stakeholders, they resulted in increased faculty satisfaction with relatively low cost and effort. Continued assessment is necessary to maintain the improvements. Future studies could investigate any association between the improved efficiency, patient safety and outcomes.

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LINKING PEDIATRIC PRIMARY CARE AND SYSTEMS: DULCE EXPANSION VIA QUALITY IMPROVEMENT ADVANCES PATIENT-CENTERED CARE AND ADDRESSES HEALTH-RELATED SOCIAL NEEDS

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Background American Academy of Pediatrics Bright Futures™ 4th edition health supervision guidelines prioritize screening for and addressing health-related social needs (HRSN) in the patient centered medical home. Time constraints, lack of knowledge of resources, and other priorities make implement-

ing these recommendations challenging. DULCE (Developmental Understanding and Legal Collaboration for Everyone) is an evidence-based intervention that embeds a community health worker in an interdisciplinary team that includes a pediatrician, mental health clinician, legal partner, and early childhood system representative to screen for and address HRSN, maternal depression, intimate partner violence, and to build on family strengths.

Objectives To adapt DULCE at five sites across the U.S., so that by July 31, 2018, 75% of families receive all routine healthcare (RHC) visits on time, 95% are screened for seven HRSN, and 90% of families with concrete supports needs and 75% of families with maternal depression or intimate partner violence needs receive support.

Methods We used a 19-month technical assistance approach with QI coaching.

Results The percent of families that completed all RHC visits on time increased from 46% to 65%. More than 94% of families were screened for HRSNs, 70% had one or more positive screen, and 88% of those were provided resources. Most prevalent needs were for financial assistance (53%), food (46%), depression support (14%) and housing stabilization (13%).

Abstract 20 Figure 1 DULCE key driver diagram

Abstract 20 Figure 2 Percent of children with all visits on time

Abstract 20 Figure 3 Percent of children with 1-month visits on time

Abstract 20 Table 1 DULCE families screened and provided resources

	Screened % (N)	+ screen % (N)	Families provided resources (among all families)	Families provided resources (among families with + screen)
Food Insecurity	98.0% (678)	46.1% (319)	45.4% (314 of 678)	98.4% (314 of 319)
Housing Instability	97.5% (675)	13.2% (91)	11.3% (78 of 675)	85.7% (78 of 91)
Housing Conditions	94.9% (657)	3.5% (24)	2.0% (14 of 657)	58.3% (14 of 24)
Financial Assistance	99.0% (685)	51.3% (355)	36.3% (251 of 685)	70.7% (251 of 355)
Utilities	96.5% (668)	2.2% (15)	1.7% (12 of 668)	80.0% (12 of 15)
Smoking	97.5% (675)	6.8% (47)	6.1% (42 of 675)	89.4% (42 of 47)
Maternal Depression	94.2% (652)	14.3% (99)	12.0% (83 of 652)	83.8% (83 of 99)
Intimate Partner Violence	96.4% (667)	5.1% (35)	3.0% (21 of 667)	60.0% (21 of 35)

Conclusions QI-supported DULCE expansion increased by 50% the proportion of children receiving all RHC visits and strengthened the healthcare system's capacity to proactively address families' needs via integration of existing resources.

21 EFFECT OF DATA QUALITY IMPROVEMENT INTERVENTION ON HEALTH MANAGEMENT INFORMATION SYSTEM DATA ACCURACY: AN INTERRUPTED TIME SERIES ANALYSIS

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Background As part of a partnership between the Institute for Healthcare Improvement and Ethiopian Federal Ministry of Health (FMOH), a Maternal and Neonatal Health (MNH) Collaborative took place between November 2016 and December 2017 aiming to accelerate reduction of maternal and neonatal mortality in Lemu Bilbilu, Tanqua Abergele and Duguna

Fango districts. Before starting the MNH Collaborative, assessments found inaccuracies in core process and outcome data obtained from Health Management Information System (HMIS) reports.

Objectives We aimed to assess the effect of an initiative to improve data quality in the MNH Collaborative.

Methods Building on the core MNH Collaborative design, data quality improvement activities were added. We used the WHO review methodology to derive a verification factor (VF) for the core measures of number of pregnant women that received antenatal care first visit, number of pregnant women that received antenatal care on at least four visits, number of pregnant women tested for syphilis and number of births attended by skilled health personnel. Impact was assessed using interrupted time series.

Results Data quality improved across all measures, for example, in Duguna Fango, the VF for number of pregnant women that received antenatal care first visit improved from 0.79 (quartiles 0.73, 0.85) pre-intervention to 0.99 (0.93, 1.00) post intervention, $p < 0.001$; and the VF for number of pregnant women tested for syphilis increased from 0.45 (0.36, 0.48) to 0.96 (0.89, 0.99), $p < 0.001$.