although analysis of eight openended questions also produced several additional themes and concepts. The study team identified the following five themes: the availability of community mental health services and substance abuse services at discharge; suicide precautions after admission; addressing suicidality at discharge; continuing education and inservice related to suicide; and public education on suicide prevention and suicide issues. These five themes will be discussed later in this report.

Results

Archival Analyses

Death by Suicide and Involuntary Examination (Regardless of Medicaid Enrollment)

There were 7,128 deaths in Florida in the three-year period from 2004 through 2006 that were ruled suicides by a medical examiner and, therefore, reported as a suicide in the Florida Department of Health data. There were 1,147 (16.09%) of the 7,128 people who died by suicide who experienced at least one involuntary examination in the four years before their death. The number of involuntary examinations for these individuals ranged from 1 to 29 (see **Table 2**).

Information about the number of involuntary examinations over a four year period experienced by the 7,128 people who died by suicide is presented in **Table 2.** There were 1,147 (16.09%) of the 7,128 people who died by suicide from 2004 through 2006 who had at least one involuntary examination in the four years before their death. There were 1,051 (14.74%) with involuntary exams in the three years prior to death, 910 (12.77%) within two years, 683 (9.58%) within one year, 482 (6.76%) within 180 days, 263 (3.69%) within 60 days, 169 (2.37%) within 30 days, 81 (1.14%) within 14 days, 36 (0.51%) within 7 days, and 14 (0.20%) within four days of their death by suicide.

Following is information that is helpful in the interpretation of data in Tables 2 and 5.

Two groups are of particular interest and have data labeled as being in "Box A" and "Box B."

People with data in **Box A** had involuntary examinations close in time to their death by suicide. This means that they came to the attention of someone within six months of their death (and some even closer in time to their death) in a way that made someone initiated an involuntary examination.

People with data in **Box B** present a different challenge. That is, these are individuals who have a long history of many involuntary examinations. These individuals have had extensive contact with receiving facilities, given the number of involuntary examinations.

It is also important to recognize that some of the people with data in Box B may also be some of the same people who had involuntary examinations close in time to their death by suicide (that is, some of the people represented by data in Box A also are associated with data in Box B).

Knowing more about these individuals, their background, diagnoses, severity of symptoms, the nature of their social support networks, and the nature of their contact with the criminal justice, mental health and substance abuse treatment services would help to understand how to try to determine the factors related to their death by suicide. The factors may be different for people in group A and B; there may be heterogeneity in group A and B such that subgroups may be identified within each group as the factors related to their death by suicide.

Given the large volume of people who are examined at Baker Act receiving facility and the complicated nature of why people experience involuntary examinations and repeated involuntary examinations identifying these factors is a complicated issue

	Table 2									
	Num	ber of Invol	untary Exan	ninations 4 \	ears to 4 Da	ys Prior to D	eath by Suic	ide for the 7	7,128 People	!
				e III 2004, 2	005, 01 2000	(negarules			() [*]	
ms	4	3	2	1	180	60	30	14	7	4
# Exa	# (%)	# (%)		# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)
1	737 (64.25%)	697 (66.32%)	636 (69.89%)	503 (73.65%)	386 (80.08%)	238 (90.49%)	163 (96.45%)	81 (1.14%)	36 (0.51%)	14 (0.20%)
2	212 (18.48%)	192 (18.27%)	159 (17.47%)	122 (17.86%)	68 (14.11%)	25 (9.51%)	6 (3.55%)			
3	84 (7.32%)	77 (7.33%)	56 (6.15%)	37 (5.42%)	21 (4.36%)					
4	46 (4.01%)	32 (3.04%)	28 (3.08%)	8 (1.17%)	4 (0.83%)					
5	19 (1.66%)	17 (1.62%)	13 (1.43%)	4 (0.59%)	2 (0.41%)					
6	16 (1.39%)	11 (1.05%)	4 (0.44%)	5 (0.73%)						
7	3 (0.26%)	5 (0.48%)	2 (0.22%)		1 (0.21%)		I		1	
8	6 (0.52%)	5 (0.48%)	4 (0.44%)	1 (0.15%)			↑			
9	4 (0.35%)	4 (0.38%)	1 (0.11%)	2 (0.29%)						
10	4 (0.35%)	1 (0.10%)	1 (0.11%)				Box A			
11	3 (0.26%)	1 (0.10%)	2 (0.22%)							
12	4 (0.35%)	2 (0.19%)			- Boy	R				
13	2 (0.17%)		1 (0.11%)	1 (0.15%)		D				
14		2 (0.19%)	1 (0.11%)							
15	1 (0.09%)	3 (0.29%)								
16	2 (0.17%)		2 (0.22%)							
17	1 (0.09%)									
22		1 (0.10%)								
25	1 (0.09%)									
27	1 (0.09%)									
28		1 (0.10%)								
29	1 (0.09%)									
Totals	1147 (16.09%)	1051 (14.74%)	910 (12.77%)	683 (9.58%)	482 (6.76%)	263 (3.69%)	169 (2.37%)	81 (1.14%)	36 (0.51%)	14 (0.20%)
*Th	e groups for wh	iom data are pr	resented in this	table are NOT	mutually exclu	sive. That is, th	e counts of peo	ple are cumul	ative . For exam	ple, the
14 dea	14 people who had involuntary examinations 7 days before death by suicide are included in the 36 who had involuntary examinations 7 days before death by suicide, the 81 who had an involuntary examination 14 days before death by suicide, etc.									

Death by Suicide and Involuntary Examination for People Enrolled in Medicaid

Of the 7,128 people who died by suicide in 2004, 2005, and 2006, 908 (12.73%) were enrolled in Medicaid during at least some portion of the three years prior to their death. There were 699 (9.81%) who were enrolled in Medicaid on the day of their death. This is not an especially helpful issue to identify (Medicaid enrollment on the date of death) because some people could have been retroactively enrolled in Medicaid.

Analyzing data of people who were continuously enrolled in Medicaid for a period of time before their death by suicide is more useful because these individuals had coverage and theoretically should have had access to service prior to their death. In order to explore the relationship of Medicaid enrollment to death by suicide and Baker Act examination, the cohort of the 7,128 people who were continuously enrolled in Medicaid for the one year prior the death by suicide was identified. There were 474 people in this cohort (or 6.65% of the 7,128 people who died by suicide from 2004 through 2006).

SED/SMI and Non-SED/Non-SMI Group (see Appendix C for additional details)

Two sub groups of the main group of people continuously enrolled in Medicaid were identified. One were children who were identified as having a serious emotional disturbance (SED) or adults with serious mental illness (SMI) because they had at least one service utilization claim in Medicaid that indicated they were people with SED/SMI. The people in the Non-SED/Non-SMI group did not have such claims. However, it is possible that people in the SED/SMI group were people with SED/SMI who did not have an SED/SMI claim (so were not identified as having SED/SMI). While this complicates the interpretation of differences between these groups, we feel that the distinction is a helpful one to consider even with this weakness in the distinction between the two groups because people identified as having SED/SMI are a group that it may be helpful to focus upon for a variety of policy issues relevant to AHCA.

These 474 people were identified as having a Medicaid claim that identified them as a person with serious mental illness (SMI) or severe emotional disturbance (SED). There were 231 people in this group and 243 in the group who did not have SED or SMI. See **Table 3**. People in the SED/SMI group were significantly younger (M=45.87; SD=13.74) than those in the non SED/SMI group (M=53.60; SD=20.97) (t=4.74; df=1, 405; p<.001). Those in the non-SED/non-SMI group were more likely to be male (63.98% male), compared to the SED/SMI group (50.84% male) (X²=10.60; p< .01). This significant chi-square for the comparison of all race categories across the SED/SMI and non-SED/non-SMI groups (X²=19.59; p< .001) was difficult to interpret. The lack of quality in the race/ethnicity variable was such that difference between groups could not be explored on race/ethnicity.

Table 3. Demographics for People who Died by Suicide in 2004, 2005, or 2006 who were 100% Medicaid Eligible in the Year Prior to Death										
	Descriptive Statistics									
aphic	Medicaid Eligible	Medicaid One Full	Eligible for Year and							
Demogr Variable	for One Full Year (N=474)	SED or SMI (N=238)	Non-SED and Non-SMI (N=236)							
Age										
Mean	49.72	45.87	53.60							
Median	47.50	45.00	52.50							
SD	18.11	13.74	20.97							
		t = 4.74 (df =	1, 405), p < .001							
	N (%)	N (%)	N (%)							
10-14	7 (1.48%)	1 (0.42%)	6 (2.54%)							
15-24	35 (7.38%)	14 (6.06%)	21 (8.64%)							
25-34	45 (9.49%)	32 (13.45%)	13 (5.51%)							
35-44	107 (22.57%)	66 (27.73%)	41 (17.37%)							
45-54	116 (24.47%)	70 (29.41%)	46 (19.49%)							
55-64	59 (12.45%)	31 (13.03%)	28 (11.86%)							
65+	105 (22.15%)	24 (10.08%)	81 (34.32%)							
Gender										
Male	268 (56.54%)	121 (50.54%)	151 (63.98%)							
Female	206 (43.46%)	117 (49.16%)	85 (36.02%)							
	X ² = 10.60; p < .01									

Variables from the Department of Health Deathmaster file were used to categorize the 474 individuals by demographic variables and by other variables reported in the Deathmaster file (see **Table 4**). The majority of people who died by suicide were divorced or never married (for all people, SMI/SED group, and Non-SMI/Non-SED group). The majority of deaths occurred at the person's home (All=58.44%; SMI/SED=57.56%; Non-SMI/Non-SED=59.32%). A small percentage of people who died by suicide had current or past military service (All=7.81%; SMI/SED=5.04%; Non-SMI/Non-SED=10.59%). While this percentage is low, it is meaningful to note that about 10% of people who were 100% enrolled in Medicaid who were not categorized as SMI or SED who died by suicide had some military service. The pregnancy variable was not especially helpful due to the large percentage of missing data for this variable. Only three women were pregnant within one year of their death by suicide.

