

For more than a decade, CEP research associate **Peter Boone** and his colleagues at Effective Intervention have been running health and education programmes in some of the poorest parts of the world. As he recounts here, there have been successes and failures – but the one clear lesson is that while financing is an issue in foreign aid projects, it is by no means the most important one for saving lives or educating young children.

Aid: it's not just about the money

As a result of significant increases in foreign aid under recent governments, the UK is now the largest donor in the G7 in terms of share of GDP. But this is not something that should necessarily be comforting for taxpayers. We lack hard evidence that aid does much to reduce poverty: indeed, the most salient examples of success – elimination of smallpox, global vaccination programmes and campaigns to reduce HIV/AIDS – actually cost very little money compared with global aid budgets. More money may not be the issue.

To explore whether foreign aid can work better, in 2006, a small interdisciplinary group formed Effective Intervention with CEP's assistance. Rather than revisiting past aid failures, we undertook to create examples of aid programmes that might show success. Our focus was two-fold:

- First, we wanted to stick to simple, measurable goals, ones that directly related to helping people escape from extreme poverty. For that reason, we focused on children's health and education in some of the world's most impoverished regions.
- Second, we decided it was critical to

measure outcomes carefully. We designed our projects as randomised control trials (similar to those used for testing medical drugs) so that we could learn whether our clients, the aid recipients, truly benefitted from these projects.

We've now completed three major programmes and will have results from two more in the next few months. At their peaks, our Indian and African interventions provided roughly 20,000 children with daily after-school numeracy and literacy courses, as well as offering maternal and child health programmes to a population of 450,000. We have also created

and run 23 schools in one of the most impoverished regions of West Africa, and we're embarking on major new projects in northern India soon.

We've had successes and failures – and the contrasts between them are important. We've repeatedly learned that financing is an issue, but not the most important one. The cost of saving lives or educating young children can be kept very low.

What matters most is breaking down the myriad of obstacles that prevent both public and private education and health services from taking hold in these regions. The obstacles vary by nation and region, so there is no magic bullet, and there is much to learn from failure and success.

Our biggest failure was in Guinea-Bissau, where we implemented a three-year trial aimed at reducing child deaths. Guinea-Bissau is a lovely nation with a history of reckless management. Top officials let the country become an entrepôt for the drug trade between Latin America and Europe. There is a regular pattern of coups, 'on-again-off-again' foreign assistance, and non-payments of salaries and benefits in the public sector.

In rural regions, the public health clinics and schools hardly function and provide

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little in the way of basic services. Over one in ten children die before the age of five. And based on a survey of 9,947 children in rural villages, we found that only 27% of children aged seven to seventeen (almost all of whom had been enrolled in schools) were able to add two single digits, while just 19% could read and comprehend a simple word (Boone et al, 2013).

Health education in Guinea-Bissau

Our first project in Guinea-Bissau aimed to reduce child deaths in a sustainable way. With politics in regular turmoil and a public sector that was paid low and irregular salaries, there was no reason to believe health clinics would operate reliably in the future. So we worked with local experts to design a programme that would improve care in villages, with parents and village health workers at the centre of the solution.

We ran health education programmes to teach parents the symptoms of key

diseases that cause child deaths, and we trained health workers to provide first-line treatments for those diseases. Nurses visited villages regularly to supervise health workers, keep tabs on pregnancies and newborns, and monitor the distribution of first-line treatments for respiratory infections, malaria and diarrhoea.

To measure results carefully, we ran the programme as a randomised control trial, with experts from the London School of Hygiene and Tropical Medicine advising on the overall design and statistical analysis. After three years of running this trial, where 73 randomly selected villages (clusters) received the intervention, and 73 others were left with existing standards of care, we ‘unblinded’ the results. The conclusion was devastating: there was no statistically significant difference in deaths (Mann et al, 2009).

This result was a huge surprise to all of us: on the ground, it seemed like the project was running beautifully, and the members of the communities that received the interventions were pleased. Even

the health minister was convinced: she prodded us to roll out the interventions to the controls well before the trial was complete because, as she put it, she saw with her own eyes how successful it was. It would have been easy to describe this programme as a great success to donors and recipients, yet our rigorous measurement proved otherwise.

