Telemedicine Evaluation Final Results*

Ohio Department of Mental Health
Office of Program Evaluation and Research

Susan M. Missler, Ph.D.

Revised August 16, 2007

* This report was revised on August 16, 2007 to include data submitted on August 15.
# Telemedicine Evaluation Final Results

## Table of Contents

- **Background** .................................................................................................................................2
- **Demographic Data** ..........................................................................................................................2

## Consumer and Provider Results

- **Access** .......................................................................................................................................6
- **Clinical Quality** ............................................................................................................................8
- **Satisfaction** ..............................................................................................................................11

## Administrator Results

- **First Visit In-Person Requirement** ...........................................................................................14
- **Accommodating Consumers with Telemedicine Appointments** ................................................15
- **Recommend Implementing Telemedicine** ....................................................................................18
- **Do Differently with Implementation of Telemedicine** .................................................................18

## Report Summary

- **Evaluation Highlights** ..............................................................................................................19

## Appendix A

- **Administration Guidelines for the Consumer Survey: Satisfaction with Services Delivered over Two-way Video Camera** ..........................................................22
- **Administration Guidelines for the Provider Survey: Provider Satisfaction with Telemedicine** .23
- **Administration Guidelines for the Administrator Survey: Administrator Satisfaction with Telemedicine** ......................................................................................................................24

## Appendix B

- **Consumer Satisfaction with Services Delivered over Two-way Video Camera** .......................26
- **Provider Satisfaction with Telemedicine** ....................................................................................28
- **Administrator Satisfaction with Telemedicine** ............................................................................30
Telemedicine Evaluation Final Results

Background

On December 15, 2005, the Ohio Department of Mental Health (ODMH) amended the Behavioral Health Counseling Service (5122-29-03) and Pharmacologic Management Service (5122-29-05) rules to allow these services to be offered via interactive videoconferencing technology (i.e., telemedicine). As part of the agreement leading to the promulgation of these rules, ODMH agreed to sunset the rules in two years, and reintroduce them after an evaluation of the implementation of telemedicine. The Department agreed to coordinate the evaluation process.

The following telemedicine (TM) evaluation results address access, satisfaction, and clinical quality issues from the perspectives of consumers, providers and administrators. The evaluation and technical requirements for services delivered by mental health providers using interactive video conferencing (TM) were described in an April 24, 2006 memo to Behavioral Healthcare Organizations (BHOs), Boards, Provider Agencies and Shareholder Organizations.

The telemedicine evaluation is composed of two parts:

- Surveys from recipients, providers and administrators of services provided via telemedicine to ascertain information regarding their experiences, and
- Service data gathered through MACSIS.

Specifically, agencies that planned to deliver telemedicine services (i.e., pharmacological management and behavioral health counseling) between the dates of May 1, 2006 and June 30, 2007 were required to complete all three versions of the surveys and utilize Modifier 4 in MACSIS (see Administration Guidelines for the three questionnaires in Appendix A). Agencies were required to begin completing the questionnaires immediately and continue throughout the study’s duration, administering them at least one time per quarter:

- Consumer Questionnaire – every consumer receiving TM services across a two-week period once per quarter
- Provider Questionnaire – every provider delivering services via 2-way video conferencing across a two-week period once per quarter, and
- Administrator Questionnaire – every administrator who was delivering TM services in his/her agency once per quarter.

Consequently, it is possible that the same consumer, provider or administrator completed the questionnaires more than once.

Demographic Data

The consumer questionnaire was completed 222 times and the parallel provider questionnaire was completed 37 times (see Appendix B for copies of the questionnaires). There were nine (9) administrator questionnaires submitted by five (5) different agencies (see Appendix B for a copy of the questionnaire). As noted above, the same consumers, providers and administrators
could have submitted questionnaires during each of the study’s quarters and thus, submitted data more than once.

**Consumer and Provider Results**

The following charts display gender for both consumer and provider respondents (see Figures 1 and 2).

**Figure 1**

Consumer Gender

- Female, 46.7%
- Male, 53.3%

One hundred (46.7%) consumer respondents were female and 114 (53.3%) were male (see Figure 1).

**Figure 2**

Provider Gender

- Female, 56.8%
- Male, 43.2%

Twenty-one (56.8%) provider respondents were female and sixteen (43.2%) were male (see Figure 2).
Forty-three (19.4%) consumer respondents indicated they were less than 12 years of age. Eighty-one (36.5%) consumer respondents indicated they were from 12 to 17 years of age. The remaining 91 consumer respondents (42.0%) ranged from 18 to 64 years of age (see Figure 3).