Table 4.										
Descriptives for People who Died by Suicide and 100% Medicaid Enrolled in the Year Prior to Death by Suicide										
		All	Non SMI/ Non SED							
Variable		# %		# %		# %				
Marital Status										
Divorced	174	(36.71 %)	97	(40.76 %)	77	(32.63%)				
Never Married	156	(32.91%)	87	(36.55%)	69	(29.24%)				
Married	89	(18.78%)	33	(13.87%)	56	(23.73%)				
Widowed	38	(8.02%)	14	(5.88%)	24	(10.17%)				
Married- Simultaneous Death	1	(0.21%)	0	(0.00%)	1	(0.42%)				
Married But Separated	6	(1.27 %)	3	(1.26 %)	3	(1.27%)				
Unknown	10	(2.11 %)	4	(1.68 %)	6	(2.54%)				
Place of Death										
Decedent's Home	277	(58.44 %)	137	(57.56 %)	140	(59.32%)				
Inpatient (Hospital)	53	(11.18 %)	28	(11.76 %)	25	(10.59%)				
ER/Outpatient (Hospital)	50	(10.55 %)	24	(10.08%)	26	(11.02%)				
Dead on Arrival (Hospital)	2	(0.42 %)	1	(0.42 %)	1	(0.42%)				
Hospice	1	(0.21%)	1	(0.42%)	0	(0.00%)				
Nursing Home	1	(0.21%)	1	(0.42%)	0	(0.00%)				
Other	89	(18.78%)	45	(18.91%)	44	(18.64%)				
Unknown	1	(0.21%)	1	(0.42%)	0	(0.00%)				
Current or Past	Militar	y Service								
No	424	(89.45 %)	221	(92.86%)	203	(86.02%)				
Yes	37	(7.81%)	12	(5.04%)	25	(10.59%)				
Unknown	13	(2.74%)	5	(2.10%)	8	(3.39%)				

The number of involuntary examinations for time periods prior to death by suicide (individualized for each person) ranging from four years to four days is reported in **Table 5**. For example, in the four years prior to death by suicide, the number of involuntary examinations ranged from 1 (n=91; 47.40%) to 17 (n=1; 0.52%). It is important to remember that while the subjects of this portion of study are people who were continuously enrolled in Medicaid in the one year prior to their death by suicide, they may or may not have been enrolled in Medicaid in the period up to four years before their death by suicide. It is interesting to note that 11 people had an involuntary examination initiated within two weeks of death by suicide, 27 within 30 days, 48 within 60 days, and 61 within 180 days of death by suicide. [See the box on page 11 for additional information about how to interpret the information in **Table 5**.]

	Table 5									
Nu	umber of Inv	oluntary Ex	aminations	4 Years to 4	Days Prior to	Death by S	uicide for Pe	ople who Di	ed by Suicid	e in 2004,
2003, 01 2000 101 the 4/4 reopie continuously chronieu în Meuicaiu în the fear Prior to Their Death										
ary		Ye	ars				Da	lys		
olunta	4	3	2	1	180	60	30	14	7	4
lnv Exa	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)
1	91 (47.40%)	88 (49.72%)	76 (51.70%)	63 (55.75%)	61 (71.76%)	43 (93.48%)	27 (96.43%)	11 (2.32%)	3 (0.63%)	2 (0.42%)
2	41 (21.35%)	40 (22.60%)	30 (20.41%)	31 (27.43%)	16 (18.82%)	3 (6.52%)	1 (3.57%)			
3	13 (6.77%)	12 (6.78%)	11 (7.48%)	12 (10.62%)	4 (4.71%)					
4	13 (6.77%)	5 (2.82%)	14 (9.52%)	2 (1.77%)	1 (1.19%)					
5	7 (3.65%)	11 (6.21%)	6 (4.08%)		1 (1.18%)	1				
6	10 (5.21%)	9 (5.08%)	2 (1.36%)	1 (0.88%)		1				
7	1 (0.52%)	2 (1.13%)	1 (0.68%)		1 (1.18%)					
8	1 (0.52%)	1 (0.56%)	1 (0.68%)	1 (0.88%)			1			
9	1 (0.52%)	2 (1.13%)	1 (0.68%)	1 (0.88%)			Box A			
10	4 (2.08%)	1 (0.56%)	1 (0.68%)	1 (0.88%)						
11	1 (0.52%)	1 (0.56%)	1 (0.68%)							
12	4 (2.08%)	1 (0.56%)	1 (0.68%)		Bo	v R				
13	1 (0.52%)		1 (0.68%)	1 (0.88%)		X D				
14		1 (0.56%)								
15	1 (0.52%)									
16	2 (1.04%)	3 (1.69%)	1 (0.68%)							
17	1 (0.52%)									
Totals	192 (40.51%)	177 (37.34%)	147 (31.01%)	113 (23.84%)	84 (17.72%)	46 (9.70%)	28 (5.91%)	11 (2.32%)	3 (0.63%)	2 (0.42%)
*The	e aroups for wh	om data are pr	resented in this	table are NOT	mutually exclu	sive. That is, the	e counts of peo	ple are cumula	ative.	

It is striking that while 16% of all people who died by suicide had at least one involuntary examination in the year prior to their suicide, 41% of people who died by suicide and were continuously enrolled in Medicaid from 2004 through 2006 had at least one involuntary examination up to four years prior to their death.

The percentages of all 7,128 people who died by suicide (see **Table 2**) and the 474 people who were continuously enrolled in Medicaid (see **Table 5**) in the year before their death by suicide are presented in **Figure 1**. While the same pattern is seen in both groups, the group of people who were 100% enrolled in Medicaid were more likely to have had involuntary examinations for all time periods prior to death by suicide than the entire group of people who died by suicide.



Children

One hundred thirty-four (1.88%) of the 7,128 people who died by suicide during the three years were under 18 at the time of their death.

They were 10 years (n=2), 11 (n=3), 12 (n=5), 13 (n=12), 14 (n=15), 15 (n=24), 16 (n=32), and 17 (n=41) (See **Figure 2**). Twenty-two of the people who were included in the 474 people who were continuously enrolled in Medicaid in the year prior to their death by suicide were under the age of 18 at the time of their death. Two were in the SMI/SED category and twenty were in the Non-SMI/Non-SED category. In the four years prior to their death by suicide, three of the children had one involuntary examination, one had six involuntary examinations, and one child had 17 involuntary examinations.



Death by Suicide in 2004 through 2006 for All People with an Involuntary Examination in 2004 through 2006

While the analyses in this report thus far have focused on the involuntary examinations of people who died by suicide, the analyses in this section focus on all people who had an involuntary examination from 2004 through 2006 and how many of those people died by suicide.

There were 347,802 involuntary examinations for 210,422 people in the three-year period from 2004 through 2006.¹ During this same time period, 1,051 of these individuals died by suicide (.50%). Additionally, 177 of these deaths by suicide occurred to individuals who were continuously enrolled in Medicaid in the year prior to their death (.08%).

Service Utilization Analysis

Three cohorts were created for the analyses of Medicaid service utilization claims for individuals who died by suicide from 2004 through 2006 as follows:

Cohort 1: Continuously enrolled in Medicaid for more than one year but less than two years. Followed service utilization for the 12 months preceding their death.

¹ The count of people is a slight underestimate because the social security number—necessary to count people—was not reported for 15,580 or 7.40% of involuntary examinations.

- **Cohort 2:** Continuously enrolled in Medicaid for more than two years but less than three years. Followed service utilization for the 24 months preceding their death.
- **Cohort 3:** Continuously enrolled in Medicaid greater than or equal to three years. Followed service utilization for the 36 months preceding their death.

Table 6 Three Cohorts Based on Medicaid Enrollment for Persons who Died by Suicide from 2004-2006											
Demographic			Coh	orts			Significance				
Variable	· ·	1	:	2		3	lesting				
Total N	98 (2	98 (20.68%)		72 (15.20%)		54.14%)	474				
	Mean	SD	Mean	SD	Mean	SD					
Age	42.69	18.51	47.46	19.05	52.52	17.09	F=12.11; df=1,471; p<.001				
Gender	N	(%)	N	(%)	N (%)						
Male	59 (6	0.20%)	40 (5	5.56%)	169 (55.59%)		X ² not significant				
Female	39 (3	9.80%)	32 (4	4.44%)	135 (4	44.41%)					
Race	N	(%)	N	(%)	N	(%)					
White	66 (6	7.35%)	48 (6	6.67%)	207 (6	58.09%)	X ² White/Black				
Black	12 (12.24%)		8 (11.11%)		16 (5.26%)		comparison not				
Other	20 (2	0.41%)	16 (2	2.22%)	81 (26.64%)		Significant				
Used Medicaid Services	76 ((78%)	63 (88%)	286	(93%)					

Figures 3 through **5** present the per user per month cost for various service categories from the Medicaid claims data for each cohort. More detail about the claims utilization for the three cohorts is contained in **Appendix B**. Users in these figures refer to individuals who used any Medicaid service in the cohort study period. The study did not have access to HMO physical health data, which is one reason that seven percent of Medicaid continuously enrolled persons did not show any use of Medicaid services. No attempt was made to remove HMO enrollees from this study. As a result, the totals shown in these analyses are the minimum estimates of possible service use in these cohorts. Statistics showing costs and claims per user for just those utilizing services in any one category can be found in **Appendix B**, along with more detailed statistics for overall services users.

Institutional Services

Institutional services data were obtained from the Medicaid claims files as well as from the managed care encounter files. Psychiatric inpatient (A1) and outpatient hospital (A3) services required psychiatric inpatient revenue codes on the claim or encounter. Other mental health inpatient (A4) and outpatient hospital (A2) services were those that were not included in the psychiatric claims but had a MH diagnosis (ICD-9 codes of 290–315). The remaining inpatient (A5.2) and outpatient (A5.3) hospital claims were the remainder of the claims

with an inpatient and outpatient hospital claim type. The remainder of the institutional claims were coded as other institutional (A5.1). To obtain per user per month costs, we divided the total costs by the number of Medicaid service users in the cohort multiplied by the number of months the cohort was followed.



Figure 3 Per User Per Month Cost for Medicaid Claims — Institutional Claims

The major contributor to the total institutional cost for these clients was inpatient services. In both Cohort 1 and 3 the psychiatric inpatient costs were over \$100 per user month. Although Cohort 2 appears to have less psychiatric service costs, this cohort had the highest non-mental health inpatient cost, and the inpatient cost per claim was less. It is not clear whether or not this group had a higher percentage of users in managed mental health care. Other institutional costs (nursing home and hospice) contributed about \$40 per month to the total user cost in each cohort.

Community Behavioral Health Services

Basic Outpatient Services (B1) are the types of services that a psychiatric patient would typically receive in a basic therapy or medication management office visit in a community mental health center or a mental health practitioner's office. Psychiatric basic office services (B2) are similar types of claims but provided by a psychiatrist and billed with a CPT code for therapy, medication management or office visits. ARNP Basic Outpatient Services (B3) are those basic services provided by an Advanced Registered Nurse Practitioner. Intensive outpatient services include day treatment, intensive therapeutic on-site services (ITOS), or home and community-based rehabilitative services (HCBRS). Assessment services (B5) and Targeted Case Management (B7) are assigned to those claims with procedure codes that definitely specify these services. The remainder (B6) include treatment planning and the remaining community behavioral health procedure codes.



