

FINAL REPORT:

**WHATCOM COUNTY
TREATMENT & RELATED SUPPORT
OUTCOMES CONSULTING PROJECT**

As presented to the Whatcom County
Substance Abuse Advisory Board

June 29, 2005
Bill Luchansky
Looking Glass Analytics

Whatcom County Health Department
Substance Abuse Program

WHATCOM COUNTY DEFINED OUTCOMES

Purpose

The purpose of this project was to bring together staff of the Whatcom County Health Department (WCHD), contracted service providers and a consultant to come to agreement on the appropriate outputs and outcomes for the following substance abuse services: 1) treatment, 2) outreach and 3) crisis triage. In March of 2005, the WCHD contracted with Looking Glass Analytics to provide consulting services.

For some time, the WCHD and its Substance Abuse Advisory Board (SAAB) have recognized the need to determine appropriate outcomes for the services they provide, and to begin measuring them. This project attempted to build on this recognition, and on two other efforts the County has been involved in. The first effort is the *Substance Abuse Needs Assessment*, which is produced and updated on an annual basis by WCHD staff. This assessment compares the need for services with service utilization, and provides valuable information regarding the amount of care the County provides relative to need. The latest version of the assessment recommended the implementation of a system to monitor countywide outcomes. The second effort was the County's contract with *Strategic Learning Resources and Kelly Point Partners* for consulting regarding the creation of a coordinated, co-located crisis triage facility that is to be built in the near future. The final report recommended structured linkages to backdoor services, and the development of measurable outcomes so that triage services can be monitored and improved on an on-going basis.

The emphasis of this project was on defining short-term outcomes. For the most part, long-term outcomes were not considered. The short-term emphasis makes sense, at least initially. Contracting agencies, and the individual services they provide, are more likely to affect short rather than long-term outcomes.

Rationale

There are several important reasons to focus on outputs and outcomes.

Why are outputs and outcomes important?

- To increase accountability
- To convey expectations to providers and the community
- To clarify roles and responsibilities
- To assist in the contracting process
- To provide data for grant applications

Methods

Meetings: Most of the work on this project happened in a series of meetings attended by county staff, the consultant and contracted providers. Staff from the WCHD arranged the meetings. Separate meetings were arranged with treatment, outreach and crisis triage providers. Department officials invited representatives from all contracted providers to attend, and each provider sent at least one representative. To ensure continuity across meetings, the providers were asked to send the same person to successive meetings. For the most part, providers complied with that request. For the treatment and outreach meetings, one county staff was in attendance. For the crisis triage meetings, two WCHD staff attended. All meetings occurred over an 11-week period between April 6 and June 14, 2005.

There were three separate meetings with outreach and triage providers, and four meetings with treatment providers. The number of meetings was determined primarily by the needs of the project. After the third meeting on outreach and triage, outputs and outcomes were decided. However, treatment providers needed one additional meeting to reach that point.

Initially, providers were asked to focus on determining the most appropriate outcomes, and not to deal with issues of measurement or responsibility for outcome analysis. Those latter issues were set-aside for a future phase of work.

Role of the Consultant: The role of the consultant in these meetings was first to gain an understanding of the services and the environments where they are provided. The second role for the consultant was to facilitate discussions with county staff and providers.

Analysis, Literature Review: In addition to meetings, WCHD staff provided the consultant with reports describing substance abuse in the County. Two reports were particularly helpful, the *Substance Abuse Program Needs Assessment Plan*, produced by WCHD staff, and the final report from consultants examining the future of the crisis triage system (David Wertheimer, Strategic Learning Resources & Kelly Point Partners).

Scope: The emphasis of this project was on short-term outcomes. Whatcom County has an innovative continuum of care for substance abuse: often, the most desirable outcome of a service is entry to another service. Thus, providers were asked to think about the continuum of care, and what the appropriate linkages between services should be.

A note about Triage: discussions with triage providers focused on how the triage system will work when all providers are housed in their new facility. At that point, the work of the 2 contracted providers will be coordinated to a far greater degree than they are currently. Recognizing that this change in operation will occur shortly, it was decided to determine outcomes with the new situation in mind.

