Should Social Determinants of Health Interventions in Primary Care Use Universal or Targeted Approach? Lessons from an Observational Cohort Study of a Universal Pediatric Primary Care Approach

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Social determinants of health are responsible for approximately 60% of health outcomes.[1] Increasingly, healthcare systems aim to address patients' health-related social needs (HRSN) through routine healthcare; questions remain about the most effective ways to do so. HRSN interventions commonly use a targeted approach to identify which patients to screen and support. Targeted approaches limit services to patients meeting specific eligibility criteria, whereas universal approaches offer services to all patients, with varied intensity (i.e., "tailoring).

DULCE (Developmental Understanding and Legal Collaboration for Everyone) is an evidence-based intervention [2] that addressees HRSN for families with infants (0-6 mo.) by embedding a community health worker (Family Specialist, "FS") in a cross-sector team in pediatric primary care settings. DULCE offers a universal approach with tailoring.

OBJECTIVE

Do families that qualify for targeted interventions using traditional eligibility criteria ("Risk Criteria Present") differ from those that only receive support through universal approaches ("Risk Criteria Absent") by:

1. Program participation and intensity
2. Healthcare utilization
3. HRSN identified and resources used

METHODS

Participants include 1677 families with 1691 infants born between January 2017 and December 2019 that received care at eight pediatric clinics implementing DULCE in three states (California, Florida, Vermont). All participants were followed through their six-month well-child visit (WCV).

We divided the cohort into two groups for comparison using published eligibility criteria from targeted, evidence-based interventions that serve families with infants: **first-time parents, teen parents, infants in foster care, and low-income families.**

Risk Criteria Present ("RCP," n = 815) families fulfilled at least one of these eligibility criteria. Risk Criteria Absent ("RCA," n = 862) had none of these observable characteristics.

We calculated descriptive statistics and used chi-squared and Mann-Whitney median tests to test for differences between RCA and RCP families across:

1. Demographics (child sex, primary and secondary caregiver roles and ages; primary caregiver marital status and race; number of adults/children in home; primary language(s) spoken at home).
2. Program participation and intensity (percent of families offered DULCE and enrolled, that completed DULCE; infant age at enrollment; number of days enrolled in DULCE; number of FS encounters; total minutes of FS-family contact time).
3. Healthcare utilization (percent of families whose infants received all WCVs on time, no show rate).
4. HRSN identified and resources used (percent of families screened for seven HRSN, screened for each HRSN domain, screened positive for one or more HRSN, screened positive for each HRSN domain; percent of families with a positive HRSN screen with resources discussed for each positive screen, using resources for each positive HRSN screen).

RESULTS

Figure 1. Program Participation, Healthcare Utilization, and HRSN Identified, by Study Group

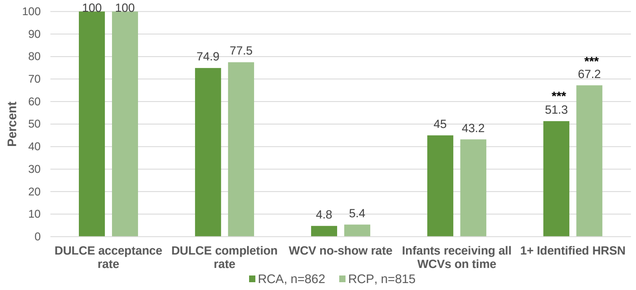
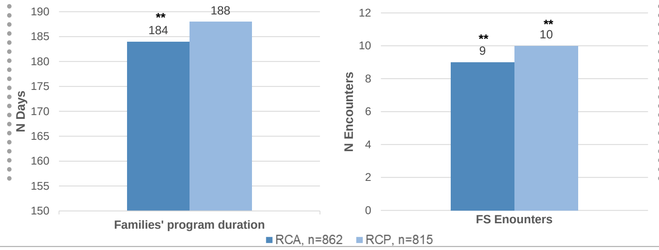