While we can’t be sure of the reasons for the failure, one clear possibility is that first-line treatments are not enough. Children in these regions often have symptoms of dangerous diseases: our surveys suggest a child will be sick 10 to 20 times per year.

If the child has co-infections and becomes weak, they can quickly die. It may be that intravenous fluids and other second-line treatments are required to prevent these rapid deaths. Sadly, given the inability of the state to organise healthcare, and the lack of any private sector services in the region, families had no opportunities for reliable second-line care.



Training teachers in Guinea-Bissau: once trained for a year, the prospective teachers formed an ad hoc union and demanded sky-high salaries and lax performance conditions.

Research team ‘enumerators’ employed in the Indian trial villages – these colleagues monitored all women in their villages, tracking pregnancies and deliveries, so that we obtained accurate mortality statistics – the photo represents 50% of the team.



Healthcare and education in India

In India, we've worked on two large trials that did achieve their goals. The first was a programme to reduce neonatal deaths. In rural regions of Andhra Pradesh in the south east of the country, we randomly allocated 232 villages to receive interventions aimed at helping pregnant women and reducing neonatal deaths, with another 232 villages acting as controls.

The intervention villages received a comprehensive package of measures designed by the NICE Foundation, a local expert organisation in the health of mothers and newborns. The intervention measures included services that both the private and public sector offer, but NICE felt that women were not able to seek out required care adequately (due to lack of knowledge, costs and the difficulty of assessing the care providers).

We trained village health workers to monitor pregnant women in their villages. Nurses were hired to visit the villages bi-monthly and provide basic antenatal care as well as teaching pregnant mothers about issues surrounding safe delivery and care for their babies.

We also took advantage of ambulance services for pregnant women offered by the local government, encouraging women to use these early when needed. We worked with private clinics, which were more than happy to contract delivery services for high-risk women in our trial. In return, they implemented a protocol for treatment that NICE supervised.

At the end of the trial, the medical statisticians calculated that there were 24% fewer neonatal deaths in the intervention villages compared with the controls (Boone et al, 2017).

We embedded a second trial in this same project. Instead of providing nothing to the control villages, which is usual in randomised control trials, we offered them an education package for children attending years 2, 3 and 4. The intervention was designed by the Naandi Foundation – one of India's leading NGOs, which supports children's education.

Despite very high enrolment rates at school, children's education outcomes are poor, and Naandi is convinced that poor functioning of schools (partially driven by the lack of incentives for teachers) is the core of the problem. Since the teachers report to the state and not Naandi,

they did not feel they could change the schools directly. Their opinion was that the simplest way to raise children's literacy and numeracy outcomes was to provide classes outside regular school hours.

In our intervention villages, we trained young adults with a high school education to teach after-school classes for these children six days a week. At the end of two years of intervention, the children in the intervention villages rose approximately 25 percentiles in the scores distribution on a composite reading and numeracy test (Lakshminarayana et al, 2013).

The test was designed and implemented by an independent assessor group, and children from all control and intervention villages were tested. To put it simply, a child that was at the median in their school now rose to be in the top quartile of the distribution.

As a result of this success, we expanded both these projects to cover intervention and control villages for a further five years. While we no longer measured outcomes in comparison to randomised control villages, so we cannot be as confident of impact, our measures of outcomes did show neonatal mortality rates continuing to fall, and children seemed to perform well in classes.

Since the expanded projects were on a much larger scale – we provided 15,000 children with the after-school services, and we covered a population of 400,000 with services for pregnant women and newborns – we were particularly pleased that the cost proved to be similar to those estimated by the trial. The total cost was around £1,600 per village with a population of 1,000.

There are few incentives in the aid industry to measure outcomes properly

Lessons for foreign aid

What does this teach us about foreign aid? A lot.

First, the problems of extreme poverty today don't have simple monetary solutions, and they vary with the context, but they can be alleviated. In Guinea-Bissau, if we want to reduce child deaths sharply, we (probably) need to find an entity capable of building and maintaining a well-managed health system for many years. There simply aren't groups around that have the funding and managerial capacity to do this, and, as a result, more than 10% of children continue to die there before their fifth year.

Even though India is growing fast, and there is a functioning private and public health system, nearly one in 14 newborns die in the region in which we work. We are now embarking on another project in northern India where mortality is even higher. There are surely many routes to bring deaths down, including harnessing the benefits of the public and/or private actors, but this will require well-designed interventions.

