

## Kitsap County Health District Nightingale Notes Report:

### Demographics & KBS Ratings of Parent Child Health Program Clients

January 1<sup>st</sup>, 2010 to June 30<sup>th</sup>, 2010

All Parent Child Health clients seen by a public health nurse for an assessment which resulted in the new identification of an actual problem between January 1<sup>st</sup>, 2010, and June 30<sup>th</sup>, 2010, were pulled into an Excel database from the Nightingale Notes 'Reports' function and then analyzed by PASW Statistics 18 for demographic and Knowledge, Behavior, Status (KBS) information. A total of 256 clients who had a new problem identified were seen during these six months (100% women). As of June 30<sup>th</sup>, 97 clients (38%) had open cases and 158 (62%) had closed cases (1 case was pending).

#### I. Who are our clients?

- COST CENTER:** The following table shows the specific program that was billed for the client's public health nurse services:

	# of times entered as cost center	% of total cost centers entered
<b>PCH-MSS</b>	247	96.5%
<b>PCH-Early Head Start</b>	4	1.6%
<b>PCH-Healthy Start Kitsap</b>	3	1.2%
<b>PCH-Parenting Adult</b>	1	0.4%
<b>Unknown</b>	1	0.4%
<b>Total</b>	256	100.0%

- AGE:** The age range of the women was 13 to 41 years old, average age of 24 years old.
- RACE/ETHNICITY:** Two-thirds of the client population is White, Non-Hispanic. A total of 17% of the client population is Hispanic, any race; however, of this Hispanic population, 91% is white.

	# of clients	% of all clients	% missing data
<b>Race/Ethnicity</b>			
<b>Non-Hispanic</b>	202	82.8%	
<b>White</b>	162	66.4%	
<b>Black</b>	9	3.7%	
<b>American Indian</b>	8	3.3%	
<b>Asian</b>	5	2.0%	
<b>NHOPI*</b>	13	5.3%	
<b>2 or more races, or other</b>	5	2.0%	
<b>Hispanic</b>	42	17.2%	
<b>Total</b>	244	100.0%	4.7%
*Native Hawaiian or other Pacific Islander			

- **MARITAL STATUS:** Almost 70% of the client population was unmarried. Of the clients who were unmarried, up to 86% may not have been living with a partner.

	# of clients	% of all clients	% missing data
<b>Marital Status</b>			
Married	74	30.2%	
Unmarried	170	69.4%	
Single	131	53.5%	
Domestic partner	24	9.8%	
Separated	8	3.3%	
Divorced	7	2.9%	
Unknown	1	0.4%	
<b>Total</b>	<b>245</b>	<b>100.0%</b>	<b>4.3%</b>

- **EMPLOYMENT STATUS:** A total of 63% of the client population was unemployed.

	# of clients	% of all clients	% missing data
<b>Employment Status</b>			
Employed	88	37.1%	
Medical/family leave	6	2.5%	
Unemployed	149	62.9%	
ID GAU-X or ID SSDI	4	1.7%	
Disabled	6	2.5%	
<b>Total</b>	<b>237</b>	<b>100.0%</b>	<b>7.4%</b>

- **EDUCATION LEVEL:** A total of 30% of the client population had not completed high school or high school equivalency.

	# of clients	% of all clients	% missing data
<b>Education Level</b>			
No school	5	2.5%	
Grade 8 or below	9	4.4%	
Did not complete high school	46	22.7%	
High school or GED	79	38.9%	
Vocational/technical school	11	5.4%	
Any college	53	26.1%	
<b>Total</b>	<b>203</b>	<b>100.0%</b>	<b>20.7%</b>

- **HOUSING TYPE:** A total of 15% of the client population owned their own house, 54% rented a house, and 23% rented an apartment.

