

# Draft of C1 Activity Level Report

OUHSC External MIECHV Evaluation Team  
David Bard, Will Beasley, & Thomas Wilson

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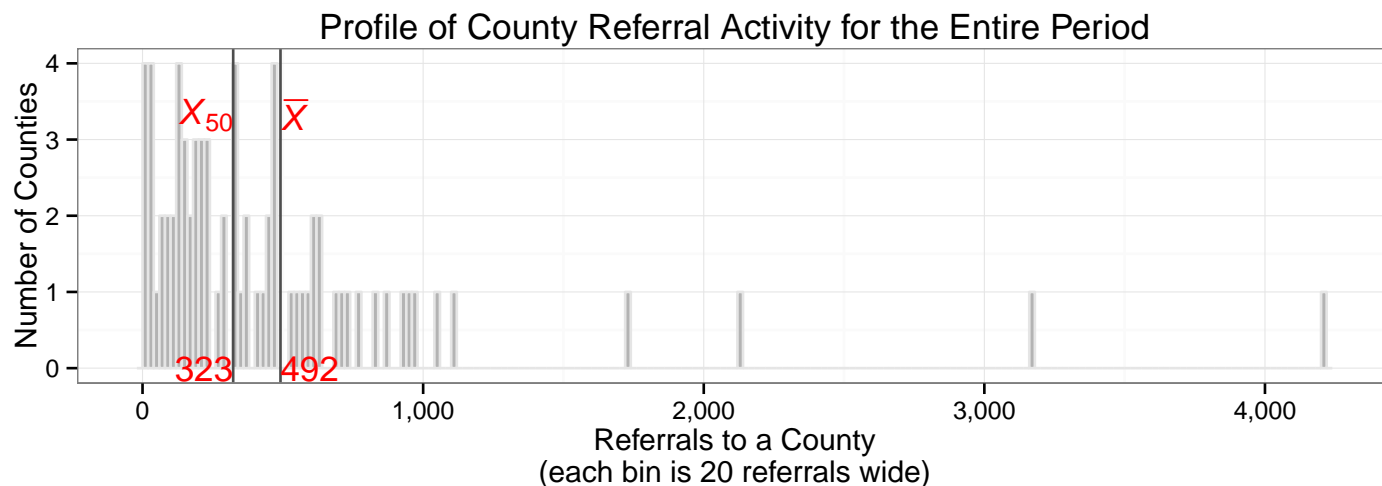
*Note:* This is a draft, and does not represent the official results. One next step is to address potential redundant records, which we believe represent fewer than 10% of the existing records. A second step is to account for the referrals that come from a county without an established health department or C1 program. Currently the analysis considers all referrals equivalently, which biases down the activity level so it appears that the performance is worse than it actually is.

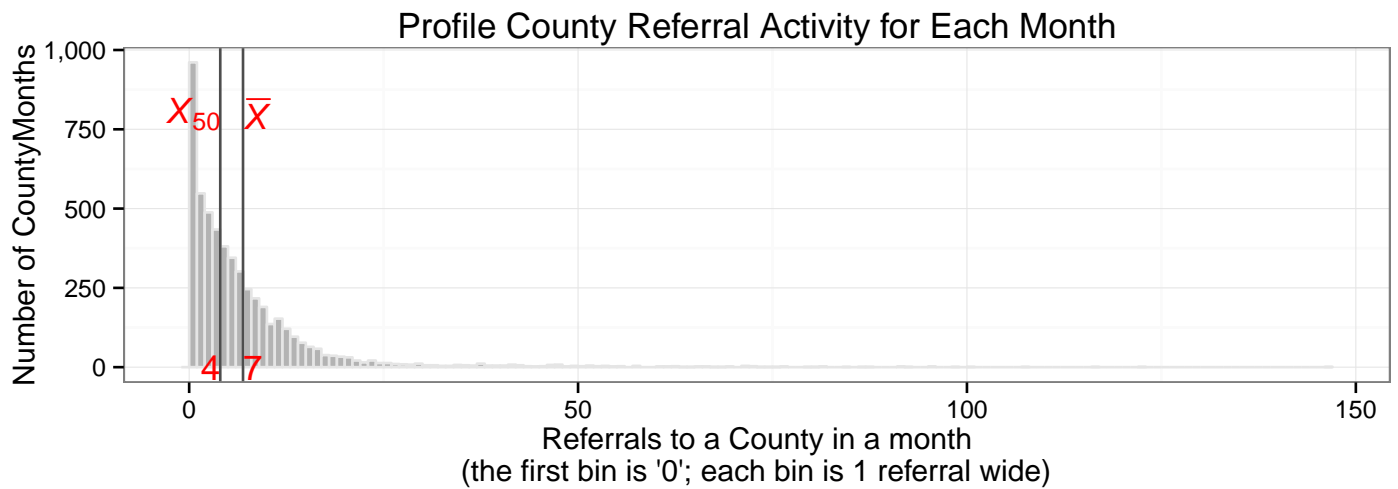
This report contains information from 74 counties, 86 clinics, 33,170 parents, 36,379 referrals, 5,936 enrollments, 641 recorded graduations, and 2,826 recorded nongraduations. It summarizes C1 referrals between January 02, 2007 and November 29, 2012. The 3 referrals received by the central OSDH office (*i.e.*, ID #99) have been excluded.

## 1 Referrals

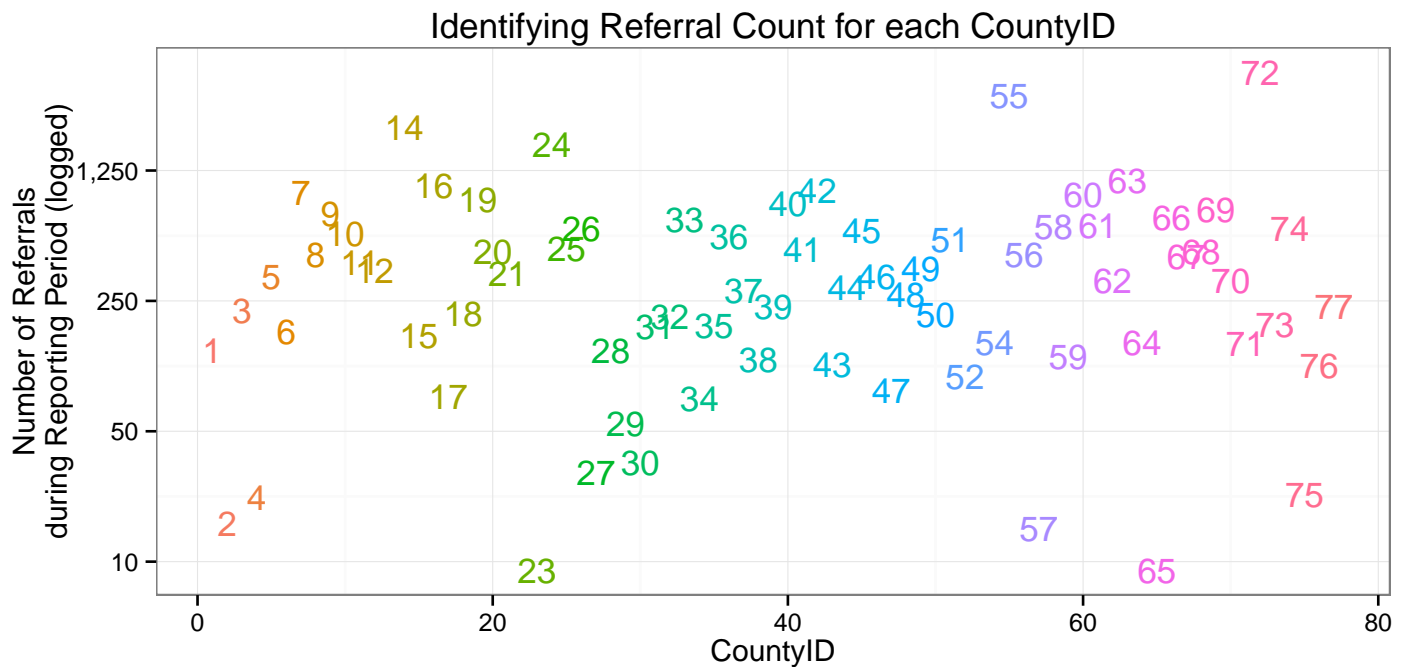
The first histogram looks at the number of referrals received by the different *counties* during the reporting period. The second histogram looks at the number of referrals received by the different *county months* during the reporting period. Notice the median and mean are annotated each with a darker vertical gray line; the median is on the left, the mean is on the right.

