End-of-Project Report

Development and Field Testing of the North Carolina Family Assessment Scale for General Services (NCFAS-G)

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November 2006

Introduction

This report presents the results of a project undertaken to develop and field test a broad-based family assessment tool for use in the San Mateo County Human Services Agency (HSA). The HSA is an integrated services agency and the goal was to develop an assessment tool that could be used with all agency programs. Officials in the San Mateo HSA contracted with the National Family Preservation Network to accomplish this task. Using the North Carolina Family Assessment Scale (NCFAS) as the seminal instrument, the team from NFPN (the researcher and the executive director of NFPN) developed the new instrument, named the North Carolina Family Assessment Scale for General Services (NCFAS-G). Reliability and validity of the NCFAS-G were examined during a field tested with actual cases being served by the Differential Response workers in the County.

Generally speaking, the project is a success. The NCFAS-G exhibits good psychometric statistical properties. The results of assessments conducted on the families being served are in line with expectations for the client population being served, both with respect to the magnitude of assessment ratings at Intake, and with the direction and magnitude of changes of ratings following services delivered under Differential Response.

The full details of the field test findings are presented in a later section of the report. First, it is necessary to understand the policy objectives of Differential Response, as articulated by policy spokespersons from San Mateo, as these objectives informed the design of the NCFAS-G instrument, and the field test.

San Mateo's Differential Response System

Differential Response is a service alternative to traditional forensic investigations in child abuse/neglect situations. Traditionally, a child abuse/neglect report would be responded to by San Mateo County HSA workers with the intention of determining the veracity of the report, and if the report was substantiated, the County would exercise its child protection mandate, often by legally compelling the family caregiver(s) to participate in services. Sometimes the child(ren) would be removed and placed in out of home care, if the abuse or neglect was serious, and/or if the caregiver(s) was not receptive to services. This method of response is, by its very nature, condemning, legalistic, and adversarial.

By contrast, Differential Response can be applied in cases where the alleged abuse or neglect is not serious (that is, the risk is low or moderate, rather than high), and the family can be engaged to receive services voluntarily. One of the overarching policy objectives of Differential Response is to develop a cooperative, caring and voluntary relationship with families who may benefit from services such that the risk of future abuse or neglect is reduced.

Over the past two years, San Mateo has developed policies and procedures for operating a Differential Response option, and has tested the model. During this same period of time, NFPN developed the NCFAS-G to be used as an assessment tool by Differential Response workers. The official roll-out of Differential Response county-wide occurred in July of 2006, so the program is fairly new, and may still be evolving as workers learn the new system and as the policies and procedures are "tweaked" on the basis of experience.

The majority of Differential Response (DR) cases in San Mateo County are managed and served through a contract with Youth and Family Enrichment Services (YFES). YFES serves all areas of the county except for Daly City which has 5 city employees handling DR referrals. YFES expects to average about 200 referrals per month.

There are 12 case managers who handle the DR cases; all but one has a bachelor's degree and all have had previous work experience in the social services arena. The workers receive two weeks of training on the DR program that includes the following topics: child development, mandated reporter, available services, substance abuse, NCFAS-G assessment tool, CARE database, safety, and home visiting. Each worker has a computer and completes the NCFAS-G tool online.

The DR case managers receive referrals from the child welfare system. Hotline calls are screened and rated by intake workers using a risk assessment instrument. Almost all DR referrals are rated Path 2 cases which fall into the moderate risk category. Policy requires that Path 2 cases be investigated by a social worker. The social worker generally interviews age-appropriate children separately from parents and then takes the DR worker along to interview the parents. If the social worker decides that it is not necessary to open a child welfare case, she informs the parents of this decision, states that the DR worker will assist the parents in receiving services, and leaves. The DR worker then begins working with the parents.

The NCFAS-G assessment tool is completed after two or three home visits. DR workers use the tool to help develop a case plan. The DR program was designed for a 90-day time frame but cases can stay open longer if necessary. The DR workers are encountering difficulties in engaging families that can result in premature case closure. Strategies are being developed to address this issue.

Referred to as case managers, DR workers act as brokers for services but they are also being encouraged to provide more of the services themselves such as parenting education. Typical referrals for services include legal aid, immigration, health insurance, and food. Child care is an urgent need but the only child care agency in the county offering subsidized care has a two-year waiting list. Other than the shortage of subsidized child care, services are generally available for the 0–5 age group. There is a shortage of services for teens, especially mentoring programs. DR workers receive a substantial number of referrals that involve divorce cases with allegations by one parent against another and these cases are very difficult.

DR workers generally develop three-four goals with the family. A typical goal might be to improve parenting skills with a parent education component to help the parent achieve the goal. The case is closed when a family is connected to resources. The NCFAS-G tool is completed upon case closure. Supervisors review the NCFAS-G tool ratings with the DR workers. More training is needed on the purpose of the NCFAS-G tool and how the tool can be used to improve practice. The main outcome measure at this time is re-referrals. Some agencies, especially schools, continue to lodge complaints because they are unaware that the families are receiving services and making changes.

Contracted agency program managers meet twice monthly with the San Mateo County DR program managers to discuss needs and problems. Implementation of a new program using a new assessment tool is challenging but it appears that the program is well underway and that issues are being resolved as they arise.

