

Childhood Obesity in Primary Care: Results of a Novel Pilot Collaborative to Improve Obesity-related Risk Assessment at Well-child Visits



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Background & Objective

- A gap remains between the primary care provided to pediatric patients and present standards for obesity prevention and treatment. Systems-level quality improvement (QI) processes are likely needed.
- However, because relevant QI projects are often time- and resource-intensive or focused at the level of individual providers, a novel approach appears needed.
- Childhood Obesity in Primary Care (COPC)** was designed to facilitate the conduct of comprehensive obesity-related risk assessment during well child visits, including growth, behavioral, and medical risks, while enhancing the feasibility of practice team participation.
- Objective: To examine the feasibility and effectiveness of COPC, a brief, all-virtual, team-based QI collaborative to improve obesity-related care during well child visits.**

Design and Methods

COPC Project Design

- A 19-week, virtual collaborative was piloted in January-May, 2016 and repeated in January-May, 2017.
- All teams included staff in 4 roles (Lead Clinician, Clinical Staff, Office Manager, and Front Office Staff), plus locally participating providers and additional staff as desired.
- Incentives included 25 part 4 Maintenance of Certification (MOC) credits (pediatricians) and up to 9 Continuing Medical Education (CME) credits (clinical staff).
- Team leaders attended 4 national webinars, held 4 local meetings, and led local implementation efforts.
- Provided resources included tools to assess 3 aspects of obesity-related risk (i.e., growth, behavioral, and medical risks), a comprehensive algorithm, 6 CME modules, and ongoing technical assistance.

Participation

- Round 1 included 11 teams, 35 providers, and 37 staff.
- Round 2 included 23 teams, 110 providers, and 64 staff.
- Teams were diverse with respect to geographic location, urban/suburban/rural location, size/type of practice, and medical home status (i.e., NCQA PCMH recognition).