As can be seen in **Figure 4**, the major contributor to the Community Behavioral Health Claims for this group is targeted case management. This indicates that all three cohorts have members that have been recognized as having complex behavioral health treatment needs (a little less than 20% of service users in any cohort). Cohort 2 has the highest per user per month total for CMH Basic Outpatient services, which may be related to the lower psychiatric inpatient costs—either because this group has more time outside of inpatient settings to avail themselves of services in the community OR because the greater utilization of outpatient services had a treatment effect that prevented inpatient usage. About 25% of Cohort 2 had CMH Basic Outpatient services with a little less than 17 visits in the 24 months on the average. About 28% of the services users in Cohort 3 had CMH Basic Outpatient, but members of this cohort had an average of 16 visits in 36 months. The two cohorts with more than 24 months of Medicaid eligibility prior to their death also have members who have received intensive behavioral health services. Eleven percent of Cohort 2 service users had an average of about 40 claims for intensive services in 24 months. Nine percent of Cohort 3 service users had an average of 60 claims for intensive services in 36 months.

Other Outpatient Claims

Category C1 includes basic outpatient services for persons with a mental health diagnosis not provided by a community mental health center, mental health practitioner, psychiatrist or ARNP. Category C2 includes all other services with a behavioral health indicator of some type that are not in any of the other behavioral health categories. This includes psychiatrist and ARNP care outside of the basic outpatient category as well as other miscellaneous care. Category C3 includes all other claims in the medical claims file.



As can be seen in **Figure 5**, the medical claims that are not mental healthrelated are also a major contributor to the total cost per Medicaid service user. This indicates that enrollees being served had complex needs that required medical care as well as psychiatric care. Non-mental health outpatient service costs are considerably higher than all the mental health outpatient categories combined. Use of non-mental health services was almost 99% of all service users in Cohort 3 and slightly less in Cohorts 1 and 2. It should be noted that as follow-up time increases there is generally a trend to increase percentage service use in any study, as a certain percentage of service users only utilize services sporadically.

Online Survey

From the 480 individual e-mail contacts, 156 (32.50%) respondents completed the online survey and will be the focus of this section. The 32.50% rate is not a true response rate because people who were sent the e-mails were encouraged to forward the information about the survey to people they knew who worked at Baker Act receiving facilities and who they thought might be interested in the survey.

The initial section of the online survey dealt specifically with questions related to professional demographics (see Table 7). The overwhelming majority of respondents (90%, n= 140) reported being directly employed, either full or part time, with a designated Baker Act receiving facility. Many respondents (31.4%, n=49) described their current professional position as "Psychiatric Nurse," followed by licensed mental health counselor (20.0%, n=31), and licensed clinical social worker (19.2%, n=30). One quarter of respondents (25.0%, n=39) identified themselves within the "other mental health professionals" category that included responses such as, executive, intake specialist, care coordinator, and Baker Act coordinator. When asked to describe the "nature of their work" by checking all categories that applied to their position, the most frequent response category was that of "Other" (37.2%, n=58), while 31.4 % (n=49) checked "Program Director." Sixty-three percent (n=98) of the respondents reported serving in an administrative role, with 25% (n=40) indicating full time administrative duties, 51.0% (n=79) reporting a combination of administrative and clinical/direct services, and 18% (n=28) indicating that they provided only clinical and/or direct services. Finally, when asked about length of employment 100% of the respondents reported being employed at their current facility for at least one year, with 29.0% (n=45) having worked at the same facility for six to ten years, and 18.0% (n=28) being employed at the same facility for over 20 years. When asked about length employment in their *current position*, the majority (51.9%, n=63) reported six or more years. Only a small percentage of respondents reported working at a state hospital (5.1%).

Interviews

Face-to-face interviews were conducted with 22 mental health professionals from four Baker Act receiving facilities. All 22 people interviewed were directly employed (full or part time) at a Baker Act receiving facility. Six (27.3%) described their professional position/degree as being a psychiatric nurse, while the remaining respondents reported being a licensed clinical social worker (n=2), clinical psychologist (n=1), licensed mental health counselor (n=1), and "other mental health professional" (n=12). Some titles that fell under the "other" category include un-licensed social worker, mental health technician, and Baker Act coordinator. When asked to describe the current nature of their work and/ or position title, nine (40.91%) reported emergency screening and reception, six (27.3%) reported case manager, while twelve (54.5%) described their current positions within other category. Of those who indicated other, many specified that they provided individual and group counseling to individuals on the units. Other responsibilities reported in the "other" category included admitting clients, distributing medications, coordinating Baker Act hearings, and taking crisis phone calls. The majority of respondents (n=15; 68.2%) reported <u>not</u> serving in an administrative capacity, while two (9.1%) of the respondents reported full time administrative duties and five reported a combination of administrative and clinical services. When asked about the length of their employment at their *current facility*, 32% (n=7) indicated between 1–5 years, 22.7% (n=5) reported between 6-10 years, 22.7% (n=5) reported 20 or more years, 13.6 (n=3) reported 16-20 years, and 9.09% (n=2) reported between 11–15 years. Similarly, when asked about the length of employment in their *current position* 50% (n=11) of the respondents reported between 1–5 years, 9.1% (n=2) reported less than one year, 9.1% (n=2) between 11–15 years, and one of the respondents indicated between 16–20 years within their current position. None of the respondents reported being employed with a state hospital (see **Tables 7** and **8**).

Results from the survey and the interviews are presented in the same tables, with results for each side-by-side in each table.

Table 7									
Mental Health Professional — Employment Demographics									
Employment Demographics		Online Survey (n=156)		terview n=22)	Tota	l (n=178)			
	#	ŧ %	;	# %	#	ŧ %			
Affiliation to a Baker Act receiving facility									
Directly employed (full or part time)	140	(90.0%)	22	(100%)	162	(91.0%)			
Consultant	1	(0.62%)	0	(0.0%)	1	(0.5%)			
Other affiliation	15	(9.6%)	0	(0.0%)	15	(8.0%)			
Professional degree/position									
Psychiatrist	1	(0.6%)	0	(0.0%)	1	(0.5%)			
Clinical psychologist	6	(3.8%)	1	(4.5%)	7	(3.9%)			
Licensed Clinical Social Worker	30	(19.2%)	2	(9.1%)	32	(17.9%)			
Psychiatric nurse	49	(31.4%)	6	(27.3%)	55	(30.8%)			
Licensed Mental Health Counselor	31	(20.0%)	1	(4.5%)	32	(17.9%)			
Licensed marriage and family therapist	0	(0.0%)	0	(0.0%)	0	(0.0%)			
Other mental health professional	39	(25.0%)	12	(55.0%)	51	(28.6%)			
Current position/nature of work (multi-opt	tion vai	riable)*							
Case Manager	14	(9.0%)	6	(27.3%)	20	(11.2%)			
Emergency Screening and Reception	38	(24.0%)	9	(41.0%)	47	(26.4%)			
Mobile Crisis	8	(5.1%)	0	(0.0%)	8	(4.4%)			
FACT	8	(5.1%)	0	(0.0%)	8	(4.4%)			
ACT	2	(1.2%)	0	(0.0%)	2	(1.1%)			
Private Practice	2	(1.2%)	0	(0.0%)	2	(1.1%)			
Vocational Rehabilitation	0	(0.0%)	0	(0.0%)	0	(0.0%)			

Table 7									
Mental Health Professional — Employment Demographics (continued)									
Employment Demographics		ne Survey =156)	ln (terview n=22)	Total (n=178)				
	#	%	#	# %	#	ŧ %			
Current position/nature of work (multi-opt	ion var	iable)* (con	tinued)					
Faculty at a University/College	0	(0.0%)	0	(0.0%)	0	(0.0%)			
Executive Director of Facility/Program	8	(5.1%)	0	(0.0%)	8	(4.4%)			
Program Director	49	(31.4%)	0	(0.0%)	49	(27.5%)			
Nurse Manager/Director	9	(5.8%)	0	(0.0%)	9	(5.0%)			
Other	61	(37.2%)	12	(55.0%)	73	(41.0%)			
Not indicated	1	(0.6%)	0	(0.0%)	1	(0.5%)			
Total		200* 27*			227*				
Serve in an Administrative Role									
Yes	98	(63.0%)	7	(32.0%)	105	(58.9%)			
No	58	(37.0%)	15	(68.0%)	73	(41.0%)			
Full time administrative	40	(25.0%)	2	(9.1%)	42	(23.5%)			
Combination of administrative & clinical svs	79	(51.0%)	5	(27.3%)	84	(47.1%)			
Provide clinical/direct services only	28	(18.0%)	15	(63.6%)	43	(24.1%)			
Other	9	(6.0%)	0	(0.0%)	9	(5.0%)			
Yes	8	(5.1%)	0	(0.0%)	8	(4.4%)			
No	148	(94.9%)	22	(100%)	170	(95.5%)			

Table 8										
Mental Health Professional — Length of Employment										
Length of Employment	Online Survey (n=156)	Interview (n=22)								
	# %	# %								
Total years employed at current facility/age	ency									
less than one year	0 (0.0%)	0 (0.0%)								
1–5 years	36 (23%)	7 (32%)								
6–10 years	45 (29%)	5 (22.7%)								
11–15 years	24 (15.3%)	2 (9.1%)								
16–20 years	23 (14.7%)	3 (13.6%)								
20 or more years	28 (18.0)	5 (22.7%)								
Total years employed in current position										
less than one year	12 (7.7%)	2 (9.1%)								
1—5 years	81 (51.9%)	11 (50.0%)								
6—10 years	37 (23.7%)	3 (13.6%)								
11–15 years	19 (12.2%)	2 (9.1%)								
16–20 years	3 (1.9%)	1 (4.5%)								
20 or more years	4 (2.6%)	3 (13.6%)								

Use of Assessments for Suicidality

Research has demonstrated the importance of integrating psychological assessment tools within the more comprehensive approach to identifying associated risk factors of suicidality (Bongar, 2002; Jacobs, Brewer, & Klein-Benheim, 1999). This literature highlights many of the assessment tools commonly used within the clinical setting to aid clinicians in the assessment of risk for suicide, and subsequently help develop recommendations for intervention and treatment. Respondents were provided the option of selecting from a designated list of established assessment tools (checking all that applied) or could write in options under "other." Questions about assessment were focused on the utilization during the intake and discharge process. **Table 9** shows the most commonly reported assessment instruments reportedly utilized by online and interview respondents during both intake and discharge.

