

## Making waves: can radio reduce child mortality?



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In *The Lancet Global Health*, Sophie Sarrassat and colleagues<sup>1</sup> report on the first cluster randomised controlled trial of a radio intervention to reduce child mortality. The study is exceptional in its design and ambition: a systematic review of 111 mass media interventions to improve child survival found that only 32 used moderate to strong evaluation designs and only one measured an actual health outcome.<sup>2</sup> This elegant Burkinabé trial bucks all trends.

Unfortunately, the study found no effect of the radio campaign on child mortality, or on any of 17 self-reported protective behaviours, except perhaps one. Using time series analyses of routinely collected health facility data, the authors reported a 7.7% increase in antenatal care attendance, a 7.3% increase in facility deliveries, and a 23.7% increase in all-cause consultations for children over 3 years of intervention. The researchers conclude that the radio campaign did not reduce child mortality but improved health service use. The fact that increases in service use from facility data are not echoed in self-reported data is puzzling, but the smaller self-report surveys might have been underpowered. Intervention areas had much lower levels of use at baseline, so it might have been easier for them to improve by a larger amount, and adjustments via confounder scores could have been insufficient to temper residual confounding in view of the substantial differences between groups at baseline.

Is the lack of effect on child mortality surprising? Perhaps not. This study wrestled with three familiar problems. First, it assumed that giving information would be sufficient for caregivers to practice behaviours that protect children: “virtually all mothers are highly motivated to protect their child with the proper knowledge of how to do so”.<sup>3</sup> This statement underestimates other social, financial, and geographic constraints on behaviour. People need capabilities and opportunities to change behaviour in addition to the knowledge and motivation that radio messages might provide.<sup>4</sup> Other community-focused interventions, such as participatory women’s groups and home visits, go beyond providing information: ideally, they build women’s, families’, and communities’ capacities to problem-solve in order to overcome social and financial barriers.<sup>5,6</sup>

However, even this approach may not be sufficient to reduce mortality, especially when access to care is key. As Sarrassat and colleagues point out, other studies identified challenges with perceived and actual quality of care in facilities in the trial areas. Interventions that generate demand must be coupled with efforts to make quality services accessible to those in need in order to achieve mortality reductions.<sup>7</sup> The Integrated Management of Neonatal and Childhood Illness approach<sup>8</sup> recognises this by highlighting the indivisibility of community, outpatient, and inpatient health facility efforts for child survival.

Finally, given widespread decreases in under-5 mortality, a challenge for any trial testing a new intervention is to reduce mortality over and above ongoing efforts. The trial was designed to detect a 20% reduction in post-neonatal child mortality over 3 years, but it is possible that reductions caused by ongoing national policy changes outpaced the intervention.

Is there a role for mass media in promoting child survival in low and middle-income countries? Undoubtedly. Campaigns focusing on fewer behaviours linked to child survival (eg, vaccination uptake) have recorded positive effects.<sup>2</sup> Future initiatives need to carefully consider equity and evaluation designs. Sarrassat and colleagues found that the intervention increased care-seeking for childhood illness among those who lived less than 2.5 km away from a facility, but not those who lived further away. Do mass media campaigns reduce or worsen inequalities in knowledge, practices, access to services, and ultimately survival? Trials incorporating a realist approach might help us understand who benefits and why.<sup>9</sup>

Few mass media campaigns are done only via local radios—many use national media and a combination of television, radio, digital, and print media. Most are also done in combination with community engagement and activities to strengthen health services. This is what makes isolating the contribution of mass media challenging. It also provides an opportunity for evaluative innovation. The Alive and Thrive initiative studied large-scale programmes to improve infant and young child feeding in Bangladesh, Ethiopia, and Vietnam. In all countries, mass media was used in varying degrees of intensity, with or without

For more on the **Alive and Thrive** initiative see <http://aliveandthrive.org>

community mobilisation and interpersonal counselling. Variations in intensity and coupling allowed evaluators to explore which aspects led to the best outcomes. The results suggest that mass media campaigns alone are usually insufficient for substantial change, and that effects on practices are more likely when campaigns are strengthened by community mobilisation and interpersonal counselling.<sup>10</sup> Trials testing varying levels of media exposure, times series, and propensity-score-matching studies could provide less clean but fairer approaches to assessing the contribution of mass media to child survival in the real world.

Could a standalone radio campaign reduce child mortality in low-income and middle-income countries? Probably not. The Burkina Faso radio trial may have provided an elegant answer to the wrong question.

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