Data Collection,

Graphing and Reporting

Data Collection, Graphing, & Reporting

How will we know if a person is progressing under a behavior plan?

Collecting, **graphing** and **reporting** on data helps to answer that question as well as these:

1. Is the plan accomplishing what we hope for it to accomplish?

2. Does the plan need to be adjusted in some way?

Behavior plans often need to be adjusted as we learn what is, and is not, working for the individual. Data gives us feedback that helps us determine if we need to adjust what we are doing so we can maximize our helpfulness and effectiveness over the course of our treatment plan.

Some examples for which data are collected and feedback gathered include:

- Behaviors targeted for reduction

- Replacement behaviors

- Skill acquisition

- Psychiatric symptoms

- Hours of sleep

- Weight

- Toileting

- Functional assessment results

Before any behavior program is implemented, **baseline data** should be collected. Baseline information will provide the treatment team with a clear picture of the frequency, duration, and/or severity of behaviors targeted for interventions. Then further systematic collection and analysis of data will provide the mechanism for tracking the progress of the behavior plan . It will also become the basis of a sound report to the individual's team.

You may be interested to learn that the latest research suggests that the most successful behavior approach is one that the individual:

Enthusiastically embraces

Enjoys a **positive** relationship with the staff implementing the plan.

With these two features present in our approach, there will be an **85% expectation of success** regardless of the behavioral approach you use! *(The Heart and Soul of Change Hubble, Duncan and Miller)* Any plan without these two features present can, at best, expect a **15% success rate**.

Therefore, some of the data collection forms included in this resource measure areas of consumer satisfaction and relational information. We have included other, more traditional, data collection forms as well. Use of the most appropriate forms for the individual's needs will largely accomplish your data collection and reporting purposes. However, the forms in this resource are far from all inclusive. You may decide to develop data collection forms better suited to your person-centered purposes or find other readily available forms online.

If you find that a behavior plan is not yielding positive results, you may want to take a very close look at whether or not the individual is embracing the plan and enjoying a positive relationship with those involved in the plan implementation. The first three data collection forms listed in the table on the

following page are designed to determine plan effectiveness in these important areas.

Type	Definition	When to Use
Rational Support/ Experience (Process) Feedback Scale (1) *	A simple, 4-item pencil and paper visual analog scale designed to assess key dimensions of effective therapeutic relationships.	In all cases to measure the fit and effect of the services you offer
Rational Support/ Experience (Process) Feedback Scale (2) *	A simple, 4-item pencil and paper visual analog scale designed to assess key dimensions of effective therapeutic relationships.	In all cases to measure the fit and effect of the services you offer
Progress & Outcome Feedback Scale*	A simple, four-item visual analog scale designed to assess areas of life functioning known to change as a result of therapeutic intervention.	In all cases to measure the fit and effect of the services you offer
A-Antecedent B-Behavior C-Consequence	Type of frequency count of events occurring prior to, during, and after a behavioral episode.	Best used for low frequency behaviors.
Frequency Count	Every occurrence of target behavior is counted over a designated time period.	When the total sum of the target behavior over time is required, as in baseline data.
Interval Recording	Divides the observation period into equal time periods and requires the person recording to mark whether or not the behavior occurred during each interval.	When the target behavior occurs with high frequency.
Time Sample Recording	Similar to interval recording, but does not require constant attention by person recording data. Behavior is only periodically sampled. Observation periods are divided into specific times.	When personnel or time constraints are involved or when target behaviors only occur during specific time periods.

The table below lists and defines some types of data collection methods and describes when they are most often recommended. Samples of each can be found in Appendix A.

Data Collection continued...

*Used with permission from, and adapted for use in supporting those with ID, by Guy Legare, PDSS Consulting, LLC, Mechanicsburg, PA, March 2010. Adapted from the Session Rating Scale (SRS) developed by Scott D. Miller and Barry L. Duncan from the Institute of the Study of Therapeutic Change in Chicago. (www.talkingure.com)
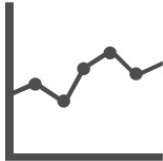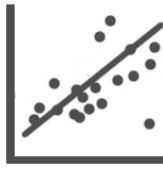
Some behaviors targeted for reduction may require that other types of data be collected. For example, it can be beneficial to collect data regarding the duration (a record of length of time for each episode) of a targeted behavior in which the person engages for extended periods of time. Likewise, it may be important to collect data regarding the severity (a rating of the amount of damage or injury resulting from a particular behavior). For some behaviors targeted for reduction, the person's team might decide to collect data on several dimensions.

Data should be collected across time, people, and circumstances.

