The Effectiveness of Utilizing the Electronic C20 Screening Tool Versus the Scanned
Paper Screening Tool

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Problem Statement:

This project was chosen to investigate which of the two screening tool processes are more efficient and effective in assuring that potential clients are offered an assessment appointment within the allotted standards set by the Future Is Now committee (F.I.N.). The Department of South Carolina Mental Health F.I.N. committee consists of executive directors, clinic directors and stakeholders that meet to establish a timeline and the necessary steps to create a cohesively aligned system of care and uniform accessibility throughout South Carolina 17 mental health centers. This investigation will focus only on Charleston/Dorchester Mental Health Clinic. An initial request for services flowchart was created by Charleston/Dorchester to adhere to the F.I.N. committee (Appendix 1).

Charleston/Dorchester Mental Health clinic is under one entity but is housed in different locations that consist of different counties. Charleston/Dorchester Mental Health has the same executive director with a clinic director at each site. The screening tools in this investigation will consist of the electronic C20 screening tool and the paper scanned tool utilized over a three month time span beginning August 2013 to November 2013.

The scanned paper tool was developed October 2009 and revised April 2010 (Appendix 2). The electronic C20 tool was developed February 2013 (Appendix 3). Both tools are utilized by Charleston and Dorchester Mental Health staff, whose duties include; conducting intakes or administering the screening tool. The paper tool was most commonly used by the staff. The C20 was utilized has the small sample size for comparison purposes. The target population of this investigation included the intake staff, administration staff and out stationed clinics.

There were similarities in both tools; however; the scanned tool lacked the following indicators:

- type of contact (i.e. phone, face to face, emergency, urgent, non-urgent)
- date/time of service request

- date/time appointment offered

- date/time of the appointment by client's preference

- no area designated for treatment history for psychiatric/alcohol and drug treatment.

For many years of using the scanned paper tool, one of the many concerns was that this tool was not centrally located and not legible. Due to the tool not being centrally located, it was time consuming for the staff to locate the form upon the arrival of the client when they showed for their scheduled appointment. This produced anxiety and apprehension for the potential client which resulted in low ratings on the consumer service review cards and accurate data could not be gathered at the end of the fiscal year to determine the client's disposition. This caused inefficient delivery of services and clinics were not able to have accurate data, which were needed to request funding from stakeholders. Another concern was that the scanning done by various staff personnel showed no consistency in the scanning process. In addiction the forms were not always legible when viewing the various handwritings of the staff.

The electronic C20 tool was developed in February 2013 to address the concerns as it pertained to the scanned forms. This development was to alleviate anxiety and apprehension from potential clients and to gather data to measure outcomes. The C20 tool had it flaws. It was not always able to access the portal to pull up the electronic form due to internet glitches as it pertained to out stationed clinicians.

The electronic C20 tool at the beginning of this investigation lacked the following indicators:

- a tab to indicate if a C20 screening tool had been started prior by a staff person

- a tab to indicate the county of resident

- a tab with drop down boxes to indicate why the potential client was not offered an appointment in regards to if they were/were not eligible for service

A potential client is a person requesting services for the first time via telephone or walking into the clinic for a first time appointment or those persons returning to services requesting that their charts be reopened. Potential clients are ranked in three

categories:

- emergent clients

- urgent clients

- non-urgent clients

This project aligns with the Community Mental Health System (CMHS) of care for the subsequent reasons:

(1) to train clinical staff on the new Department of Mental Health (DMH) goals for rapid access,

(2) mandatory use of the C20 electronic DMH screening tool,

(3) implement the use of DMH screening tool C20 in the electronic medical records (EMR)

Data Collection:

The goal of the Charleston/Dorchester Mental Health Clinic is to offer potential clients (i.e. emergent, urgent and non-urgent) an assessment within a timely manner according to their presenting needs. The following is data collected from August 2013 thru November 2013 that was obtained for this project in order to provide a comprehensive and a comparable investigation. The goal is to determine which of the two screening tools are most effective in gathering data to measure outcomes and most efficient for staff usage. The measured outcomes should adhere to the following to meet the F.I.N. committee's goal to have the 17 mental health centers utilize the tool by the close of the 2013 fiscal year:

- days to emergent appointments (Appendix 4)

- days to urgent appointments (Appendix 5)

- days to non-urgent appointments (Appendix 6)

The interview method was also used to gather data for this investigation. Debbie Blalock, executive director of Charleston/Dorchester Mental Health was interviewed. The purpose of this interview was to gather information from Mrs. Blalock related to F.I.N.'s expected outcomes of using an electronic screening tool. She reported that the overall mission of the F.I.N. committee is to create uniform accessibility across the 17

mental health centers in South Carolina pertaining to potential clients. She shared that in working towards achieving the mission, three goals would be met. These areas include improved delivery of client services, improved care coordination, and a reduction in the cost of service and reduced impact on the budget.

The other interviewees included intake staff, administrative staff and out stationed staff. Intake staffs are known as the "doorkeepers." They are responsible for assessing and screening potential clients via telephone or walk-ins. Their responsibilities also include arranging dispositions for potential clients. The administrative staff role in the intake process is responsible for gathering the information for the intake packet so that the intake staff can conduct the assessment. Out stationed clinicians provide assessments to potential clients who are unable to get to the clinic for an assessment. These are usually persons living in rural areas where public transportation resources are limited. The interview method was chosen to gain feedback from staff that administered the tools and that are involved in the process.

Data Analysis:

According to the report from the Substance Abuse and Mental Health Services Administration (2012) one in five Americans experience some sort of Mental illness in 2010 within the report, 26.2% of Americans ages 18 and older suffered from a diagnosable mental disorder. The National Institute of Mental Health (1996) reports that one in four adults, approximately 57.7 million Americans experience a mental health disorder in a given year and the World Health Organization(2004) reported that four of the ten leading causes of disabilities in the United States and other developed countries are mental illness.

Mental illness is defined by National Alliance of Mental Illness (NAMI) as a medical condition that disrupts a person's thinking, feeling, mood and ability to relate to others and daily functioning. Some of life's daily interferences as it pertains to mental illness of an individual include school, work and family involvement.

Information from the referenced reports outlining mental illness, include that it is imperative that potential clients be offered an assessment appointment in a timely

manner. By using an efficient screening tool, DMH will ensure that better assessment appointments are offered to emergent, urgent and non-urgent potential clients in a timely manner. When potential clients are assessed in a timely manner it reduces the number of suicidal occurrences, emergency room visits, lessens the probability of homelessness and of persons going undiagnosed.

The key findings of the investigation from the data collected and interviews demonstrated that the electronic C20 screening tool was more effective and efficient than the paper scanned tool. The following were the findings from the interviews pertaining to the electronic C20: (Appendix 7)

- customer friendly in that the emergent, urgent and non-urgent clients were offered an assessment in a timely manner
- there were quicker access to the tool being used that was centrally located
- less time consuming for administrative and intake staff to complete which produced increase customer satisfactions surveys
- efficient in tracking data to measure outcome to adhere to F.I.N.
- thirty minutes or less to complete the form

The following were the findings from the interviews pertaining to the scanned paper tool:

- emergent, urgent and non-urgent clients were not offered an appointment within an allotted time due to no slot indicator on the form
- the tool was not easy to locate due to different staff scanning and not complying the information in a central location
- administrative and intake staff were taking thirty minutes or more to complete the form
- difficulties in obtaining data to track and monitor
- the handwriting of staff was not always legible causing important information to be missed

Mental illness can be managed successfully and people do recover, therefore utilizing an efficient and effective screening tool is imperative.

One of the solutions to make sure that potential clients are offered an assessment is to continue to utilize the electronic C20 screening tool. I am certain that with the feedback from the other centers, the C20 will be an efficient document that will create uniform accessibility within the DMH system. I also think it will meet the needs described by the interviewee, Mrs. Blalock to improve delivery of client services, care coordination and cost.