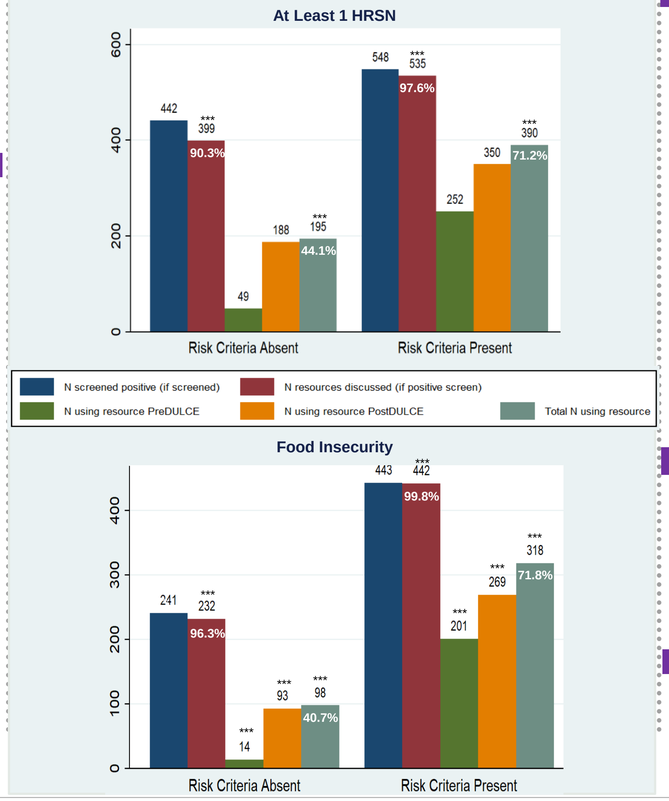
Figure 2. Program Intensity, by Study Group



Program Participation, Healthcare Utilization, and HRSN Identification Highlights (Figures 1 and 2):

- All families offered DULCE enrolled and about 75% completed the six-month program.
- Across all DULCE families, there was only a **5% no-show rate** for scheduled WCVs.
- Over half of RCA families screened positive for at least 1 HRSN.
- RCP families had significantly more encounters and stayed in the program longer.

Figure 3. Resource Discussion and Use Among Families that Screened Positive for 1+ HRSN and for Food Insecurity, by Study Group



HRSN Resource Discussion and Use Highlights (Figure 3):

- **High rates of resource discussion and resource use:** FS discussed resources with over 90% of families with HRSN; nearly half of RCA families and three-quarters of RCP families with at least 1 identified HRSN were using at least 1 resource.
- A higher proportion of RCA families using resources accessed HRSN supports while enrolled in DULCE ("PostDULCE").
- Out of the 98 RCA families using food supports (SNAP, WIC, etc.), only 14 were connected to resources at DULCE enrollment ("PreDULCE").

DISCUSSION

- DULCE demonstrated higher acceptance (100%) and completion (~75%) rates than comparable targeted interventions, which have typical acceptance and completion rates of 80% and 50%, respectively.[3]
- **FS tailored program intensity**, evidenced by RCP families' significantly higher program intensity (more FS encounters, longer program duration). More research on how tailoring occurs is needed.
- The 51% of RCA families with 1+ HRSN would likely not be eligible for targeted early childhood interventions. **Observable family characteristics may not be the most accurate predictors of risk.**
- A higher proportion of RCA families received HRSN supports while enrolled in DULCE, suggesting they were **less likely to access supports (for food insecurity, etc.) for which they were eligible** without a universal intervention. These families fell beyond the reach of the public safety net and targeted early childhood interventions.

CONCLUSIONS

DULCE's universal approach led to high uptake among all families and identified and connected many families with and without traditional risk criteria to resources. Study findings also suggest many families who need and are eligible for HRSN supports fall through the public safety net and the reach of targeted interventions. Further empirical research is needed to inform when and why universal or targeting strategies are employed when delivering early childhood interventions.

REFERENCES / NOTES

Note: Statistical significance levels are indicated as ~ ≤ .10, * ≤ .05, ** ≤ .01, *** ≤ .001 and reflect statistically significant differences between the RCA and RCP groups for each outcome.

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2. Sege, R., Preer, G., Morton, S.J., Cabral, H., Morakinyo, O., Lee, V., Abreu, C., De Vos, E. and Kaplan-Sanoff, M., 2015. Medical-legal strategies to improve infant health care: a randomized trial. *Pediatrics*, 136(1), pp.97-106.

3. MIECHV Issue Brief on Family Enrollment and Engagement. (2015). 12.