**Figure 3**

![Consumer Age Groups](image)

The age range of providers varied across the continuum from the group of 25 to 34 years at 35.1% of respondents, to 21.6% of respondents in the 35 to 44 year old group, to 27% in the 45 to 54 year old group, lastly, to 16.2% in the 54 to 64 year old group. Refer to Figure 4.

**Figure 4**

![Provider Age Groups](image)
An examination of the MACSIS data (per August 9, 2007 data run) along with all submitted questionnaires (as of August 15, 2007) revealed that five providers were utilizing Telemedicine (TM) in some way (i.e., completing surveys, using Modifier 4, or both). See Table 1 below.

Table 1.

<table>
<thead>
<tr>
<th>Provider</th>
<th>Boards (per MACSIS)</th>
<th>Use of Modifier 4</th>
<th>Surveys Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>TriCounty</td>
<td>Athens, Hocking, Vinton Fairfield Franklin Gallia, Jackson Meigs Muskingum Joint Paint Valley Scioto, Adams, Lawrence</td>
<td>Yes</td>
<td>Consumer Provider Administrator</td>
</tr>
<tr>
<td>Shawnee</td>
<td>Paint Valley Scioto, Adams, Lawrence</td>
<td>Yes</td>
<td>Consumer Provider Administrator</td>
</tr>
<tr>
<td>Thompkins</td>
<td>Not available</td>
<td>No</td>
<td>Consumer Provider Administrator (as of August 9, 2007)</td>
</tr>
<tr>
<td>Southeast</td>
<td>Franklin</td>
<td>Yes</td>
<td>Consumer Provider Administrator</td>
</tr>
<tr>
<td>Mound Builders</td>
<td>Not available</td>
<td>No</td>
<td>Consumer Provider Administrator (as of August 9, 2007)</td>
</tr>
</tbody>
</table>

The Department has no way of knowing what other agencies might be utilizing telemedicine and not using Modifier 4 or not submitting consumer, provider and administrator surveys to the Office of Program Evaluation and Research.
Access

Almost two-thirds of the consumer respondents (141/221, 63.8%), indicated this session represented the first time meeting with the mental health staff person using the 2-way interactive video (i.e., using telemedicine). Refer to Figure 5 below. On the other hand, the majority of provider respondents (20/37, 54.1%) who completed the questionnaire reported they had utilized TM 10 or more times (likely indicative of the same providers completing multiple questionnaires across the study’s 13-month time frame).

Figure 5

Number of Times Meeting with MH Staff and Using the TM Equipment
The majority of consumer (181/209, 86.6%) and provider (28/36, 77.8%) respondents reported that they would rather be seen or see each other “now” via 2-way interactive video (TM) than wait until later. Refer to Figure 6 for these graphical representations.

**Figure 6**

```
I would rather see person now via TM than wait longer to see him/her in person
```

The majority of consumer respondents (122/217, 56.2%) agreed or strongly agreed that using the 2-way camera (TM) was just as good as seeing the mental health services provider in person (see Figure 7). Just under half of the provider respondents (18/37, 48.6%) agreed that using the 2-way camera (TM) was just as good as seeing the consumer in person (see Figure 7).

**Figure 7**

```
Using 2-way Camera is Just as Good as in Person
```
For the first appointment with the mental health staff (see Figure 8), the majority of both consumer respondents (120/216, 55.6%) and provider respondents (23/37, 62.2%) noted they preferred to “meet in person”. The next largest groups of respondents (consumers at 81/216, 37.5% and providers at 14/37, 37.8%) preferred the first appointment either to “meet in person or with 2-way video camera”. None of the provider respondents indicated a first appointment preference for meeting using the 2-way camera. Fifteen (6.9%) consumer respondents noted a first appointment preference of meeting using telemedicine.

**Figure 8**

For the *First Appointment* it is important for me to …

<table>
<thead>
<tr>
<th>Preference</th>
<th>Consumer</th>
<th>Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet in person</td>
<td>120</td>
<td>23</td>
</tr>
<tr>
<td>Meet with 2-way camera</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Meet in person or with 2-way camera</td>
<td>81</td>
<td>14</td>
</tr>
<tr>
<td>Missing</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

**Clinical Quality**

Consumer respondents’ level of comfort improved across the time of the appointment (i.e., from beginning to end). Refer to Figure 9. For example, fewer consumers were “not comfortable at all” (changed from 24 at the beginning of the appointment to 4 consumers at the end). Also, the number of consumer respondents who were “very comfortable” increased from 62 to 101 (i.e., a 62.9% increase) over the duration of the appointment.