Implementation Plan:

One of the goals of the Charleston/Dorchester Mental Health Center is to offer timely assessments to potential clients. Continuing to utilize the electronic C20 screening tool would be the first step in implementing the goal. The electronic C20 tool is efficient and effective in that it is easy for staff to locate and administer to potential clients. The easy access to the forms decreases the wait time for potential clients and this allow clients to be offered an appointment and eliminates the process of having to scan in the form. It also decreases the time that the staff would have to spend locating the form. This process is cost effective because it is paperless. The DMH staffs are provided with a computer for their day to day job functions; therefore, additional items will not have to be purchased to perform the task which will save the agency money.

The current problem of the electronic C20 is that several C20's can be created on potential clients which create several client identification numbers. This may cause problems when it comes to documenting clinical service notes and payment for clients. The problem increases for potential clients who are returning clients. The solution to this problem is making sure that the staff reviews the database by inputting the potential client's date of birth or social security number to avoid duplication of electronic C20 forms.

The implementation of this process can be easily communicated to stakeholders by executive directors during general quarterly task meetings. Integrating electronic C20 forms throughout the 17 mental health center can be implemented by center directors. The center directors will discuss the implementation of the process with team leaders who would than coach and teach their employees how to utilize the tool. This task will be implemented by the close of the 2013 fiscal year. It should be a standard operating procedure to assist with offering potential clients an assessment appointment in a timely manner.

Evaluation Method:

In order to ensure that the electronic C20 maintains its value in being effective and efficient the following two data collection methods should be explored:

(1) On going interviews with staff periodically throughout the fiscal year who are utilizing the electronic C20's. Also, interviews will be useful in determining if additional information should be captured on the form to generate a better assessment and other concerns with the process. The purpose of the continuation of interviews, would be to gather input on improving the C20 process.

(2) Develop a spreadsheet that indicates when the request for services was made and when the assessment appointment was offered. Spreadsheets can also be used to track and monitor data to measure treatment and care coordination outcomes. Data from the spreadsheet can be provided to stakeholders and the F.I.N. committee. The spreadsheet should be located in the C20 database for easy accessibility.

These two data collection methods can be used to monitor and measure results.

Summary and Recommendations:

The electronic C20 tool is conducive to meeting the needs of DMH, F.I.N. committee and to those responsible for administering assessments to potential clients. The interviewing method was crucial to the key findings of the investigation. The investigation process allowed me to gain insight for recommendations to further improve the process. I would offer three recommendations. First, I would recommend that an indicator be added to the form to identify when the potential client is actively engaged in the armed services or if they are a veteran. In knowing this, it would save time in properly referring the client to facilities that can better serve them. Several C20's can be created at any given time in the EMR database. This can be confusing to the staff in determining which form has accurate information. Secondly, the recommendation would be to implement a tool that would be able to delete C20 forms that are not current by making them not visible. Finally, is to formulate a "stack and stamped system." The "stack and stamped system" would stack the staff's signature each time a different staff reviewed the form. The system will stamp the time and date on the form when it was reviewed and revised. This system would also allow information to be retained and not deleted when revisions are made to update the form. The electronic C20 tool is a new way of ensuring that the 17 mental health centers are uniformed and cohesive in offering assessment appointments to person presume to have mental illness.

References

Murray, R. (2012, January). One in five people suffered mental illness in past year, new report says. Retrieved October 16, 2013, from http://www.nydaily.news.com.

Tribble, M. (2004, May). Mental illness threatens lives everywhere. Retrieved November 10, 2013, from http://www.iccd.org.

What is mental illness, mental illness facts. (n.d.). Retrieved October 18, 2013, from http://www.nami.org.

Operational Definitions

Department of Mental Health (DMH) - seventeen mental health centers in South Carolina design to provide outpatient treatment services to person with chronic a persistent mental illness.

Electronic Medical Records (EMR) - electronic charting systems used throughout South Carolina Mental Health Center.

Emergent Clients - potential clients needing same day service (i.e. clients with suicidal ideations and suicidal attempts).