Developing the NCFAS-G

The idea to develop a broad-based family assessment tool grew out of program managers' and practitioners' frustration over the lack of family assessment instruments that supported social work practice models. A review of instruments being used throughout the County HSA offices and programs revealed that the content of the instruments did not relate closely to practice

concerns, and were not designed to be capable of detecting or assessing changes that occurred in families as a result of service.
Furthermore, the instruments tended to focus on individuals rather than families, and were deficit-based with no capacity to assess strengths.

A series of meetings were held in late 2004 and early 2005 in which the NFPN team solicited input from practitioners, managers and administrators representing child welfare, mental health, temporary assistance to needy families (CalWorks), alcohol and other drug services, and domestic violence. The focus of the information solicited was the content of the expanded family assessment tool so that the tool would be appropriate and responsive to the changing practice environment in California, and to the roll-out of Differential response, in particular.

NFPN was already distributing a family assessment scale with a training package, the North Carolina Family Assessment Scale (NCFAS), which appeared to be appropriate to use as the basis for the new NCFAS-G instrument. In fact, the NCFAS was already being used in Differential Response settings (e.g., the Fraser Ministry Differential Response Program in Canada). The NCFAS had been developed for high-risk family service cases, and exhibited very good psychometric properties. The NCFAS had been used as a practice tool by hundreds of workers in numerous practice environments throughout the United States and abroad, and it covered 5 of the 8 assessment domains identified by San Mateo workers as necessary for the NCFAS-G. These domains include:

- Environment
- Parental Capabilities
- Family Interactions
- Family Safety, and
- Child Well-Being

To complete the content required for the NCFAS-G, three additional domains were developed, along with appropriate subscales and scale definitions. These include:

- Self-Sufficiency
- Family Health, and
- Social/Community Life.

Some subscales from the original NCFAS were realigned among existing domains or among the new domains so that the NCFAS-G would address the *general service needs* of all families, not focusing on families in crisis, but focusing as well on low-risk and moderate-risk families that are the focus of Differential Response. In its final form and construction, the NCFAS-G included the following domains and subscales:

Self-Sufficiency

- Overall self-sufficiency
- Caregiver employment
- Family income
- Financial management
- Food and nutrition
- Transportation

Environment

- Overall environment
- Housing stability
- Safety in the community
- Environmental risks
- Habitability of housing
- Personal hygiene
- Learning environment

Parental Capabilities

- Overall parental capabilities
- Supervision of child(ren)
- Disciplinary practices
- Provision of developmental/enrichment opportunities
- Parent(s)'s physical/mental health
- Parent(s)'s use of drugs/alcohol
- Parent promotes education
- Parent controls media/reading materials
- Parent(s)'s literacy

Family Interactions

- Overall family interactions
- Bonding with child(ren)
- Communications with child(ren)
- Expectations of child(ren)
- Mutual support within family
- Relationship between parents
- Family routines & rituals
- Family recreation & play

Family Safety

- Overall family safety
- Absence/presence: domestic violence
- Absence/presence: other family violence
- Absence/presence: physical/emotional abuse of child(ren)
- Absence/presence: sexual abuse of child(ren)
- Absence/presence: neglect of child(ren)
- Absence/presence: access to weapons

Child Well-Being

- Overall child well-being
- Child(ren)'s physical, mental, emotional health
- Child(ren)'s behavior
- School performance
- Child(ren)'s relationship with parents/caregivers
- Child(ren)'s relationship with siblings
- Child(ren)'s relationship with peers
- Cooperation/motivation to maintain family

Social/Community Life

- Overall social/community life
- Social relationships
- Relationships with child care, schools, extracurricular services
- Connection to neighborhood and cultural/ethnic community
- Connection to spiritual/ethnic community
- Caregiver initiative and acceptance of available help and support

Family Health

- Overall family health
- Caregiver(s)'s physical health
- Caregiver(s)'s disability
- Caregiver(s)'s mental health
- Child(ren)'s physical health
- Child(ren)'s disability
- Child(ren)'s mental health
- Family access to health/mental health care

Each of the domains and subscales is structured to assess both family strengths and family problems, using a 6-point Likert-type scale. The structure of the scale provides for ratings to be recorded both at the Intake stage and at the Closure stage of case activity. The basic scale structure is presented below:

#. Domain/Subscale title

	Clear Strength	Mild Strength	Baseline/ Adequate	Mild Problem	Moderate Problem	Serious Problem
(I)	+2	+1	0	-1	-2	-3
(C)	+2	+1	0	-1	-2	-3

Workers assign ratings to the families on each of the subscales and overarching domains using guiding language in a set of scale definitions. The definitions provided are derived from the literature, the experience of the scale authors and other scale authors, conceptual and legal thresholds and definitions, and the practice wisdom of social workers using the scales. The intention that the language of the definitions is *guiding* rather than literal, may require local contextual adjustments based on worker/supervisor judgment or legal/policy requirements.

Of the 6 points on each scale, 3 levels of functioning are "defined" by guiding language to assist workers to assign ratings:

+2 = > Clear Strength
0 = > Baseline/Adequate
-3 = > Serious Problem

Intermediate levels of functioning (+1, -1, -2) are left undefined in order to encourage worker inquiry and judgment when assigning ratings. The NCFAS-G is designed to encourage worker judgment. The **Baseline/Adequate** level of functioning ***is the threshold above which there is no legal, moral or ethical reason for public intervention***. The level of functioning described by this

definition reflects the community standards in which the scale is applied in practice. This definition does not preclude the offer or acceptance of voluntary services, regardless of assigned rating.