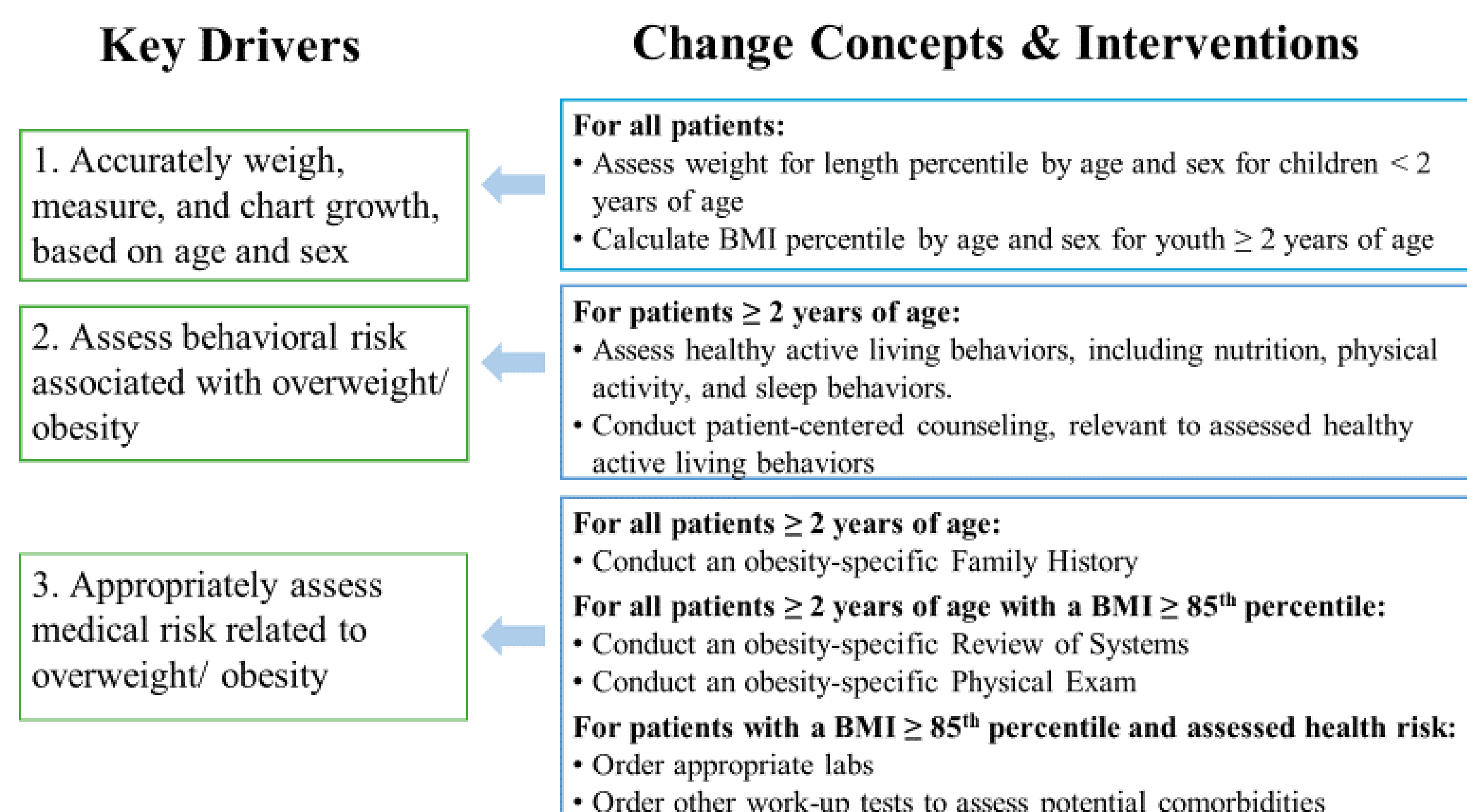
Key Data Sources

- Clinical data were submitted at 3 time points (≥ 5 most recent charts/provider; ≥ 20 charts/practice) and used to calculate up to 10 measures.
- Post-project surveys, containing Likert-type and open-ended questions, were completed by individual providers. (Round 1 response rate (RR) =74%; Round 2 RR=80%.) Key variables included assessments of provided resources, team function, COPC structure, overall satisfaction, successes, and challenges.
- Follow-up surveys were completed 10 months after COPC participation. Round 1 team leaders were re-sent final team run charts and asked to assess the sustainability of final clinical measures. (RR= 64%.)

Analysis

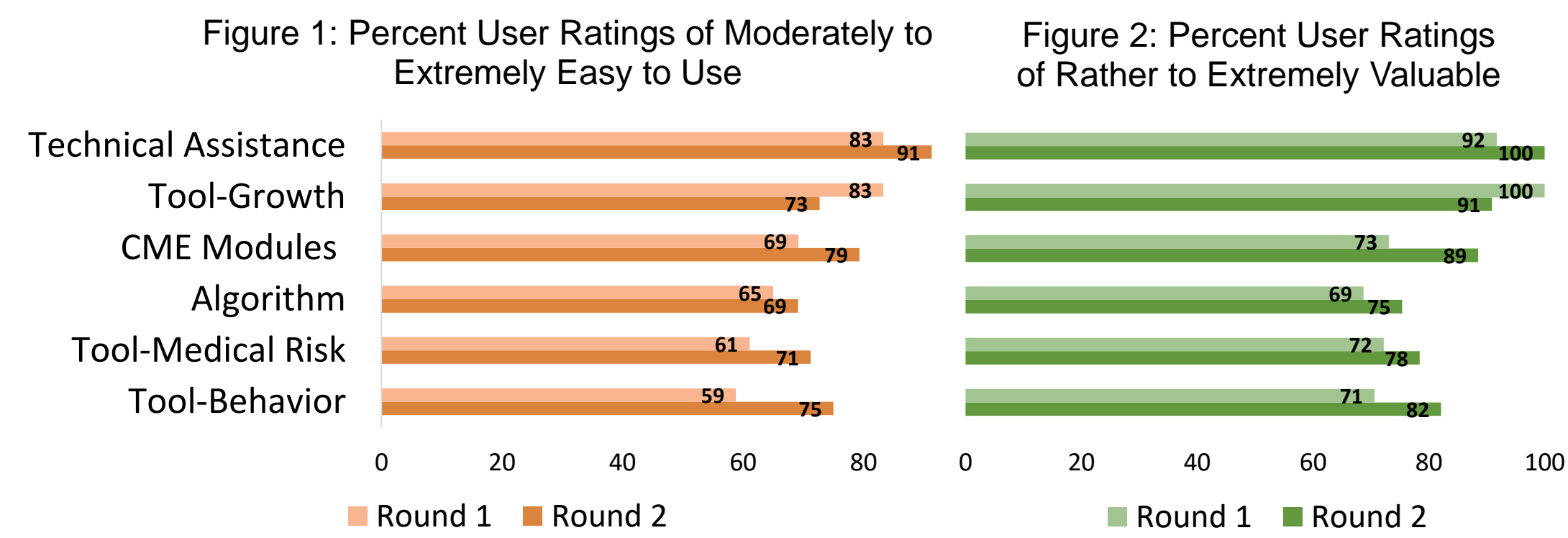
- Overall clinical measures were constructed by aggregating results across all submitted charts. Fisher's exact test was used to compare clinical measures at baseline (T1) with values at T2 and T3. Hypotheses were one-sided hypotheses (improvement) with significance set at $p < .025$ (due to 2 comparisons).
- Post- survey results are presented as descriptive statistics and common themes (if open-ended).