	Table 9)		
Assessment Instrum	ents for Suicida	ality at Intake	and Discharge	
Assessment tools utilized for	Online Surv	ey (n = 156)	Intervie	w (n=22
screening of suicidality during intake and discharge	Intake*	Discharge*	Intake*	Discharge*
(multi-option variable)*	# (%)	# (%)	# (%)	# (%)
Beck Depression Inventory (BDI/BDI-II)	39 (25.0%)	14 (9.0%)	5 (22.7%)	4 (18.2%)
Beck Hopeless Scale (BHS)	6 (3.8%)	1 (0.6%)	0 (0.0%)	0 (0.0%)
Adult Suicide Ideation Survey (ASIQ)	13 (8.3%)	6 (3.8%)	2 (9.1%)	1 (4.5%)
Scale for Suicide Ideation (SSI)	13 (8.3%)	11 (7.0%)	0 (0.0%)	0 (0.0%)
Suicide Ideation Survey (SIQ)	22 (14.1%)	14 (8.9%)	0 (0.0%)	0 (0.0%)
Suicide Intent Scale (SIS)	12 (7.7%)	9 (5.8%)	1 (4.5%)	0 (0.0%)
Linehan Reasons for Living Inventory (LRFL)	2 (1.3%)	1 (0.6%)	0 (0.0%)	0 (0.0%)
Facility Generated assessment (unspecified)	14 (9.6%)	10 (6.4%)	2 (9.1%)	1 (4.5%)
Interview/Intake/Psychosocial (unspecified)	9 (5.8%)	11 (7.0%)	0 (0.0%)	2 (9.1%)
Suicide Risk Assessment (unspecified)	10 (6.4%)	6 (3.8%)	4 (18.2%)	1 (4.5%)
Not Indicated/skipped/unsure	54 (34.6%)	94 (60.2%)	7 (32.0%)	9 (41.0%)
Other (see next page for details)	20 (12.8%)	5 (3.2%)	8 (36.4%)	4 (18.2%)

Notes to Table 9

^e Some respondents indicated multiple assessment instruments by checking all that apply. Percentages are based on the total number of instruments reported

Other Intake Assessment Tools Include: Mental Status Exam; Question, Persuade, Respond (Refer) [QPR]; Suicide Lethality Scales; Pierce Suicide Intent Scale; Family Risk Assessment; Health Suicide assessment scale; CAGE; Geriatric Depression Scale; FARS/ CFARS; Mood disorder behavior scale; Zung depression scale; saad; Buspar anxiety scale.

The Availability of Community Mental Health Services and Substance Abuse Services at Discharge

Online Surveys

Respondents were asked to choose the phrase that best described the *availability* of community mental health services and substance abuse treatment services for consumers being discharged or referred by their facility (see **Table 10**). Almost half of those surveyed online (n=73; 46.9%) described the *availability* of "community mental health treatment" at discharge as being "less than adequate" or "not adequate," while 25.6% (n=40) described it as adequate. One quarter of these respondents (n=39; 25%) rated the *availability* of community mental health services as "excellent" or "good." When online participants were asked to describe the *availability* of "substance abuse services" at discharge, the majority of respondents (n=103; 66%) felt that the *availability* of substance abuse services for consumers upon discharge from their facility was "less than adequate" or "not adequate," while the remainder of online respondents described the availability as either "adequate" (n=28; 18%) or "excellent" to "good" (n=22; 14.1%).

Face-to-Face Interviews

When asked to describe the availability of community mental health services at discharge, 32% (n=7) described the availability as "less than adequate," 27.3% (n=6) as good, 27.3% (n=6) as adequate, and 13.6% (n=3) described service availability as not adequate. None of the interview respondents described the availability as "excellent." When asked to describe the availability of substance abuse treatment services at discharge, many (41%) described it as less than adequate. The remaining respondents described the availability as "not adequate" (18.2%), "adequate" (36.4%), and "good" (4.5%). Similarly, none of the interview respondents described the availability as "excellent" (see **Table 10**).

Table	10	
Availability of Communit Substance Abuse Ser	y Mental Healt vices/Treatmen	h and It
Availability Services/Treatment	Online Survey (n = 156)	Interview (n=22)
at Discharge	# (%)	# (%)
Describe the availability of community m	ental health servio	es at discharge
Excellent	14 (9.0%)	0 (0.0%)
Good	25 (16.0%)	6 (27.3%)
Adequate	40 (25.6%)	6 (27.3%)
Less than Adequate	56 (36.0%)	7 (32.0%)
Not Adequate	17 (10.9%)	3 (13.6%)
Not indicated/skipped	4 (2.6%)	0 (0.0%)
Describe the availability of substance abu	ise treatment serv	ices at discharge
Excellent	5 (3.2%)	0 (0.0%)
Good	17 (10.9%)	1 (4.5%)
Adequate	28 (18.0%)	8 (36.4%)
Less than Adequate	78 (50.0%)	9 (41.0%)
Not Adequate	25 (16.0%)	4 (18.2%)
Not indicated/skipped	3 (2.0%)	0 (0.0%)

Themes

There were eight open-response questions that were included in the analysis of themes. Though the interview and online survey were conducted through two different modalities, the question content and structure were the same. Independently conducted content analysis of textual responses by two research team members uncovered similar major themes. Five major theme categories were identified as follows:

- A. Availability of community mental health services and substance abuse services at discharge
- B. Suicide precautions after admission
- C. Addressing suicidality at discharge
- D. Continuing education or in-service training
- E. Public education related to suicide prevention and/or suicide-related issues.

Theme A The Availability of Community Mental Health and Substance Abuse Services at Discharge

Long Waiting Periods

Most notably, respondents felt that there were long waiting periods for followup appointments once a client is discharged into the community. One respondent described the consequences of delays: "The volume of patients and the availability of services in this county are poor. The patients run out of meds [medications] and return to hospital for readmission because it takes three months to get appointments."

While several staff members noted that mental health facilities and services existed in their respective communities, many survey and interview respondents indicated these long waits hindered clients' follow-up care: "...there are some facilities that we can refer to but there is always this long waiting list, so that is a problem."

While one respondent who rated the availability of these services as good reported being able to locate empty beds within two weeks for a client, three other staff members described average waiting periods for both outpatient appointments and inpatient beds to be between two and three months. According to one respondent, "...unless they are admitted to the psychiatric facility, they might wait six—eight weeks to get an appointment with the doctor in outpatient services, so I do not think that is adequate,"...suggesting that clients are potentially engaged in inappropriate levels of treatment because of this lack of available services at the best level for them.

One respondent expressed concern particularly for those who need detoxification services.

"We have a major problem in this state for individuals who are battling drug and alcohol addictions. There are chronic waiting lists for detox [detoxification] and even longer lists for inpatient treatment. We are forced to discharge individuals to home to wait two-three weeks until someone calls them to try to coordinate treatment. By then, the patient has relapsed and may no longer be motivated to pursue treatment."

Funding Resources

A second sub area in Theme A revealed in the responses was related to the lack of available funding, whether systemic or client level, for community treatment. When asked specifically about the availability of community mental health services one respondent seemed to sum up the overall consensus when he/she reported: "Services are available for people with a means of financing, however those without such a means have a less readily available system of support." Related to the availability of substance abuse services at discharge, respondents emphasized the limitation of insurance coverage for those with substance abuse issues. One such comment included:

"Insurance does not cover, or if it does, it uses up all their outpatient therapy visits, so you cannot offer ongoing counseling after completing IOP [intensive out patient]. Most insurances here do not cover residential."

Additionally, several staff members indicated the availability of followup substance abuse treatment appointments and beds was dependent on an individual's insurance status.

"Okay, if you have insurance I would say adequate, if you don't have insurance, it is less than adequate. For people without insurance they are limited to faith-based programs and you need to travel at least 100 miles for something other than AA [Alcoholic's Anonymous] or NA [Narcotic's Anonymous], really, that is pretty much it..."

Respondents also noted how lack of funds hinders their clients' ability to make doctor's appointments to get medication prescriptions and their ability to refill the medications. One staff member noted how his/her facility attempted to remedy this problem: Many of the people that we have out in the community, they do not have funds and resources to pay for their medications and I encourage them to see our pharmacists in front of the building because there are drug programs for the indigent that they can sign up for and might cost them \$3 a month to get their medicines or they will accommodate them with samples if they can.

Some respondents reported that while community mental health services may be available, access could be challenging: "There are too many steps required before someone is actually able to see a psychiatrist." Those who regarded the availability of services to be adequate, good, or, excellent tend to report similar themes as those who reported below adequate availability. The literature suggests that many people who have died by suicide also abused alcohol or drugs, and survey respondents pointed out how the presence of a dual diagnosis poses an additional barrier to services.

Majority of CSU [Crisis Stabilization Units] clients have substance issues. Detox won't accept many, and clients don't follow through with OP [out patient] services; many substance programs will not accept dually diagnosed patients.

The majority of feedback provided by respondents in these follow-up, openended questions revolved around deficits in funding. Some who indicated the availability of services was adequate or more than adequate as reported in **Table 10**, offered additional insight such as their facilities provide an "Extensive array of services," they "strive" to be as available as they can, and that follow-up appointments "are always scheduled" at discharge for their clients.

Theme B Suicide Precautions after Admission.

Both online and interview respondents provided information about a number of important strategies and procedures utilized to maintain patient safety when the issue of suicidality had been determined for newly admitted clients. The majority of staff members indicated that there are baseline fifteen minute checks on each client, at which time the client must be in the sight of a staff member. A respondent noted that these safety checks were also documented: "...the techs are responsible for checking the clients every 15 minutes, that is the minimum observation level, every kid comes in with a 15 minute check sheet where they are located so they have to be eyeballed every 15 minutes..." In addition to the baseline checks, respondents also pointed out that the facilities were locked, a fact that was confirmed on the researchers' tours of the facilities, where keys or key cards were necessary in order to move between many sections of the units. Another safety rule reported from unit staff is what some respondents referred to as "no sharps." That is, "...no safety pins, anything they could use as a weapon on them." Many staff members also reported environmental safety assessments and personal searches in order to confiscate items such as strings, shoelaces and belts from the unit or prior to unit admission.

