

Health Homes in a System of Care

August 3rd, 2017



The Educational Training, Evaluation, Assessment, and Measurement (E-TEAM) at The University of Oklahoma serves as the external evaluator for the Oklahoma Department of Mental Health and Substance Abuse Services (ODMHSAS), Oklahoma Systems of Care (OKSOC). Oklahoma Systems of Care (OKSOC) provides services to children and youth experiencing serious emotional disturbance. It began in 2 communities in 1999. ODMHSAS' active sponsorship and state and federal financing have helped OKSOC expand across the state and increase the number of families and youths served. OKSOC supports, maintains, and grows local systems of care communities by providing infrastructure, training and technical assistance, and staff professional development. In 2014, Health Homes were implemented. Health Homes promote enhanced integration and

coordination of primary, acute, behavioral health, and long-term services and supports for persons across the lifespan with chronic illness, including adults with serious mental illness (SMI) and children with Serious Emotional Disturbance (SED). Care is delivered using an integrated team that comprehensively addresses physical, mental health and substance use disorder treatment needs with a goal to ensure access to appropriate services, improve health outcomes, reduce preventable hospitalizations and emergency room visits, promote the use of Health Information Technology (HIT), and avoid unnecessary care. The following report discusses the impact of the Health Home implementation to date.

Starting in the early months of calendar 2015, the Health Homes (HH) initiative dramatically extended the reach



of the Oklahoma Systems of Care (OKSOC) treatment philosophy.

- In calendar 2014 – the last full year preceding Health Homes— 1965 youths and their families were served statewide by OKSOC.
- In calendar 2016 – the first full year of the Health Homes initiative – 5980 youths and families were served using Wraparound (high intensity) or Service Coordination (moderate intensity) OKSOC protocols.

This tripling of the youth caseload in less than a year, which involved both expansion within the group of established Systems of Care providers and the addition of other children's services providers under the Systems of

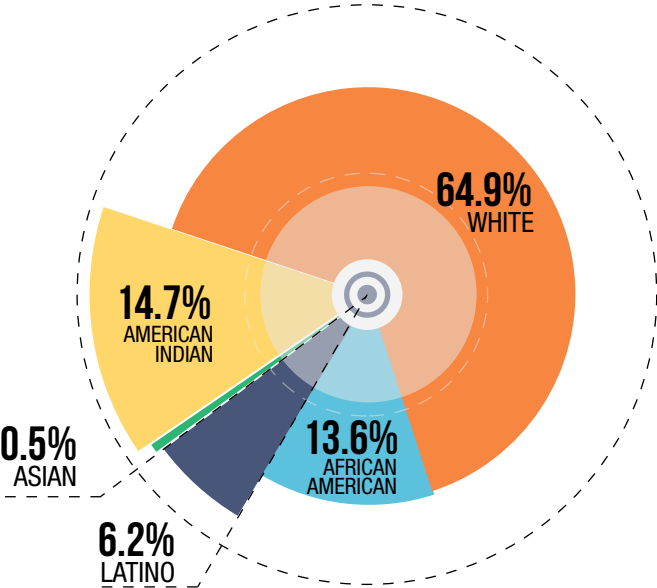
Care umbrella, altered the characteristics of the youths in service statewide and potentially the overall outcomes and improvements achieved through SOC services.

The charts that follow compare the youths enrolled in the last year (2014) of the original Oklahoma Systems of Care initiative with those entering services during the first year (2016) of full Health Homes implementation. In addition, several of the charts include separate summary numbers for a health home managed by one of Oklahoma's experienced and long-serving Systems of Care providers, to illustrate how, if at all, the shift to the Health Homes model impacted established OKSOC agencies. This comparison site will be identified as 'SOC/HH Comp 2016' in all relevant charts.

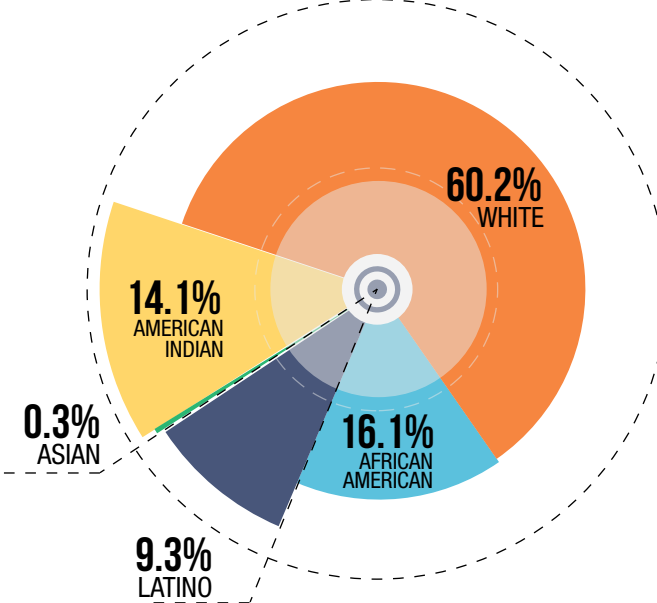
RACE/ETHNICITY

As the graphs below indicate, the Health Homes expansion of SOC services increased the representation of African American and Latino youths, both of which increased their share of the caseload by roughly 3%, while the proportion of Whites dropped by nearly 5% and the participation of American Indians remained fairly static.