There are many months where a county received few referrals. Several sources of these zeros have been identified, and we are deciding how to most accurately represent them in various contexts. For instance, when analyzing the cost-effectiveness of C1, an understaffed county should be treated differently than an adequately staffed county. We soon will incorporate a county's operational dates and its specific funding and staffing levels.



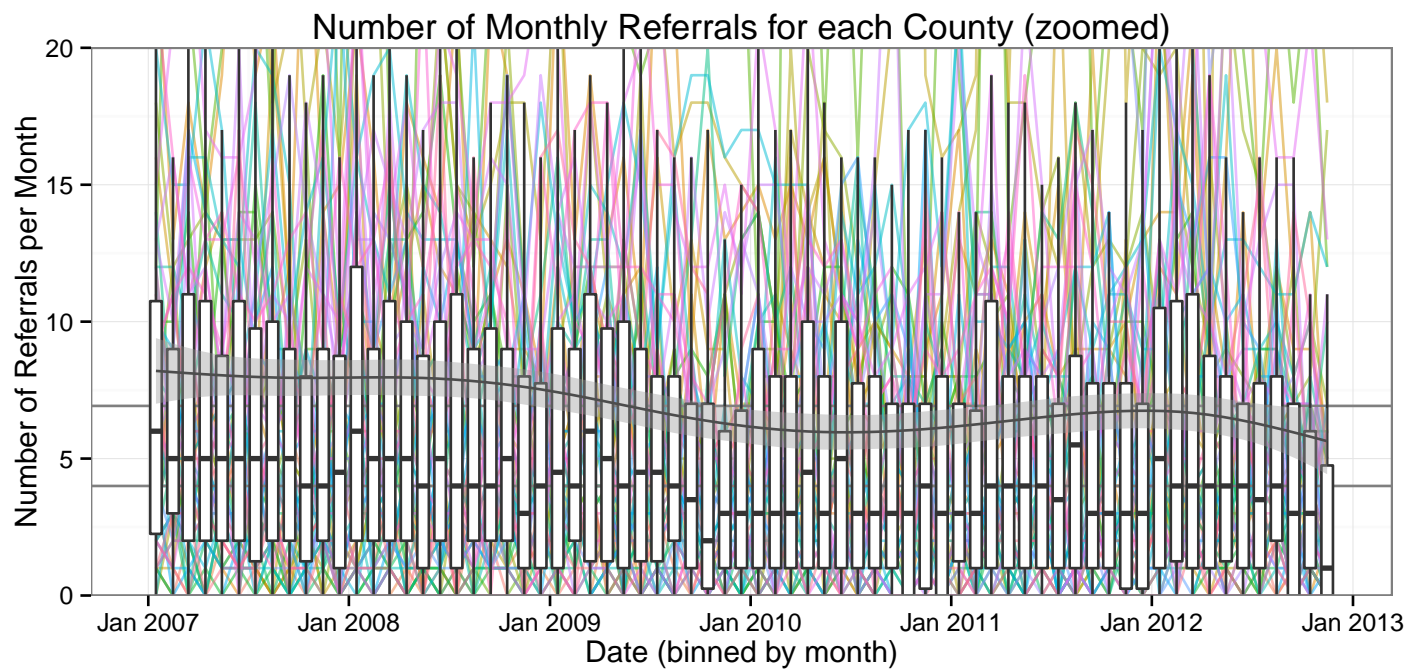
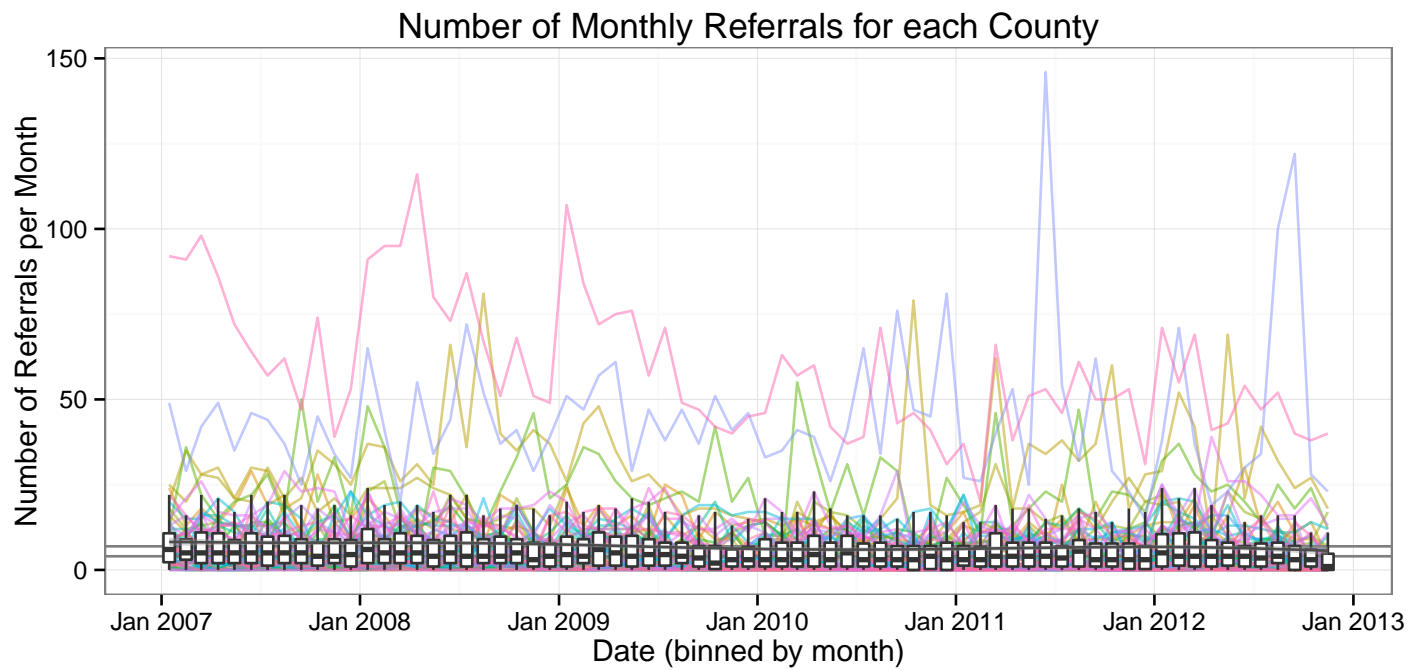