While all of the facilities had unique procedures for determining suicidality upon admission, if it was indicated that a client was at a higher risk for selfharm, all of the facilities had escalating procedures based on a higher level of risk. Though some clients may have required an "extra eye," some facilities' policies put them on open seclusion, where the client is in sight at all times: "We put them on visual precautions and a staff member will be assigned to them, that means that staff member has to have that client in her sight at all times."

One respondent also indicated that "...they go on one-to-one or on visuals where they are within arm's length at all times," a policy that was found in all of the facilities that were visited. The one visited facility which did put clients in paper scrubs did so under only the most extreme circumstances:

"...we have had patients who were not allowed to have their own clothes, they wear paper gowns because their suicide risk was so high and I can only think of one time that that occurred in which we had one individual who was literally taking everything she could get her hands on in trying to harm herself and hang herself."

For clients seriously at risk of harming themselves or others, many facilities will put into place even higher levels of precautions in order to ensure patient safety. One respondent described it this way: If the risk factor is deemed severe, that person will be put in a camera monitored room on suicide watch where they are monitored 24/7 by a camera and audio and they also will have frequent checks as well as the 15 minute documentation of the assessments. If necessary, they have everything taken away, they are put in hospital gowns, given finger foods and are to remain in that seclusion room but the door is not locked.

Theme C Addressing Suicidality at Discharge.

In addition to utilizing various assessment measures at discharge to help identify the presence of risk for suicide, respondents offered a number of other common strategies to help address suicidality at discharge.

Verbal Assessment

Respondents reported asking questions to the patient before discharge such as, "...do you have any thoughts that you want to hurt yourself?" or, "...we ask them every day are you having any suicidal thoughts or your depression was a 10 when you came in, what is it today, one or two, so we address the depression part of it too." Many of the respondents who answered this question clearly emphasized the absence of risk for suicidality as criteria for discharge back into the community.

Facility and Community Resources

Several facilities had on-site a toll free hotline for people to call when they were experiencing a crisis. Another respondent similarly expressed that, "...we remind the patients about our 1-800 number that is 24/7, someone they can talk to through an access center and of course those staff are trained to deal with suicide prevention in the phone calls." Patients were also discharged with additional information related to community resources and numbers, many times in the form of "crisis cards" that contained vital contact number for emergency services and help.

Family Involvement in the Discharge Planning Process

Including family members in a client's discharge was seen as critical to some staff members, who noted that not only should family be included in a dialogue about stressors that may exist for a client at home, but also his/her access to weapons. Staff members saw the home and family as a potential site for both danger and support for the client: "...we...look at what things in the home can put the patient at risk, such as if there are any weapons in the home, is there any support systems, if the person has a family..." One facility mandated that some form of a support system be utilized in the discharge of a client.

"In order for us to discharge them we have to get two forms of collateral, whether it is friends, family members, spouses to say they feel comfortable with this client to come home, are they going to be in a spot where they are not going to have stress again to where they are going to want to commit suicide or attempt suicide..."

Several staff members mentioned turning to family members for information regarding weapons, particularly guns, in the client's home, and took the family members' assessment of the home environment into consideration when planning for discharge.

"We go through the...permission to talk to family members and they will tell you that they don't want this person home right now because they are a suicide risk, there are other guns in the house... they want the discharge planners to know this..."

Follow-up Appointments/Services

Setting up clients with follow up mental health care appointments is also a safety measure that facilities implement upon client discharge. One respondent noted that, "...every client has to have appointment set up with the psychiatrist if they are on medications, appointment set up within a week with a therapist...", while another said that "...they are networked into whatever support services are available and necessary for them in the community..."

No-harm Contracts

Thirteen total responses from both the surveys and interviews, indicated that no-harm contracts were used in an attempt to secure patient safety upon their discharge. One respondent indicated:

"...we have them sign a no harm contract saying if they do have any thoughts to hurt themselves, call emergency services or call our 800 number 24/7 and just even if you just need to talk to somebody or come back in."

Theme D Continuing Education or In-service Training

The majority of online (76.2%; 116) and interview (91%; 20) respondents noted that their facility offered in-service or continuing education for its employees. Most of these training opportunities were reported as mandatory and were offered on an annual basis. However, some facilities offered monthly, weekly, and/or ongoing training opportunities in which both video and televised methods of training were offered. One respondent reported that, "We offer continuing education twice a month on various different diseases, diagnoses, and disorders, suicide I know has been covered once or twice at least and it provides CEUs..." One staff member noted that his/her facility mandated a yearly suicide competency training, as well as held monthly staff meetings which often dealt further with issues related to suicide.

Theme E Public Education Related to Suicide Prevention and/or Suicide Related Issues

When asked if their facility conducted educational activities for the public related to suicide prevention or other suicide related issues, 36% (56) of the online survey respondents reported "yes," 32.7% (51) reported "No," and 25.6% (40) were unsure. Similar findings were reported by interview respondents with 55% (12) reporting "Yes," and 22.7% (5) reporting "No," and 22.7% (5) indicating they were unsure. Textual themes developed from the follow-up question about facility-conducted educational activities for the public related to suicide issues included community depression screenings, providing public speakers to various community agencies and organizations, and trainings with local law enforcement and schools regarding suicidality and the Baker Act. Other respondents stated that their facilities have been involved with local health fairs, speaking to the National Association for the Mentally Ill [NAMI], providing QPR [question, persuade, and refer] training for the general public, and involvement with an annual suicide prevention conference.

Discussion

The number of people who died by suicide in Florida from 2004 through 2006 (7,128) highlights the need to understand this population. This is an important issue for the Florida Agency for Health Care Administration because some of these people who died by suicide were enrolled in Medicaid prior to their deaths. For example, 544 (7.63%) people were continuously enrolled in Medicaid in the six months prior to their death by suicide, with 474 (6.65%) continuously enrolled in Medicaid in the year prior to death. That is, these individuals had coverage for services via Medicaid enrollment yet died by suicide. Potentially there were services or interventions these individuals might have been connected with that might have prevented their deaths.

Describing the service utilization patterns of these individuals aids our understanding of what occurred in the lives of these individuals prior to their death to identify points of intervention. This information may help to inform policy for people at risk of death by suicide. The system of community mental health and substance abuse services which include Medicaid-funded services are access points at which individuals can obtain treatment and support for their treatment needs. Involuntary assessments, such as those provided at Baker Act receiving facilities, are only one component in an effective continuum of care necessary to address mental health crises and prevent suicides. In order to put the discussion of the archival data analyses into context, it is important to understand that the population of focus for these analyses, people continuously enrolled in Medicaid in the year prior to death by suicide, is likely to be different in important ways to people who are sporadically enrolled in Medicaid and people not enrolled in Medicaid. People who are continuously enrolled in Medicaid are likely to be "sicker" and living continuously in poverty to a greater extent than those who are enrolled in Medicaid on and off because it is these variables (severity of illness and socio-economic status) that, in part, qualify people for Medicaid. These results can only be generalized to this subset of people who are continuously enrolled in Medicaid. However, this is an important, core group of people served by Medicaid—making the results meaningful to Medicaid policy. The archival data analyses yielded some important findings, as follows.

Involuntary Examinations and Medicaid Enrollment

First, while **16.09%** of the 7,128 people who died by suicide had experienced at least one involuntary examination in the four years before death, **40.15%** of this subset that were continuously enrolled in Medicaid for the year before their suicide had at least one involuntary examination in the four years prior to death. This pattern continues for all time periods from 4 years until 4 days prior to death (see **Table 11**). This suggests that Baker Act receiving facilities are an important nexus at which issues related to suicide risk for people enrolled in Medicaid (especially those continuously enrolled in Medicaid for several years) can be addressed.

	Table 11				
Comparison o People who Died Continuously E Be	f Involuntary by Suicide (se nrolled in Med fore Death (Ta	Examinations for e Table 2) and People licaid in the 1 Year able 5)			
Time Before Death	All 7,128	474 Continuously Enrolled in Medicaid 1 Year Prior to Death by Suicide			
	(%)	(%)			
4 Years	(16.09%)	(40.15%)			
3 Years	(14.74%)	(37.34%)			
2 Years	(12.77%)	(31.01%)			
1 Year	(9.58%)	(23.84%)			
180 Days	(6.76%)	(17.72%)			
60 Days	(3.69%)	(12.93%)			
30 Days	(2.37%)	(5.91%)			
14 Days	(1.14%)	(2.32%)			
7 Days	(0.51%)	(0.63%)			
4 Days	(0.20%)	(0.42%)			

Second, nearly 18% who were continuously enrolled in Medicaid in the year prior to their death by suicide had an involuntary examination within six months of death. These were people who had contact with at least one person (such as a mental health professional or law enforcement officer) close in time to their death by suicide who felt they met involuntary examination criteria. These individuals also had contact with staff at the Baker Act receiving facility at least at intake, and also possibly on the inpatient unit, if admitted.

Third, analysis of Medicaid claims data showed that inpatient services were the major contributor to the total institutional cost for the people 100% enrolled in Medicaid in the year prior to death by suicide. In both Cohort 1 and 3 (see page 15 for cohort descriptions) the psychiatric inpatient costs were over \$100 per user month. Other institutional costs (nursing home and hospice) contributed about \$40 per month to the total user cost in each cohort. Targeted case management was the major contributor to the Community Behavioral Health Claims for this group. Also, medical claims that were not mental health related were also a major contributor to the total cost per Medicaid service user. This indicates that enrollees being served had complex needs that required medical care as well as psychiatric care. These services also provide additional opportunities for identification of and intervention for individuals at risk for suicide.

Finally, it is important to put this information into the context of the Baker Act receiving facilities and all people who experience involuntary examinations. The percentage of people who experience an involuntary examination who also die by suicide is very low (0.50% with involuntary examinations in four years prior to death by suicide for everyone regardless of Medicaid enrollment; 0.08% with involuntary examinations in four years prior to death by suicide for people continuously enrolled in Medicaid in the year prior to death by suicide).

Perceptions of Follow-up Behavioral Health Service Availability

Because there are many factors associated with vulnerabilities to suicide, the approach to treatment should be no less varied in order to maximize the benefits of these services. Emergency crisis services, such as those initiated on an involuntary basis and provided at Baker Act receiving facilities, are only one component necessary to prevent suicides. Research has demonstrated that immediate follow-up after examinations and discharge from mental health facilities is critical in preventing suicides in this population (Appleby et al., 1999; Becker et al., 2005), yet perceptions of survey/interview respondents about community services (mental health and substance abuse treatment) for people at discharge are that availability is inadequate. This inadequacy of services at follow up involves services from multiple systems; therefore, the need for services in these multiple systems needs to be addressed.