Systems of Care Youths Starting Service in Calendar Year 2014



Health Home Youths Starting Calendar Year 2016

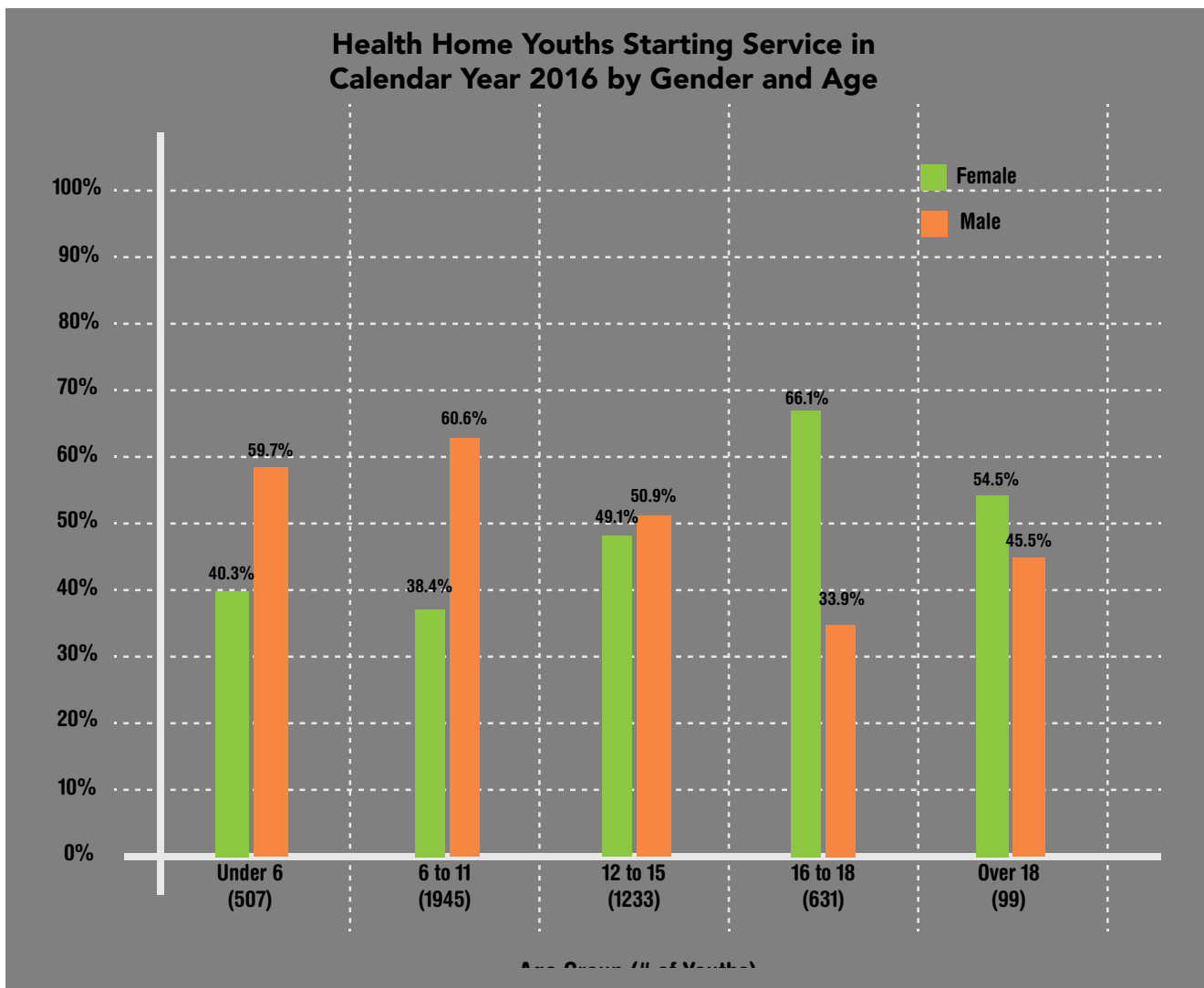


GENDER/AGE

The expansion of SOC services through the Health Homes shifted the gender balance of the statewide program substantially. Systems of Care has had, since its beginnings over 15 years ago, a predominately male population. In the early 2000s, males outnumbered females in OKSOC by nearly a 3 to 1 margin. This gap has been narrowing steadily since then, and with the advent of Health Homes, we are closer to gender parity than ever before. Youths enrolled in 2014 were 40% female and 60% male; those entering service in 2016 were 46% female and 54% male.