	# of clients	% of all clients	% missing data
<b>Housing Type</b>			
Apartment	54	23.3%	
Rent house	126	54.3%	
Own house	35	15.1%	
Mobile home	8	3.4%	
Subsidized housing	3	1.3%	
Shelter	1	0.4%	
Homeless	1	0.4%	
Other*	4	1.7%	
<b>Total</b>	<b>232</b>	<b>100.0%</b>	<b>9.4%</b>

\*includes congregate, temporary housing and unspecified housing

## II. What are the KBS outcomes of our clients?

- **PROBLEMS PER CLIENT:** There was an average of 2.6 identified problems per client. The number of identified problems per client ranged from 1 to 9.
- **TOP PROBLEMS:** The top three problems identified for the client population were income, mental health, and substance abuse. Income was identified as a problem for 66% of clients, mental health for 45% of clients, substance abuse for 30% of clients, pregnancy for 24% of clients, caretaking/parenting for 21% of clients, and postpartum for 20% of clients.

	# of times entered as problem	% of total problems entered	% of clients for which problem was entered
Income	169	25.7%	66.0%
Mental health	115	17.5%	44.9%
Substance abuse	77	11.7%	30.1%
Pregnancy	61	9.3%	23.8%
Caretaking/parenting	53	8.1%	20.7%
Postpartum	51	7.8%	19.9%
Health care supervision	31	4.7%	12.1%
Communication w/ community resources	20	3.0%	7.8%
Residence	19	2.9%	7.4%
Family planning	18	2.7%	7.0%
Abuse	17	2.6%	6.6%
Medication regimen	11	1.7%	4.3%
Interpersonal relationship	10	1.5%	3.9%
Growth and development	3	0.5%	1.2%
Grief	1	0.2%	0.4%
Neighborhood/workplace safety	1	0.2%	0.4%
<b>Total problems entered</b>	<b>657</b>	<b>100.0%</b>	<b>n/a</b>

- **DATA NOTES FOR THE KBS SCORES ANALYSIS:**

- KBS scores are entered at the time of the initial assessment for any problems that are identified as actual problems (have signs/symptoms). At any follow-up visits, the KBS scores are only entered again when there has been a change in any of the three scores. The data reported for the KBS scores are from the initial assessment and from the last time the KBS scores were entered *if* more than one assessment was completed.
- However, if there was only one time for which scores were entered, the report pulls the one set of scores as both the “initial” and “latest” scores. It is not possible to distinguish whether a client received more than one KBS score from the Reports function without going into each individual client record separately. Problems for which the initial assessment date and date of closure of record were the same were eliminated from the analysis as these clients definitely had only one KBS rating done for this specific problem (34 problems were removed for this reason).
- All other clients who received only one KBS rating are included in the analysis of change from the “initial” to “latest” score. This will decrease the actual overall change that occurred in the KBS scores, but to what extent is not known as the number of clients for which only one rating was completed is not known.
- The initial assessment for all of these problems occurred for the first time between January 1<sup>st</sup> and June 30<sup>th</sup>, 2010, but the latest KBS score might have been given either before or after June 30<sup>th</sup> (the system pulls all scores entered as of the current date, which was September 9<sup>th</sup>, 2010). Also, a client may have had a problem which was first identified prior to January 1<sup>st</sup>, 2010 who received a changed KBS score during the time period of January 1 to June 30; this problem will not be included in the analysis because the initial assessment occurred prior to January 1<sup>st</sup>.

- **CHANGE IN KBS SCORES FROM INITIAL TO LATEST RATING FOR ALL PROBLEMS COMBINED (n=623):**

- **KNOWLEDGE SCORES:** The average Knowledge score at the time of the initial assessment for all problems combined was 3.12 and the average score at the time of the latest assessment was 3.29.

Score	Initial Knowledge: # of clients given score	Latest Knowledge: # of clients given score
1	5	1
2	98	63
3	344	322
4	167	226
5	9	11
<b>Total</b>	623	623
<b>Average score:</b>	3.12	3.29

- **BEHAVIOR SCORES:** The average Behavior score at the time of the initial assessment for all problems combined was 3.49 and the average score at the time of the latest assessment was 3.60.