A graph is a quick and visual way to assess and communicate progress. The table below lists and defines some of the different types of graphs that can be used for graphing behavioral data and also indicates circumstances when a particular graphing method can be most useful.

Type of Graph	Definition	When to Use	Sample
Bar Graph	Used to show relationships between groups	Fast way to show big differences between items being compared. E.g. comparing behavior frequency from month to month.	
Line Graph	Used to show continuing data; how one thing is affected by another.	Can be used to show the effect of an intervention on a behavior.	
Circle (pie) Graph	Used to show how a part of something relates to the whole.	Can be used to show percentages. E.g. percentage of time behavior is exhibited at home vs. day program vs. in public	
Scatter Plots	Pre-defined time intervals plotted to record occurrences of problem behavior	Can be used to identify patterns. E.g. helps to identify the conditions under which behavior is exhibited.	

Once collected, data should be summarized in graph form at least quarterly.

Reports should:

- Summarize the data collected.

- State whether the data indicate that the intervention(s), are effective, or whether the person is showing progress based upon the data. If there is no progress or the behaviors/ symptoms have worsened, you may want to provide a hypothesis as to why this has occurred. (Remember to "check in" with the person who is the subject of the plan. Use the feedback scales included in this resource to help you evaluate the plan's effectiveness and where adjustments might be needed.)

- If an adjustment is needed, state how you will adjust the plan incorporating your modified hypothesis and with consideration given to the individual's feedback.

For more Data Graphing Reporting, Community

training on Collection, and contact Health

Appendix A:

Data Collection Tools
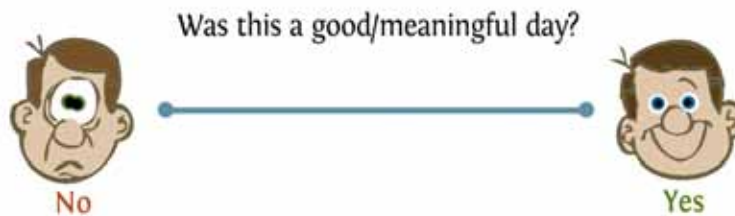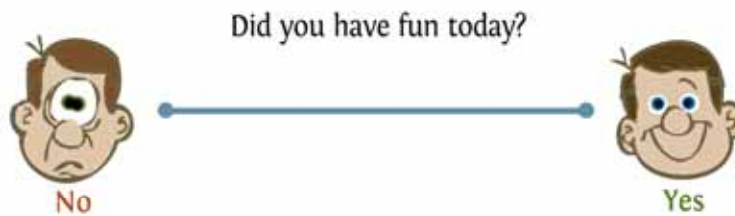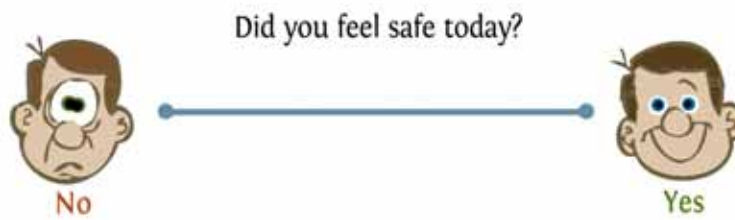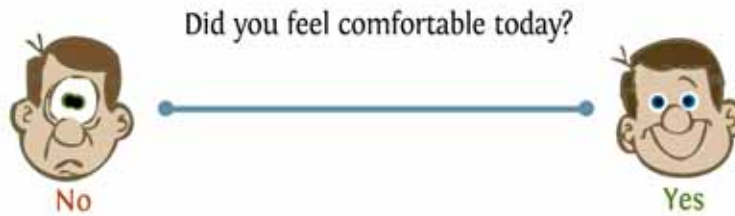
Did you feel comfortable today?

No — Yes

Did you feel safe today?

No — Yes

Did you have fun today?

No — Yes

Was this a good/meaningful day?

No — Yes

This is an adaptation of the Session Rating Scale (SRS) developed by Scott D. Miller and Barry L. Duncan from the Institute for the Study of Therapeutic Change in Chicago. (www.talkingcure.com)

Developed by Guy Legare, PDSS Consulting, LLC, Mechanicsburg, PA, March 2010

Please rate our time together today by placing a hash mark nearest to the description that best fits your experience.

Did you feel heard and understood today?

No   Yes

Did we/I do what was important for you today?

No   Yes

Were we/Was I supportive and encouraging with you today?

No   Yes

Overall: how did we/I do today?

