state with baseline data, root cause analysis, and surveys to identify common and impactful failures. A Key Driver Diagram defined leading factors. Run charts and later SPC charts captured change over time. A communication board displays ongoing work; weekly huddles evaluate progress and barriers.

Results We met and exceeded goal since in 12/2017. We have sustained our improvement with an average of 92% as of 06/2019. This work also helped decrease time from referral to consult for all clinic referrals from 65.4 business to 21 business days. Additionally, this project helped our clinic lower no-show rates from 15% to 6% making it the lowest rate for the entire Specialty Center. Furthermore, it helped increase patient volume by an average of 30 more patients per month starting 07/17 and \$375,000 increased revenue even before factoring in additional downstream revenue. During this period, patient satisfaction scores reached 93–100%.

Conclusions Standardizing, empowering the care team, and improving communication across primary and specialty care brought relief to over 800 families, connecting suffering children with the right care at the right time.

6 IMPLEMENTATION ANALYSIS OF A COMPREHENSIVE PATIENT SAFETY PROGRAM IN GUATEMALA

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Background Although patient safety programs improve clinical outcomes in a variety of settings, little is known about factors affecting successful implementation of safety programs in low and middle-income countries (LMICs).

Objectives Our goal was to investigate the implementation of a comprehensive patient safety program for pediatric care in Guatemala.

Methods We performed a mixed-methods implementation analysis of a comprehensive patient safety program in 11 pediatric units at the Roosevelt Hospital in Guatemala. The safety program was contextualized to each unit, and included assessment of the safety culture, perioperative checklists, and targeted QI interventions. We performed qualitative analysis of implementation challenges using semi-structured interviews with hospital staff (n=82) using the Consolidated Framework for Implementation Research (CFIR), with follow-up focus group interviews one year later. We also measured staff views towards implementation challenges using the quantitative Evidence Based Practice Attitude Scale (EBPAS-36). All data were triangulated to identify emerging themes as well as barriers and facilitators to implementation.

Results We classified implementation challenges within 25 CFIR constructs. We identified several emerging themes:

1) High staff receptivity to safety programs, including recognition of relevance to their patient population; 2) Importance of increasing staff knowledge and awareness about patient safety; 3) Difficulties with high patient care demands; 4) Limited governance and leadership engagement; 5) Contextualization of safety programs to local needs.

Conclusions Our study provides insight into hospital staff perspectives on implementation challenges for patient safety programs in Guatemala. Definition of implementation challenges may enhance successful adoption of safety practices in low-resource settings.

7 THE MULTIPLE SCLEROSIS CONTINUOUS QUALITY IMPROVEMENT COLLABORATIVE (MSCQI): INTERIM RESULTS OF THE 3-YEAR MULTI-CENTER PROSPECTIVE STEP-WEDGE RANDOMIZED RESEARCH STUDY

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Background MS-CQI is the first multi-center, randomized research study aiming to improve population health outcomes for people with multiple sclerosis (MS) using quality improvement (QI).

Objectives (1) benchmark performance and study variation in utilization and outcomes; (2) provide performance feedback to MS centers; and (3) compare effectiveness of QI versus usual care controls on improving outcomes.

Methods Four centers are participating following approximately 5,000 people with MS. We collect 21 Patient Reported Outcome Measures (PROMs) and 11 Electronic Health Record (EHR) measures. System-level de-identified EHR data is collected for all clinical encounters. Individual-level PROM data is collected from participants who consent. Centers are randomized to QI or usual care following a step-wedge randomized design beginning in Year 2.

Results MSCQI has recently completed Year 2. At the end of Year 1, EHR n=2,755 encounters, and PROM n=269 individuals (tables 1–3). There is significant variation in EHR findings, including proportion of patients on disease modifying therapy (DMT), MRI, ED, hospitalizations, urgent care, and relapses (table 2), as well as PROM findings (table 3) including depression, fatigue, cognition, sleep, communication, and work-related impairment. In Year 2, the first center (Center C) was randomized to QI. Center C has higher average depression and fatigue severity than the Collaborative, but has realized a reduction in quarterly relapse rate since beginning QI intervention in Quarter 4 (figure 1).

Conclusions MSCQI has succeeded in benchmarking system-level variation and has begun studying outcomes of QI intervention versus usual care. MSCQI has potential to improve