This scatterplot is atypical, because the horizontal is not a real quantitative dimension, it is the value of the County's ID. The information is redundantly displayed by the numbers in the scatterplot. Notice the vertical is logged (base 10), so the smaller counties will not be bunched together. This plot can serve as a legend for the subsequent line graphs. A county's color in the scatterplot corresponds to its color in the subsequent line graphs. The county names corresponding to the CountyIDs are decoded in the long table at the end of this document.

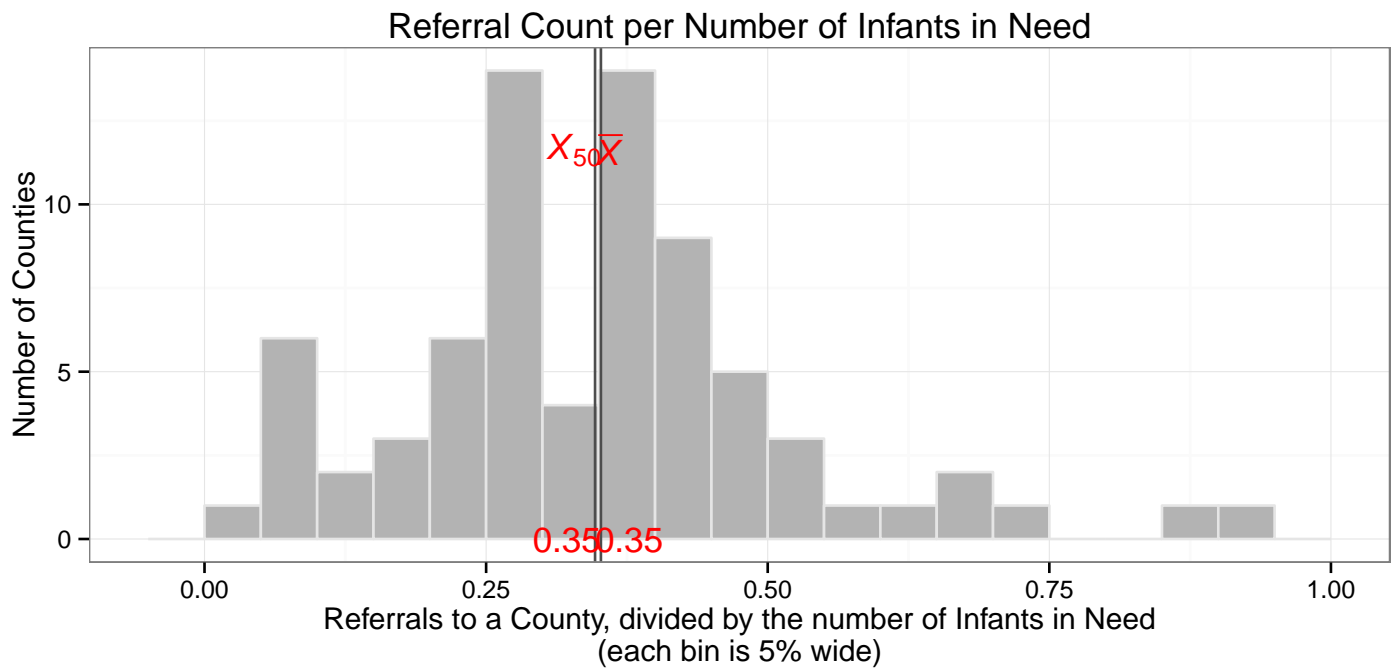


The next two graphs show the number of referrals received over time, by county. Each county has a unique line. Each boxplot denotes a month's 25%, 50% and 75% counts of referrals to a county. For instance, when the middle of a box plot is at  $y = 7$ , then 50% of the counties received 7 referrals or fewer.

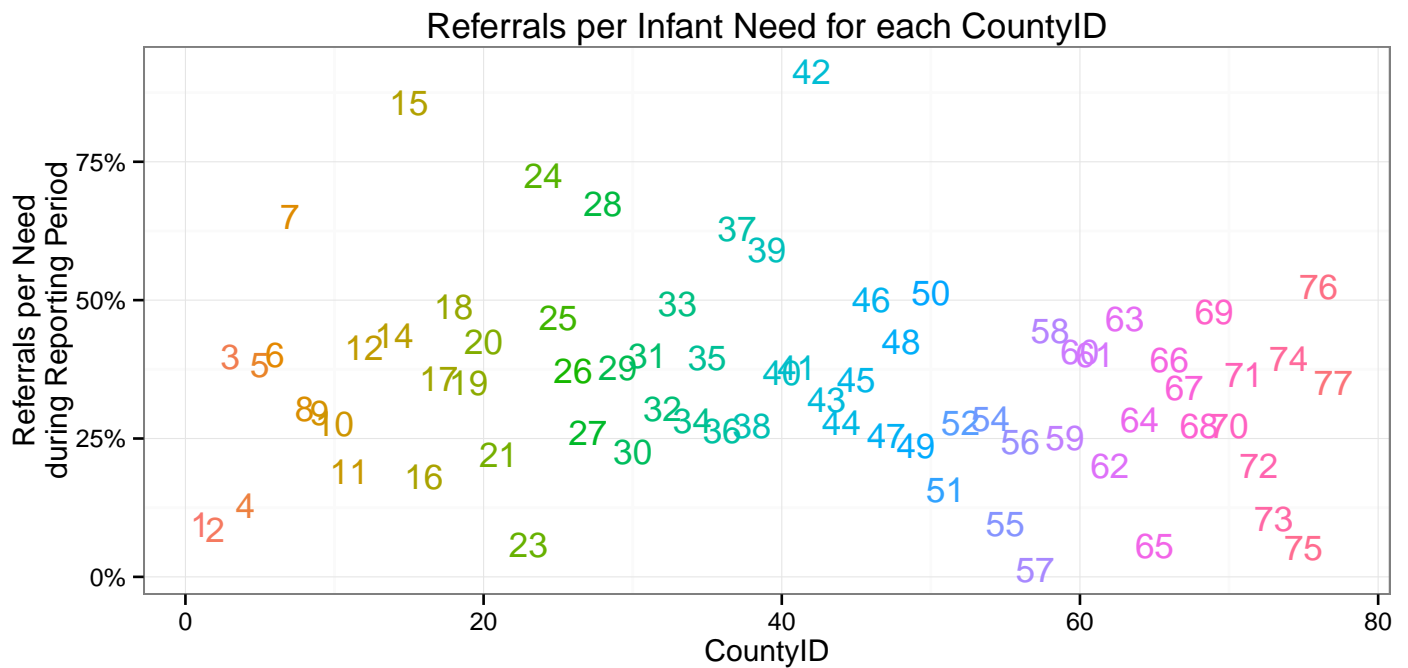
The gray lines appear again as the median (on bottom) and mean (on top). A curvy longitudinal line summarizes the state's trend during the reporting period. The two graphs are identical, except the second one zooms in on the vertical.