A trend that has been very consistent over the years is that female youths enter OKSOC services at older ages than their male counterparts. The chart below shows that this trend continues within the Health Homes initiative. Pre-school and elementary admissions are dominated by boys, roughly 60/40; high school and transitions (over 18) ages are similarly dominated by female consumers, with the middle school ages divided almost exactly evenly.

It's worth mentioning in this context that the overall age distribution of our youthful consumers has shifted toward the younger end of the spectrum. While children aged 0 through 11 made up 44.5% of the 2014 enrollees in SOC, these kids accounted for 54.4% of the 2016 group entering Health Homes. Loss of momentum in OKSOC's transitions (over 18) programs may account for some of this movement, but the magnitude of the change – reducing the overall average service entry age by nearly a year, from 11.9 to 11.0 years – probably points to differences in the referral and recruitment processes of Health Homes as opposed to OKSOC.



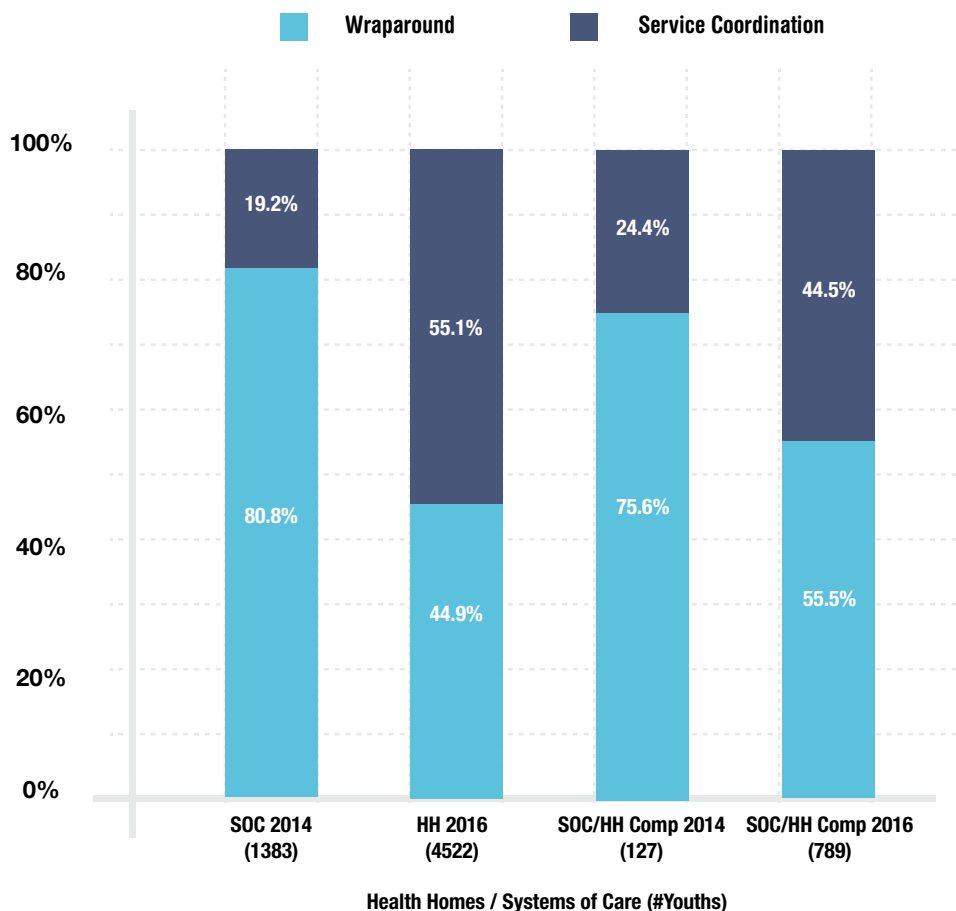
OKSOC SERVICE TIER DISTRIBUTION

OKSOC was implemented initially as a Wraparound Services initiative, focused on the most difficult and needful cases and using an intensive, team-centered approach to treatment. In recent years, wraparound has been supplemented by the Service Coordination service tier, which has much in common with traditional case management services and has been used with families who either declined or did not require wraparound.

The caseload expansion that came with Health Homes confronted all providers – but particular those with no previous SOC experience – with a significant training challenge, to bring adequate numbers of staff up to speed with the often difficult philosophical and procedural demands of wraparound. This ‘spin-up’ requirement in the new HH environment led to questions about whether wraparound would continue to be the dominant service delivery model within the Health Homes.

As the following chart shows, the advent of Health Homes radically altered the distribution of youths across the wrap-around / service coordination alternatives. Where wraparound encompassed 81% of the OKSOC youths enrolled in 2014, that proportion dropped to just 45% for the youths starting HH services in 2016. Even the OKSOC comparison site, with its long experience with wraparound, went from using wraparound for 76% of its kids to using it for 56%. It will be interesting and important to monitor this trend to see if the spread of staff experience and comfort with the wraparound model leads to its wider use over time.