**Figure 9**

Consumer Level of Comfort at Beginning and End of Appointment

- Frequency
- Not comfortable at all
- Mostly comfortable
- Very comfortable
- Missing

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Consumer Begin appt comfort</th>
<th>Consumer End appt comfort</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>133</td>
<td>114</td>
<td>62</td>
</tr>
<tr>
<td>101</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

*Telemedicine Evaluation Final Results*

OPER/smm

*Revised August 16, 2007*
The majority of consumer respondents (185/219; 84.5%) and provider respondents (30/37, 81.1%) did not experience any technical difficulties during the TM appointment (see Figure 10). However, a small number did, and mentioned the following “technical problems”:

- Screen went blank,
- Some static,
- Some freezing up,
- A bit of delay (mouth moving and sound),
- Tiling (i.e., visual and audio jamming),
- Equipment inoperable, and
- A disconnection.

**Figure 10**

Did you experience Technical Problems?

![Bar chart showing the frequency of technical problems experienced by consumers and providers](chart.png)
The overwhelming majority of consumer respondents (214/218, 98.2%) and provider respondents (34/37, 91.9%) reported it was both easy ("mostly easy" and "very easy") to both see and hear during the TM appointment (refer to Figure 11).

Figure 11

How Easy was it to See and to Hear the other Person?
Satisfaction

When asked about preference for talking with the mental health staff person, 29.8% (64/215) of consumer respondents reported, “I prefer talking with the mental health staff person in person”, while 62.8% (135/215) of consumer respondents reported “I have no preference” for talking in person or using the 2-way video camera (see Figure 12). The remaining 7.4% (16/215) of consumer respondents indicated, “I prefer talking with the mental health staff person using the 2-way video camera”. Provider respondents were equally split (18/37, 48.6%) between a preference for “talking in person” and “no preference” (see Figure 12). One (2.7%) provider respondent reported a preference for “talking using 2-way video camera”.

Figure 12

Preference for Appointment

![Preference for Appointment Chart]

- **Prefer talking with 2-way video**: 16 (Consumer), 1 (Provider)
- **Prefer talking in person**: 64 (Consumer), 18 (Provider)
- **No preference**: 135 (Consumer), 18 (Provider)
- **Missing**: 7 (Consumer), 0 (Provider)
The overwhelming majority of both consumer respondents (178/191, 93.2%) and provider respondents (31/36, 86.1%) reported they would “recommend speaking with the mental health provider through 2-way camera to someone else” (see Figure 13).

**Figure 13**

Would you recommend Telemedicine?

![Bar chart showing the recommendation rates for telemedicine.]

- **No**: 13 consumers, 5 providers
- **Yes**: 178 consumers, 31 providers
- **Missing**: 31 consumers, 31 providers

Frequency
When asked, “If this service were delivered in person instead of by 2-way video camera”, 78.2% (165/211) consumer respondents noted they would be “just as satisfied” (see Figure 14). Almost twenty percent (42/211) reported they would be “more satisfied”. Four (1.9%) consumer respondents indicated they would be “less satisfied”. No provider respondent reported s/he would be “less satisfied” if the “service was delivered in person instead of by 2-way video camera”, while 73% (27/37) said they would be “just as satisfied”, with the remainder (10/37, 27%) of provider respondents indicating they would be “more satisfied”.

**Figure 14**

If this service were delivered in person you would be ...

![Figure 14](image_url)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Consumer</th>
<th>Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less satisfied</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Just as satisfied</td>
<td>165</td>
<td>27</td>
</tr>
<tr>
<td>More satisfied</td>
<td>42</td>
<td>10</td>
</tr>
<tr>
<td>Missing</td>
<td>11</td>
<td>0</td>
</tr>
</tbody>
</table>

**Administrator Results**

As mentioned earlier, there were nine (9) administrator respondents. These respondents represented five (5) agencies (refer to Table 1). Two respondents completed the administrator questionnaire three times over the course of the study. The remaining three respondents completed the administrator questionnaire once.

During part of the evaluation’s time frame (specifically from October 5, 2006 through December 31, 2006), one administrator was granted a waiver from paragraph (C) (3) of the Pharmacologic Management Service rule 5122-29-05. In other words, the administrator was able to provide pharmacologic management services to clients via telemedicine without first providing the same service to the same client in person.

Polycom VSX 7000 was the most listed make and model of Telemedicine equipment for the five reporting administrators. The average cost for this equipment was approximately $6,880 (costs ranged from $3,900 to $12,000, with some administrators reporting the cost included both the monitor and cart). The average connection fees for the three administrators reporting information was approximately $2,726 (T-1 lines). One administrator reported a training fee of $1,500 for six months.
First Visit In-Person Requirement

Almost 90% (8/9) of the administrator respondents reported that the requirement for the first visit with the consumer being in person posed problems for the agency in providing needed services for consumers (see Figure 15). Almost 80% (7/9) of the administrator respondents reported that the requirement for the first visit with the consumer being in person posed problems for the agency in accessing needed services for consumers (see Figure 15). There was one administrator who initially did not report the requirement posed problems in both accessing and providing needed services, noting it was the “first day providing services via TM”, so s/he was not aware of any issues at that point.