Results: The Agreed Upon Outcomes

Outreach: As the discussions progressed, it became obvious that outreach providers were all performing the same service, albeit in different settings. However, there was initial disagreement or confusion regarding just what outreach was and the terms being used to describe it. To get beyond that initial disagreement, the group decided to break the outreach process into a series of activities and define each activity. That step would serve as a prelude to determining outputs and outcomes. Below, Table 1 shows how participants defined the various outreach activities.

Table 1: Definitions of Outreach Activities

Activity	Definition
Engagement	Building a relationship by meeting members of the target population.
Screening	Determining need for various services (CD, MH, Housing, Medical, Dental)
Data Collection	Collecting identifying information (name, DOB, SSN, etc.) as well as information on outputs.
Case Management/Referral	Achieving client agreement on a service plan. Providing information and assisting clients with entry to services.
Closure	Ending a relationship

The outreach process was divided into a series of five activities. For most part, providers agreed that the process followed the order outlined in the table. However, some activities can happen simultaneously, depending on the willingness of the client. For example, engagement and screening can happen at the same time, if the outreach worker can engage a client quickly and begin gathering information immediately. In other cases, the engagement process might take several meetings with the client, and further progress might have to wait until the client becomes amenable to providing information and receiving further services.

Table 2 shows the outputs and outcomes chosen by providers. For the most part, the continuum of care was emphasized in the choice of outcomes: three of the five outcomes are substance abuse or mental health services that the County currently provides. One of the outcomes, reduced rates of criminal justice involvement, is a longer-term outcome.

Table 2: The Outputs and Outcomes of Outreach.

Outputs	Short-Term Outcomes
1. Engagement	1. CD Assessment
2. Screening for DSHS eligibility	2. CD TX admission
3. Screening for CD & MH needs	3. Acquire housing
4. Making service arrangements (CD TX, transportation, medical services, housing)	4. MH assessment
5. Completing DSHS applications	5. Reduced rates of criminal justice involvement (a longer-term outcome)

Triage: Crisis triage is a series of discrete services, and each of those services has specific outcomes associated with it. Table 3 shows the outputs and outcomes for each service.

Table 3: Crisis Triage: Outputs and Outcomes

Service	Outputs	Outcomes
Crisis Response	1. Screening for acute needs (medical, psychiatric)	1. CD Outpatient TX admission
	2. Referral to ER/other medical care	2. MH Outpatient TX admission
	3. Referral to Detox	3. ITA admissions
	4. Referrals to Crisis Respite	4. Lesser restrictive services
	5. Evaluate criteria for detention	
Crisis Respite	1. Short-term residential support	1. Resolution of crisis
	2. Case Management	2. MH TX admission
		3. Decrease in hospital admissions
Alcohol Protective Custody	1. Protective custody	1. Detox admissions
	2. Referral to detox	2. Admission to outreach
	3. Referral to MH	3. Crisis Response admission, if needed
	4. Referral to Outreach	
Detoxification	1. Monitoring safe withdrawal	1. Detox completion
	2. Creation of individualized service plans	2. CD TX admission
	3. Screening for acute needs	3. Admission to outreach
		4. Crisis Respite admission
ITA Case Management	1. Screening for ITA eligibility	1. Assessment & ITA admission
	2. Case filing, documentation	

The outcome column shows that for each service, the chosen outcomes were almost always other substance abuse or mental health services. Again, this highlights the importance of the continuum of care already in place in Whatcom County.

Chemical Dependency Treatment: Treatment providers were less concerned with defining outputs and more interested in proceeding directly to outcomes. For this reason, Table 4 shows only the outcomes that participants chose. There is another difference between treatment and the other services. The Washington State Division of Alcohol and Substance Abuse (DASA) have created an online tool that counties and providers can use to measure outcomes of treatment. This tool, called the DASA Treatment Analyzer

(DASA-TA), was created prior to the start of this project. However, it does measure some of the outcomes of interest to providers in Whatcom County. For each outcome selected by those providers, Table 4 shows whether that outcome can be measured using DASA-TA

Table 4: Outcomes of Treatment

Outcome	Can this be measured using DASA-TA Now?
Completion Rate: the percentage of clients successfully completing treatment in a given period of time.	Yes
Retention Rate at 90 Days: the percentage of clients still in outpatient treatment 90 days after admissions	Coming soon
Number of Group & Individual Sessions per Discharge: the average number of treatment sessions attended per discharge.	No
Admission to Discharge Changes: changes in various client measures over the course of treatment, from admission to discharge	Coming soon

Table 4 shows the four treatment outcomes chosen and defined by Whatcom County providers. Of those four, 3 can or will be measurable using the DASA-TA. Also, DASA is actively seeking user input on this tool, and is willing to incorporate features suggested by users. Thus, it is quite possible that all four outcomes of treatment will be able to be measured using the DASA-TA in the near future.