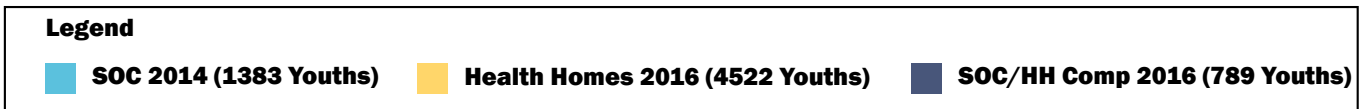
Health Homes (HH) vs. Systems of Care (SOC) Proportion of Youths in Wraparound and Service Coordination



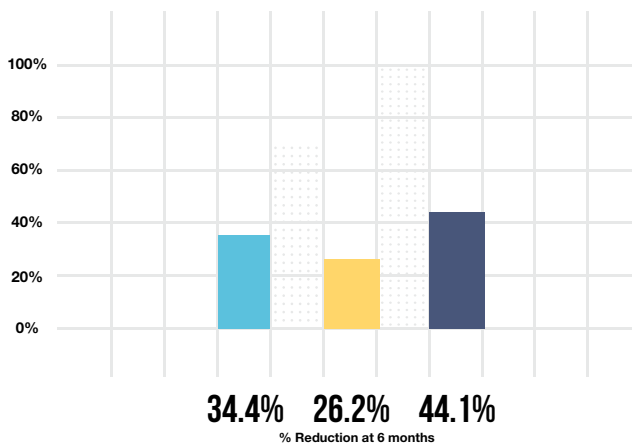
OUTCOME MEASURES

Continuing the evaluation plan that has been a part of the Oklahoma Systems of Care initiative since 2004, assessments are administered to caregivers (and youths, if old enough) at baseline (intake) and every 6 months thereafter. These assessments include psychometric (Ohio Scales), placement, school, legal and other measures intended to capture the trajectory of improvement of individual youths and of entire caseloads (when aggregated). Charts reflecting these outcomes measures for the 3 cohorts mentioned earlier – 2014 SOC, 2016 HH, 2016 SOC/HH Comp – are presented below.

Baseline to 6-Month Change in Event Measures



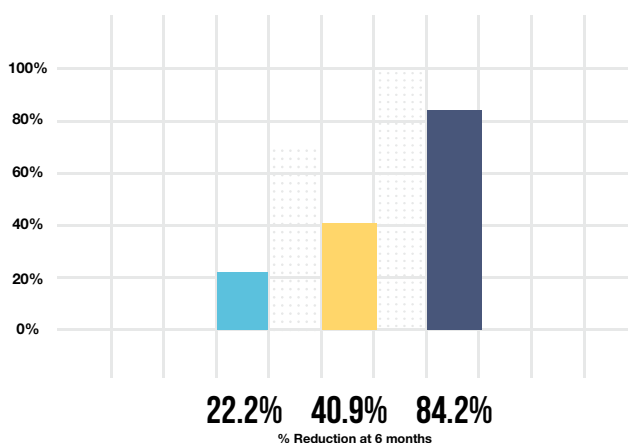
Reduction in Days Placed Out of Home



The majority of our young clients never experience out-of-home placement, but for those that do it is traumatic to the youth and disruptive to her/his family. Reducing days spent in out-of-home placement has always been one of the highest priorities of OKSOC.

- Historically OKSOC has realized 30-40% reductions in this measure over the first 6 months of service, as reflected in the 34.4% reported here for the 2014 youths.
- Health Homes in 2016 came in somewhat below this level (26.2%). This overall performance should improve as HH providers new to wraparound and to the philosophy and priorities of Systems of Care shift their focus to reducing placements and enhance the community supports needed to assist in this effort.
- The relatively high reduction rate for the comparison site (44.1%) is in line with that site's historical performance and reflects the results of targeted and effective application of SOC practices.

Reduction in School Days Missed



Missing days in school is a frequent negative consequence of a youth's struggles with SED, undermining her/his future prospects while also increasing stigma and negative perceptions at school. Working with families and with schools to reduce the number of missed days contributes to youth connectedness to the community and to an overall sense of improved family function. Improvement in this area also enhances relations between providers and schools.

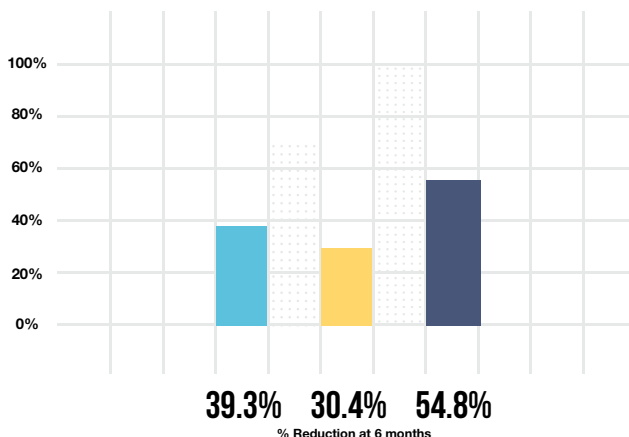
- The reduction rate for 2016 Health Home enrollees – 40.9% – is in line with historical OKSOC trends and substantially exceeds the surprisingly low 22.2% for the 2014 OKSOC cohort. This is evidence that HH providers place considerable importance on keeping their kids in the classroom.
- The comparison site has focused in recent years on work with the schools, and this is reflected in the very high, 84.2% reduction in missed days.