Figure 15

In explaining the problems posed by the first appointment being in-person, administrator respondents noted the limited numbers of psychiatrists employed in the rural areas, turnover of psychiatrists and its effects on continuity of care, and long waitlist time (e.g., weeks to several months) to see a psychiatrist in person.

Specific provider quotes follow:

- We are a rural provider with very few psychiatrists who are willing to work full time or under contract. Wait times to see new patients can vary from weeks to several months. If a first face-to-face requirement was not in the rule, I would buy telemedicine services from psychiatrists in other parts of Ohio where available. This would always occur based solely on consumer preference.

- Due to psychiatrist turnover, it is sometimes necessary to be able to do telemedicine without a face-to-face first (by the interim provider) in order to ensure continuity of care.
• We will lose one psychiatrist, effective 11/20/06; leaving us with one FTE Psychiatrist and one FTE Advanced Practice Nurse. The ability to provide services without the in-person requirement would help us meet needed requirements for services while we pursue additional psychiatrists.

• The face-to-face requirement for the first visit has created major inefficiencies, thus preventing the use of the equipment for its intended purpose.

• This is our first day of use. Not a problem now - could be in the future.

• When we lost the adult psychiatrist for our remote clinic site (Vinton) we needed to ask for a waiver which we received through 12/31/06. If we had not received the waiver, continuity of care for our SMD adults in Vinton would have been disrupted. Thankfully the Department waived this requirement for us, so we could provide services via telemedicine. We have recruited and hired a new adult psychiatrist for our Vinton clinic; the person starts in December 2006.

• The problem exists when transferring from one psychiatrist to another. The rule implies that the prescribing physician meet face-to-face with the client.

• Some clients may wait for the first psychiatrist visit for several months.

• There is a waiting list for first appointment with psychiatrist.

• This (the requirement for in-person visit) appears to be necessary for quality care. It does reduce the efficiency of telemedicine.

Accommodating Consumers with Telemedicine Appointments

Six (66.7%) administrator respondents indicated they were able to accommodate between 0% and 10% of cancellations, reschedules and no-show visits with telemedicine appointments (see Figure 16). One administrator (11.1%) indicated the capacity to accommodate greater than 10% of cancellations, reschedules and no-show visits with telemedicine appointments. Two administrators (22.2%) were unable to accommodate any cancellations, reschedules and no-show visits with telemedicine appointments (see Figure 16).

Figure 16

Percent of cancellations, reschedules and no show visits filled with Telemedicine appointments

![Bar chart showing frequency of cancellations, reschedules, and no-show visits]
Only two (22.2%) administrator respondents were never able to fill an **urgent request** to see the mental health staff person because of the availability of telemedicine (see Figure 17). Five (55.6%) administrator respondents were able to accommodate an urgent request to see the mental health staff person one to five times because of the availability of telemedicine (see Figure 17). One (11.1%) administrator respondent was able to accommodate an urgent request to see the mental health staff person six to ten times and another one (11.1%) could accommodate this request 11 to 15 times because of the availability of telemedicine (see Figure 17).

Six (66.7%) administrator respondents were never able to accommodate a **specialty request** to see the mental health staff person due to the availability of telemedicine (see Figure 17). One (11.1%) administrator respondent was able to accommodate a specialty request to see the mental health staff person one to five times and another one (11.1%) could accommodate this request six to ten times and another administrator (11.1%) was able to accommodate specialty requests 20+ times due to the availability of telemedicine (see Figure 17).

**Figure 17**

Urgent and Specialty requests filled because of Telemedicine availability

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Times an urgent request filled because of TM</th>
<th>Specialty request filled because of TM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1 - 5 times</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6 - 10 times</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>11 - 15 times</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>16 - 20 times</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20+ times</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Teledermcine Evaluation Final Results
OPER/asm
Revised August 16, 2007
The maximum amount of employees providing telemedicine services was four at two (22.2%) agencies (refer to Figure 18). Two (22.2%) administrator respondents noted they had three mental health staff utilizing the 2-way video camera to provide telemedicine services. Four (44.4%) of the administrator respondents had two mental health staff providing telemedicine services. The remaining administrator respondent (11.1%) had only one staff person providing telemedicine services (refer to Figure 18).

Figure 18

Number of Employees Providing Services via 2-way Video Camera

Almost every administrator respondent (8/9, 88.9%) reported they used also the telemedicine equipment to provide staff training and team meetings (refer to Figure 19). Six (66.7%) administrator respondents reported they used also the telemedicine equipment to provide case consultations and case management.

