

Testing the Efficacy of Telephone-Based Early Childhood Developmental Screening and Care Coordination through 2-1-1

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Pediatric Academic Societies Meeting; April 30, 2016

BACKGROUND

- Parents of 30-40% of young children report concerns about development, behavior or learning.
- Child health providers face a number of challenges with universal developmental screening, referrals to services, and follow-up.
- In 2009, 2-1-1 Los Angeles County (211LA) developed a telephone-based developmental screening and care coordination program.
- We sought to test the efficacy of developmental screening and care coordination through 211LA, compared to usual care in a community clinic.

MEASURES and ANALYSES

- Surveys with parents in both groups at the time of enrollment assessed baseline concerns about children's development and behavior, and experiences of care with clinic providers and community services.
- We are currently conducting follow-up parent surveys, 6 and 12 months post-enrollment, in both groups.
- Extraction of key variables from children's medical records at baseline, 3, 6, 9, and 12 months post-enrollment, in both groups, include developmental surveillance and screening done, concerns identified, and referrals made.
- Analyses include logistic regression models with dichotomized primary outcomes (developmental screening/referrals done- yes or no) predicted by group assignment.

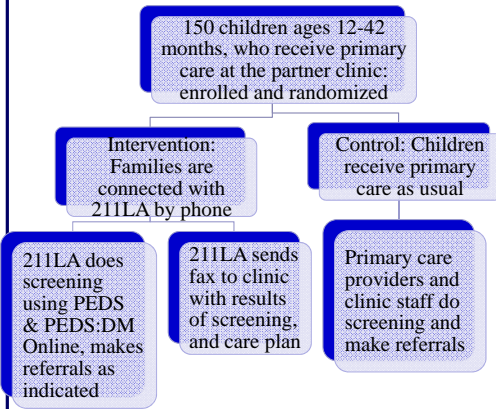
RESULTS: Screening and Referrals

| | Total | Intervention | Control | p-value |
|---|-----------|--------------|----------|---------|
| PEDS Path A/B from baseline interview or 211 | 59 (39%) | 26 (34%) | 33 (37%) | 0.28 |
| DB surveillance (EPIC milestones) done by MD? | 128 (86%) | 63 (84%) | 65 (88%) | 0.50 |
| DB concerns noted in medical record? | 15 (10%) | 8 (11%) | 7 (9%) | 0.85 |
| Validated screening tool(s) used? | 54 (36%) | 54 (71%) | 0 (0%) | 0.000 |
| Referrals to Early Intervention or special education evaluation | 24 (16%) | 20 (34%) | 4 (5%) | 0.001 |

- 211LA also makes referrals to early care and education programs like Head Start and Early Head Start, behavioral and mental health services, family literacy, and family financial support services (>90% of intervention group).
- To date, over 60% of families referred by 211LA to a community program are receiving services, and this number continues to rise with follow-up.

STUDY DESIGN and PROCEDURES

- We are conducting a randomized, controlled trial, and have recently completed recruitment, enrollment and baseline data collection.



- 211LA is conducting ongoing care coordination to follow-up and track the outcomes of referrals and address any barriers faced by families.

RESULTS: Description of Sample

| | Total | Intervention | Control | p-value |
|--|------------|--------------|------------|---------|
| Parent Surveys | 150 | 76 | 74 | |
| Child's age (months) | Mean= 24.6 | Mean= 25.8 | Mean= 23.4 | 0.10 |
| Child gender: | | | | |
| Male | 75 (50%) | 43 (57%) | 32 (43%) | 0.12 |
| Female | 75 (50%) | 33 (43%) | 42 (57%) | |
| Race/Ethnicity: | | | | |
| Hispanic/Latino | 141 (94%) | 71 (93%) | 70 (95%) | 0.76 |
| Other | 9 (6%) | 5 (7%) | 4 (5%) | |
| Primary language: | | | | |
| English | 58 (39%) | 27 (36%) | 31 (42%) | 0.49 |
| Spanish | 92 (61%) | 49 (64%) | 43 (58%) | |
| Parent's highest education: | | | | |
| Less than high school | 75 (50%) | 39 (51%) | 36 (49%) | 0.74 |
| High school graduate | 42 (28%) | 21 (28%) | 21 (28%) | |
| Some college | 25 (17%) | 12 (16%) | 13 (18%) | |
| College degree | 8 (5%) | 4 (5%) | 4 (5%) | |
| Annual household income: | | | | |
| Less than \$20,000 | 85 (66%) | 41 (62%) | 44 (70%) | 0.50 |
| \$20,000-\$35,000 | 31 | 16 (24%) | 15 (24%) | |
| \$35,000-\$70,000 | 10 | 6 (9%) | 4 (6%) | |
| > \$70,000 | 3 | 3 (5%) | 0 (0%) | |
| Developmental or behavioral (DB) concerns by parent in past 6mo? | 55 (37%) | 27 (36%) | 28 (38%) | 0.47 |
| Parent reports MD asked about DB concerns? | 81 (54%) | 43 (57%) | 38 (51%) | 0.52 |

CONCLUSIONS and NEXT STEPS

- Telephone-based early childhood developmental screening and care coordination through 2-1-1 appears to be an effective way to improve rates of validated screening tool use, and increase referrals to interventions.
- With 2-1-1 call centers across the country, this model has excellent potential for scale and spread.
- Limitations of this study include a small sample at just one clinic, with limited time to follow-up developmental outcomes.
- We plan to conduct a larger research study to test the model in multiple clinics and follow children for a longer period of time.

ACKNOWLEDGEMENTS

- Supported by a grant from the Robert Wood Johnson Foundation Public Health Services and Systems Research Program
- Many thanks to the families who participated in this study, to our partners and collaborators at 211LA, Clínica Monseñor Oscar A. Romero, and UCLA, and especially to the volunteer student interns, promotoras, and clinic staff.