One of the outcomes, admission to discharge changes, needed further refinement. These changes must be measured using data collected in DASA’s TARGET data system, used by all contracted providers in the State. Over 100 variables are measured at admission and again at discharge, and each of these could be used as a measure of change over that period of time. However, some variables are more meaningful than others, and providers chose a limited set of variables that they felt best reflected the most meaningful changes.

Table 5 shows what measures providers chose, from among the six domains. Most of the measures come from a commonly used assessment instrument called the Addiction Severity Index, developed by A. Thomas McLellan and colleagues at the University of Pennsylvania (McLellan et al. 1980). Most measures chosen by providers involved comparing the 30 days before admission to treatment with the 30 days prior to discharge. For example, in the employment domain, the measure chosen was the number of days of paid work. The time periods being compared are the 30 days prior to admission and the 30 days prior to discharge. The desirable outcome is to have more days working prior to discharge compared to prior to treatment.

Table 5: Admission to Discharge Changes: Specific Measures Selected

Domain	Measures (from TARGET)
Family & Social	In the last 30 days, have you had significant periods in which you have experienced serious problems getting along with those you interact with most closely?
Employment	In the last 30 days, how many days were you paid for working? (Primary population of interest: adults, ADATSA, TANF.)
Physical Health	In the last 30 days, how many days have you experienced medical problems? How troubled or bothered have you been by these medical problems?
	Number of previous emergency room visits
	Number of previous outpatient/clinic visits
	Number of previous hospital inpatient admissions
	Number of previous hospital inpatient days
Mental/Psychological	In the last 30 days, how many days have you experienced psychological or emotional problems? How troubled or bothered have you been by psychological or emotional problems?
Arrests & Legal	How many times have you ever been charged with the following types of crimes?
Substance Abuse	Frequency of use in the last 30 days
	How many days have you experienced alcohol and/or drug problems? In the last 30 days, how troubled or bothered have you been by these alcohol or drug problems?
	Injected drugs in the last 30 days?

Admission to discharge changes are particularly relevant because they measure things most directly under the control of contracted providers, since they are measuring change over the course of treatment. Table 5 shows that within each domain, providers chose at least one measure to examine change over time. For the physical health and substance abuse domains, providers felt that multiple measures would best capture change.

Recommendations and Implementation Suggestions

In Whatcom County, the overall goal is to create an ongoing way to monitor the outcomes of substance abuse services. By defining outcomes for each service, phase one of that work is now complete. What follows are recommendations and suggestions for completing this process and creating a monitoring mechanism. Future work has been grouped into three phases, and it begins at phase 2, since this current effort reflects the completion of phase 1.

Tables 5, 6 and 7 summarize the future phases of work and can be found beginning on page 11. The text below adds detail to each recommendation and each implementation suggestion.

PHASE 2

Create Outcome Benchmarks

Whenever possible, analyze historical data on outcomes: to create reasonable expectations for the future, we need to know how well the system has worked in the past. For some outcomes, this is relatively easy. Historical data on treatment outcomes is readily available and statistics can be generated using the DASA-TA. These statistics can then guide decisions on creating benchmarks. Where historical data is not readily available, decisions could be based on the judgments of providers and county staff.

Make the creation of benchmarks a consensus-based process and select achievable goals: During the outcome definition process, providers showed a willingness to engage and cooperate to complete the task. So, there is every reason to believe they can reach consensus on outcome benchmarks as well.

Create a Single Outreach Data Collection System

Review the data collection procedures of each provider: a cursory review of those procedures was done for this project, but that review was not complete. Such a review will provide information on all phases of data collection and storage, and is a necessary first step in creating something that will be more useful to both providers and the County.

Determine a common list of desired data elements that each provider should collect: in the discussions with the outreach providers, they seemed to have a clear idea of what kind of information needs to be collected. The result of this step will be a list of data elements that all providers will be asked to collect.

Consider newer data collection technologies appropriate for outreach environments: hand-held devices, such as Palm organizers, now have the capability of doing many tasks that in the past could only be done with desktop computers. Currently,

in most situations outreach providers are using paper-based systems of data collection. Electronic methods using hand held devices could improve the accuracy and efficiency of these tasks.

