

# NEWS IN FOCUS

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KENYA MILLENNIUM VILLAGES PROJECT



Health interventions may have reduced child death in African villages, but it isn't clear by how much.

GLOBAL HEALTH

## Poverty project opens to scrutiny

Panel set to reshape evaluation of Millennium Villages research after partial retraction of health claims.

BY DECLAN BUTLER

The Millennium Villages Project (MVP) aims to chart a course out of poverty for the most deprived people in Africa. But after being forced to partially retract the findings of a paper that included the claim that its interventions had slashed child mortality, the project is revamping its oversight to make its science more robust and determine whether its approach works.

The MVP, a joint venture between Columbia University and the non-profit organization Millennium Promise, both in New

York, is simultaneously applying a raft of aid interventions — from bed nets for malaria control to fertilizers — to help impoverished villages to meet the United Nations' eight Millennium Development Goals (MDGs), including reducing hunger, extreme poverty and the burden of major diseases, and increasing levels of primary education. The first Millennium Villages were launched in Ethiopia and Kenya in 2004 and 2005, and the project now operates in 10 African countries, reaching about

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500,000 people in 80 villages over 14 sites.

In a paper published online in *The Lancet* last month<sup>1</sup>, the project claimed a significant milestone. It reported that after three years of interventions, child mortality was decreasing three times faster in the project's villages than in the host nations in general. But the analysis was criticized for underestimating nationwide improvements in child mortality, and overestimating those in the Millennium Villages<sup>2</sup>. The paper's lead author, Paul Pronyk, later accepted that this claim had put the Millennium Village mortality reduction "in an excessively positive light"<sup>3</sup>, and retracted it. Pronyk then resigned as director of Monitoring and Evaluation at Columbia University's Center for Global Health and Economic Development.

The MVP's founder, Jeffrey Sachs, head of the Earth Institute at Columbia and a co-author of the partially retracted paper, says that the MVP research teams were too autonomous, and he regrets not having brought in external advisers earlier. "I don't want such mistakes to occur again," he says. Sachs has now created a faculty committee to oversee MVP research and increase interactions with outside researchers; he will co-chair the committee, along with Cheryl Palm, a scientist at the Earth Institute's tropical agriculture programme.

An external advisory board called the International Scientific Expert Advisory Group will oversee how the MVP assesses the impact of its work. The panel is still being assembled, but will be chaired by Robert Black, head of the department of international health at Johns Hopkins Bloomberg School of Public Health in Baltimore, Maryland. Black says that Sachs has given him a remit "to open the study to more scrutiny, to be more transparent, to be very explicit about what are the expected outcomes of the study, and to be sure that evaluation is as well done, as rigorously, as possible". Black also wants to respond to criticisms by giving external researchers access to as much of the MVP data as he can, as well as to detailed information on the project's costs, so that outsiders can have greater confidence in the project's results and cost-benefit analyses.

It is too soon to say what sort of recommendations the external panel will make on the MVP's future research in the study villages. But given that the project is already almost seven years into its planned ten-year pilot phase, the scope for change is limited, says Black. "It is ▶

► impossible to completely redesign the study, though many of us would have designed it differently,” he says.

Michael Clemens, a migration and development researcher at the Center for Global Development, an independent research institution in Washington DC, is unimpressed with the creation of the advisory panel, and argues that the MVP needs rigorous and transparent evaluation from completely independent groups. Clemens, who co-authored a letter<sup>4</sup> to *The Lancet* that led to the partial retraction of the MVP's findings, believes that the paper still has problems — in particular, a claim that the child mortality rate in Millennium Villages fell

by one-third more than that in matched comparison villages over the course of the study. “The whole study should have been retracted,” he says, adding that he has submitted a new letter to *The Lancet* to this effect.

Black says that whether the MVP ultimately proves a success or failure, it will still provide useful information, so it is important to improve its evaluation mechanisms. “I don't think it should be dismissed because it has flaws,” he says.