Future Is Now (F.I.N.) - a committee headed by South Carolina Department of Mental Health State director and the department's agency directors aligning to develop a system that is uniform in policies and procedures with the seventeen mental health centers.
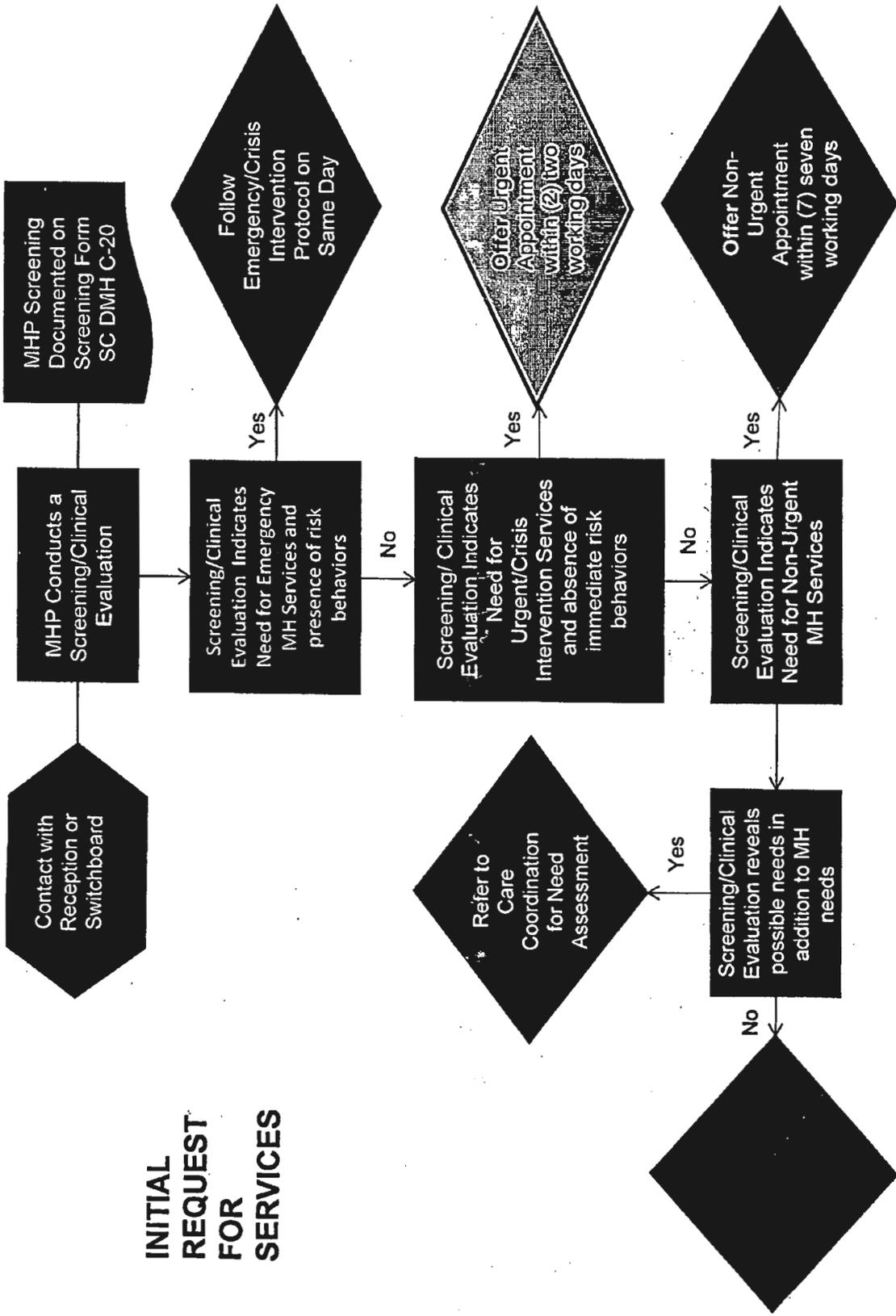
Urgent Clients - potential clients needing services within two working days (i.e. clients that are being discharged from the hospital or emergency room).

Non urgent clients - needing services with seven working days (i.e. is able to maintain with the assist of a support system until they are seen for an assessment).

