High levels of poverty, undernutrition and developmental delay, comparable with those from low- and middle-income countries, have been reported from children in the Roma community – Europe’s largest ethnic minority of 10-12 million. Despite the former being key risk factors for suboptimal early child development (ECD), no data exists on the scale of neurodevelopmental disturbances among impoverished Roma children in Slovakia. Brain stimulation interventions during the first three years of life are evidenced to have pervasive effects on ECD outcomes in such settings. However, because of their reliance on healthcare professionals, these are difficult to scale to population-level. This pilot study examined (1) rates of ECD delay and (2) whether a community- and play-based, brain stimulation intervention (the Omama intervention) had beneficial effects on neurocognitive outcomes in 2-year-old impoverished Roma children from Eastern and Central Slovakia.

Roma children (n=116), aged 24.01 (SD 4.6) months, from 11 settlements participated in the pilot: 87 (75%) and 29 (25%) were randomized to the Roma control (RC) and intervention (I) groups respectively. Caucasian, non-Roma children (n=13) comprised the non-Roma control (NRC) group. RC and NRC represent the study’s negative and positive control groups respectively. Cognitive, language, motor and behavioural outcomes were measured at 2 years on the INTERGROWTH-21st Neurodevelopment Assessment (INTER-NDA), an international, standardized, validated measure of child development for children aged 22 to 30 months. Its norms are international standards on which severe and mild-to-moderate delay for each ECD domain are defined as ≤3rd and 3–10th centiles.

The intervention, administered between 6 months and 2 years, consisted of increasingly challenging developmental tasks modelled on the Play Wisely® Curriculum, with additional components on responsive parenting and parental engagement. One-hour, home-based, weekly sessions were delivered to mothers and children by trained Roma women. Mothers were taught intervention exercises and encouraged to administer these daily to their child.

Standardized INTER-NDA domain scores, and the rates of mild-to-moderate and severe delay were compared between groups. Cognitive, gross motor, and language scores were significantly lower in RC compared to NRC and I (F=20.47, 7.86, 16.33 and 3.48 respectively; p<0.05). Fine motor scores were similar across groups. Severe delays (figure 1) were observed in RC only across all domains, except negative behavior – this was significant for cognition (17.2%, X² statistic=8.54, p=0.01). Rates of mild-to-moderate delay were lower in I than RC, across all domains except negative behavior -these differences were not statistically significant. The risk of any delay was higher in RCs than I for cognition (OR 8.36, 95% CI 1.07-65.33), gross motor (OR 1.39, 95% CI 0.36-5.30) and positive behavior (OR 1.99, 95%CI 0.62-6.37). Effect sizes were medium (g=0.64-0.77) for improvements in cognitive, gross motor and language outcomes and small (g=0.36-0.46) for positive behavior and fine motor outcomes in I when compared with RCs.

Despite the small sample size, this pilot study provides evidence of (1) high rates of ECD, particularly cognitive, delay and (2) the beneficial effects of the Omama intervention in improving neurocognitive outcomes among impoverished Roma children in Slovakia. Data collection is ongoing.
Grenada, West Indies, with a dual focus on: (1) enhancing neurodevelopment, and thereby human capital, by imparting knowledge and skills to adult caregivers that build emotional regulation and a strong social emotional connection with the child, thereby enhancing child safety, exploration, and stimulation, while (2) addressing culturally entrenched, postcolonial practices of harsh corporal punishment and related violence against children.

The Programme uses an adapted Conscious Discipline (CD) curriculum, which is a trauma-informed triune brain state model with a specific focus on adult skill-building in a context in which licks, spanks, and beatings are culturally normative despite overwhelming evidence that violence is harmful for children’s health and brain development. The curriculum is delivered to families through a home visiting program by community-based social workers (i.e., Roving Caregivers) to communities through a mobile unit (The Saving Brains Bus) and, more recently, to pre-primary schools through an adaptable coaching system administered both in-person and virtually. A key element is the Programme’s brain-based focus on safe, connected relationships in which to maintain composure, resolve conflicts, and solve problems.