The following histogram displays referrals in relation to need. The number of referrals were divided by WIC estimates of “Infants in Need” for each county. In the current report draft, the 2010 estimates were multiplied by 5 to approximate the total need during the 5 year reporting period.



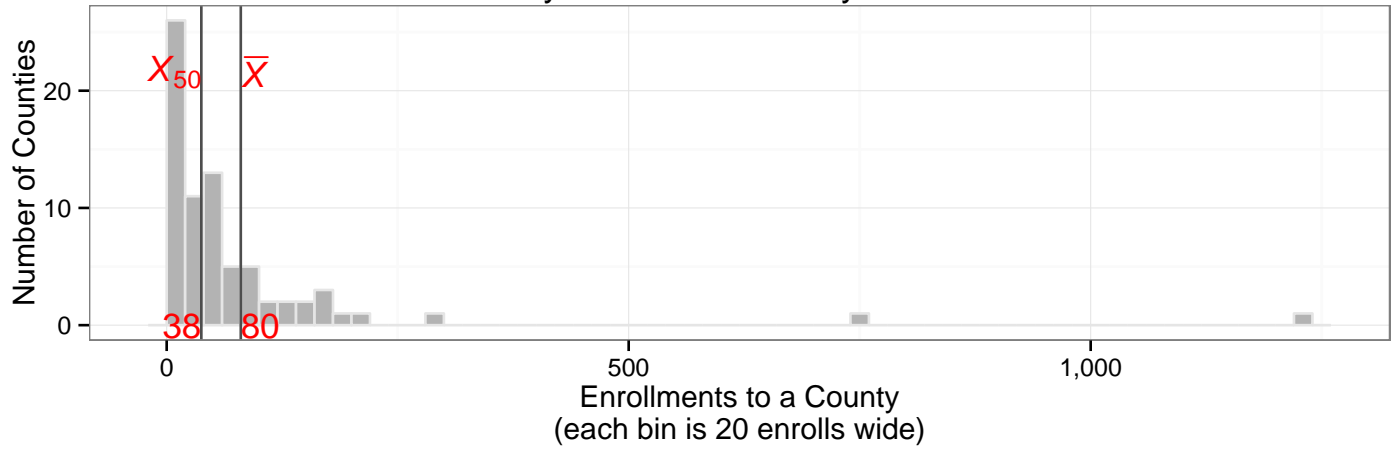
The following scatter plot resembles the previous scatter plot, where horizontal axis is the CountyID. But now the vertical axis is the proportion of referrals per infant need. For instance, County 42 has the highest number of referrals, given its population of infants in need.



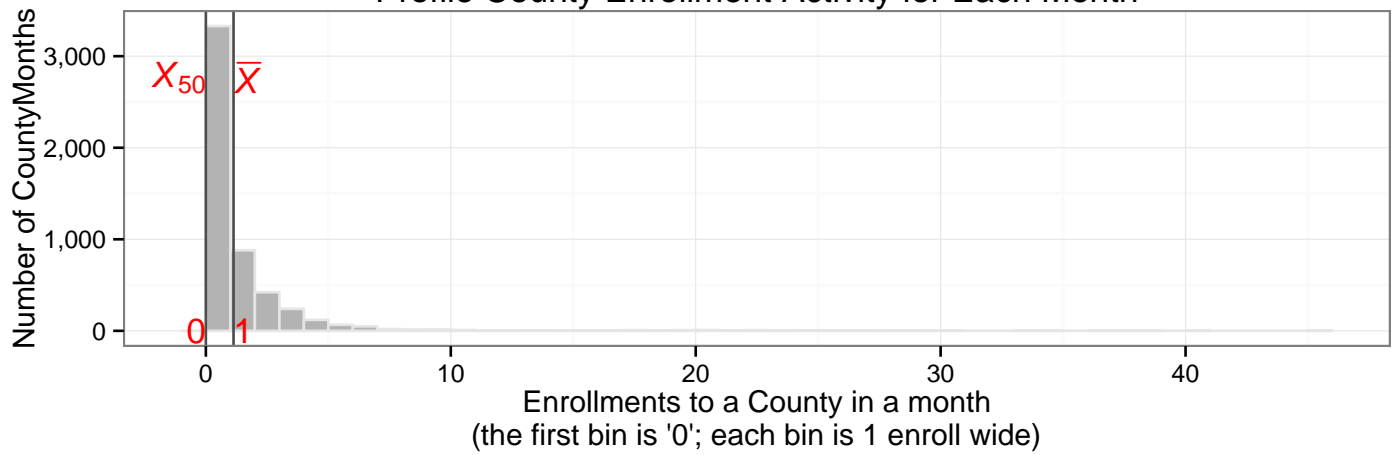
## 2 Enrollment

See the explanations for the similar graphs in the 'Referrals By County' section.

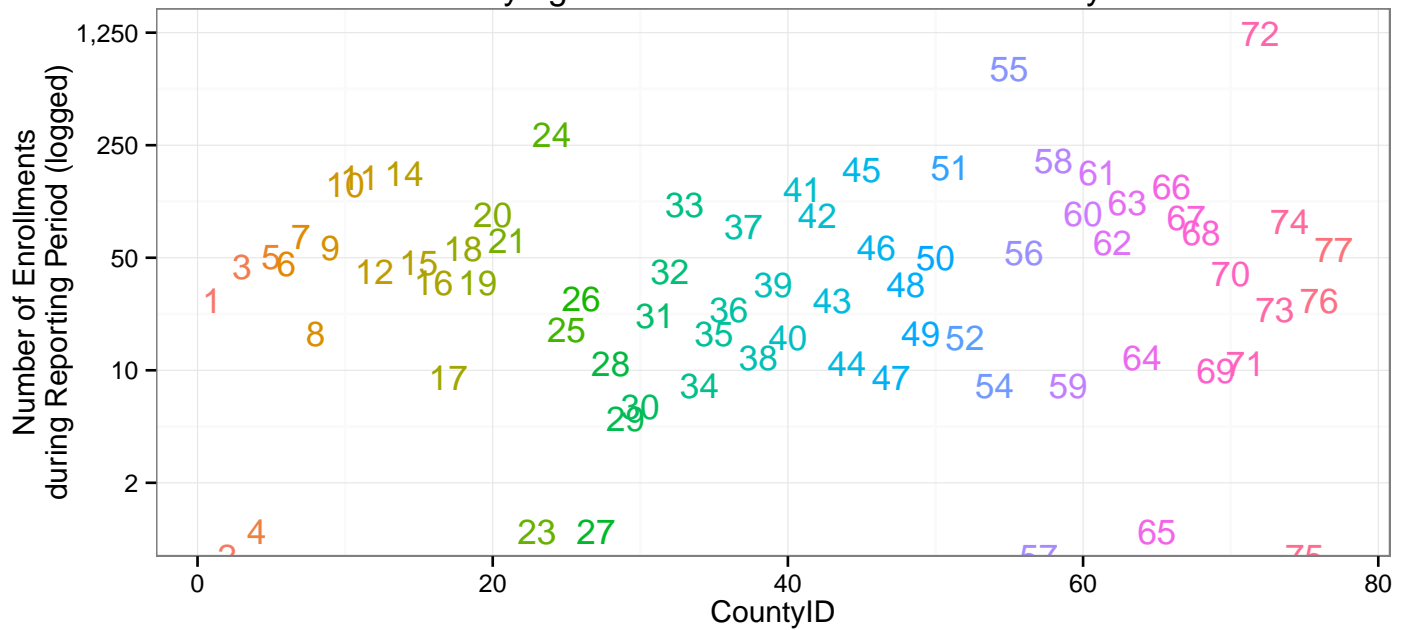
### Profile of County Enrollment Activity for the Entire Period