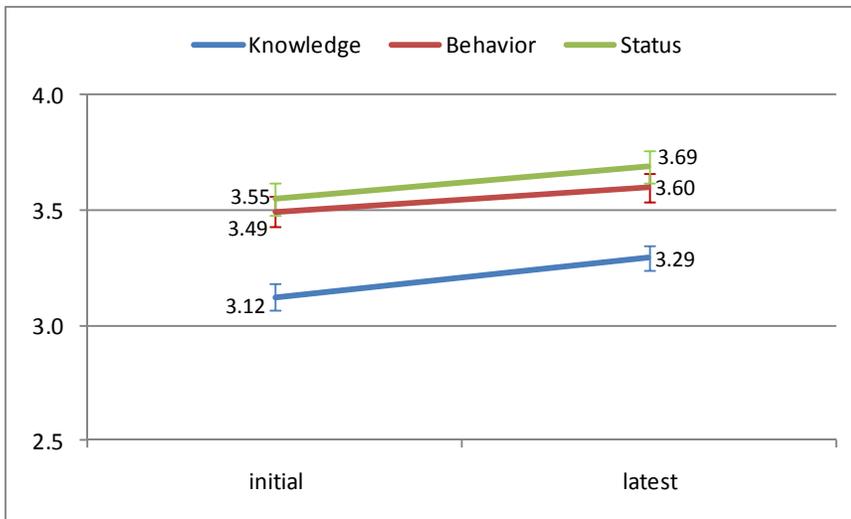
Score	Initial Behavior: # of clients given score	Latest Behavior: # of clients given score
1	8	6
2	61	49
3	209	178
4	305	344
5	40	46
<b>Total</b>	<b>623</b>	<b>623</b>
<b>Average score:</b>	<b>3.49</b>	<b>3.60</b>

- **STATUS SCORES:** The average Knowledge score at the time of the initial assessment for all problems combined was 3.55 and the average score at the time of the latest assessment was 3.69.

Score	Initial Status: # of clients given score	Latest Status: # of clients given score
1	11	9
2	54	49
3	240	194
4	216	246
5	102	125
<b>Total</b>	<b>623</b>	<b>623</b>
<b>Average score:</b>	<b>3.55</b>	<b>3.69</b>

- **STATISTICAL ANALYSIS:** The average scores for each of the three rating areas for all problems combined showed a statistically significant improvement from the initial rating to the latest rating using a paired t test for analysis.

KBS category	Average of initial scores	95% confidence interval of average of initial scores	Average of latest scores	95% confidence interval of average of latest scores	p-value
<b>Knowledge</b>	3.12	3.07 - 3.18	3.29	3.24 - 3.35	<0.001*
<b>Behavior</b>	3.49	3.43 - 3.56	3.60	3.54 - 3.66	<0.001*
<b>Status</b>	3.55	3.48 - 3.62	3.69	3.62 - 3.76	<0.001*
*denotes statistically significant change (p<.05)					



▪ **CHANGE IN KBS SCORES FROM INITIAL TO LATEST RATING FOR THE TOP 5 PROBLEMS:**

	n	Rating Area	Average Initial Rating	Average Latest Rating	p-value
<b>Income</b>	157	K	3.34	3.44	<.001*
		B	3.80	3.83	0.166
		S	3.62	3.68	0.018*
<b>Mental health</b>	107	K	2.86	3.11	0.008*
		B	3.21	3.40	<.001*
		S	3.22	3.41	0.039*
<b>Substance abuse</b>	76	K	3.17	3.34	0.001*
		B	3.16	3.29	0.086
		S	3.20	3.33	0.058
<b>Pregnancy</b>	61	K	3.21	3.23	0.709
		B	3.67	3.74	0.159
		S	3.57	3.61	0.597
<b>Caretaking/parenting</b>	50	K	2.90	3.20	0.002*
		B	3.64	3.76	0.182
		S	4.04	4.20	0.054

\*denotes statistically significant change (p<.05)