The cost of the project we implemented – resulting in a 24% reduction in neonatal deaths, and a 25% lift in numeracy and literacy outcomes, is not large compared with global foreign aid budgets today. If we roughly assume that a population of 300 million could benefit from similar projects to improve children's education and reduce neonatal deaths in India, then the total costs based on the trials outlined above, would be around £500 million annually – this is less than one half of 1% of the global bilateral aid budgets today. It is a tiny sum compared with the potential relief.

There is a second important lesson in the education sector. Economists typically ask a simple question: if there is growing wealth and demand for education, why don't markets provide a solution?

In India, as opposed to where we work in West Africa, markets do provide solutions. In our trial region, there were plenty of private schools, and communities typically felt private services were better than public ones. But most parents either could not afford these schools, or they decided they were not worth it compared with the free state education.

Schools in Guinea-Bissau

Compared with rural India, there are no 'private schools' in the rural regions of

Guinea-Bissau in which we work. There are missionary schools, NGO-financed schools and schools created as co-operatives by adults in some villages. But our surveys suggested that none of them functioned any better than the very poor public schools. The underlying problem seems to be the myriad of difficulties encountered when attempting to create and maintain functioning schools.

Our experience when attempting to manage schools in Guinea-Bissau was sobering. Given the schools were not functioning, we agreed with the government to manage an experiment where we would open several dozen schools, with high school educated teachers similar to those in our Indian project and learn whether a carefully monitored project could provide children with a significantly better education than the state system.

This sounds simple, but we soon suffered a rollercoaster of problems. After weeding through hundreds of applications from high school trained students who wanted to become teachers, we selected around 100. We hired a teacher training organisation in Portugal to travel to Guinea-Bissau and work with these potential teachers for one year. The students received a stipend to cover living expenses, and we had an implicit agreement they would teach in villages afterwards for at least three years.

When our training course finished, we selected 48 candidates to be teachers. Then we received a shock. These candidates formed an informal union and demanded wage levels significantly higher than had been previously agreed. They also insisted that we dispense with any probationary periods in the classroom, such that low-performing teachers could not be let go.

Their wage demands amounted to three times the salary of a government minister. They visited politicians, lawyers, courts and anyone else that would listen, hoping to extort higher salaries or financial payoffs. We, fortunately, received strong support from the government and refused to entertain their demands, but it meant we lost all 48 candidates. We did eventually find alternative teachers, but we only opened half the schools we intended, and with the case mired in courts for several months, the schools took a year longer than planned to start.

So why don't markets provide a solution in Guinea-Bissau? Faced with the difficulties outlined above, imagine how hard it is for an illiterate group of parents, in a small rural village, to find a trained teacher for their children, and be confident that the teacher is actually doing a good job. Private school organisers prefer to work in urban settings where a large pool of students is available, it is easier to find and supervise teachers, and incomes are higher.

Foreign donors can help, but financial assistance is not the key ingredient. Teachers' wages are manageable, and actual school costs can be kept very low using local materials. The true hurdle is the myriad of problems encountered when attempting to create schools, as well as the long hard slog of maintaining the organisation and supervision required to run a good school over many years. Unless there are aid organisations dedicated to finding solutions to this, financial assistance probably won't amount to much.

The need for rigorous measurement

Our last lesson is that rigorous measurement is essential, and it needs to be done properly. Unfortunately, there are few incentives in the aid industry to measure outcomes properly.

Donors are at the core of the problem, as they often treat aid as a consumption good: it feels good to give money to needy causes, and this is enough to satisfy them. Even when agencies report that they measure outcomes carefully, a closer look at the reports usually shows serious flaws, along with conflicts of interest (because the assessor is selected and paid for by the agencies), which reduce the credibility of the findings.

As we learned in Guinea-Bissau, it would have been far more convenient, both as donors and implementers, to stick with reports from our implementation team, as well as observers and government assessors, which suggested that our programme was a remarkable success.

It isn't easy to learn about failure. It was only because we employed a large, independent research team, and managed the intervention as a rigorously designed randomised control trial, that we learned it was not providing the recipients – pregnant mothers and their children – with what we had set out to achieve.

Peter Boone is the executive chair of Effective Intervention (<http://www.effint.org>).

Further reading

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