Key Driver Diagram



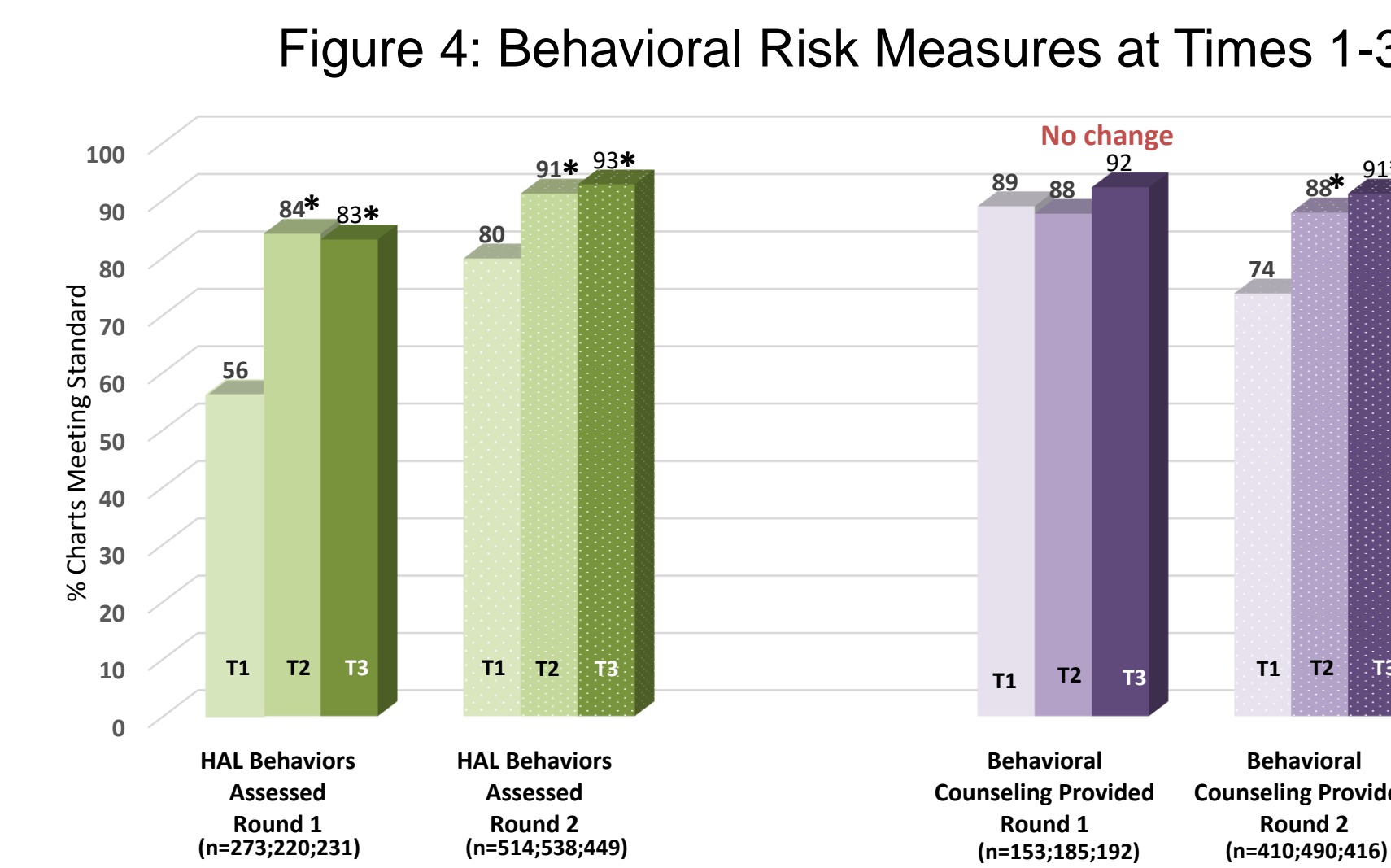