Additionally, survey and interview respondents reported that a lack of system and/or client funds were a challenge in obtaining follow-up treatment. Our data indicates that between the years 2004 and 2006, 169 Floridians died by suicide within 30 days of an involuntary examination, 81 of them having died just two weeks after their involuntary exam. Coupling these figures with the staffs' critiques of the availability of follow-up services for this at-risk population, there is clearly a need for community services to be available immediately following the conclusion of an involuntary examination. While out of over 7,100 people who died by suicide in this time frame, the 169 deaths makes up only 2.37% of Florida suicide deaths, this population is not only the most vulnerable (Deisenhammer et al., 2007), but these deaths are also the most preventable with immediate and effective continuity of care (Burgess et al., 2000).

A recent study (Ilgen et al., 2007) noted the importance of follow-up substance abuse treatment services for those with drug and alcohol dependencies who are at risk for death by suicide. As indicated in the survey data, the availability of these services is sometimes lacking just when they are most critically needed. Survey participants noted long waiting periods for beds and appointments, leaving recently discharged clients extremely vulnerable to relapse or to face the worst possible outcome of inadequate services, death by suicide. The system should ensure access to adequate substance abuse treatment and could explore effective collaborative models where clients can move easily from a mental health care setting to one for their substance use disorder or co-occurring treatment models. The survey results support this need. Attention to increasing access to services is important but should be coupled with attention to the quality of community services (e.g., efficacy, evidence-based treatments). Ensuring access to effective treatment, providing financial support for needed interventions, and reducing and eliminating identified barriers to treatment are critical efforts to effectively reducing suicide.

Safety Procedures

The criteria for involuntary examination have been substantially altered throughout the last four decades in an effort to preserve citizens' autonomy while at the same time protecting them against harming themselves or others (Melton, Petrila, Poythress, & Slobogin, 2008). These short-term services are also provided to keep individuals safe from harming themselves and/or from harming others. Survey and interview respondents indicated that important strategies and procedures were reportedly utilized to maintain the safety of individuals who had been determined to be at risk for suicide. Survey respondents indicated that facilities maintained a minimum system of 15-minute checks with escalating procedures based on a higher level or severity of risk. Agencies should be continually encouraged and supported to improve safety (e.g., risk assessments, monitoring procedures) through a variety of means (e.g., self-assessments, external reviews, training, information sharing with other agencies).

Once a client has stabilized in a Baker Act receiving facility, major next steps in the process are client discharge and reentry into his/her home community, and possible referral for follow-up therapeutic services. The process of risk assessment within both inpatient and outpatient settings is an important aspect of any treatment regimen, especially for individuals identified as having suicidal behaviors or ideation. Respondents reported routine assessments especially just prior to discharge. Thirteen respondents indicated that no-harm contracts were used in an attempt to secure patient safety upon their discharge. This could be problematic as there is no empirical evidence to support the efficacy of no-harm contracts related to suicide prevention (American Association of Suicidology Youth Suicide Prevention Task Force, 2008). No-harm contracts typically ask the patient not to harm him/herself without providing replacement behavior. Safety plans are an alternative that provide an opportunity for the client and therapist/ provider to create a plan for keeping the patient safe and the patient promises only that prior to acting on his/her suicidal thoughts, he/she will try all of the steps in their safety plan. The safety plan gives the patient specific, concrete, nonsuicidal action steps (Rudd, 2006).

Family input into and knowledge of a client's safety plan has the potential to provide support for their family member and to aid in resource utilization. The process of client discharge and reentry into his/her home community often include the family in other ways. Some staff members indicated that including family members in a client's discharge was critical. Staff reported that the family

could be a resource in helping to restrict access to lethal means of injury and suicide, and providing additional information about cultural or religious beliefs that discourage suicide, both of which are protective factors (SPRC, 2001). Setting up clients with follow-up mental health care appointments is also a safety measure that facilities implement upon client discharge. Barriers to obtaining follow-up treatment have been previously discussed.

Suicide Prevention Education

The majority of respondents noted that their facility offered continuing education for its employees. This is a critical component of employees' development, as the literature has shown keeping up with training regarding suicide issues has a direct impact on staff's knowledge and confidence when working with suicidal patients (Berlim et al., 2007; Links & Hoffman, 2005). Additionally, community awareness of suicide prevention strategies and resources are another part of the continuum. At least a third of respondents reported their facilities conducted educational activities for the public related to suicide prevention and a quarter of respondents was unsure. If agencies provide community training, better advertising might increase awareness and attendance (staff who are aware can promote via word-of-mouth). Community education provides opportunities to highlight prevention services, effective treatments, and warning signs and risk factors for suicide and other behavioral health challenges.

Recommendations

- Increase access and/or eliminate barriers to the services needed by people at the time of their discharge from involuntary examination (such as short term residential treatment or substance abuse services).
- The claims data analysis reveal multiple contact points with Medicaid providers for individuals who died by suicide. These results suggest an opportunity to intervene. These contact points suggest a need to educate provider staff at places such as nursing homes, hospice facilities, and mental health facilities working in the community about suicide prevention and risk factors. The point is that there are multiple places and professionals that can address suicide risk; training them on how to identify this risk is, therefore, an important step.
- The need for substance abuse treatment and treatment for people with co-occurring disorders was identified as a need for people subject to involuntary examination, including at time of discharge from involuntary examination. Having the Agency for Health Care Administration address issues related to Medicaid reimbursement of substance abuse services may be helpful, in addition to identifying ways to more generally fund such services.
- Survey and interview results showed that some facilities are using noharm contract. The literature does not support the use of no-harm contracts. But if they are used, this would ideally be done in conjunction with safety plans.

- Identify family and significant others as potential resources and include them in the client's safety plan development.
- Continue to increase the expertise of Baker Act receiving facility staff and professional development for suicide prevention, including additional resources via in-service and ongoing education opportunities.
- Provide and expand community education on suicide prevention and available resources, including dissemination of information about these education programs (such as with advertising).

Directions for Future Research

Learning more about what precipitated involuntary examinations for those on Medicaid who have died by suicide and what occurred as a result of the examinations may suggest important policy issues related to these individuals. This will require future study because archival data do not exist to fully address this issue. Also, further study of people at discharge from involuntary examination will help to identify the challenges at time of discharge related to placements. A project is included in the 2008-2009 Agency for Health Care Administration contract with FMHI that will allow for the development and pilot testing of an expanded cover sheet to be submitted to the Baker Act Reporting Center with each involuntary examination form. This will include the development of questions about the discharge needs and actual discharge placement of people subject to involuntary examination. This is a first step, but getting more complete data will require the widespread use of this form by receiving facilities, which is a longer term goal of that research project.

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Appendix A

				Ар	pendix A					
	Type of E	vidence Up	on which Ir	voluntary Ex	amination	was Based	for 4 Year	s to 4 Days I	Prior to	
	De	eath by Suid	cide 100% E	nrolled in M	edicaid in t	he Year Pri	or to Death	n by Suicide		
	4 Years	3 Years	2 Years	1 Year	180 Days	60 Days	30 Days	14 Days	7 Days	4 Days
	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)
Type of Initiator										
All People									_	
Judge	11 (1.97%)	11 (2.35%)	9 (2.55%)	6 (2.79%)	4 (3.31%)	3 (6.12%)	2 (6.90%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
MH Professional	320 (57.25%)	264 (56.29%)	186 (52.69%)	99 (46.05%)	57 (47.11%)	22 (44.90%)	14 (48.28%)	5 (45.45%)	1 (33.33%)	1 (50.00%)
Law Enforcement	228 (40.79%)	194 (41.36%)	158 (44.76%)	110 (51.16%)	60 (49.59%)	24 (48.98%)	13 (44.83%)	6 (54.55%)	2 (66.67%)	1 (50.00%)
TOTAL	559	469	353	215	121	49	29	11	3	2
SMI/SED										
Judge	9 (1.83%)	9 (2.21%)	8 (2.67%)	5 (2.73%)	3 (2.94%)	2 (4.88%)	1 (3.85%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
MH Professional	286 (58.25%)	234 (57.35%)	160 (53.33%)	84 (45.90%)	48 (47.06%)	18 (43.90%)	13 (50.00%)	0 (0.00%)	1 (33.33%)	1 (50.00%)
Law Enforcement	196 (39.92%)	165 (40.44%)	132 (44.00%)	94 (51.37%)	51 (50.00%)	21 (51.22%)	12 (46.15%)	0 (0.00%)	2 (66.67%)	1 (50.00%)
TOTAL	491	408	300	183	102	41	26	0	3	2
NonSMI/NonSE	D									
Judge	2 (2.94%)	2 (3.28%)	1 (1.89%)	1 (3.13%)	1 (5.26%)	1 (12.50%)	1 (33.33%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
MH Professional	34 (50.00%)	30 (49.18%)	26 (49.06%)	15 (46.88%)	9 (47.37%)	4 (50.00%)	1 (33.33%)	5 (45.45%)	0 (0.00%)	0 (0.00%)
Law Enforcement	32 (47.06%)	29 (47.54%)	26 (49.06%)	16 (50.00%)	9 (47.37%)	3 (37.50%)	1 (33.33%)	6 (54.55%)	0 (0.00%)	0 (0.00%)
TOTAL	68	61	53	32	19	8	3	11	0	0
Evidence Type										
All People										
Neglect	85 (15.21%)	77 (16.42%)	57 (16.15%)	38 (17.67%)	17 (14.05%)	7 (14.29%)	4 (13.79%)	2 (18.18%)	0 (0.00%)	0 (0.00%)
Harm	412 (73.70%)	338 (72.07%)	254 (71.95%)	153 (71.16%)	86 (71.07%)	34 (69.39%)	21 (72.41%)	8 (72.73%)	3 (100.00%)	2 (100.00%)
Neglect & Harm	35 (6.26%)	30 (6.40%)	22 (6.23%)	13 (6.05%)	10 (8.26%)	5 (10.20%)	2 (6.90%)	1 (9.09%)	0 (0.00%)	0 (0.00%)
Not Reported	27 (4.83%)	24 (5.12%)	20 (5.67%)	11 (5.12%)	8 (6.61%)	3 (6.12%)	2 (6.90%)	0 (0.00%)	0 (0.00%)	0 (0.00%))
TOTAL	559	469	353	215	121	49	29	11	3	2
SMI/SED										
Neglect	71 (14.46%)	63 (15.44%)	45 (15.00%)	32 (17.49%)	13 (12.75%)	5 (12.20%)	4 (15.38%)	2 (18.18%)	0 (0.00%)	0 (0.00%)
Harm	364 (74.13%)	297 (72.79%)	218 (72.67%)	130 (71.04%)	74 (72.55%)	30 (73.17%)	19 (73.08%)	8 (72.73%)	3 (100.00%)	2 (100.00%)
Neglect & Harm	33 (6.72%)	28 (6.86%)	21 (7.00%)	13 (7.10%)	10 (9.80%)	5 (12.20%)	2 (7.69%)	1 (9.09%)	0 (0.00%)	0 (0.00%)
Not Reported	23 (4.68%)	20 (4.90%)	16 (5.33%)	8 (4.37%)	5 (4.90%)	1 (2.44%)	1 (3.85%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
TOTAL	491	408	300	183	102	41	26	11	3	2
Evidence Type Nor	SMI/NonSED									
Neglect	14 (20.59%)	14 (22.95%)	12 (22.64%)	6 (18.75%)	4 (21.05%)	2 (25.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Harm	48 (70.59%)	41 (67.21%)	36 (67.92%)	23 (71.88%)	12 (63.16%)	4 (50.00%)	2 (66.67%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Neglect & Harm	2 (2.94%)	2 (3.28%)	1 (1.89%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Not Reported	4 (5.88%)	4 (6.56%)	4 (7.55%)	3 (9.38%)	3 (15.79%)	2 (25.00%)	1 (33.33%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
τοται	68	61	53	32	19	8	3	0	0	0