Figure 19
Recommend Implementing Telemedicine

One hundred percent (9/9) of administrator respondents expressed they would recommend undertaking the process of implementing telemedicine all over again (refer to Figure 20).

Figure 20

Do Differently with Implementation of Telemedicine

Written comments concerning what the administrator might do differently if they were implementing telemedicine all over again included:

- “Work harder to see that ODMH didn’t require a face-to-face visit with the videoconference practitioner first, before using videoconferencing. This defeats the purpose of using it. My professional staff feels it is an unnecessary, overly prescriptive requirement.”
- “Advocate more aggressively for a rule that worked, allowing the technology to be used the way it is in other states.”
- “More training for psychiatrists.”
- “Have a better plan in place as to how prescriptions would be handled.
- “Not much. However, new technology may lead us to re-evaluate the infrastructure we are currently using.”

One administrator respondent reported, “As for implementation, I would not do anything differently.” Another administrator wrote, “Once the current rule is to be reviewed, I would advocate that language requiring the first visit to occur face-to-face be changed to allow for consumer choice as to whether they want to receive services via the two-way video system.”
Another factor to consider is provider choice as some psychiatrists will also prefer to see a consumer face-to-face before offering video treatment services.”

**Report Summary**

This report provides the details of the telemedicine evaluation, which was conducted in order to ascertain information that might influence any recommended changes for subsequent rules pertaining to telemedicine.

The evaluation was to review access, satisfaction and clinical quality issues related to behavioral health counseling and therapy services and pharmacologic management services delivered via two-way video conferencing technology.

During the period between May 1, 2006 and June 30, 2007 agencies that planned to deliver pharmacological management and behavioral health counseling via telemedicine were required to complete consumer, provider and administrator questionnaires to assess various issues surrounding the delivery of telemedicine. These agencies were also required to utilize Modifier 4 in MACSIS billing system to denote use of these services via telemedicine.

**Evaluation Highlights**

**Consumer and Provider Results**

The consumer questionnaire was completed 222 times and the analogous provider questionnaire was completed 37 times. The questionnaires could have been completed by the same consumers and providers over the 13-month course of the evaluation.

One hundred (46.7%) consumer respondents were female and 114 (53.3%) were male. Forty-three (19.4%) consumer respondents indicated they were less than 12 years of age. Eighty-one (36.5%) consumer respondents indicated they were from 12 to 17 years of age. The remaining 91 consumer respondents (42.0%) ranged from 18 to 64 years of age.

Twenty-one (56.8%) provider respondents were female and sixteen (43.2%) were male. Age range of providers varied across the continuum from the group of 25 to 34 years at 35.1% of respondents, to 21.6% for the 35 to 44 year old group, to 27% for the 45 to 54 year old group, to the last group of 54 years to 64 years at 16.2% of respondents.

Approximately two-thirds of the consumers responding to the questionnaire reported that it was their first time seeing the mental health professional via two-way interactive video. Contrastingly, over 50% of the providers reported they had utilized the TM equipment 10 or more times.

Overall consumers were positive about their experiences with telemedicine indicating:
- They (86.6%) would rather be seen “now” via 2-way interactive video (TM) than wait until later [almost 70% of providers preferred to meet now]; and
- Almost 60% agreed or strongly agreed that using the 2-way camera (TM) was just as good as seeing the mental health services provider in person [under 50% of the provider respondents agreed].
When asked specifically about their preference for the first appointment with the mental health staff person, almost 56% of consumers indicated they preferred to meet in person. Just over 62% of providers reported they preferred to meet in person.

Very few consumer (15.5%) or provider (18.9%) respondents experienced technical difficulties during the telemedicine session. Only one provider reported a session as unable to occur due to technical difficulties. Between 80% and 90% of consumers and providers noted their level of comfort improved from the beginning to the end of the appointment. Likewise, over 91% of providers and approximately 98% of consumers reported it was both easy to see and hear during the appointment.

When asked about their preference for talking with the mental health staff person:

- 29.8% of consumer respondents reported a preference for talking in person,
- 62.8% of consumer respondents reported no preference, and
- 7.4% of consumer respondents indicated a preference for using the 2-way video camera.

Provider respondents were equally split (18/37, 48.6%) between a preference for “talking in person” and “no preference” (see Figure 12). One (2.7%) provider respondent reported a preference for “talking using 2-way video camera”.

The overwhelming majority of both consumer respondents (93.2%) and provider respondents (86.1%) indicated they would recommend telemedicine to someone else.