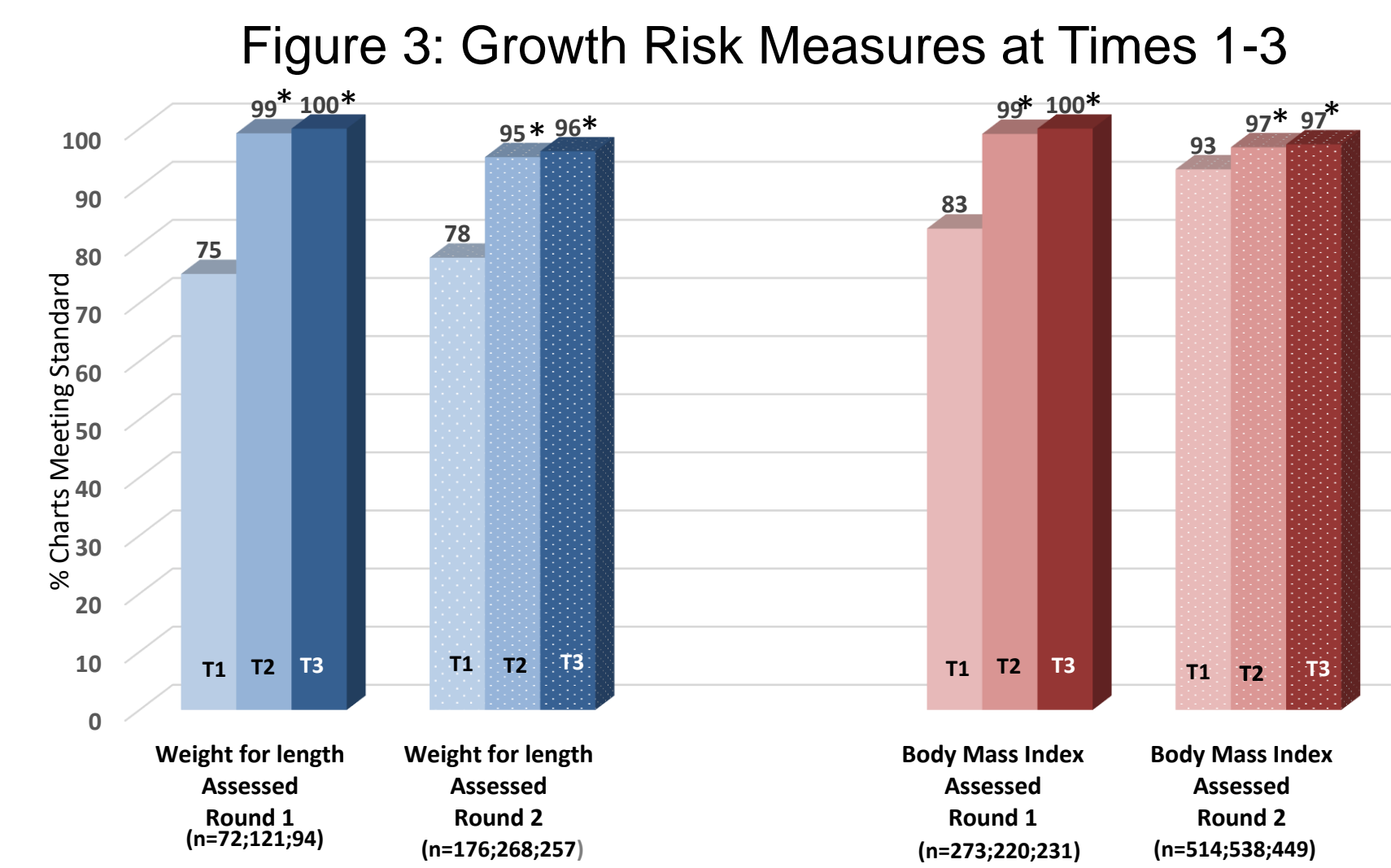
Resource Use and Perceived Value