Appendices

A-1

**INITIAL
REQUEST
FOR
SERVICES**

```
Contact with
Reception or
Switchboard
```

```
MHP Conducts a
Screening/Clinical
Evaluation
```

```
MHP Screening
Documented on
Screening Form
SC DMH C-20
```

```
Screening/Clinical
Evaluation Indicates
Need for Emergency
MH Services and
presence of risk
behaviors
```

Yes → Follow Emergency/Crisis Intervention Protocol on Same Day

No ↓

```
Screening/ Clinical
Evaluation Indicates
Need for
Urgent/Crisis
Intervention Services
and absence of
immediate risk
behaviors
```

Yes → Offer Urgent Appointment within (2) two working days

No ↓

```
Screening/Clinical
Evaluation Indicates
Need for Non-Urgent
MH Services
```

Yes → Offer Non-Urgent Appointment within (7) seven working days

↓

```
Screening/Clinical
Evaluation reveals
possible needs in
addition to MH
needs
```

Yes → Refer to Care Coordination for Need Assessment

No →

A -2

CHARLESTON DORCHESTER COMMUNITY MENTAL HEALTH CENTER INTAKE/SCREENING

Client Demographic Information

Type of Contact: ☐ Phone   ☐ Face to Face

NAME: (Last) _____ (First) _____ (MI) ____ CID: _____

Address: _____

Phone: (home) _____ (work) _____ (cell) _____ (other) _____

DOB: _____ Age: _____ SSN #: _____ Gender: ☐ Male ☐ Female

County of Residence: _____ School Attending: _____ Grade: _____

Translator/Interpreter Needed? ☐ No ☐ Yes   Language: _____

Payor Source/Type of Insurance: _____

REFERRAL INFORMATION

Referral Source: ☐ Self ☐ Family: _____ Relationship: _____

   ☐ School: _____ Position: _____

   ☐ Other: _____

Legal Involvement: ☐ No ☐ Yes Type: _____

Other Agencies Currently Involved: _____

Reason for Referral: _____

_____

_____

_____

PRESENTING PSYCHIATRIC SYMPTOMS: (check and explain all that apply)

☐ Suicidal Ideation   ☐ w/ plan   ☐ w/ intent   ☐ Suicidal Gesture/Attempt   ☐ Previous Attempt(s)
☐ Homicidal Ideation   ☐ w/ plan   ☐ w/ intent   ☐ Homicidal Gesture/Attempt   ☐ Previous Attempt(s)
☐ Self Harm Behaviors   ☐ Fire Setting   ☐ Destructive Behavior(s)   ☐ Violent Threats/Behaviors
☐ Cruelty/Harm to People/Animals/Property   ☐ Change in School Performance ☐ Bedwetting
☐ Alcohol Use Last Used: _____   ☐ Drug Use Last Used: _____
☐ Alcohol/Drug Screen Lab Results: _____

Explanation: _____

_____

_____

Risk Assessment Plan: _____

Other Presenting Psychiatric Symptoms: _____

_____

CURRENT MEDICATION(S) (name, and prescribing doctor if known): t

List any Medical problem/issues/concerns: _____

A-2

Client Name: _____

PSYCHIATRIC / A&D TREATMENT HISTORY (check all that apply)

INPATIENT: ☐ No ☐ Yes (where, when, reason): _____

_____

_____

OUTPATIENT/OTHER: ☐ No ☐ Yes (where, when, reason): _____

_____

_____

OTHER IDENTIFYING INFORMATION

RACE: ☐African American/Black ☐Asian ☐Hispanic ☐Native American ☐White ☐Other: _____

MARITAL: ☐ Single ☐ Married ☐ Separated ☐ Divorced ☐ Widowed ☐ Unknown

EMPLOYED: ☐ No ☐ Yes (what type and how long?) _____

LIVING SITUATION: ☐ Alone ☐ w/Spouse ☐ w/Children ☐ w/Siblings ☐ w/Parents ☐ Jail ☐ Homeless
☐ Group Home ☐ Shelter ☐ Foster Home ☐ Other _____