OUTCOME MEASURES

Legend

- **SOC 2014 (1383 Youths)**
- **Health Homes 2016 (4522 Youths)**
- **SOC/HH Comp 2016 (789 Youths)**

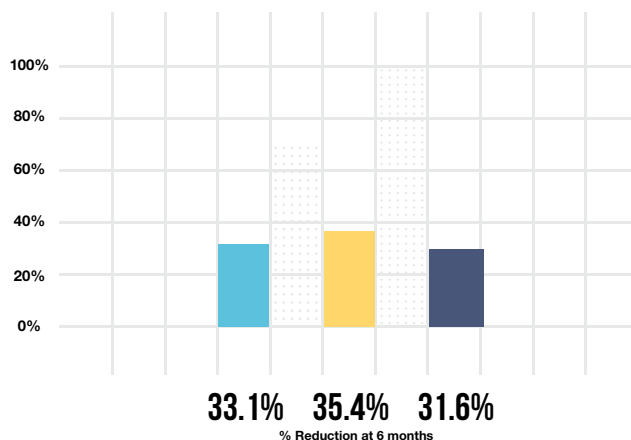
Reduction in Contacts with Law Enforcement



Negative encounters with law enforcement – arrests, questioning, citations, etc. – affect only about 10% of our youthful clientele, but are frightening and threatening in ways unlike other events, posing potentially long-term dangers to our young people. In a social environment where behavioral health issues often generate legal responses, Systems of Care – by stabilizing individual and family functioning – can help to reduce the frequency and intensity of these interactions.

- Because these events are relatively rare, aggregate results reported year-to-year are subject to more pronounced swings than other measures.
- Reduction rates for the 2014 (SOC) and 2016 (HH) cohorts are within the range of the historical 25-40% rates for OKSOC.
- Once again, the comparison site shows up well, easily exceeding the typical rate of reduction with 54.8%.

Reduction in Number of Youths Self-Harming



Roughly a third of the youths in Systems of Care (34.7% since 2014) report self-harming behaviors, including suicide attempts, cutting, scratching, taking pills found in the home, etc. Helping to stop this behavior is difficult, but important, and OKSOC has been reasonably successful in its past efforts.

- The data for the 3 cohorts that are the focus of this report are strikingly consistent, though all 3 reduction rates fall toward the lower end of the historical OKSOC range of 30-45% for this measure.
- Interestingly, this measure finds the comparison site coming in last, though the differences between the three cohorts are quite small.



OHIO SCALES

The Oklahoma Systems of Care initiative has used the Ohio Scales as its primary psychometric measure since 2004 and continues to administer it in the Health Homes context. The Ohio Scales is short and easily understood, administered, and scored. It provides clear, research-based identification of critical impairment and has straight-forward protocols for determining clinically significant improvement from one administration to the next.

The Ohio Scales is used to help us answer two questions about youths in Systems of Care:

1. Does the young person's level of behavioral/psychological impairment indicate that s/he is an appropriate candidate for wraparound (assuming the family agrees)? and
2. Do youths who are identified as impaired on the Ohio Scales show significant improvement when the instrument is administered in a follow-up assessment?

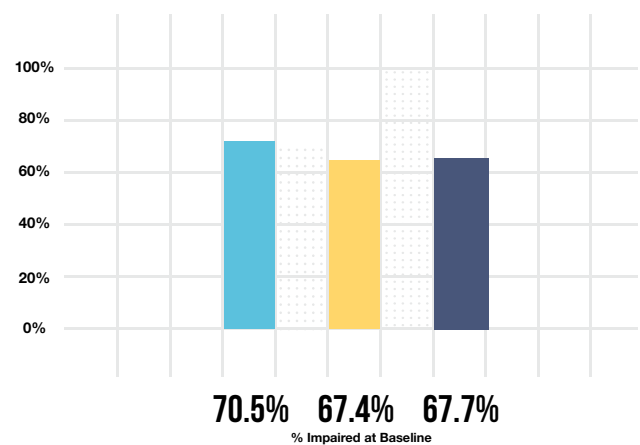
During the years in which OKSOC functioned as a separate youth services initiative, the Ohio Scales was valuable in confirming that our recruitment and referral network was identifying youths in the community who were appropriate for OKSOC services. Critical impairment on either or both of the Ohio Problems or Functioning scales was considered necessary to identify a youth clearly as needing wraparound, the primary service modality of OKSOC. Year-to-year measures consistently indicated that 70-80% of enrolled youths scored in the impaired range

Impairment rates for the 3 cohorts differ very little and are somewhat below the 70 to 80 percent rates typical in OKSOC over the past decade. This was expected, given that the Health Homes initiative focuses on both level 3 and 4 youths – which roughly map, respectively, to Service Coordination and Wraparound service tiers in Systems of Care. Level 3/ Service Coordination youths would be expected to have lower impairment rates.