The process of assigning ratings is as follows:

- Assess and rate at Intake and Closure
- Rate all subscales prior to making Overall Domain rating
- Domain ratings ***not*** the average of the subscale ratings, they are the "gestalt" of the subscales in each domain.
- Assessment is an iterative process
- Intake ratings completed when sufficient information has been obtained (sufficient family or collateral contact)
- Closure ratings within a few days of closure

Once ratings are assigned, they can be used for a variety of purposes. At Intake, the ratings are used to develop a case plan, provide a framework for team meetings or case staffings, or case reviews. They also focus resource allocation on specific problem areas, and help to prioritize those areas for service. Intake ratings help identify existing strengths for inclusion in case planning. The NCFAS-G form also provides a ready picture of family functioning at Intake for periodic reassessment of key issues and problems.

Closure ratings provide "outcome measures" of services that are both a measure of service efficacy and an indication of unresolved issues needing step-down services or referral to other service organizations. Closure ratings can also be compared to Intake ratings by computing "change scores" that indicate the magnitude of change evident on each of the domains.

Field Testing the NCFAS-G in San Mateo

Procedures

The NCFAS-G was field tested after the official roll-out of the Differential Response program in July 2006. Workers began using the NCFAS-G immediately after training that occurred in conjunction with the roll-out. It is noteworthy that the Differential Response program is new, as new programs tend to evolve with experience, so the practice environment in which the NCFAS-G was being tested may have been changing in subtle and/or unknown ways during the field test period. However, the results of the field test convincingly support the efficacy of the NCFAS-G.

Intake and Closure ratings were obtained in accordance with the practice model: Intake ratings were obtained after 2 to 3 home visits (although some cases were not contacted with this degree of frequency), and Closure ratings were assigned at the point that the DR worker decided to close the case. Intake and Closure ratings were obtained on 123 families, and limited service data were obtained on 67 families. Of the 123 families, 252 children were served directly or indirectly via the family service plan (47% male, 53% female); and a broad range of racial/ethnic identities were served (18% White, 18% Black, 48% Hispanic, 16% Other). Children from all ages were also represented in the sample (5% < 1 year old, 32% 1–5 years old, 36% 6–12 years old, 28% 13–19 years old).

A total of 157 services were offered to 67 families, upon whom these data are available. The most frequently offered services included: 25% of families were offered mental health services, 12% were offered food or clothing, 7% were offered adolescent services, and 10% were offered parent education. All other categories were infrequently offered.

Nearly three quarters (72%) of all cases were closed within the 90-day service period envisioned by the practice model. The complete breakdown of case durations is as follows

- 18% $\leq$ 30 days
- additional 27% $\leq$ 60 days
- additional 27% $\leq$ 90 days
- additional 10% 91 days $\leq$ 120 days
- additional 18% 121 days $\leq$ 200 days

Intake and Closure Scores and Scale Dynamics

The following figures and tables present the findings of the analyses of the field test data, beginning with Figures 1 through 8, which present the Intake and Closure ratings assigned by workers using the NCFAS-G scale. In all cases the figures are based upon 123 families.

Figure 1. Aggregate Intake and Closure ratings on the domain of Self-Sufficiency.

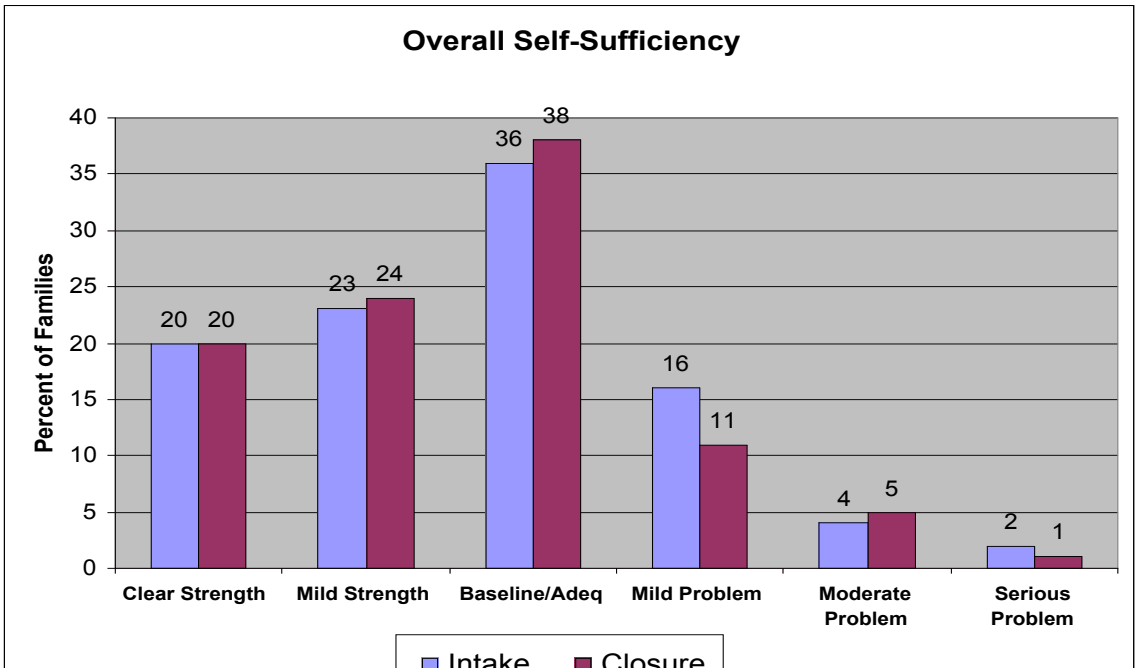


Figure 2. Aggregate Intake and Closure ratings on the domain of Environment.