FORMER CMHC CLIENT: ☐ No ☒ Yes (where) _____

EMERGENCY CONTACT INFORMATION

Contact Name: _____ **Relationship:** _____

Address: _____

Phone: (home) _____ (work) _____ (cell) _____ (other) _____

DISPOSITION (check ALL that apply)

Eligible for CMHC services: ☐ Yes ☐ No **If no explain:** _____

_____

_____

Referral made: ☐ Private MH Professional/Psychiatrist ☐Drug/Alcohol Agency ☐ DSS ☐ DDSN
☐ Vocational Rehabilitation ☐ Primary care Physician ☐ Other: _____

☐ **Inpatient Psychiatric Admission:** ☐ Voluntary ☐ Involuntary Facility: _____

☐ **Inpatient Alcohol/Drug Admission:** ☐ Voluntary ☐ Involuntary Facility: _____

CMHC Appointment: Date & Time: _____ Clinician: _____

Follow up if indicated: _____

Comments/Summary:

Clinician Signature / Title:	**Date:**

DMH
South Carolina Department of Mental Health

Electronic Medical Record

Switch user to: HAMPLETON, ROCHELLE (1171) ▼
[Reset User]
Logout

| Home | Client | POC | TCM | Scheduler | Clinical Notes | ICA | Audit |

Welcome ROCHELLE HAMPLETON MA   Quick Search:

Show/Hide Autosaves

Please specify the reason for revising the form
review

[SAVE and CONTINUE]   [SAVE FORM] [SAVE and SIGN FORM] [CANCEL]

Type of Contact: ☐ Phone   ☐ Face to Face   ☑ Emergency   ☑ Urgent   ☑ Non-Urgent

Date/Time of Service Request: ▦ / 2 ▼ 47 ▼ PM ▼

Date/Time of Appointment Offered by CMHC: ▦ / 1 ▼ 00 ▼ PM ▼

Date/Time of Appointment by Client's Preference: ▦ / 1 ▼ 00 ▼ PM ▼

Clinician: HAMPLETON, ROCHELLE ▼   **Location:** 050 - DORCHESTER ADULT ▼

Client Demographic Information

Name: (Last)_____ (First)_____ (MI)____   CID: 8200714

Address:

Phone: (home)_____ (work)_____ (cell)_____ (other)_____

DOB: _____ ▦ **Age:** NaN **SSN #:** _____   **Gender:** ⦿ Male ○ Female

County of Residence: DORCHESTER ▼ **School Attending:** _____ **Grade:** ____

Translator/Interpreter Needed? ⦿ No ○ Yes **Language:** _____

Payor Source/Type of Insurance:

REFERRAL INFORMATION

Name of Referral Source: ☐ Self ☑ Family: _____   **Relationship:** _____
☐ School: _____   **Position:** _____
☐ Other: _____

Legal Involvement: ⦿ No ○ Yes **Type:** _____

Name of Contact: _____

Other Agencies Currently Involved: _____

Reason for Referral: _____

OTHER IDENTIFYING INFORMATION

RACE: AFRICAN AMER. ▼

MARITAL: ☐ Single ☐ Married ☐ Separated ☐ Divorced ☐ Widowed ☐ Unknown

EMPLOYED: ⦿ No ○ Yes (what type and how long?)

LIVING SITUATION: ☐ Alone ☐ w/Spouse ☐ w/Children ☐ w/Siblings ☐ w/Parents ☐ Jail ☐ Homeless
☐ Group Home ☐ Shelter ☐ Foster Home ☐ Other: Friend

FORMER CMHC CLIENT: ⦿ No ○ Yes (where)

ALTERNATE CONTACT INFORMATION

Contact Name: _____   **Relationship:** _____

Address:

Phone:

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(home)	(work)	(cell)	(other)

PRESENTING PSYCHIATRIC SYMPTOMS & RISK ASSESSMENT: *(check and summarize)*

☐ Suicidal ☐ Gesture/Attempt ☐ Ideation ☐ w/ plan ☐ w/ intent ☐ w/means ☐ Previous Attempt(s)