No   Yes

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Developed by Guy Legare, PDSS Consulting, LLC, Mechanicsburg, PA, March 2010

Looking back over the past week, including today, help us understand how you have been feeling by rating how well you have been doing in the following areas of your life, where marks on the left represent low level and marks on the right indicate high levels.
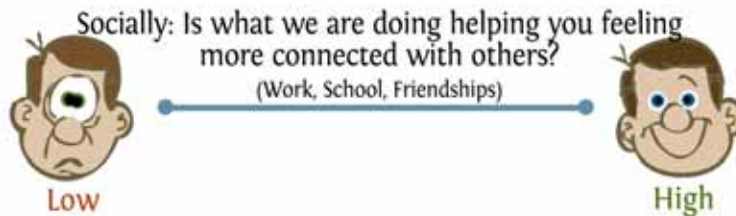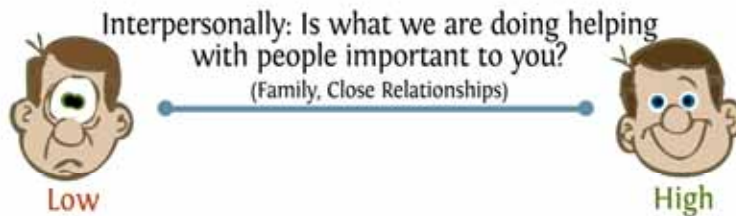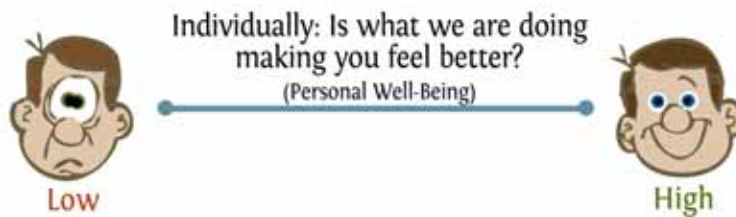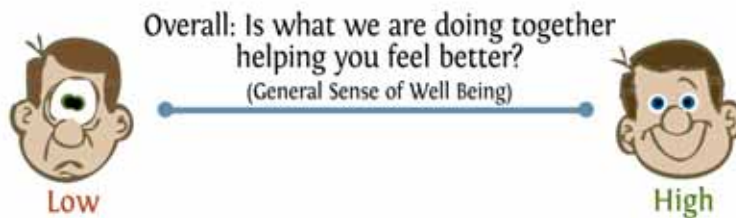
Overall: Is what we are doing together helping you feel better?
(General Sense of Well Being)

Low   High

Individually: Is what we are doing making you feel better?
(Personal Well-Being)

Low   High

Interpersonally: Is what we are doing helping with people important to you?
(Family, Close Relationships)

Low   High

Socially: Is what we are doing helping you feeling more connected with others?
(Work, School, Friendships)

Low   High
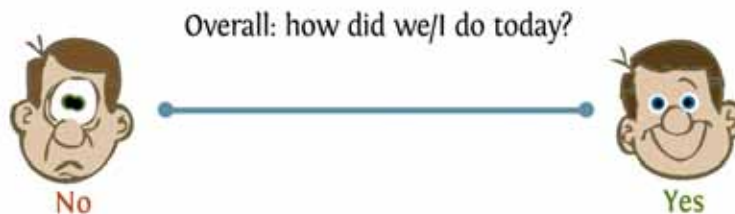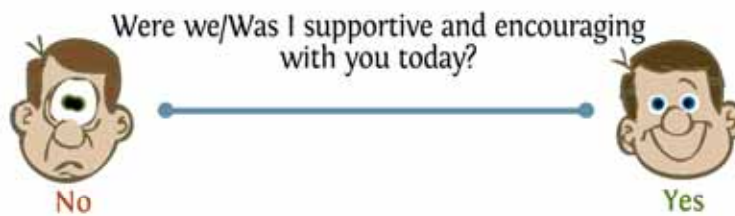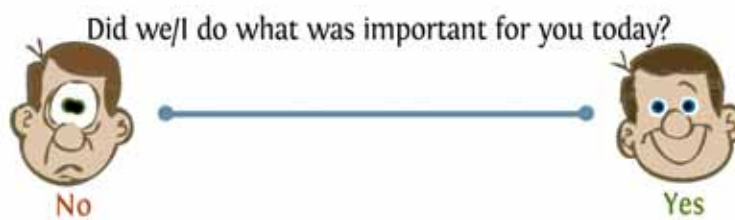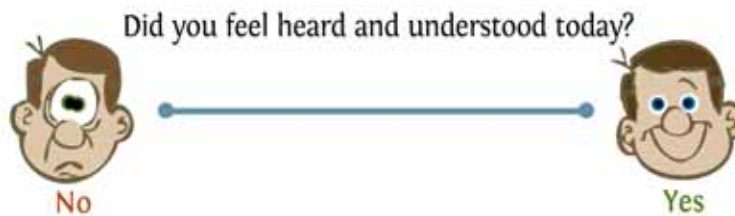
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A-B-C Observation Form

Name: _____ Observation Date: _____
Observer: _____ Time: _____

Antecedent (What happened before the target behavior?)	Behavior (What was the actual behavior in objective terms)	Consequence (What happened after the behavior occurred?)