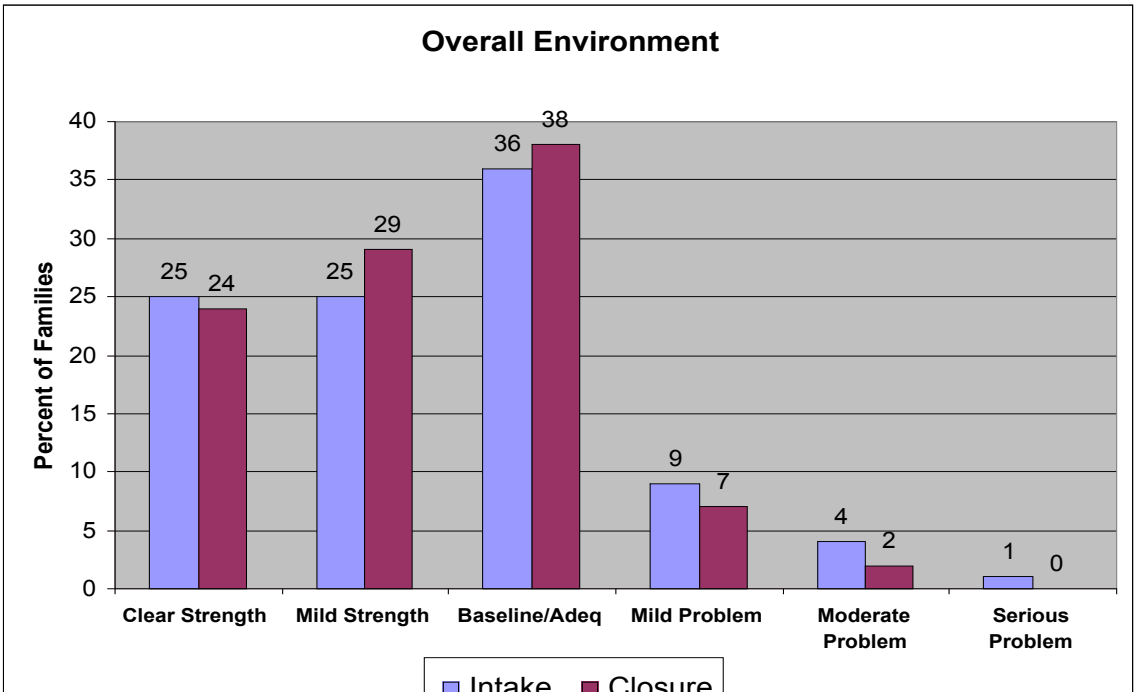


Figure 3. Aggregate Intake and Closure ratings on the domain of Parental Capabilities.

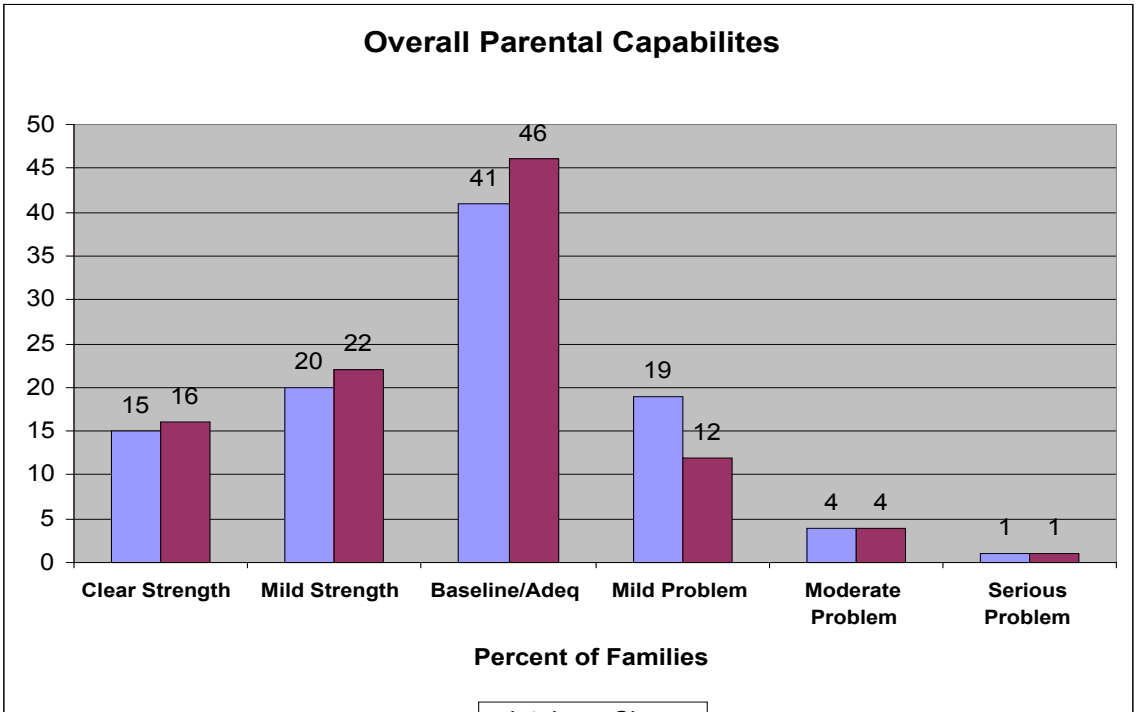


Figure 4. Aggregate Intake and Closure ratings on the domain of Family Interactions.