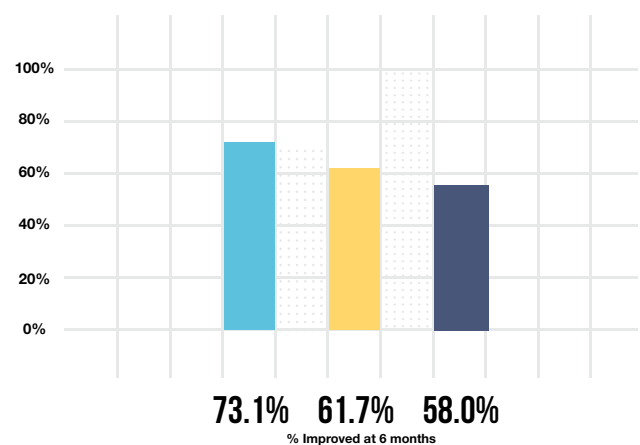
The Ohio Scales provides the Health Homes initiative with its only outcomes measure that directly addresses the behavioral and functional health of our youthful clients. When youths score in the impaired range at baseline, their subsequent assessments are used to see if research-based levels of change are achieved that indicate the youth has improved in a 'clinically significant' manner.

- Over the past decade, 65-75% of impaired youth in OKSOC have shown clinically significant improvement 6 months after intake.
- The SOC 2014 cohort is consistent – at 73.1% – with preceding years.
- The Health Home and comparison site cohorts come in substantially below historically typical levels, at 61.7% and 58%. This may be due to the more limited use of wraparound with impaired youths in the HH context. If so, we can hope this rate will improve as wraparound training expands and providers implement it with more of their caseload and with better fidelity.

Ohio Scales Impairment at Baseline



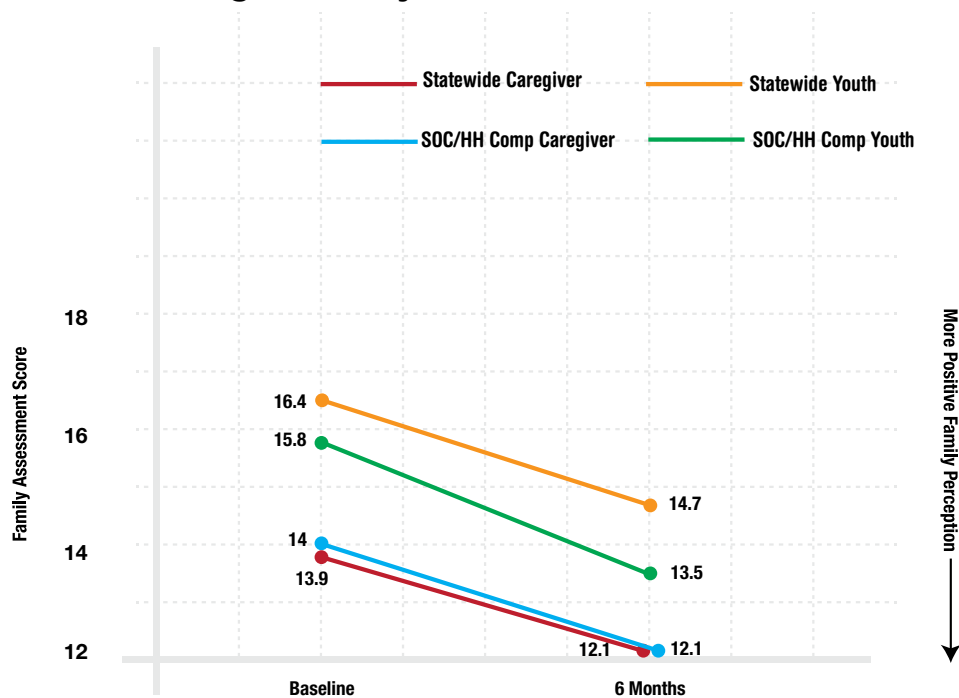
Significant Ohio Scales Improvement



FAMILY ASSESSMENT

In 2014 OKSOC began using a 10-item Family Assessment (FA), developed with input from family members and youths, and designed to provide a measure of how caregivers and youths evaluate the functional health of their families. The ten scale items produce an overall score, the sensitivity and validity of which are still being assessed. Initial work comparing results from the Family Assessment with the Ohio Scales have shown the new family instrument scores logically compared to the Ohio Scales – higher levels of Ohio Scales impairment associating strongly with higher (worse) scores on the FA. The charts below show how the 2016 youth cohorts (Health Homes overall and SOC/HH separately) scored initially on the FA and how those scores changed over the first 6 months of service.