				Ар	pendix A					
	Type of E	vidence Up	on which In	voluntary Ex	amination	was Based	for 4 Years	s to 4 Days I	Prior to	
	De	atil by Suid				le fear Pric	or to Deatr	i by Suicide		
	4 Years	3 Years	2 Years	1 Year	180 Days	60 Days	30 Days	14 Days	7 Days	4 Days
	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)	# (%)
Harm Type										
All People										
Self	292 (52.24%)	243 (51.81%)	179 (50.71%)	114 (53.02%)	63 (52.07%)	22 (44.90%)	13 (44.83%)	6 (54.55%)	1 (33.33%)	1 (50.00%)
Others	24 (4.29%)	19 (4.05%)	14 (3.97%)	3 (1.40%)	2 (1.65%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Self & Others	60 (10.73%)	48 (10.23%)	40 (11.33%)	23 (10.70%)	12 (9.92%)	4 (8.16%)	3 (10.34%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Not Reported	183 (32.74%)	159 (33.90%)	120 (33.99%)	75 (34.88%)	44 (36.36%)	23 (46.94%)	13 (44.83%)	5 (45.45%)	2 (66.67%)	1 (50.00%)
TOTAL	559	469	353	215	121	49	29	11	3	2
SMI/SED										
Self	258 (52.55%)	215 (52.70%)	155 (51.67%)	97 (53.01%)	55 (53.92%)	19 (46.34%)	12 (46.15%)	6 (54.55%)	1 (33.33%)	1 (50.00%)
Others	20 (4.07%)	15 (3.68%)	10 (3.33%)	3 (1.64%)	2 (1.96%)	0 (0.00%	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Self & Others	53 (10.79%)	41 (10.05%)	34 (11.33%)	19 (10.38%)	9 (8.82%)	3 (7.32%)	2 (7.69%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Not Reported	160 (32.59%)	137 (33.58%)	101 (33.67%)	64 (34.97%)	36 (35.29%)	19 (46.34%)	12 (46.15%)	5 (45.45%)	2 (66.67%)	1 (50.00%)
TOTALI	491	408	300	183	102	41	26	11	3	2
NonSMI/NonSED										
Self	34 (50.00%)	28 (45.90%)	24 (45.28%)	17 (53.13%)	8 (42.11%)	3 (37.50%)	1 (33.33%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Others	4 (5.88%)	4 (6.56%)	4 (7.55%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Self & Others	7 (10.29%)	7 (11.48%)	6 (11.32%)	4 (12.50%)	3 (15.79%)	1 (12.50%)	1 (33.33%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Not Reported	23 (33.82%)	22 (36.07%)	19 (35.85%)	11 (34.38%)	8 (42.11%)	4 (50.00%)	1 (33.33%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
TOTAL	68	61	53	32	19	8	3	0	0	0

Appendix B

					Appendix	в						
Medi	icaid Servi	ice Claims	or Perso	ns who Died b	y Suicide fo	r People w	ho Died b	y Suicide in 2	004, 2005	, or 2006		
Institutional Claims		Cohort 1 (N=	76) 12 mor	iths	C	hort 2 (N=6	3) 24 mont	IS)	Cohort 3 (N=2	286) 36 mon	iths
Sub Category	Cost Per Service User	Claims Per Service User	Cost PUPM	Average Cost Per Claim Per Service User	Cost Per Service User	Claims Per Service User	Cost PUPM	Average Cost Per Claim Per Service User	Cost Per Service User	Claims Per Service User	Cost PUPM	Average Cost Per Claim Per Service User
Psychiatric Inpatient Hospital Claims	\$1,902	0.4	\$158	\$4,380	\$984	0.4	\$41	\$2,480	\$4,018	1.0	\$112	\$4,075
Other MH Diagnosis Outpatient Hospital Claims	\$67	0.6	\$6	\$118	\$117	0.8	\$5	\$145	\$203	1.2	\$6	\$163
Psychiatric Outpatient Claims	\$3	0.1	\$0	\$50	\$12	0.3	\$1	\$47	\$12	0.1	\$0	\$85
Other MH Diagnosis Inpatient Hospital claims	\$811	0.1	\$68	\$5,603	\$754	0.8	\$31	\$931	\$608	0.5	\$17	\$1,307
Other Remaining Claims in Institutional File	\$607	0.3	\$51	\$1,775	\$876	0.4	\$36	\$2,398	\$2,131	1.2	\$59	\$1,752
Non-MH Inpatient Hospital Claims	\$1,135	0.4	\$95	\$2,696	\$4,015	0.8	\$167	\$5,163	\$4,325	1.4	\$120	\$3,196
Non-MH Outpatient Hospital Claims	\$293	2.0	\$24	\$150	\$1,228	7.6	\$51	\$161	\$1,023	7.4	\$28	\$139
Legend for Appendix B												
Cost per se	rvice user	 Total cost fe 	or cohort stu	dy period/total nu	mber of service u	isers in cohort						
Claims per se	rvice user	r Total numb	er of claims	for cohort study pe	eriod/total numb	er of service u	sers in cohor					
0	ost PUPM	Costs per us	sers/months	in cohort study pe	eriod							
Average Cost	Per Claim	Total cost/t	otal number	of claims								
Cost Per Cate	gory User	 Total cost fe 	or cohort stu	dy period/number	of distinct enrol	lees using just	the categor)	of service				
Claims Per Cate	gory User	- Total numb	er of claims	for cohort study pe	eriod/ number of	distinct enrol	ees using jus	t that category of	service			
Cost Per Category User F	er Month	Cost per Ca	tegory User/	months in cohort	study period							
Percent	Category	Number of	distinct enro	llees using just th	at category of sei	vice/total nur	nber of servi	ce users in cohort				

				Ap	pendix B (Co	ntinued)						
Medi	icaid Servio	ce Claims f	or Persol	ıs who Died b	y Suicide for	r People w	ho Died b	y Suicide in 2	2004, 2005	i, or 2006		
Outpatient Claims	0	ohort 1 (N=)	76) 12 mon	ths	Co	ohort 2 (N=6	3) 24 month	IS		Cohort 3 (N=	286) 36 mor	iths
Sub Category	Cost Per Service User	Claims Per Service User	Cost PUPM	Average Cost Per Claim Per Service User	Cost Per Service User	Claims Per Service User	Cost PUPM	Average Cost Per Claim Per Service User	Cost Per Service User	Claims Per Service User	Cost PUPM	Average Cost Per Claim Per Service User
Basic Outpatient (CMH Claims)	\$61	1.0	\$5	\$62	\$233	4.3	\$10	\$54	\$206	4.4	\$6	\$47
Basic Outpatient (Psychiatric Services	\$9	0.4	\$1	\$21	\$35	1.9	\$1	\$18	\$42	2.6	\$1	\$16
Basic Outpatient (Advanced Nurse Practitioner Services)	\$0	0.0	\$0	0.0	\$1	0.3	\$0	\$3	\$13	0.5	\$0	\$25
Intensive Outpatient Services (CMH Claims)	\$15	0.4	\$1	\$35	\$138	4.4	\$6	\$31	\$263	5.1	<i>2</i> 5	\$52
Assessment Services (CMH Claims)	\$45	0.5	\$4	\$83	\$100	1.9	\$4	\$52	\$50	0.9	\$1	\$57
Treatment Planning and Other CMH Services	\$19	0.4	\$2	\$49	\$198	7.7	\$8	\$26	\$278	8.7	\$8	\$32
Targeted Case Management	\$186	4.5	\$16	\$42	\$358	6.9	\$15	\$52	\$674	16.3	\$19	\$41
Primary Care/Non MH Specialty Physician/Nursing Care with Primary Mental Health Diagnosis (Other Behavioral Health)	\$188	3.4	\$16	\$54	\$235	4.3	\$10	\$55	\$340	12.7	\$9	\$27
Primary Mental Health Diagnosis Excluding Other Behavioral Health Category (above row)	\$102	1.9	\$9	\$53	\$254	1.6	\$11	\$161	\$251	4.5	\$7	\$56
Other and Physical Health Claims	\$1,098	22.3	\$92	\$49	\$2,996	82.3	\$125	\$36	\$3,968	114.7	\$110	\$35
Total for All Claims	\$6,541	38.8	\$545	\$168	\$12,534	126.6	\$1,045	¢99	\$18,405	183.0	\$1,534	\$101
Legend for Appendix B												
Cost per ser	rvice user	Total cost fo	r cohort stu	dy period/total nu	mber of service u	users in cohort						
Claims per set	rvice user	Total numb	er of claims	for cohort study po	eriod/total numb	ier of service u	sers in cohor					
ט	ost PUPM	Costs per us	ers/months	in cohort study pe	eriod							
Average Cost	Per Claim	Total cost/to	otal number	of claims								
Cost Per Cate	gory User	Total cost fo	r cohort stu	dy period/number	· of distinct enrol	lees using just	the categor)	of service				
Claims Per Cate	gory User	Total numb	er of claims	for cohort study po	eriod/ number of	distinct enrol	lees using jus	t that category of	f service			
Cost Per Category User P	er Month	Cost per Cat	egory User/	months in cohort	study period							
Percent	Category	Number of (distinct enro	llees using just th	at category of ser	rvice/total nur	nber of servi	e users in cohort:				