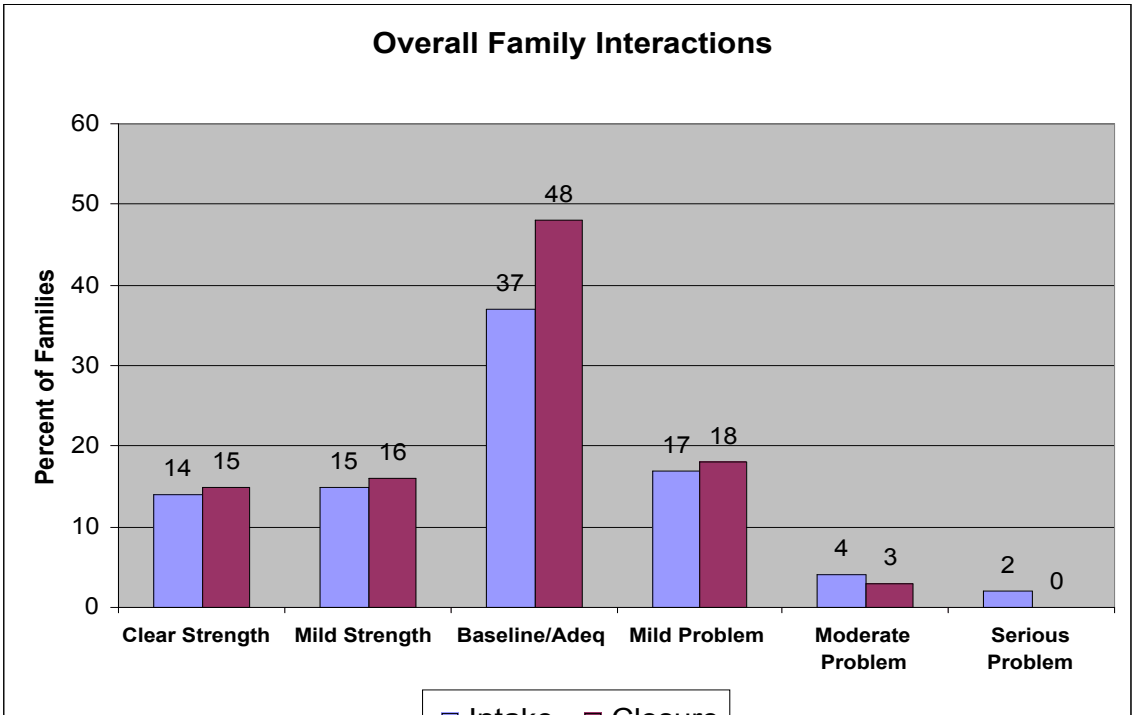


Figure 5. Aggregate Intake and Closure ratings on the domain of Family Safety.