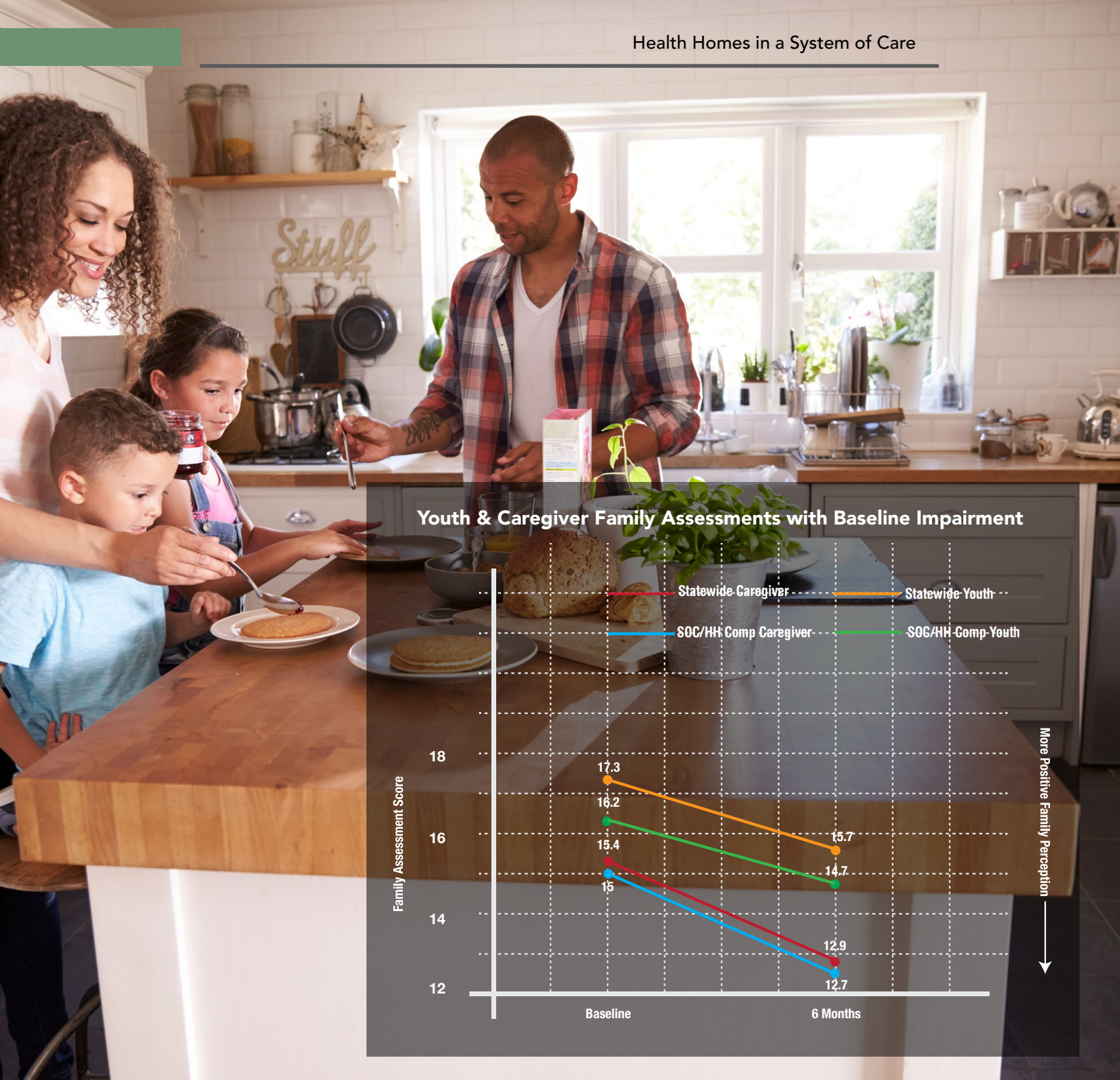
Youth & Caregiver Family Assessments (Baseline & 6 Month)