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Appendix C

FMHI Policy and Services Research and Data Center Rules for Determination of SED and SMI Categorization

PART I: Severe Emotional Disturbance (SED) for Children Under the Age of 18 years SED Definition:

- A. Have at least 2 claims on different days in one of the following diagnostic categories:
 - 1. Bipolar Disorder (ICD-9 diagnosis in range from 296.4-296.99 or 296-296.19)
 - 2. Schizophrenic Disorders (ICD-9 diagnosis in range from 295-295.99 or 297-298.99)
 - 3. Major Depressive Disorder (ICD-9 diagnosis in range from 296.2-296.39)
 - 4. Personality Disorder (ICD-9 diagnosis in range from 301-301.99)

<u>OR</u>

- B. Do not have diagnoses 1-4 above but have at least 2 claims on different days in at least 2 of the following 7 conditions (there must be at least 2 claims for each condition met):
 - 1. ADHD (ICD-9 diagnosis in range from 314-314.99)
 - Conduct/Oppositional Disorder (ICD-9 diagnosis in range from 312-312.99 or 313.81)
 - 3. Anxiety Disorder (ICD-9 diagnosis in range from 300-300.99, or 308-308.99, or 313-313.99 or in (309.81,309.89,309.21) but not in (300.40,300.15,300.16,300.19))
 - 4. Depressive Disorder (ICD-9 diagnosis in range from 311-311.99 or in ('300.40', '301.13'))
 - 5. Anti-Psychotic medication (total claims must total to at least a 60-day supply of medication, generic names for pharmaceuticals include: ARIPIPRAZOLE, CLOZAPINE, OLANZAPINE, QUETIAPINE FUMARATE, RISPERIDONE, ZIPRASIDONE HCL, CHLORPROMAZINE HCL, FLUPHENAZINE DECANOATE, FLUPHENAZINE HCL, HALOPERIDOL, HALOPERIDOL DECANOATE, HALOPERIDOL LACTATE, LOXAPINE SUCCINATE, MESORIDAZINE BESYLATE, MOLINDONE HCL, PERPHENAZINE, THIORIDAZINE HCL, THIOTHIXENE, TRIFLUOPERAZINE HCL).
 - Anti-Depressant medication (total claims must total to at least a 60day supply of medication, generic names for pharmaceuticals include: CITALOPRAM HYDROBROMIDE, FLUOXETINE HCL, FLUVOXAMINE MALEATE, PAROXETINE HCL, SERTRALINE HCL, BUPROPION HCL, MIRTAZAPINE, NEFAZODONE HCL, TRAZODONE HCL, VENLAFAXINE HCL).
 - Mood Stabilizers (total claims must total to at least a 60-day supply of medication, generic names for pharmaceuticals include: CARBAMAZEPINE, CLONAZEPAM, DIVALPROEX SODIUM, GABAPENTIN, LAMOTRIGINE, LITHIUM CARBONATE, LITHIUM CITRATE, OXCARBAZEPINE, TOPIRAMATE, VALPROATE SODIUM, VALPROIC ACID).

PART II: Adult Serious Mental Illness or SMI Definition

Have at least 1 claim in one of the following diagnostic categories:

- 1. Bipolar Disorder (ICD-9 diagnosis in range from 296.4-296.99 or 296-296.19)
- 2. Schizophrenic Disorders (ICD-9 diagnosis in range from 295-295.99 or 297-298.99)
- 3. Major Depressive Disorder (ICD-9 diagnosis in range from 296.2-296.39)
- 4. Personality Disorder ((ICD-9 diagnosis in range from 301-301.99)

<u>OR</u>

5. Anti-Psychotic medication (total claims must total to at least a 60-day supply of medication, generic names for pharmaceuticals include: ARIPIPRAZOLE, CLOZAPINE, OLANZAPINE, QUETIAPINE FUMARATE, RISPERIDONE, ZIPRASIDONE HCL, CHLORPROMAZINE HCL, FLUPHENAZINE DECANOATE, FLUPHENAZINE HCL, HALOPERIDOL, HALOPERIDOL DECANOATE, HALOPERIDOL LACTATE, LOXAPINE SUCCINATE, MESORIDAZINE BESYLATE, MOLINDONE HCL, PERPHENAZINE, THIORIDAZINE HCL, THIOTHIXENE, TRIFLUOPERAZINE HCL).

Appendix D

Interview and Online Survey Questions

ווכומנוטווזוווט טו זעונועכ טכמנוו נט טמגכו הנו בגמווווומנוט	Relationshi	o of Suicide	Death to	Baker	Act Examiı	natior
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Facility Interview Form

Interviewer

- 🗌 Stephen Roggenbaum
- 🗌 Amanda LeBlanc

I. Background Information

Respondent/Facility Information

T * 1	
litle	
Facility Location (cour	nty/city)/
Facility Number	
What best describes facility?	your relationship to a Baker Act receiving
Directly employe	ed (full/part time)
Consultant	
Other affiliation	
What best describes one)?	your current professional position (choose
Physician	 Psychiatrist Emergency Room Physician (but not psychiatrist) Other type of physician (specify)
 Clinical Psych LCSW - Licent Psychiatric N 	nologist sed Clinical Social Worker urse
 LMHC- Licens Licensed Mar Other (descri 	sed Mental Health Counselor rriage and Family Therapist be)

	tional	Rehal	oilitation
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- □ Faculty at a University/College
- Executive Director
- Program Director
- Other (see below)
- Other (specify)
- 2. Do you serve in an administrative role at your place of employment (such as executive director of a center or director of a unit)?
 - 🗌 Yes
 - 🗌 No
- 3. How would you best describe your role at your place of employment?
 - □ Full time administrative
 - □ Provide direct services only
 - □ Combination of administrative and direct service
 - Other (see below)
 - □ Other (specify)_

Additional Background Information

- 4. Number of years employed with this agency/ organization?_____
- 5. How long have you been in your current position?
- 6. Are you currently employed with a state hospital (FSH, FSH/ ASH or NEFSH) or at NFETC or SFETC?
 - ☐ Yes
 - 🗌 No
- 7. Are there are other elements to your work that are not captured in the responses to the above questions that you think may be relevant to the focus of this study?
 - Yes (if Yes- see below)
 No)
 Other elements (describe)

.P u w	 Please indicate any instruments/assessment tools that are attilized by you or your facility when screening for suicidal with newly admitted consumers. Beck Depression Inventory (BDI/BDI-II Beck Hopeless Scale (BHS) Adult Suicide Ideation Questionnaire (ASIQ) Scale for Suicide Ideation (SSI) Suicide Ideation Questionnaire (SIQ) Suicide Intent Scale (SIS) Linehan Reasons for Living Other Measures (see below): Other (specify)
P	Other (specify)
ti s	his protocol (risk factor checklist, behavioral assessment pecific acts, etc).
. [Describe any suicide precautions that are in place after
, C F (Describe any suicide precautions that are in place after people are admitted i.e., while they are on the unit).
. C F (Describe any suicide precautions that are in place after beople are admitted i.e., while they are on the unit).
. [])	Describe any suicide precautions that are in place after beople are admitted i.e., while they are on the unit).
. [F (Describe any suicide precautions that are in place after beople are admitted i.e., while they are on the unit). Please describe how suicidality is addressed in the
. [F (Describe any suicide precautions that are in place after beople are admitted i.e., while they are on the unit). Please describe how suicidality is addressed in the discharge planning process at your facility.
. [[(Describe any suicide precautions that are in place after beople are admitted i.e., while they are on the unit). Please describe how suicidality is addressed in the discharge planning process at your facility.
. [[(Describe any suicide precautions that are in place after people are admitted i.e., while they are on the unit). Please describe how suicidality is addressed in the discharge planning process at your facility.
. С ГГ (А.	Describe any suicide precautions that are in place after beople are admitted i.e., while they are on the unit). Please describe how suicidality is addressed in the discharge planning process at your facility. Please indicate any instruments and/or assessment tools that are utilized by you or your facility to screen for
. [F (A.	Describe any suicide precautions that are in place after people are admitted i.e., while they are on the unit). Please describe how suicidality is addressed in the discharge planning process at your facility. Please indicate any instruments and/or assessment tools that are utilized by you or your facility to screen for suicidality during the discharge planning process. Beck Depression Inventory (BDI/BDI-II)
. С Г (А.	Describe any suicide precautions that are in place after people are admitted i.e., while they are on the unit). Please describe how suicidality is addressed in the discharge planning process at your facility. Please indicate any instruments and/or assessment tools that are utilized by you or your facility to screen for suicidality during the discharge planning process. Beck Depression Inventory (BDI/BDI-II) Beck Hopeless Scale (BHS)
. [[(A.	Describe any suicide precautions that are in place after people are admitted Describe are admitted i.e., while they are on the unit). Please describe how suicidality is addressed in the discharge planning process at your facility. Please indicate any instruments and/or assessment tools that are utilized by you or your facility to screen for suicidality during the discharge planning process. Beck Depression Inventory (BDI/BDI-II) Beck Hopeless Scale (BHS) Adult Suicide Ideation Questionnaire (ASIQ)

II.

	Suicide	Ideation	Questionnair	e (SIQ)
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- Suicide Intent Scale (SIS)
- □ Linehan Reasons for Living
- Other Measures (see below):
- Other (specify)
- 5A Please choose the phrase that best describes the availability of community mental health services for people being discharged or referred by your facility.
 - □ Excellent
 - Good
 - Adequate
 - Less than Adequate
 - □ Not Adequate
- **5B. Additional comments**
- 6A. Please choose the phrase that best describes the availability of substance abuse treatment services for people being released from your facility.
 - Excellent
 - 🗌 Good
 - □ Adequate
 - Less than Adequate
 - Not Adequate
- **6B. Additional comments**

III. Training

- 1A. Do you offer any continuing education or in-service training related to suicide issues/prevention?
 - ☐ Yes (if Yes, See 1B. Below)
 - 🗌 No
- 1B. If yes, please describe the training and how often it is offered

2A.	Does your agency conduct any educational activities for the public related to suicide prevention or other suicide related issues? Yes (if Yes, See 2B. Below) No
2B.	If yes, please describe these educational opportunities offered to the public
IV. General	Comments
Are abo und	there any additional comments you would like to offer ut issues related to suicide that may help us better erstanding this important area?
END	OF SURVEY