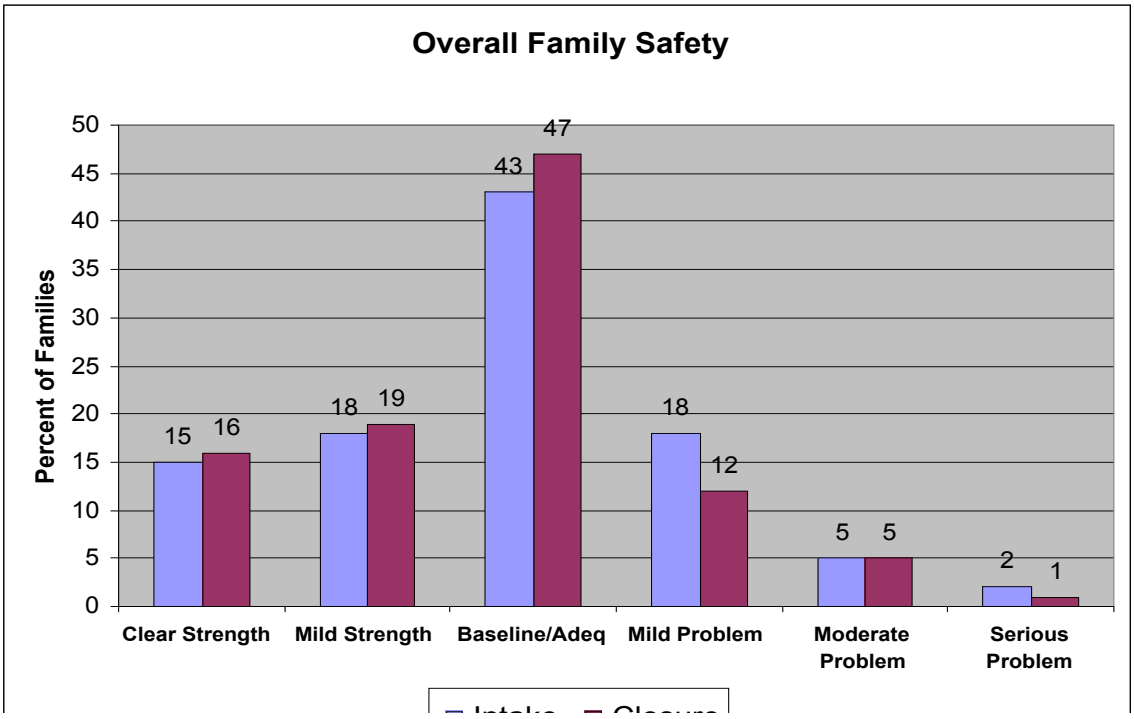


Figure 6. Aggregate Intake and Closure ratings on the domain of Child Well-Being.

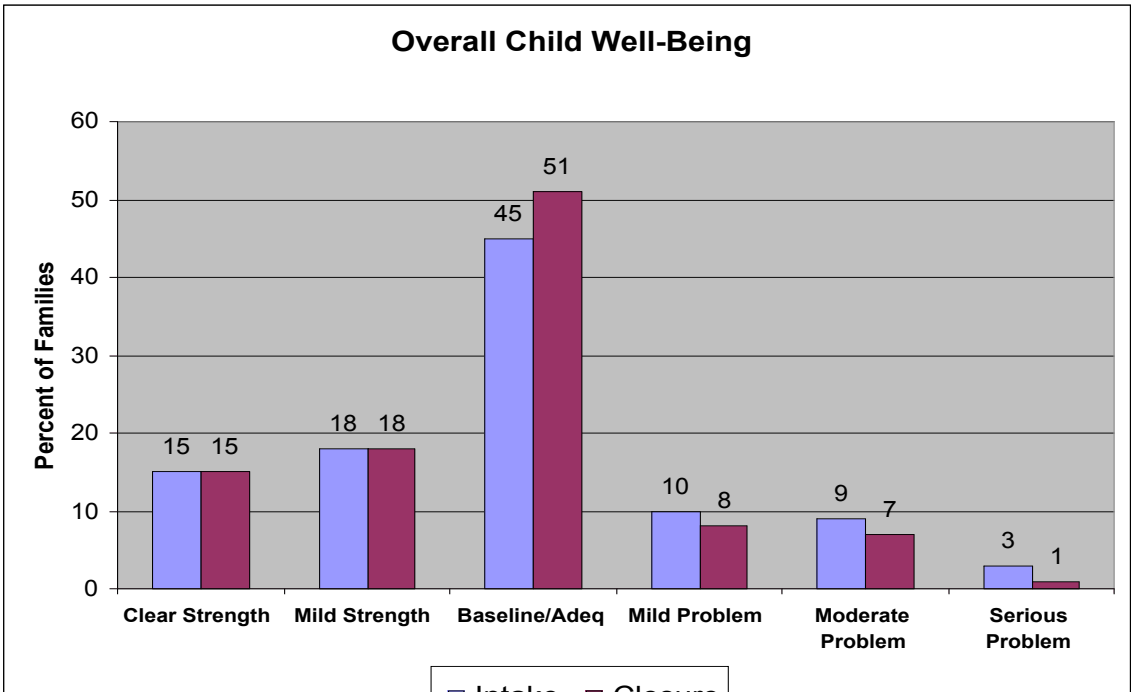


Figure 7. Aggregate Intake and Closure ratings on the domain of Social/Community Life.