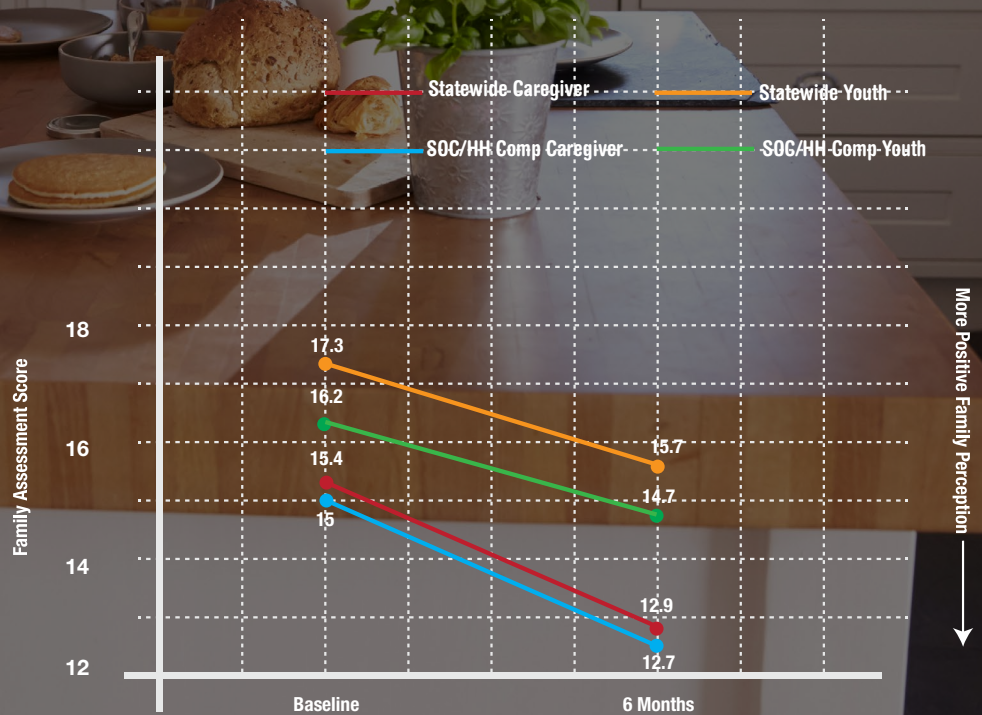
Scores on the Family Assessment, as is common with measures of this sort, tend to cluster toward the positive (lower score) end of the possible range. Thus movements of even a point or two from one assessment to another can be meaningful.

- Youth perceptions of family function have been consistently worse than those of caregivers, as illustrated by the higher average scores in the chart above.
- All HH cohorts and respondent types show substantial (clinically significant change is not yet defined), improvement from baseline to 6 months. These improvements range from 15% (Soc/HH Comp Youth) to 10% (Statewide Youth).





Youth & Caregiver Family Assessments with Baseline Impairment



When we look at Family Assessment scores for only those youths who scored in the impaired range at baseline on the Ohio Scales, some interesting associations emerge:

- Caregivers and youths rate their family functioning more poorly than the overall population (above).
- Impaired youths are again more pessimistic than caregivers, but while both youth and caregiver scores improve, caregivers show more improvement than their children. This may mean that SOC services are particularly helpful in reducing the worry and stress of parents with more behaviorally impaired children.



SUMMARY

These brief and preliminary results provide for some speculative inferences and also suggest additional questions and areas for further investigation:

- The data from the Soc/HH comparison site make it clear that outcomes for families in the Health Homes are likely to vary dramatically from provider to provider. This is not surprising, given how new many of the HH providers are to the philosophy and the service protocols of Systems of Care. The data also indicate that even providers with long SOC experience may face an adjustment curve in expanding their wraparound practices to the wider Health Homes customer base. Experienced and long-serving Systems of Care providers have the advantage of being familiar with wraparound, but they are still faced with ensuring treatment fidelity while expanding their base of trained staff. In addition, they must now include families in outcomes reporting who previously might have opted out of Systems of Care services.
- The expansion of the SOC target caseload that is required by the Health Homes model is likely to impact, at least in the short term, both the efficacy of wraparound services (and perhaps the outcomes data needed to measure that efficacy) and the demographic and diagnostic characteristics of the youths served. Adjustments in data collection and monitoring are already being undertaken to accommodate the more complicated HH environment, including streamlining the Systems of Care data system by trying to eliminate areas of duplicative data collection and adding data instruments to address the needs of new client groups – such as the 0 to 5 year-old children targeted by the new SOC² grant.
- Despite the organizational disruption and greatly increased need for training in Systems of Care approaches, the



historical outcomes registered by Systems of Care since 2004 have taken only a modest hit. Improvements in the lives and perceptions of our service families continue to be substantial and measurable. As training progresses and the fidelity of the wraparound delivered statewide continues to improve, these outcomes are likely to improve – at least for those youths receiving wraparound services.

- As Health Homes grow and mature, it is important for the evaluation to make full use of the performance data we collect to identify areas of need and of opportunity. As our ability to follow the path of children through multiple HH episodes improves, it should be possible to develop better indicators of need and acuity and to identify effective service approaches that can be shared across the statewide, integrated Health Home system.
- Factors that differentiate agencies from one another in areas of management policy and organization of work should be identified and treated as independent variables when assessing outcomes. Some of these factors could be:
 - Differences in youth characteristics and levels of case acuity produced by agency referral and recruitment processes;
 - Size and acuity (weight) of front line caseloads;
 - Levels of on-going staff training, credentialing and turnover;
 - Measures of fidelity to the wraparound model.





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