Administrator Results

There were nine (9) administrator respondents, which represents five (5) different agencies (refer to Table 1). Two respondents completed the administrator questionnaire three times over the course of the study. The remaining three respondents completed the administrator questionnaire once. Eight out of nine administrator respondents reported that the requirement for the first visit with the consumer being in person posed problems for the agency in providing needed services to consumers. Seven out of nine administrator respondents reported that the requirement for the first visit with the consumer being in person posed problems for the agency in accessing needed services for consumers. There was one administrator who initially did not report the requirement posed problems noted it was the first day providing services via TM, so s/he was not aware of any issues at that point.

The majority (77.8%) of administrators were never to seldom (1 to 5 times) able to accommodate an urgent or specialty request to see a mental health staff person because of the availability of telemedicine. Four (4) different administrators reported being able to accommodate requests for urgent and specialty services either six to ten times, 11 to 15 times or 20+ times due to the availability of telemedicine.

Eight out of nine administrators reported using the TM equipment for staff training and team meetings. Each administrator (9/9) reported they would recommend undertaking the process of implementing telemedicine all over again.

Finally, a few administrators (per their qualitative responses) expressed a preference for a change in the rules such that the first appointment with the mental health staff person did not have to be in person.
Appendix A

Administration Guidelines
Administration Guidelines for the Consumer Survey: Satisfaction with Services Delivered over Two-way Video Camera

Instructions to Agency / On-site Telemedicine Clinician:

1. Beginning May 1, 2006, please ask the consumer to complete the “Satisfaction with Services Delivered over Two-way Video Camera” questionnaire upon completion of his/her first telemedicine appointment.

2. In addition, during each quarter (list of quarters follows), select a two-week period and administer this questionnaire to every telemedicine consumer.
   b. October 1, 2006 – December 31, 2006
   d. April 1, 2007 – June 30, 2007

3. Please inform the consumer that his/her responses are confidential. In addition, tell the consumer the questionnaire will take approximately five to ten minutes to complete and that the agency is very interested in his/her opinions about the ease, comfort and satisfaction of speaking with the mental health staff person via 2-way video camera. His/her opinions are important to assessing the value of the service and improving the process of delivering the service.

4. In addition, please tell the consumer to:
   a. Not write his/her name on the form.
   b. Please try to answer every question.
   c. Please return the survey to the on-site mental health staff person upon completion.

5. If the consumer needs assistance with completing the questionnaire, please read the items and record the responses.

6. Please write the Agency UPI in the box provided on the questionnaire.

7. Please collect the questionnaire upon consumer completion.

8. Thank the consumer for his/her responses!

9. Once a month return all the completed questionnaires to:
   Susan M. Missler, Ph.D.
   Ohio Department of Mental Health
   Office of Program Evaluation and Research
   30 E. Broad Street, Ste. 1170
   Columbus, OH 43215-3430
   (614) 466-8651
Administration Guidelines for the Provider Survey: Provider Satisfaction with Telemedicine

Instructions to Agency

1. Beginning May 1, 2006, please ask providers to complete the “Provider Satisfaction with Telemedicine” questionnaire upon completion of a consumer’s first telemedicine appointment with the provider.

2. In addition, during each quarter (list of quarters follows), select a two-week period and administer this questionnaire to every telemedicine provider.
   b. October 1, 2006 – December 31, 2006
   d. April 1, 2007 – June 30, 2007

3. Please write the Agency UPI in the box provided on the questionnaire.

4. Please collect the questionnaire upon completion by the provider.

5. Once a month return all the completed questionnaires to:
   Susan M. Missler, Ph.D.
   Ohio Department of Mental Health
   Office of Program Evaluation and Research
   30 E. Broad Street, Ste. 1170
   Columbus, OH 43215-3430
   (614) 466-8651

Instructions to On-site Telemedicine Clinician:

1. Please know that your responses are confidential. In addition, the questionnaire will take approximately five to ten minutes to complete.

2. The Department of Mental Health is very interested in your opinions about the ease, comfort and satisfaction of speaking with the consumers via 2-way video camera. Your opinions are important to assessing the value of the service and improving the process of delivering the service.

3. In addition:
   d. Do not write your name on the form.
   e. Please answer every question.
   f. Please return the survey to the agency staff person upon completion.
   g. Thank you for your input!
Administration Guidelines for the Administrator Survey: Administrator Satisfaction with Telemedicine

Instructions to Agency Administrator:

1. The Department of Mental Health is very interested in your opinions about the ease and satisfaction in implementing and utilizing telemedicine services. Your opinions are important to assessing the value of the service and improving the process of delivering the service.