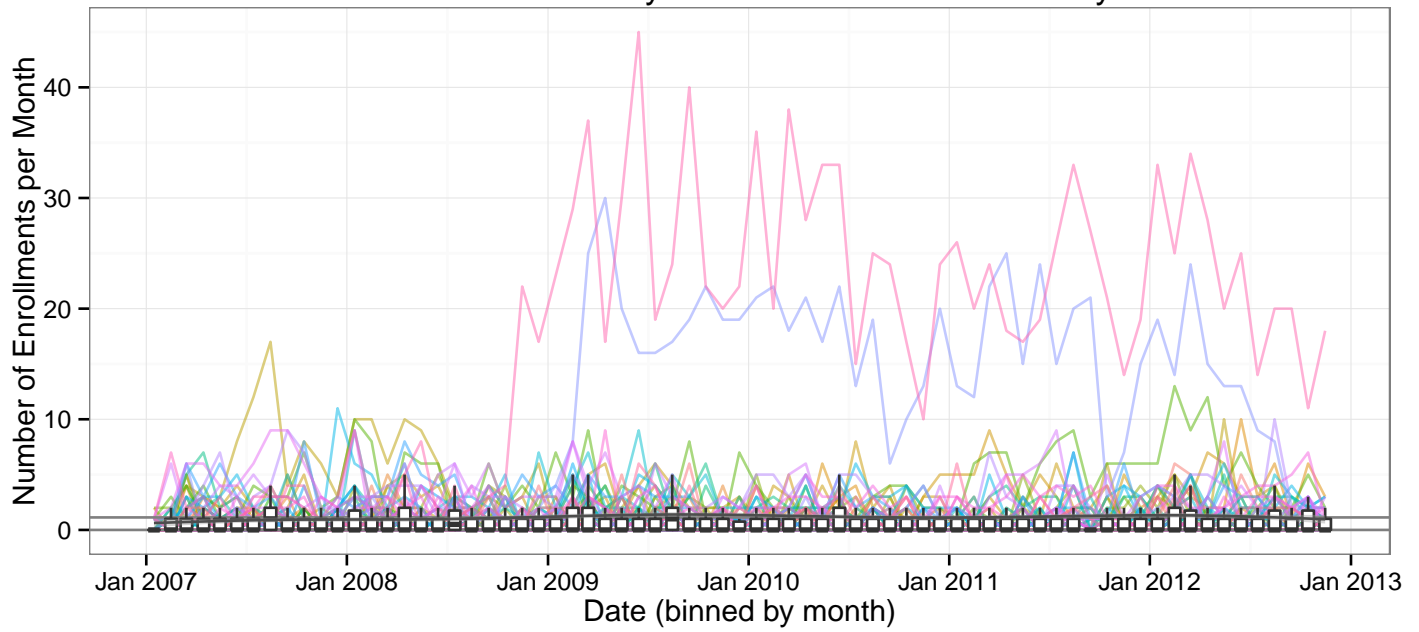
### Profile County Enrollment Activity for Each Month



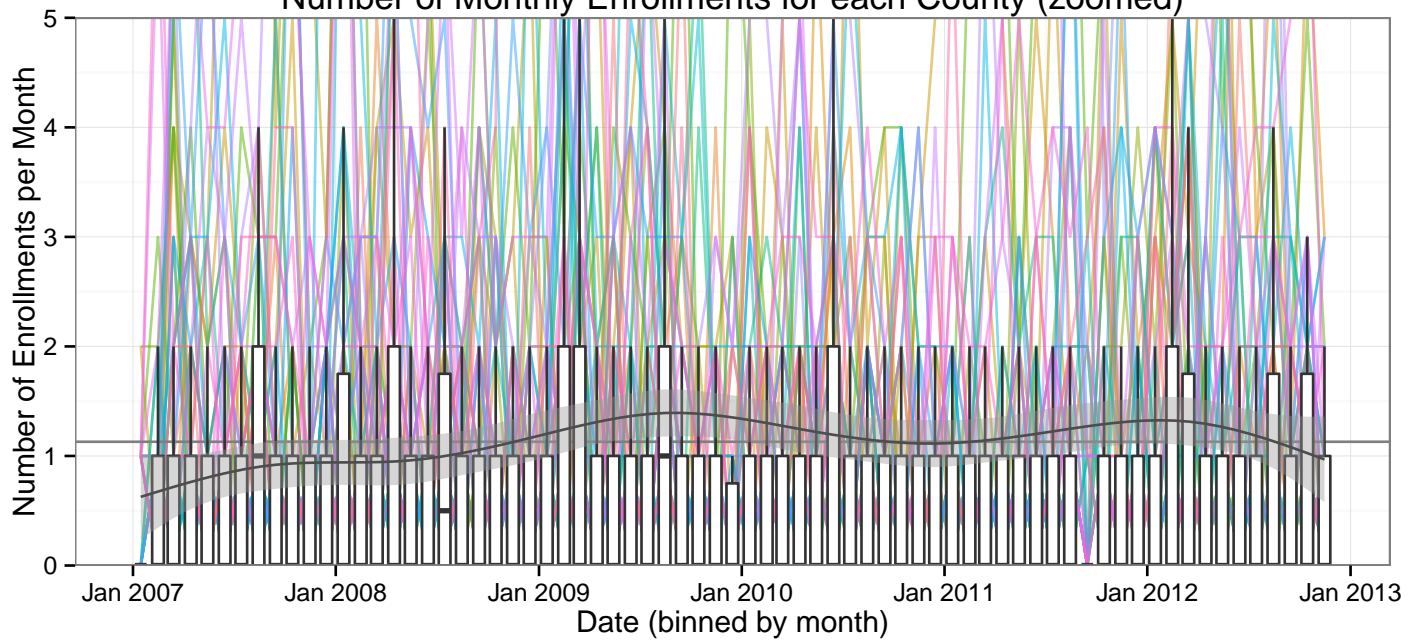
### Identifying Enrollment Count for each CountyID