The UK government's Department for International Development last year launched its own £3.8-million (US\$5.9-million) independent evaluation to accompany an £11.5-million ten-year grant to create Millennium Villages

covering 30,000 people in Ghana. “A massive effort is needed to raise millions of people in Africa out of poverty. Millennium Villages represent one approach, and they could make a major contribution,” the department notes. “Such an opportunity should not be missed merely for want of evidence. But nor should scaled-up resources be committed to a model without assessing whether it is indeed a cost-effective approach.” ■

1. Pronyk, P. M. *et al. Lancet* **379**, 2179–2188 (2012).
2. Gilbert, N. *Nature* **485**, 158–159 (2012).
3. Pronyk, P. *Lancet* **379**, 1946 (2012).
4. Bump, J. B., Clemens, M. A., Demombaynes, G. & Haddad, L. *Lancet* **379**, 1945 (2012).

## RESEARCH

# Journal offers flat fee for ‘all you can publish’

Latest venture is part of an explosion of ideas for open-access publishing.

BY RICHARD VAN NOORDEN

Science-publishing ventures continually battle for market space, yet most operate on one of only two basic business models. Either subscribers pay for access, or authors pay for each publication — often thousands of dollars — with access being free. But in what publishing experts say is a radical experiment, an open-access venture called *PeerJ*, which formally announced its launch on 12 June, is carving out a fresh niche. It is asking its authors for only a one-off fee to secure a lifetime membership that will allow them to publish free, peer-reviewed research papers.

Relying on a custom-built, open-source platform to streamline its publication process, *PeerJ* aims to drive down the costs of research publishing, say its founders: Peter Binfield, who until recently was publisher of the world's largest journal, *PLoS ONE*, and Jason Hoyt, who previously worked at the research-paper-sharing site Mendeley. Their involvement is a major reason for the buzz around *PeerJ*. “I thought — wow — if the people I'm hearing about are working there — that's the sign of something happening. It makes it less crazy,” says John Wilbanks, an advocate of open access and a senior fellow at the Ewing Marion Kauffman Foundation in Kansas City, Missouri.

*PeerJ* is just one of a flurry of experiments, encouraged in part by the gathering momentum of open access, that might shape the future of research publishing. “We are seeing a Cambrian explosion of experiments with new publishing models. It's going to be an

interesting period for the next few years,” says Binfield.

Binfield hopes *PeerJ*'s growth will resemble that of *PLoS ONE*, which went from publishing some 1,000 articles in its first full year (2007) to its current 2,000 articles a month. “*PLoS ONE* is publishing so many articles that it is stretching the boundaries of what is a journal — instead, it's becoming a large, peer-reviewed repository of research articles. We're setting ourselves up for exploring that future,” says Binfield. But he adds that *PeerJ* will not need *PLoS ONE*'s volume of papers to be viable.

Whereas *PLoS ONE* charges \$1,350 per paper, *PeerJ* users pay \$299 for unlimited open-access publications and submissions, or a smaller fee (\$199 or \$99) for a limited number per year. (All authors on multi-author papers must be members, although papers with 13 or more authors need only 12 paying members.) The journal, which received undisclosed start-up support from the venture-capital fund O'Reilly Alpha-Tech Ventures in San Francisco, California, will be accepting articles from August.

Despite the low publication cost, *PeerJ*'s founders promise that, as with *PLoS ONE*, articles will be peer reviewed for scientific validity — but not for importance or impact. Other open-access journals have also adopted this policy, including Nature Publishing

Group's *Scientific Reports*. It marks a distinction from selective open-access journals such as the forthcoming *eLife*, which plans to publish only high-impact work. To avoid running out of peer reviewers, every *PeerJ* member is required each year to review at least one paper or participate in post-publication peer review.

Untangling user fees from the publication of individual articles is a significant innovation — but other radical ideas are in the pipeline. In high-energy physics, for example, a consortium called SCOAP<sup>3</sup>, which includes funding agencies and libraries, is planning to pay publishers for all the costs of publication, so that articles can be free to access and authors will not be charged directly. On 1 June, the SCOAP<sup>3</sup> initiative said that it had sent out tenders to publishers to bid for these contracts, with services expected to start in January 2014.

Other ideas under discussion include journals that charge for submissions rather than for publications; direct government funding for all publications; and research funders setting up their own publication infrastructure (much as some do with biology databases), says Cameron Neylon, recently appointed director of advocacy at the Public Library of Science in San Francisco, which publishes *PLoS ONE*.

No one knows what will work. But many say that the experiments now under way will help to reveal the true costs of sustainably publishing articles and research data. “*PeerJ* is part of the assertion that this can be done cheaper — and for that alone it will be interesting to watch,” says Neylon. ■

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