Name: _____ Observation Date: _____
Observer: _____ Time: _____

Antecedent (What happened before the target behavior?)	Behavior (What was the actual behavior in objective terms)	Consequence (What happened after the behavior occurred?)

Name: _____ Observation Date: _____
Observer: _____ Time: _____

Antecedent (What happened before the target behavior?)	Behavior (What was the actual behavior in objective terms)	Consequence (What happened after the behavior occurred?)

Event Recording (Frequency/Behavior Count) Form

Person's Name:_____

Person completing this form: _____

Location: _____ Date: _____

Target behavior: _____

Make a tally mark every time that the behavior occurs. Enter "0" if the behavior does not occur. At the end of your observation period, total the number of tally marks for that day (if using a different method to keep track of behavior, enter the total in the Total column. You will graph the totals after you have collected a number of days worth of data. Typically, progress is graphed quarterly)

Behavior Definition *(in specific, observable, measurable terms):*

_____

_____

Date	Time	Tally every time that the behavior occurs	*Total number of times the behavior occurred*

Whole Interval Recording Form

Person's Name:_____
Person completing this form: _____
Location: _____ Date(s): _____
Behavior: _____
Procedures:

- Write down the behavior that you will be looking for and its definition
- Write down how long you will be observing every time: Total Observation Time
- Divide the total observation time into same length intervals (here we included 10 intervals); and write down the length of each interval
- All intervals need to be the same length: Intervals can be from a few seconds long to a few minutes long
- Note: Total observation time and length of intervals need to be the same each time that you observe
- Make sure that you have your timing instrument available prior to beginning your observation
- Keep an eye on your timing instrument to keep track of the intervals
- During each time interval:
  ⇒ Look to see if the behavior occurs throughout the entire interval
  ⇒ If the behavior stops at any time, place an X for that interval
  ⇒ If, at the end of the interval the behavior is still occurring, place a checkmark (√)for that interval
  ⇒ At the end of your observation time, total the number of checkmarks. (This is what you graph.)

Date: Time:	Interval #										Total times behavior occurred (√)
	1	2	3	4	5	6	7	8	9	10	
√ or X											

Date: Time:	Interval #										Total times behavior occurred (√)
	1	2	3	4	5	6	7	8	9	10	
√ or X											

Date: Time:	Interval #										Total times behavior occurred (√)
	1	2	3	4	5	6	7	8	9	10	
√ or X											

Time Sampling Record Sheet
10 Minute Intervals

Name: _____ Date: _____

Behavior: _____

(Circle 1, 2, or 3)

Type 1:	Type 2:	Type 3:
Whole interval + = behavior is continuous in interval	Partial Interval + = single instance is observed in interval	Momentary + = record only if behavior present at end of interval

Time	+ or -	Comments	Time	+ or -	Comments	Time	+ or -	Comments
8:00-8:09			11:10-11:19			2:20-2:29		
8:10-8:19			11:20-11:29			2:30-2:39		
8:20-8:29			11:30-11:39			2:40-2:49		
8:30-8:39			11:40-11:49			2:50-2:59		
8:40-8:49			11:50-11:59			3:00-3:09		
8:50-8:59			12:00-12:09			3:10-3:19		
9:00-9:09			12:10-12:19			3:20-3:29		
9:10-9:19			12:20-12:29			3:30-3:39		
9:20-9:29			12:30-12:39			3:40-3:49		
9:30-9:39			12:40-12:49			3:50-3:59		
9:40-9:49			12:50-12:59			4:00-4:09		
9:50-9:59			1:00-1:09			4:10-4:19		
10:00-10:09			1:10-1:19			4:20-4:29		
10:10-10:19			1:20-1:29			4:30-4:39		
10:20-10:29			1:30-1:39			4:40-4:49		
10:30-10:39			1:40-1:49			4:50-4:59		
10:40-10:49			1:50-1:59			5:00-5:09		
10:50-10:59			2:00-2:09					
11:00-11:09			2:10-2:19					

*Comments column can be used to describe any prompts or redirections, type of activity, or other variables useful to identify that Interval.

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