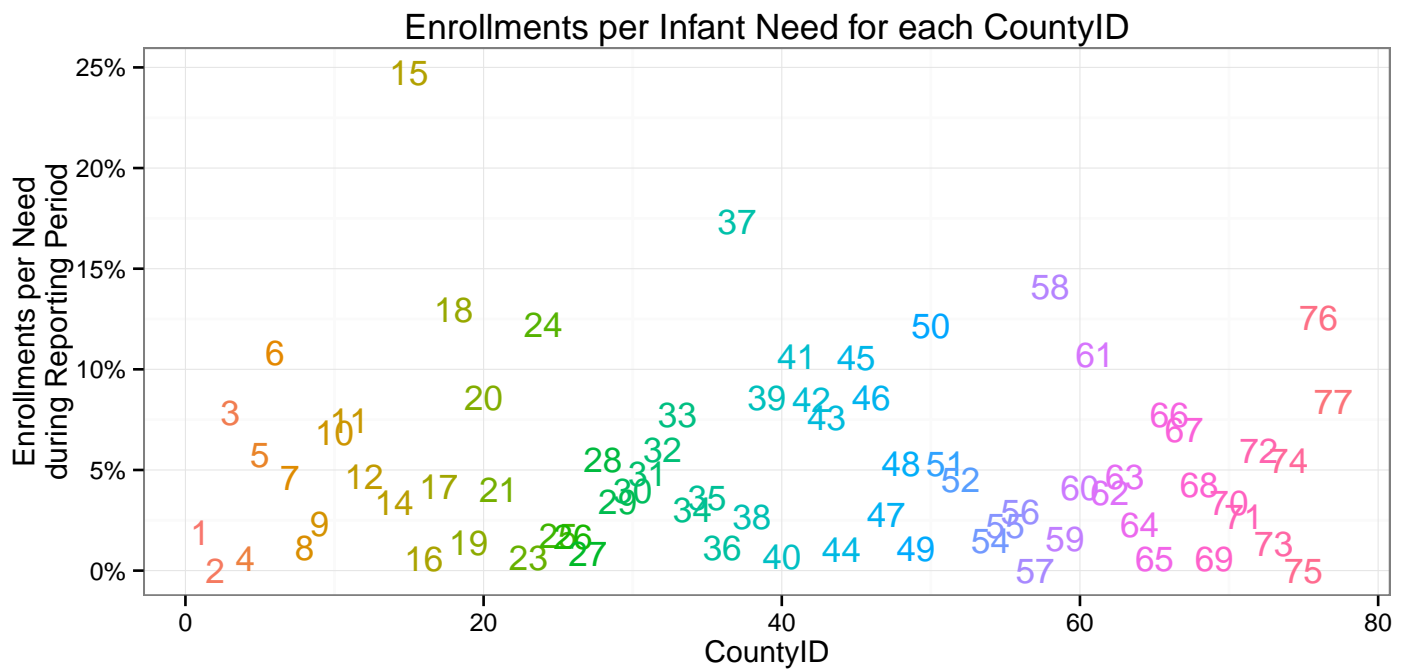
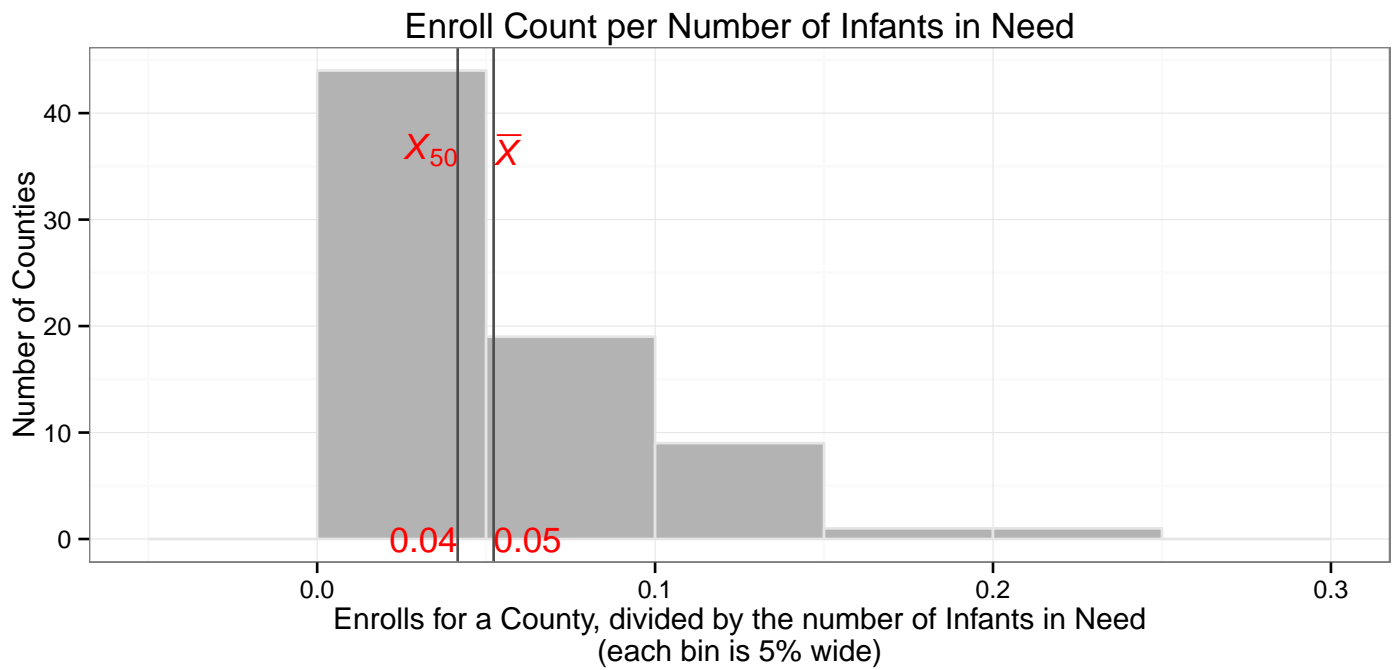