Resource Type	% Providers Using		Most Common Tools/Resources
	Round 1 (n=26)	Round 2 (n=87)	
Growth Risk Tools	23%	25%	WHO weight-for-length charts CDC BMI-for-age growth charts
Behavioral Risk Tools	65%	64%	5-2-1-0 Healthy Habits Questionnaire
Medical Risk Tools	69%	60%	Family History /Review of Systems Tables
CME Modules	100%	100%	4 modules required for MOC
Algorithm	77%	78%	--
Technical Assistance	46%	26%	--



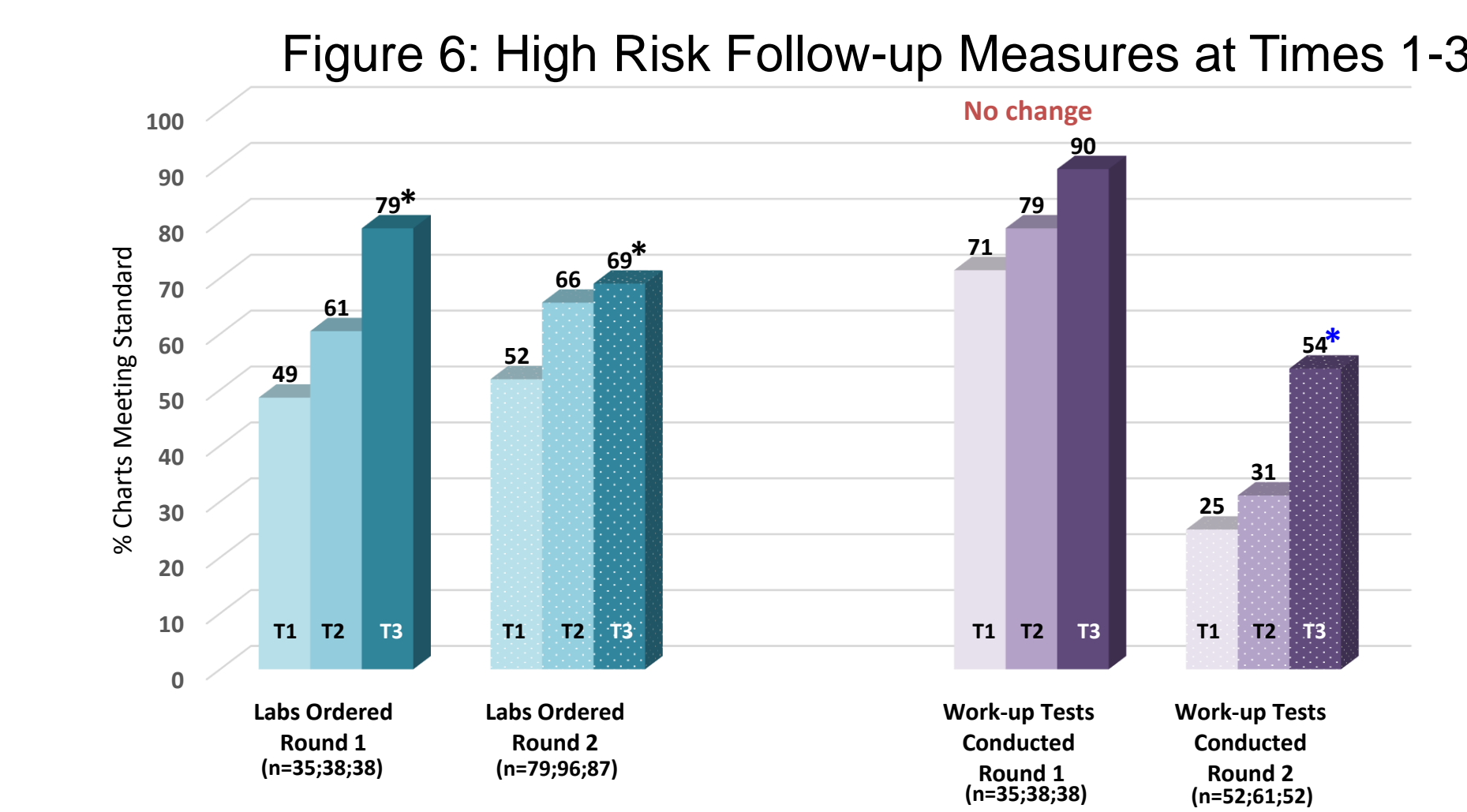
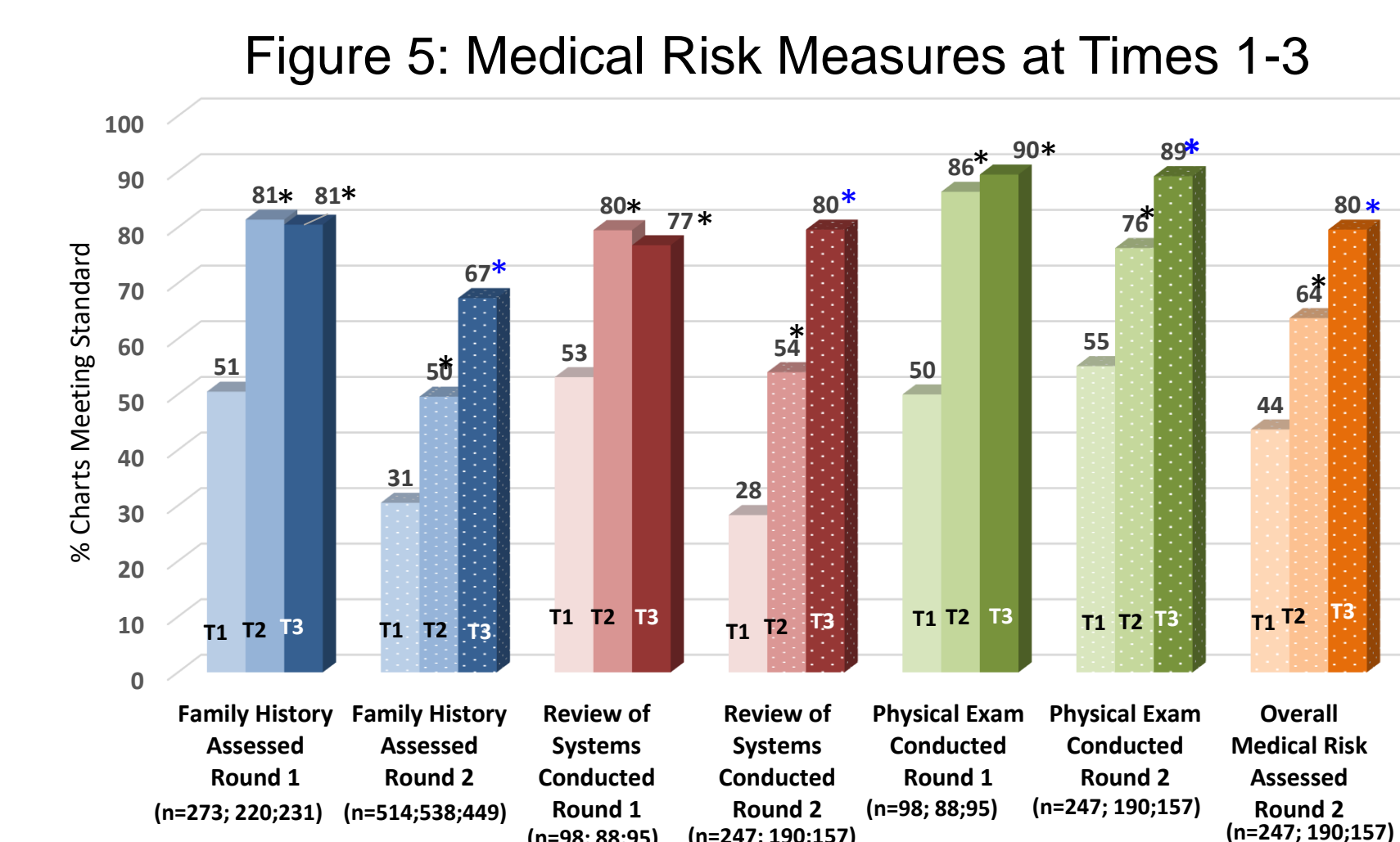
- Users rated resources from "extremely difficult to use" to "extremely easy" and perceived value from "not at all" to "extremely" valuable, with "rather valuable" above the midpoint.
- During both rounds, the majority of users rated all resources as both easy to use and valuable.