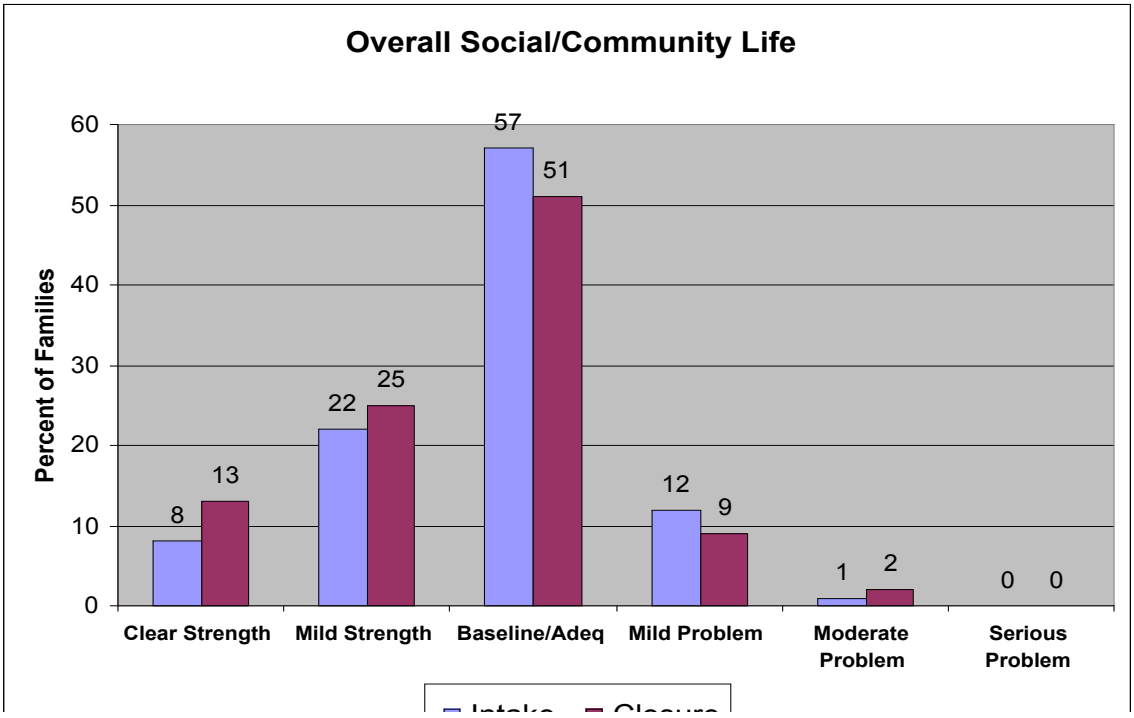
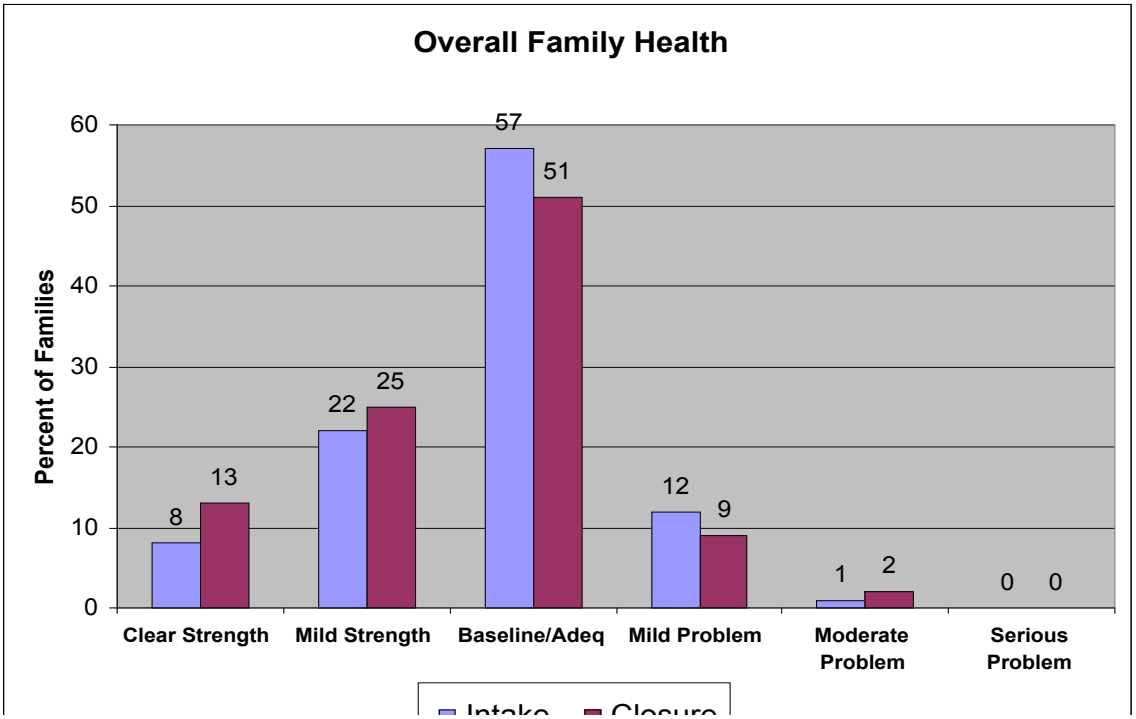


Figure 8. Aggregate Intake and Closure ratings on the domain of Family Health.



Between 12% and 25% of families are assessed as being in the problem range of ratings on any of the 8 assessment domains. However, very few cases are rated at the moderate to serious problem levels. These ratings are in keeping with the types of cases expected to be served by Differential response.

On all 8 domains the mean ratings fall between 2 and 3 (Baseline/Adequate to Mild Strength) at Intake, with a standard deviation of about 1.0 to 1.5. These statistics indicate a reasonable spread of scores about the means, without numerous "low" scores (which would indicate large numbers of serious problem/higher-risk cases requiring more intensive or mandatory services). For Closure ratings, the means are slightly higher, which is not unexpected and reflects progress made by families receiving DR services. The domain mean ratings at Closure range from about 1.5 to 2.8, with the standard deviation being about the same as those for the Intake ratings. This array of ratings and dispersion of ratings suggests a modest population shift away from the problem range of ratings towards the Baseline and higher ratings.

Although the dynamics of the NCFAS-G ratings is somewhat subdued, this is not unexpected given that the service population comprised Path 2 cases (96% of cases were Path-2). Deterioration was infrequent, and in no cases were more than two increments of negative change observed. Deterioration occurred in only 3% to 6% of cases. In contrast, improvement occurred in 8% to 14% of cases. Although these numbers appear low, they are an accurate reflection of the fact that the large majority of Path 2 families are likely to be rated in the problem ranges on only one or two domains, and therefore are likely to improve on only one or two domains. Furthermore, since an even large proportion of families are not rated in the moderate or serious problem levels, the amount of possible improvement is limited to two or three increments, at the maximum. Incremental improvements of one or two increments are the norm.

Is the NCFAS-G Reliable?