☐ Homicidal ☐ Gesture/Attempt ☐ Ideation ☐ w/ plan ☐ w/ intent ☐ w/means ☐ Previous Attempt(s)

☐ Self-Harm Behaviors ☐ Fire Setting ☐ Destructive Behavior(s) ☐ Violent threats/Behaviors

☐ Cruelty/Harm to People/Animals/Property ☐ Change in School Performance ☐ Bedwetting

☐ Alcohol Use   Last Used: ▦   ☐ Drug Use   Last Used: ▦

☐ Alcohol/Drug Screen   Lab Results:

Summary:

Safety Plan:

Other Presenting Psychiatric Symptoms:

CURRENT MEDICATION(S) (name, and presribing doctor if known):

List any Medical problem/issues/concerns:

PSYCHIATRIC / A&D TREATMENT HISTORY: *(check all that apply)*

INPATIENT: ⦿ No ◯ Yes (where, when, reason):

OUTPATIENT/OTHER: ◯ No ⦿ Yes (where, when, reason): DMH

DISPOSITION: *(check ALL that apply)*

Eligible for CMHC services: ⦿ Yes ◯ No ◯ Appointment not offered

If no / other explain:

Referral made:
☐ Private MH Profssional/Psychiatrist ☐ Drug/Alcohol Agency ☐ DSS ☐ DDSN
☐ Vocational Rehabilitation ☐ Primary care Physician ☐ Other

☐ **Inpatient Psychiatric Admission** ◯ Voluntary ◯ Involuntary Facility:

☐ **Inpatient Alcohol/Drug Admission** ◯ Voluntary ◯ Involuntary Facility:

Follow up if indicated:

Comments/Summary:

[SAVE and CONTINUE] [SAVE FORM] [SAVE and SIGN FORM] [CANCEL]

Emergent Potential Clients

Paper Scanned Tool		Electronic C20 Tool	
August 2013			
#of scvs requested	#of days to appt.	#of svcs requested	#of days to appt.
9	n/a	9	4
September 2013			
10	n/a	10	3
October 2013			
9	6	9	same day appt
November 2013			
6	2	6	same day appt

*# of svcs requested - the amount of emergent potential clients requesting services in the stated month.

*# of days to appt - number indicates how many days the appointment was offered after the initial request for service.

*n/a - data could not be obtained

Urgent Potential Clients

Paper Scanned Tool		Electronic C20 Tool	
August 2013			
#of scvs requested	#of days to appt.	#of svcs requested	#of days to appt.
11	n/a	11	3
September 2013			
10	5	10	3
October 2013			
10	n/a	10	3
November 2013			
10	5	10	4

*# of svcs requested - the amount of emergent potential clients requesting services in the stated month.

*# of days to appt.- number indicates how many days the appointment was offered after the initial request for service.

*n/a - data could not be obtained

Non-Urgent Potential Clients

Paper Scanned Tool		Electronic C20 Tool	
August 2013			
#of scvs requested	#of days to appt.	#of svcs requested	#of days to appt.
200	10	200	4
September 2013			
254	n/a	254	5
October 2013			
247	n/a	247	6
November 2013			
148	8	148	4

*# of svcs requested - the amount of emergent potential clients requesting services in the stated month.

*# of days to appt.- number indicates how many days the appointment was offered after the initial request for service.

*n/a - data could not be obtained

*13 staff from units providing assessments was interviewed.
*11 staff was concurrent in their responses.
*2 staff was new to the units and learning the assessment process

Interview Questions

    (1) What was the estimated time that it took you to complete the paper scanned form that we previously used?
- less than 30 mins
- less than an hour
- more than 30 mins
- more than an hour

    (2) What is the estimated time that it takes you to complete the electronic C20 form?

- less than 30 mins
- less than an hour
- more than 30 mins
- more than an hour

    (3) How easy/difficult was it for you to locate the form?
Paper scanned form:

C20:

    (4) Which tool is more efficient? Why

(5) Which tool is more effective? Why

(6) Concerns with the paper scanned form?

(7) Concerns with the C20:

(8) What changes would you make to the C20 form?