Outreach data is considered protected health information under HIPPA get a legal opinion on county plans to use or store the data: the collection and storage of outreach data, and the linking of that data to other service records, raises confidentiality issues. In most cases, protected health information can be disclosed and analyzed for audit or evaluation purposes, but that shouldn't be done without some sort of external review. Ideally, that review should be done by someone familiar with both Washington State public records statutes and Federal laws on the confidentiality of substance abuse treatment records (Code of Federal Regulations, Part 42) and the HIPPA Privacy Rule.

PHASE 3

Electronically link service records with outcome data (for outcome monitoring purposes)

Conduct a formal inventory of available data: That inventory should address the following issues:

- *Who* enters the data?
- *What* are the data elements?
- *Where* are data stored?
- *What* data submission requirements do providers have from state and county agencies?
- If data are stored in a relational design, get an Entity-Relationship diagram.

Identify which records need to be linked: Providers create a record for each type of service they provide. Eventually, each type of service record should be linked to an outcome. However, County staff should consider the importance of each type of service, and its related outcome. For a variety of reasons, it might be important to link certain services to outcomes sooner than others. Those reasons could include the demands for outcome information by certain constituencies or access to outcome data.

Determine the level of in-house programming expertise and availability: the County might want their own staff to electronically link data. If so, it will be necessary to assess the experience staff members have with this type of programming, and their availability for this work. Reasons to use available staff include: 1) the desire or need to have in-house capacity to do this sort of work, 2) the flexibility of in-house staff and 3) supervision that would be available over such staff and the degree of responsiveness.

If in-house staff are not available, discuss the project with a contractor with relevant experience: A suitable contractor should have experience linking records using both deterministic and probabilistic methods and in outcome measurement and analysis.

Prior to any linking of records, discuss the project with an Institutional Review Board or get a legal opinion. Record linking raises privacy and confidentiality issues, and those issues are more or less serious depending on the records being linked.

Analyze Linked Data and Report on Outcomes

Analyzing linked data should be kept as simple as possible. Outcomes have been defined so that each is measurable and can be quantified. The biggest challenge here will be organizing outcome information into a format that is meaningful for both providers and county staff.

PHASE 4

Consider Longer-Term Outcomes More Fully

The scope of this current project has been on immediate outcomes. For each substance abuse service, our primary goal has been to identify what desired event should happen next. These proximate or immediate outcomes are things that providing agencies are most responsible for. However, the continuum of care as a whole has longer-term effects, and at some point, attention should be paid to those effects as well. For most part, long-term outcomes will be the effects that substance abuse services have on public services, such as criminal justice or publicly funded medical care.

Review outcomes of interest, and determine which outcomes are most likely to demonstrate the value of your programs: The primary outcome of interest to most constituents will be those that reflect costs born by the County. All facets of the criminal justice system apply, and are very costly events. Because of those costs, criminal justice outcomes might be the most relevant from a monitoring perspective.

Consider an integrated information system for the crisis triage center

The proposed crisis triage facility will be small, so providers might be able to continue their current data collection routines without any changes. However, when operating in the same facility, more coordination will be necessary, and it might be beneficial to consider having a single information system that all providers will have access to. If so, the following suggestions might be helpful:

Inventory current data collection and storage procedures: This would provide all involved with information on what data is currently being collected and what, if any, limitations there might be with that data.

Determine whether current data collection and dissemination is adequate for a co-located co-operated facility: This step would be best done after the co-located facility has been in operation for some time. After six months to a year, participants will have a good idea of whether the information that they collect and disseminate is adequate.

Bring county staff and providers together to discuss information needs: This step should happen if it is determined that more information is needed to run the facility adequately.

Discuss an integrated information system with an IT professional: Discuss database management software, data storage possibilities and database design. A good place to start this discussion would be with the Information Services Division in the County's Administrative Services Department.

OTHER RECOMMENDATIONS

The following recommendations are not as critical as those outlined above, but might have value as the outcome monitoring effort proceeds.

Responsibility for Outcome Measurement: A recent article in the *Journal of Substance Abuse Treatment* stated that treatment agencies are 'choking on data collection requirements.' (McLellan 2003). To give contracted providers the additional responsibility of gathering and analyzing data on outcomes would be overly burdensome, particularly given the requirements chemical dependency providers have.