Reliability of the NCFAS-G was estimated using the measure of internal consistency yielding the Cronbach's Alpha statistic. Cronbach's Alpha ranges from 0 to 1.0. By statistical convention, Alphas above 0.4 are acceptable for scale development/research purposes. The standards are higher for scales used in practice settings. Alphas above 0.7 are considered to be acceptable, Alphas above 0.8 are considered to be high, and Alphas above 0.9 are very high. The Alphas obtained on all 8 domains of the NCFAS-G are very respectable. These data are presented in Table 1, which represents the Alphas obtained for both Intake and Closure ratings.

Table 1. Cronbach's Alphas for each measurement domain at Intake and Closure

Assessment Domain	Cronbach's Alphas at Intake	Cronbach's Alphas at Closure
Economic Self-Sufficiency	.91	.93
Environment	.92	.94
Parental Capabilities	.91	.92
Family Interactions	.90	.93
Family Safety	.87	.89
Child Well-Being	.95	.95
Social/Community Life	.83	.88
Family Health	.86	.88

The Alphas for all domains are above 0.83, and in 10 of 16 instances, they are above 0.9. These Alphas firmly support the reliability of the NCFAS-G with this population of cases, and the Alphas might be expected to be even higher with a large sample size, and if the DR workers were more experienced (recall that the field test occurred simultaneously with DR Program roll-out).

Is the NCFAS-G Sensitive to Change?

The discussion of scale dynamics (See *Intake and Closure Scores and Scale Dynamics*, above) has already suggested that the NCFAS-G is sensitive to change. The "change data" are presented in detail in Table 2.

Table 2. Percent of families experiencing positive change, no change, or negative change as a result of services.

	Proportion of families experiencing change		
Assessment Domain	**Positive change**	**No change**	**Negative change**
Economic Self-Sufficiency	11.5%	85.0%	3.5%
Environment	9.3%	85.2%	3.5%
Parental Capabilities	13.2%	82.1%	4.7%
Family Interactions	13.3%	81.9%	4.8%
Family Safety	16.0%	79.2%	4.7%
Child Well-Being	11.9%	82.2%	5.9%
Social/Community Life	12.1%	81.3%	6.6%
Family Health	11.9%	80.7%	7.3%

Between 9% and 16% of families experienced positive change on one or more domains and between 3% and 7% experienced slight deterioration on one or more domains. The balance of families, 79% to 85%, did not change on one or more domains. However, recalling that these are Path 2 cases, it is likely that most families were rated in the problem ranges on only one, or a few, domains, and change would not be expected to occur on domains not rated in the problem ranges (although those changes do sometimes occur).

Are Changes "Positive" and Statistically Reliable?

The data from Table 2 suggest that the majority of changes experienced by families receiving DR services are in the "positive" direction; that is, moving away from the problem rage of ratings towards the strengths range of ratings. Table 3 presents the reliability estimates of changes experienced by families during DR services.

Table 3. Significance testing of changes experienced by families during DR services.

	Proportion of families At or Above Baseline		Significance Test
Assessment Domain	At Intake	At Closure	Chi Square & p-value
Economic Self-Sufficiency	78.0%	82.6%	$X^2 = 71.10$, $p < .001$
Environment	86.8%	90.9%	$X^2 = 73.99$, $p < .001$

Parental Capabilities	76.6%	83.6%	$X^2 = 57.25$, $p < .001$
Family Interactions	74.1%	79.3%	$X^2 = 57.64$, $p < .001$
Family Safety	75.5%	82.7%	$X^2 = 54.33$, $p < .001$
Child Well-Being	78.3%	83.5%	$X^2 = 48.19$, $p < .001$
Social/Community Life	87.4%	89.0%	$X^2 = 54.71$, $p < .001$
Family Health	84.1%	88.3%	$X^2 = 47.00$, $p < .001$

Recalling that the scale definition of "Baseline/Adequate" is "the legal, moral, ethical threshold for intervention," Table 3 presents the proportion of families 'at or above Baseline/Adequate' at Intake, compared with the proportion 'at or above Baseline/Adequate' at Closure. It is evident that on all domains, the proportion of families at or above Baseline/Adequate at Closure was higher in all cases than the proportion at Intake. For every domain, the ratings at Intake are cross-tabulated with the ratings at Closure, and in each case, the changes are statistically significant, suggesting that the changes are reliable and due to services rather than due to random variation.

It should be noted that the Chi-Square values in Table 3 relate to eight separate 2 x 2 cross tabulations of both possible Baseline/Adequate conditions ('at or above' or 'below' baseline) and both time periods (Intake and Closure) Thus, the Chi-Square considers movement in multiple directions within the 2 x 2 tables. The percentages in Table 3 are valid percentages adjusted for missing values, but the table only presents the percentages "at or above Baseline/Adequate" at Intake and Closure.

Summary

To summarize these findings,

- The NCFAS-G appears to be very reliable.
- The Baseline/Adequate ratings at Intake are commensurate with moderate risk cases and Differential Response options.
- Incremental improvements on NCFAS-G ratings at Closure are commensurate with services offered to address a limited number of goals.
- Although population shifts in domain ratings are small, they are in the "right direction" and are statistically reliable.
- Overall service population changes are likely to have been diminished by families refusing services. Improved engagement strategies will increase DR services treatment effects.
- Concurrent validity appears to be established, but stronger concurrent and predictive validity requires additional data on reasons for closure and re-referral rates, over time.