Changes in Aggregate Clinical Measures



- Despite high baseline values, both growth risk measures increased significantly (*) by T2 across rounds ($p < .01$); gains remained at T3.

- Assessments of healthy behaviors increased at T2 and T3 (*), relative to T1 values ($p < .001$).
- The provision of relevant counseling did not improve during Round 1 ($p > .025$). However, during Round 2, T2 and T3 values were significantly improved from baseline ($p < .001$).



- Compared with T1 values, all available medical risk assessment measures were improved (*) at T2 and T3 during both rounds ($p < .001$).
- During Round 2, values also increased between T2 and T3 (blue asterisks).

- Improvements in the lab measure (*) were observed by T3 during both rounds ($p < .025$).
- The work-up measure did not change during Round 1 ($p > .025$) but was modified to increase sensitivity. During Round 2, improvements were noted at T3 ($p < .01$).

Key Overall Results

Figure 7: Providers Reporting High Satisfaction Levels

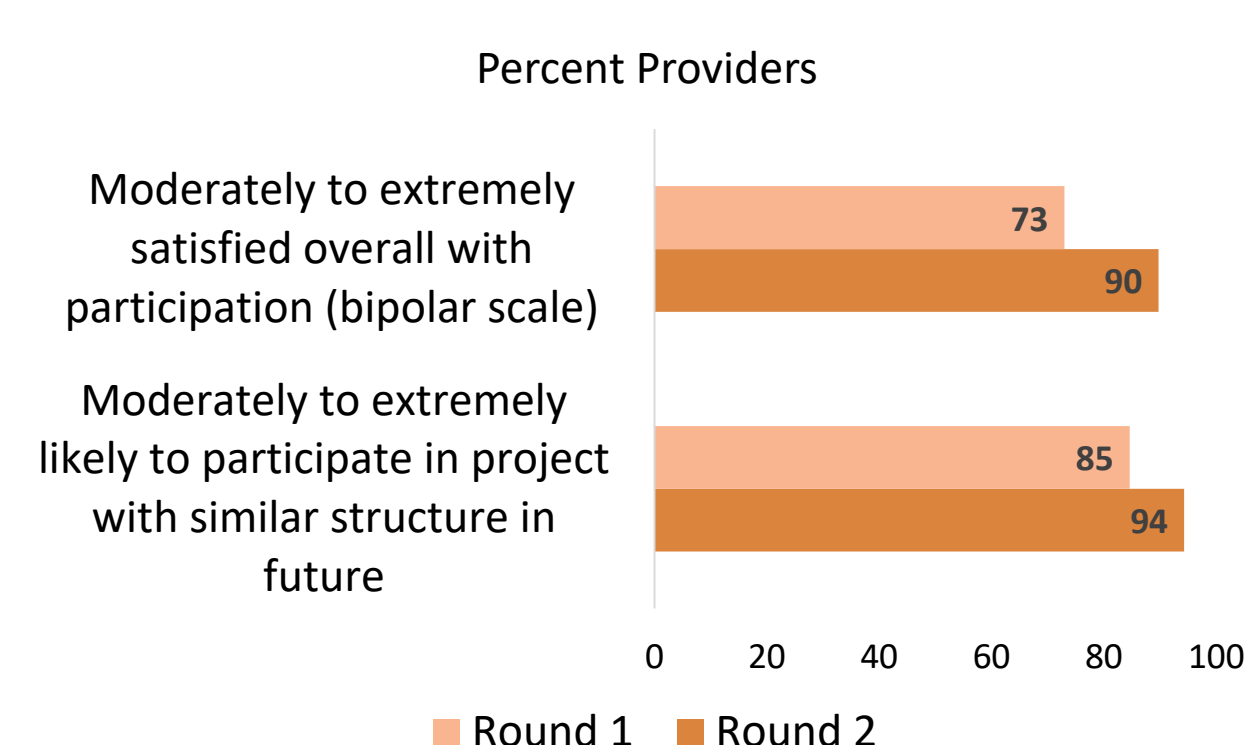
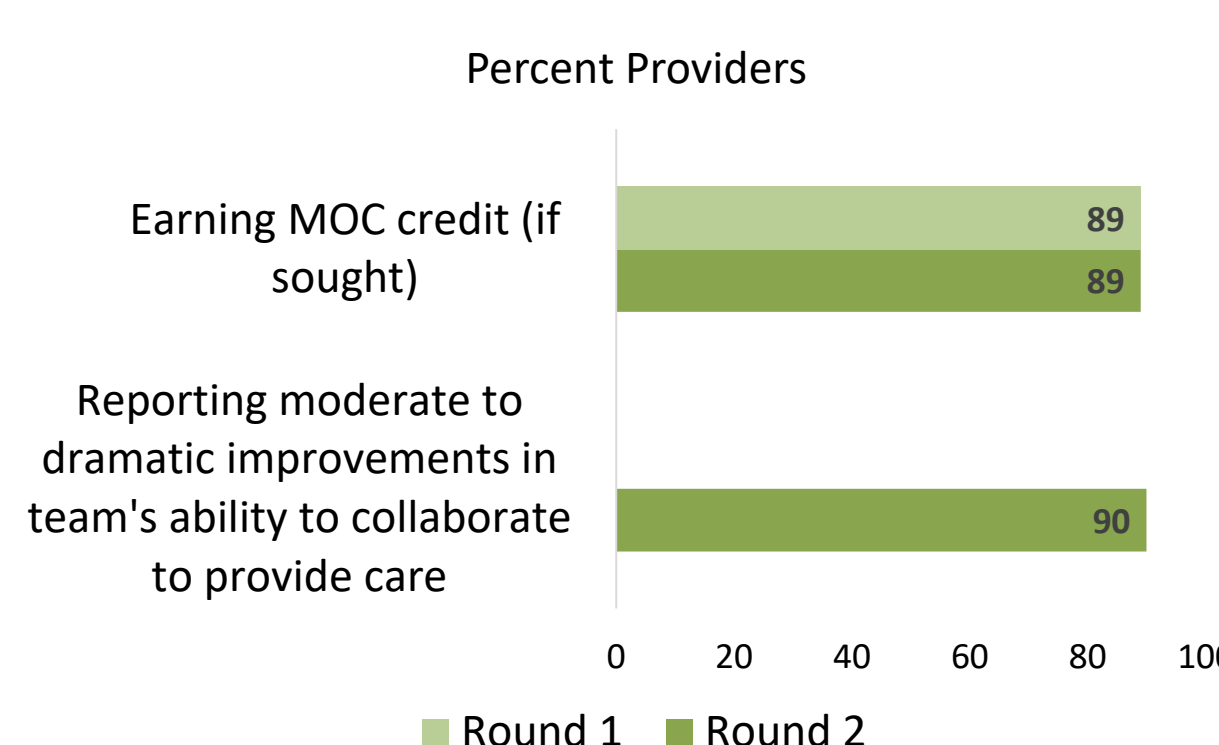