Regularly monitor the outcomes of all services: Forums should be created where county staff and providers regularly discuss outcomes. This should be done twice a year, beginning when phase 3 is complete.

Future Work: Phase 2

Recommendation	Implementation Suggestions	Human Resources Needed	Approximate Cost
Create Outcome Benchmarks (i.e. performance expectations)	Wherever possible, analyze historical data on outcomes: how well have providers done in the past?	County staff, might need consultant assistance	\$3000
	Select achievable goals and get buy-in from service contractors	Consultant & County Staff	
Create a Single Outreach Data Collection System	Review the data collection procedures of each outreach provider.	County staff, might need consultant assistance	\$7000
	Determine a common list of desired data elements that each provider should collect.		
	Consider newer data collection technologies appropriate for outreach environments (i.e. handheld data entry technologies)	Consultant w/database experience & County staff	
	Outreach data is considered protected health information under HIPPA: get a legal opinion on County plans to use or store the data.	Legal expertise	

Future Work: Phase 3

Recommendation	Implementation Suggestions	Human Resources Needed	Approximate Cost
Electronically link service records with outcome data: (for outcome monitoring purposes)	Conduct a formal inventory of available data. That inventory should address the following issues:	Staff w/database experience or consultant	\$10-15,000
	1. <i>Who</i> enters the data?		
	2. <i>What</i> are the data elements?		
	3. <i>Where</i> is the data stored?		
	4. <i>What</i> data submission requirements do providers have from state and county agencies?	County Staff & Consultant	
	Identify which records need to be linked. Rank the importance of each link and begin making the most important links first.	County Staff & Consultant	
	Determine the level of in-house programming expertise and availability: do they have experience in record linking projects?	County Staff & Consultant	
	After completing the steps above, discuss this project with a contractor with relevant experience.	County Staff & Consultant	
	Discuss record linking with an Institutional Review Board or get a legal opinion.	County staff or consultant	
Analyze Linked Records & Report on Outcomes	Work with providers to create a meaningful reporting format.	County staff and/or consultant	No estimate at this time.

Future Work: Phase 4

Recommendation	Implementation Suggestions	Human Resources Needed	Approximate Cost
Consider Longer-Term Outcomes more fully	Review outcomes of interest: which outcomes are most likely to demonstrate the value of your programs?	Consultant & County Staff	\$3-5000
	Meet with both policy and technical staff from agencies that house important data. Determine whether identified data can be disclosed (a legal issue) and whether the agency has the staff and time to share the data (a technical/organizational issue)	County staff & consultant	
	Determine what sort of agreements need to be put in place to share data.	County staff	
	Consider County needs for long-term outcome evaluation: periodic evaluations or ongoing monitoring?	County staff	
Consider an Integrated Information System for the Crisis Triage Center: (for information management and internal coordination)	Inventory current data collection and storage procedures		Costs can't be estimated with enough accuracy at this time.
	Determine whether current data collection and dissemination is adequate for a co-located, co-operated facility.	County staff and providers	
	If current information management isn't adequate, bring together County staff and the two providers to discuss what data needs to be collected and shared.	County staff and providers	
	Discuss needs with IT professionals. Include in those conversations discussions of, database management software, data storage possibilities and database design	County staff and consultant	

CONCLUSIONS

This project demonstrated the commitment on the part of the WCHD and contracted agencies to providing an innovative and integrated continuum of care for substance abuse. Whatcom County has recognized the importance of monitoring service outcomes, and by defining those outcomes, has made a significant step toward monitoring and ultimately improving service delivery. The County has creative administrators and committed service providers. Statewide, DASA is beginning a similar effort to define and measure outcomes. The results of this project could serve as a starting point for statewide efforts.

REFERENCES

- McLellan AT., Luborsky L, O'Brien CP, Woody G. 1980. An improved evaluation instrument for substance abuse patients: The Addiction severity Index. *Journal of Nervous and Mental Diseases* 168: 26-33.
- McLellan AT., Carise D, Kleber HD. 2003. Can the national addiction treatment infrastructure support the public's demand for quality care? *Journal of Substance Abuse Treatment* 25: 117-121.
- Mitchell, J. 2005. Substance Abuse Program Needs Assessment Plan, 2001-2005. Whatcom County Health Department: Bellingham, WA.