A parallel single-blind waitlist-controlled trial design was used in which children from age 0-2 and their parents were enrolled in the home visiting program and assigned to a CD Intervention group versus a Waitlist Control (WC) group. The total number of parents and children under age two years enrolled in this study was 1,043, which represented 19.8% of all children under this age in Grenada at that time. A total of 752 parents and their children were recruited by the Roving Caregiver program and served as the CD Intervention group. A total of 291 parents and their children were recruited into the WC group. A total of 333 participants (Intervention: n=165; WC: n=168) remained after the data was cleaned. Upon turning 2 years of age, children were assessed and the CD Intervention group was compared to the WC Intervention group on measures of neurodevelopmental outcomes (INTERGROWTH-21st Neurodevelopment Assessment [INTER-NDA], demographics, mother pregnancy and birth outcomes, maternal mental health indicators, home environment, food security). Mothers were also assessed for attitudes and behaviors around corporal punishment.

Results demonstrated: (1) improved neurodevelopment in children; (2) significant shifts in knowledge about developmentally appropriate child rearing practices and skills among teachers, Roving Caregivers, and parents; (3) moderate shifts in attitudes toward the use of corporal punishment in teachers and Roving Caregivers, and (4) incremental shifts in attitudes toward the use of corporal punishment among parents. Whether a reduction in attitudes and behaviors toward corporal punishment is needed for improvement (or greater improvement) in neurodevelopment remains an outstanding question.

The objective of this study was to promote healthy and adequate complementary feeding practices in Acre, a state located in the Western Brazilian Amazon, through qualification of primary healthcare (PHC) professionals. Specific aims were to: (1) develop educational materials based on the Brazilian Food Guidelines for Young Children; and (2) conduct and evaluate an online asynchronous workshop among professionals.

Educational materials were developed by a multiprofessional team. Participants were invited through messages from Secretariats of Health in the state of Acre. During the workshop, communication with the participants took place through email, Instagram and WhatsApp. Activities were developed to track the participants’ accomplishments throughout the course. Summative assessment was carried out through a final questionnaire and evaluation was performed based on reach parameters previously defined by the workshop coordinators, based on indicators for the fulfillment of the project’s aims (table 1).

The workshop materials consisted of 55 videos divided in eight themes: (1) Complementary feeding: scenario and challenges, (2) Reflections on healthcare and nutrition education, (3) Food processing and conflicts of interest, (4) Importance and promotion of breastfeeding, (5) Foundations for the complementary feeding, (6) Evolution of complementary feeding: from 6 months to 2 years, (7) Child health: overcoming challenges, (8) Family meals. Contents were presented as recorded classes (interactive or not), animations (interactive or not), interviews, podcasts, movie session with synchronous discussion, and cooking videos. A total of 30 hours of learning materials were available on an online learning platform.

170 participants (67% from Acre), with a mean age of 33 years (SD 8) participated in the workshops. Most were female (90%), and nurses (45%). Other professionals included dietitians (28%), dentists (5%), and social workers (3%). Main barriers to promote adequate complementary feeding were lack of training in the subject (reported by 54% of participants) and lack of supporting materials (reported by 43%).

The Project had a high reach of PHC facilities and participants registered in the workshop, and medium reach concerning meetings with PHC coordinators and participants completing the workshop. Participants preferred contents in the format of animations and video lessons up to ten minutes long. Contents considered the most important were anthropometric evaluation of children, food processing and classification, prenatal diets and breastfeeding challenges. The Project’s workshops thus addressed the main challenge to promoting complementary feeding in the Western Brazilian Amazon: the lack of training. Maintaining high levels of synchronous interaction with participants remains a challenge of future workshops.

### Abstract VI Table 1: Expected reach: parameters defined by workshop coordinators in advance

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<th>Medium reach</th>
<th>High reach</th>
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<tr>
<td>Number of healthcare professionals and community health agents completing the workshop</td>
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<td>≥20 and &lt;40</td>
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