### Number of Monthly Enrollments for each County



### Number of Monthly Enrollments for each County (zoomed)

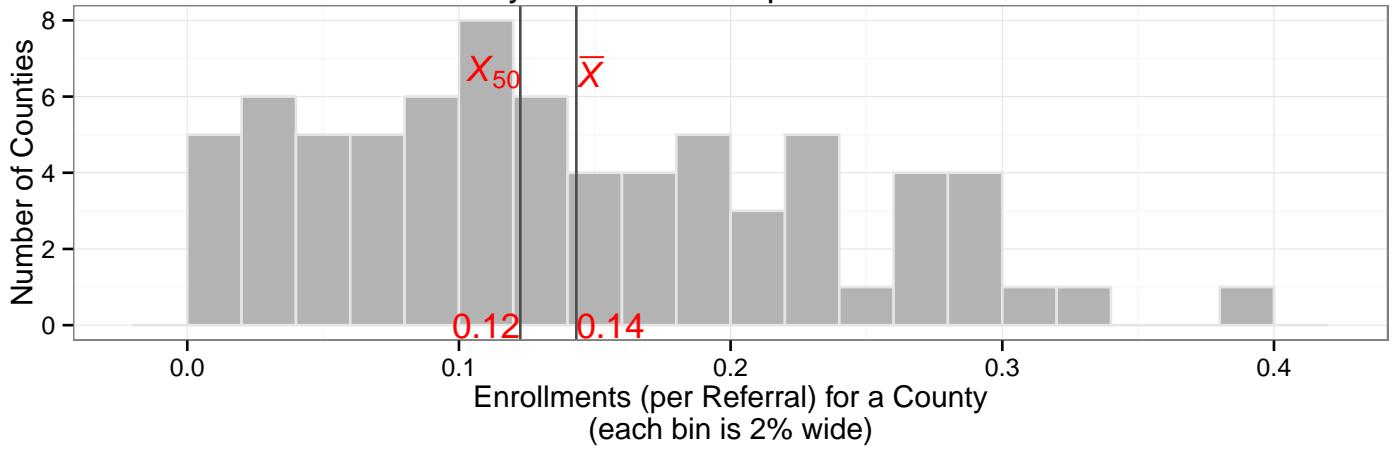




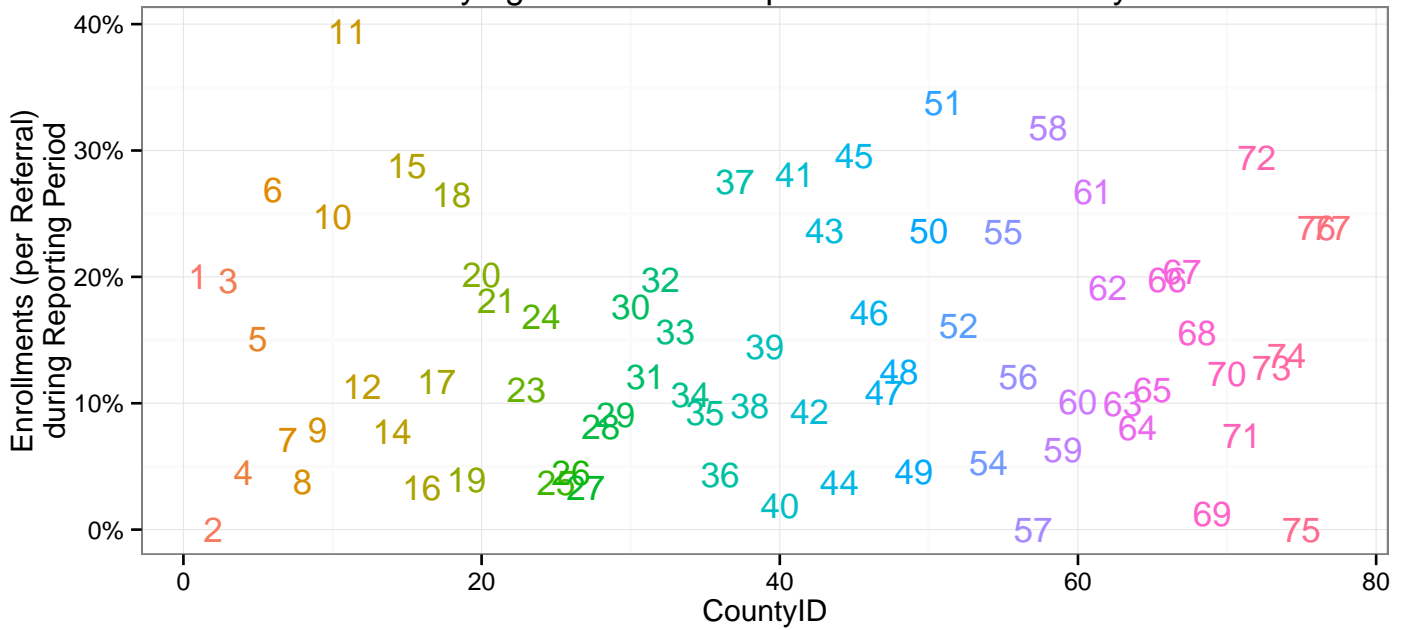
### 3 Enrollment Proportions By County

The graphs represent the proportion of referrals that are eventually enrolled. See the explanations for the similar graphs in the 'Referrals By County' section.

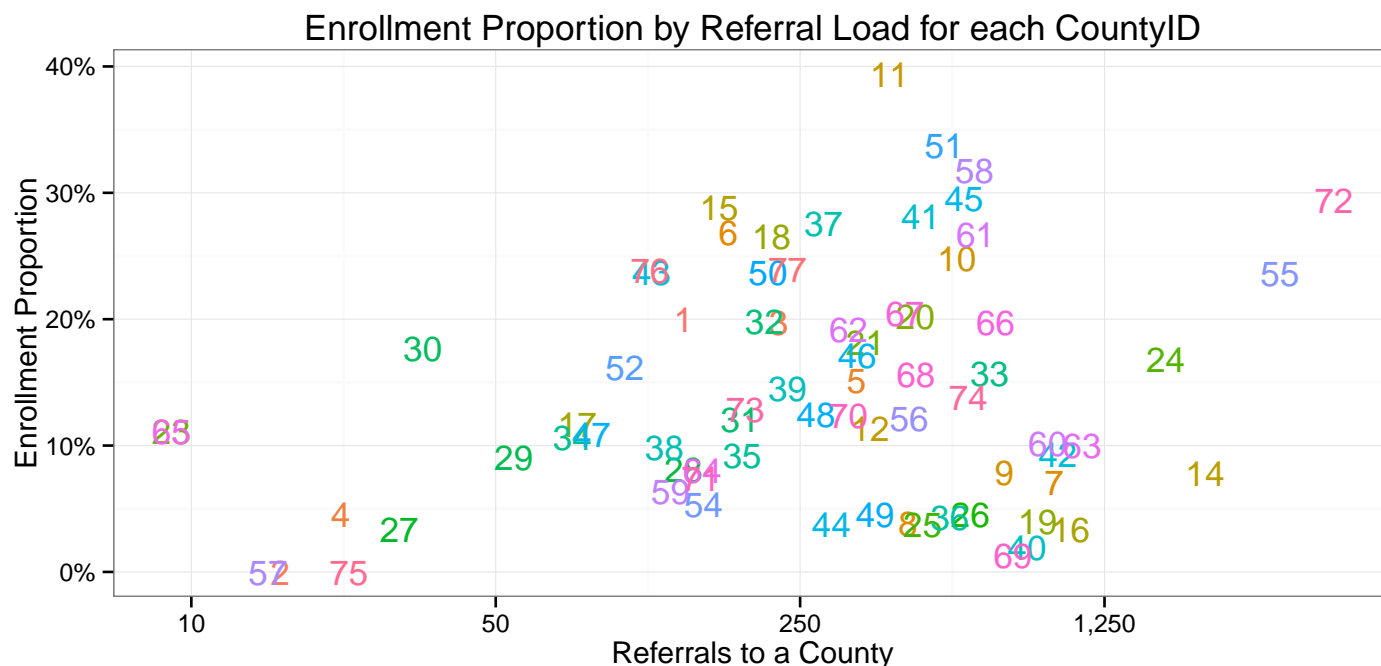
Profile of County Enrollment Proportion for the Entire Period



Identifying Enrollment Proportion for each CountyID







## 4 Visit Dates

(Repeat the same pattern, but replace Referral Date with Visit date)

## 5 Graduation Dates

(Repeat the same pattern, but replace Referral Date with Graduation date)

## 6 Dropout Dates

(Repeat the same pattern, but replace Referral Date with Dropout date)

## 7 Related Evaluation Aims

Our project currently defines 5 aims and 23 subaims. The current report partially addresses the following subaims:

Subaim	Description
1c)	Evaluate pre and post changes attributable to triage and connector agency establishments.
3a)	Continually evaluate the flow of clients served per county.
3b)	Identify reasons for low engagement in services.
3c)	Examine provider barriers to program implementation with families that do not engage.
3d)	Evaluate effectiveness of new engagement enhancement strategies.
3e)	Identify reasons for attrition from services.
3f)	Evaluate effectiveness of new retention strategies.