2. Please know that your responses are confidential.

3. In addition, the questionnaire will take approximately five to ten minutes to complete.

4. You are asked to complete the questionnaire three times:
   a. During the week of May 15, 2006 – May 19, 2006 or the first week of beginning to deliver telemedicine services
   b. During the first week of November 2006
   c. During the first week of May 2007

5. Please be sure to write the Agency UPI in the box provided on the questionnaire.

6. Please return the completed questionnaire to:
   Susan M. Missler, Ph.D.
   Ohio Department of Mental Health
   Office of Program Evaluation and Research
   30 E. Broad Street, Ste. 1170
   Columbus, OH 43215-3430
   (614) 466-8651

7. Thank you for your input!
Appendix B

Telemedicine Questionnaires
Consumer Satisfaction with Services Delivered over Two-way Video Camera

1. How many times have you seen the mental health staff person using the 2-way video camera?
   _____ First time     _____ 2 – 3 times     _____ 4 - 6 times     _____ 7 - 9 times     _____ 10 or more times

2. How easy was it for you to see the mental health staff person on the 2-way video camera?
   ___________________   ___________________   ___________________
   Not easy at all     Mostly easy     Very easy

3. How easy was it for you to hear the mental health staff person on the 2-way video camera?
   ___________________   ___________________   ___________________
   Not easy at all     Mostly easy     Very easy

4. Were there any technical problems with the 2-way video equipment while you were at the appointment?
   _____ No     _____ Yes; what was the problem? ___________________________________

5. I would rather see the mental health staff person using 2-way video camera now than wait longer to see him/her in person.
   _____ No     _____ Yes

6. Using the 2-way video camera is just as good as seeing the mental health staff person in-person (face-to-face).
   ______ Strongly Disagree      _____ Disagree      _____ Neither      _____ Agree  _____ Strongly Agree
   Agree nor Disagree

7. For the first appointment with the mental health staff person it is important to me to (check only one):
   ___________________   ___________________   ___________________
   Meet in person     Meet with 2-way video camera     Meet either in person or 2-way video camera

8. At the beginning of your appointment, how comfortable were you with the idea of speaking to your mental health staff person through 2-way video?
   ___________________   ___________________   ___________________
   Not comfortable at all     Mostly comfortable     Very comfortable

9. At the end of your appointment, how comfortable were you with the idea of speaking to your mental health staff person through 2-way video?
   ___________________   ___________________   ___________________
   Not comfortable at all     Mostly comfortable     Very comfortable

--- please go to the next page ---
10. Please check **one** of the following statements:

___ I prefer talking with the mental health staff person using the 2-way video camera.

___ I prefer talking with the mental health staff person in person.

___ I have no preference.

11. If this service were delivered **in person** instead of by 2-way video camera would you be:

<table>
<thead>
<tr>
<th>Less satisfied</th>
<th>Just as satisfied</th>
<th>More satisfied</th>
</tr>
</thead>
</table>

12. Would you recommend speaking with mental health provider through 2-way video camera to someone else?

_____ No  _____ Yes  Why? or Why not? ______________________________

________________________________________________________________________

________________________________________________________________________

13. Please add any other comments you want to share about your experience today talking with the mental health staff person using 2-way video camera.

________________________________________________________________________

________________________________________________________________________

14. Race of the person receiving the services (check all that apply):

- White
- Native American/Pacific Islander
- Black/African-American
- Hispanic/Latino
- Asian
- Other __________

15. Gender of the person receiving the services:

- Female
- Male

16. Age of the person receiving the services:

- under 12 years
- 12 - 17 years
- 18 - 24 years
- 25 - 34 years
- 35 - 44 years
- 45 - 54 years
- 55 - 64 years
- 65 - 74 years
- 75 - 84 years
- 85 or over years

Thank you for your input!

Telemedicine Evaluation Final Results
OPER/smm
Revised August 16, 2007
Date: ______________

Provider Satisfaction with Telemedicine

1. How easy was it for you to see the consumer on the 2-way video camera?
   - Not easy at all
   - Mostly easy
   - Very easy

2. How easy was it for you to hear the consumer on the 2-way video camera?
   - Not easy at all
   - Mostly easy
   - Very easy

3. Were there any technical problems with the 2-way video equipment during the appointment?
   - No
   - Yes; what was the problem?
   __________________________________________________________
   __________________________________________________________

4. How many times have you used the telemedicine equipment?
   - First time I used equipment
   - 2 – 3 times
   - 4 – 6 times
   - 7 – 9 times
   - 10 or more times

5. What is your level of expertise in using the telemedicine equipment?
   - Poor
   - Fair
   - Good
   - Very Good

6. I would rather see the consumer using 2-way video camera now than wait longer to see him/her in person.
   - No
   - Yes

7. Using the 2-way video camera is just as good as seeing the consumer in-person.
   - Strongly disagree
   - Disagree
   - Neither agree nor disagree
   - Agree
   - Strongly agree

8. For the first appointment with a consumer it is important to me to (check only one):
   - Meet in person
   - Meet with 2-way video camera
   - Either in person or 2-way video camera

9. Please check one of the following statements:
   - I prefer talking with the consumer using the 2-way video camera.
   - I prefer talking with the consumer in person.
   - I have no preference.