Figure 8: Providers Earning MOC Credit and Reporting Team Improvements



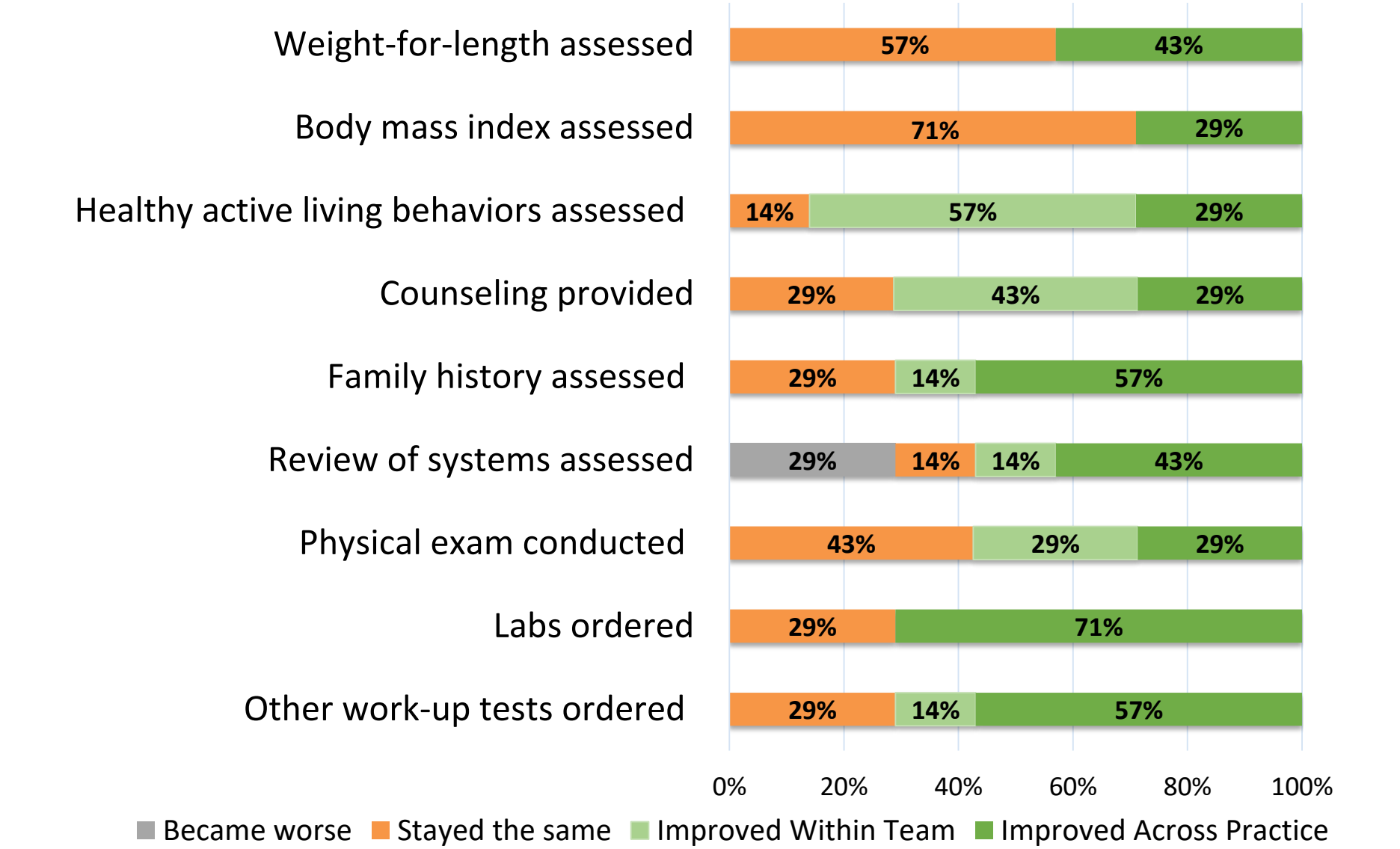
Successes & Remaining Challenges

Successes & Remaining Challenges

- "[We have] better awareness of obesity and work-up, better documentation, even of the things we already assess (ROS/PE)..."
- "It was helpful that most of the improvements could be implemented in my daily practice"
- "...the whole team is invested in making changes -- some have worked and we all worked together"
- "It will be difficult to continue the momentum regarding addressing obesity when it is not in the forefront of your work..."
- "We plan on meeting with all our providers to go over the project results and where we want to go from here."

Sustainability Assessment

Figure 9: Round 1 Follow-up Survey after 10 Months



- Responding teams reported that, since COPC, final results had generally been sustained or further improved.
- Non-responding teams tended to have lower values for clinical measures but similar patterns of improvement.

Conclusions

Summary

- Results support the feasibility and effectiveness of participation in a brief, virtual QI collaborative to facilitate the implementation of a comprehensive obesity-related risk assessment during well-child visits.
- Findings were generally consistent across rounds and supported by both clinical and survey data.
- Improvements occurred for growth and behavioral risk assessments but were particularly apparent for medical risk assessments, specific to children with overweight or obesity.
- A team approach to brief QI projects is feasible and may enhance performance.
- Improvements occurred without apparent disruption to other aspects of practice.

Limitations

- Interpretation is somewhat limited by the convenience sampling strategy used for clinical measures and the inherent self-report nature and incomplete response rates of surveys.

Next Steps

- Willing Round 2 teams will submit clinical data in October, 2017, to assess sustainability.
- Round 3 of COPC is scheduled to begin in January, 2018.

Acknowledgements

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