## 8 Some Future Steps

As with most preliminary analyses, the current one suggests many future issues that should be pursued. Here are some of the ones we have identified. If you have suggestions or requests for additional analyses, we would appreciate your input and perspective.

1. Incorporate additional details of staffing dates.
  - (a) Ideally, a nurse's "phase" has a start & stop date.
  - (b) For example, someone returning from FMLA will have at least 3 phases (and 3 pairs of start & stop dates).

- (c) The ultimate effect on the analyses might be minimal -but I want to be able to address any reasonable criticisms.
2. Consider Funding Levels and Staffing Levels.
  3. Estimate and Account for the Capacity of a County.
  4. Account for Cases that Cross County Boundaries. With most longitudinal programs, it is important to account for movement across county and administrative boundaries. This is particularly important for programs that assist mobile populations, such as C1. Here are two (of several) issues:
    - (a) Clients (*e.g.*, when a client moves out of their initial county)
    - (b) Staff (*e.g.*, when a nurse helps a client in a neighboring county, particularly a client residing in a county without a C1 program)

## 9 County Names and CountyIDs

This table connects a county's name to its ID, used in the previous scatter plots. The vaules reflect the whole reporting period (which is 5 years long).

ID	County	Referrals	Enrollments	EnrollProportion	ReferralPerNeed	EnrollPerNeed
1	ADAIR	135	27	0.20	0.10	0.02
2	ALFALFA	16	0	0.00	0.09	0.00
3	ATOKA	223	44	0.20	0.40	0.08
4	BEAVER	22	1	0.05	0.13	0.01
5	BECKHAM	337	51	0.15	0.38	0.06
6	BLAINE	171	46	0.27	0.40	0.11
7	BRYAN	958	68	0.07	0.65	0.05
8	CADDO	442	17	0.04	0.30	0.01
9	CANADIAN	735	58	0.08	0.30	0.02
10	CARTER	573	142	0.25	0.28	0.07
11	CHEROKEE	401	158	0.39	0.19	0.07
12	CHOCTAW	362	41	0.11	0.41	0.05
14	CLEVELAND	2,128	166	0.08	0.44	0.03
15	COAL	163	47	0.29	0.86	0.25
16	COMANCHE	1,045	35	0.03	0.18	0.01
17	COTTON	77	9	0.12	0.36	0.04
18	CRAIG	215	57	0.27	0.49	0.13
19	CREEK	878	35	0.04	0.35	0.01
20	CUSTER	460	93	0.20	0.43	0.09
21	DELAWARE	353	64	0.18	0.22	0.04
23	ELLIS	9	1	0.11	0.06	0.01
24	GARFIELD	1,727	291	0.17	0.73	0.12
25	GARVIN	478	18	0.04	0.47	0.02
26	GRADY	615	28	0.05	0.37	0.02
27	GRANT	30	1	0.03	0.26	0.01
28	GREER	135	11	0.08	0.68	0.06
29	HARMON	55	5	0.09	0.38	0.03
30	HARPER	34	6	0.18	0.23	0.04
31	HASKELL	182	22	0.12	0.40	0.05
32	HUGHES	207	41	0.20	0.30	0.06
33	JACKSON	681	107	0.16	0.49	0.08
34	JEFFERSON	75	8	0.11	0.28	0.03
35	JOHNSTON	184	17	0.09	0.40	0.04
36	KAY	552	24	0.04	0.26	0.01
37	KINGFISHER	283	78	0.28	0.63	0.17
38	KIOWA	122	12	0.10	0.27	0.03
39	LATIMER	234	34	0.15	0.59	0.09
40	LEFLORE	830	16	0.02	0.37	0.01
41	LINCOLN	473	133	0.28	0.38	0.11
42	LOGAN	977	91	0.09	0.91	0.09
43	LOVE	114	27	0.24	0.32	0.08

44	MCCLAIN	295	11	0.04	0.28	0.01
45	MCCURTAIN	595	176	0.30	0.36	0.11
46	MCINTOSH	338	58	0.17	0.50	0.09
47	MAJOR	83	9	0.11	0.26	0.03
48	MARSHALL	272	34	0.12	0.42	0.05
49	MAYES	372	17	0.05	0.24	0.01
50	MURRAY	211	50	0.24	0.51	0.12
51	MUSKOGEE	536	181	0.34	0.16	0.05
52	NOBLE	99	16	0.16	0.28	0.05
54	OKFUSKEE	150	8	0.05	0.29	0.02
55	OKLAHOMA	3,163	746	0.24	0.10	0.02
56	OKMULGEE	445	54	0.12	0.24	0.03
57	OSAGE	15	0	0.00	0.01	0.00
58	OTTAWA	629	200	0.32	0.44	0.14
59	PAWNEE	126	8	0.06	0.25	0.02
60	PAYNE	926	94	0.10	0.41	0.04
61	PITTSBURG	632	169	0.27	0.40	0.11
62	PONTOTOC	323	62	0.19	0.20	0.04
63	POTTAWATOMIE	1,110	111	0.10	0.47	0.05
64	PUSHMATAHA	149	12	0.08	0.28	0.02
65	ROGER MILLS	9	1	0.11	0.06	0.01
66	ROGERS	703	139	0.20	0.39	0.08
67	SEMINOLE	435	89	0.20	0.34	0.07
68	SEQUOYAH	461	72	0.16	0.27	0.04
69	STEPHENS	770	10	0.01	0.48	0.01
70	TEXAS	323	40	0.12	0.27	0.03
71	TILLMAN	148	11	0.07	0.37	0.03
72	TULSA	4,205	1,237	0.29	0.20	0.06
73	WAGONER	187	24	0.13	0.10	0.01
74	WASHINGTON	608	84	0.14	0.39	0.05
75	WASHITA	23	0	0.00	0.05	0.00
76	WOODS	113	27	0.24	0.53	0.13
77	WOODWARD	234	56	0.24	0.35	0.08

## 10 Additional Information

We would like to address any questions or suggestions during any stage of the evaluation. Please contact David Bard (David-Bard@ouhsc.edu), Will Beasley (William-Beasley@ouhsc.edu), or Thomas Wilson (Thomas-Wilson@ouhsc.edu).