10. If this service were delivered in person instead of by 2-way video camera would you be:
    - Less satisfied
    - Just as satisfied
    - More satisfied

    ---- Please go to the next page ----
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Would you recommend providing services to consumers via 2-way video camera to other providers?</td>
<td>No, Yes</td>
</tr>
<tr>
<td>Why? Or Why not?</td>
<td></td>
</tr>
<tr>
<td>12. The use of this technology enables me to make better use of my time.</td>
<td>No, Yes</td>
</tr>
<tr>
<td>Why? Or Why not?</td>
<td></td>
</tr>
<tr>
<td>13. Race (check all that apply):</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td>Native American/Pacific Islander</td>
</tr>
<tr>
<td></td>
<td>Black/African-American</td>
</tr>
<tr>
<td></td>
<td>Hispanic/Latino</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>14. Gender:</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>15. Age:</td>
<td>18-24 years</td>
</tr>
<tr>
<td></td>
<td>25-34 years</td>
</tr>
<tr>
<td></td>
<td>35-44 years</td>
</tr>
<tr>
<td></td>
<td>45-54 years</td>
</tr>
<tr>
<td></td>
<td>55-64 years</td>
</tr>
<tr>
<td></td>
<td>65 or over</td>
</tr>
<tr>
<td>16. Professional background:</td>
<td>Medical doctor or doctor of osteopathic medicine</td>
</tr>
<tr>
<td></td>
<td>Registered nurse</td>
</tr>
<tr>
<td></td>
<td>Clinical Nurse Specialist</td>
</tr>
<tr>
<td></td>
<td>Nurse Practitioner</td>
</tr>
<tr>
<td></td>
<td>Social Worker</td>
</tr>
<tr>
<td></td>
<td>Independent Social Worker</td>
</tr>
<tr>
<td></td>
<td>Counselor trainee</td>
</tr>
<tr>
<td></td>
<td>Professional counselor</td>
</tr>
<tr>
<td></td>
<td>Psychology intern / fellow</td>
</tr>
<tr>
<td></td>
<td>Psychology assistant / assistant</td>
</tr>
<tr>
<td></td>
<td>Psychologist</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>17. Please add any other comments you want to share about your experience providing mental health services using a 2-way video camera.</td>
<td></td>
</tr>
</tbody>
</table>
Administrator Satisfaction with Telemedicine

1. List the Telemedicine equipment used at your agency. Please include the equipment used at satellite offices or sites. (Please use an additional sheet of paper, if you need to add more equipment.)

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>$ Cost / Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maintenance cost (6-month)</th>
<th>Connection fees cost (6-month)</th>
<th>$ Training cost (6-month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

2. Has the requirement for the first telemedicine visit to be face-to-face posed problems for your agency in providing needed services in the past six months?

☐ No  ☐ Yes

Please describe: ____________________________________________________________
________________________________________________________________________

3. Has the requirement for the first visit to be face-to-face posed problems in accessing needed services for the consumer in the past six months?

☐ No  ☐ Yes

Please describe: ____________________________________________________________
________________________________________________________________________
4. In the past six months, please estimate what percent of cancellations, reschedules and no-show visits the agency was able to fill with telemedicine appointments.
   - None
   - Between 0% and 10%
   - 10% +

5. In the past six months, please estimate how many times you were able to accommodate an urgent request on behalf of your consumer to see the mental health staff person because of the availability of telemedicine.
   - Never
   - 1 – 5 times
   - 6 – 10 times
   - 11 – 15 times
   - 16 – 20 times
   - 20+ times

6. In the past six months, please estimate how many times you were able to accommodate a request on behalf of your consumer to see a specialty/subspecialty mental health staff person (e.g., MI / MR, child psychiatrist, hearing impaired, forensic, etc.) because of the availability of telemedicine.
   - Never
   - 1 – 5 times
   - 6 – 10 times
   - 11 – 15 times
   - 16 – 20 times
   - 20+ times

7. In the past six months, the number of employees providing services via 2-way video camera was:

8. In the past six months, this agency has also used telemedicine equipment for (check all that apply):
   - Case consultations / Case management
   - Staff training
   - Team meetings

9. Knowing what you know now, would you undertake the process of implementing telemedicine again? (or Given the experience your agency has had with the process of implementing telemedicine would you recommend your agency undertake the process again?)
   - No
   - Yes

10. If you had this process to do over again, what would you do differently?

    ___________________________________________________________
    ___________________________________________________________
    ___________________________________________________________
    ___________________________________________________________

    Thank you for your input!