

that does not screen for previous dengue infection. As I have stated previously,⁵ as a matter of ethics, no one should have been put at risk by receiving this vaccine, even if, at the population level, this vaccine could provide a beneficial effect in terms of the number of hospital admissions and treatments.

Notably, Pang and colleagues mentioned that, in countries with a very high endemic rate of dengue virus, 90% of the population are likely to have been infected with the virus by adolescence. However, in the Philippines, children aged 9–11 years were the target for the mass vaccination programme. Dengvaxia is also being used in a mass vaccination programme in Paraná, Brazil. Since there is no indication of high endemicity in this region, this programme should also be suspended to minimise the vaccination of seronegative individuals.

It is frustrating to read such commentaries in which the authors cite a theologian from the 13th century to justify the risk of severe disease in seronegative individuals through receipt of the vaccine.

I declare no competing interests.

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- 1 Aguiar M, Stollenwerk N, Halstead SB. The risks behind Dengvaxia recommendation. *Lancet Infect Dis* 2016; **16**: 882–83.
- 2 Aguiar M, Halstead SB, Stollenwerk N. Consider stopping dengvaxia administration without immunological screening. *Expert Rev Vaccines* 2017; **16**: 301–02.
- 3 Aguiar M, Stollenwerk N, Halstead SB. The impact of the newly licensed dengue vaccine in endemic countries. *PLoS Negl Trop Dis* 2016; **10**: e0005179.
- 4 Aguiar M, Stollenwerk N. Dengvaxia efficacy dependency on serostatus: a closer look at more recent data. *Clin Infect Dis* 2018; **66**: 641–42.
- 5 Aguiar M, Stollenwerk N. Dengvaxia: age as surrogate for serostatus. *Lancet Infect Dis* 2018; **18**: 245.
- 6 Sanofi. Sanofi updates information on dengue vaccine. Nov 29, 2017. <http://mediaroom.sanofi.com/sanofi-updates-information-on-dengue-vaccine/> (accessed Nov 29, 2017).
- 7 The Lancet Infectious Diseases. The dengue vaccine dilemma. *Lancet Infect Dis* 2018; **18**: 123.

- 8 Pang T, Gubler D, Goh DYT, Ismail Z. Dengue vaccination: a more balanced approach is needed. *Lancet* 2018; **391**: 654.
- 9 WHO. Updated questions and answers related to the dengue vaccine Dengvaxia® and its use. Dec 22, 2017. http://www.who.int/immunization/diseases/dengue/q_and_a_dengue_vaccine_dengvaxia_use/en/ (accessed Dec 22, 2017).

Implementing sexual and reproductive health care in humanitarian crises

We applaud the call made by Karl Blanchet and colleagues (Nov 18, 2017, p 2287)¹ for more systematic and rigorous research on health interventions in humanitarian settings. However, we wish to highlight a key concern that the authors did not directly address in their paper: humanitarian health actors' insufficient application of existing evidence, particularly with regard to sexual and reproductive health.

Although good quality research on humanitarian health interventions is indeed scarce, some evidence does exist. Three examples illustrate this point. First, the provision of long-acting reversible contraceptives is feasible in humanitarian crises, and evidence shows that when good quality contraceptive services (including these long-acting contraceptives) are offered in such settings, women will use them.^{2–4} Yet humanitarian health providers often only offer short-acting methods or none at all.^{5,6} Second, death in the neonatal period—the first 28 days of life—is the main cause of mortality for children under 5 years of age, and countries affected by conflict and instability suffer the highest neonatal mortality.^{7,8} There are cost-effective, evidence-based interventions that can be delivered at the lowest health-care level; however, these interventions are rarely available in crisis settings.⁹ Third, we know that women and men are targeted for sexual violence in many conflict settings,¹⁰ with an estimated

one in five women in complex emergencies having suffered sexual violence.¹¹ Clinical management of rape is a minimum standard in the delivery of humanitarian health services, as set forth in guidance from the Inter-Agency Standing Committee¹² and WHO.¹³ Nevertheless, implementation of this life-saving care remains on an ad-hoc basis,⁵ even in settings where ample evidence exists that sexual violence is widespread, such as in the eastern Democratic Republic of the Congo.⁶

Further research and innovation relating to health in humanitarian crises are needed; however, research and innovation alone are insufficient to meet the health needs of crisis-affected populations. It is important that humanitarian actors apply existing evidence to reduce preventable mortality and morbidity, and to promote wellbeing. During humanitarian crises, donors, aid agencies, and ministries of health should prioritise and reinforce the application of the highest standard of health care, including for sexual and reproductive health. We already know that these interventions save lives and are feasible in humanitarian settings—now we must systematically use this evidence.

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- 1 Blanchet K, Ramesh A, Frison S, et al. Evidence on public health interventions in humanitarian crises. *Lancet* 2017; **390**: 2287–96.
- 2 Casey SE, Tshipamba M. Contraceptive availability leads to increase in use in conflict-affected Democratic Republic of the Congo: evidence from cross-sectional cluster surveys, facility assessments and service statistics. *Confl Health* 2017; **11**: 2.
- 3 Curry DW, Rattan J, Huang S, Noznesky E. Delivering high quality family planning services in crisis-affected settings II: results. *Glob Health Sci Pract* 2015; **3**: 25–33.

- 4 Casey SE, McNab SE, Tanton C, Odong J, Testa AC, Lee-Jones L. Availability of long-acting and permanent family planning methods leads to increase in use in conflict-affected northern Uganda: evidence from cross-sectional baseline and endline cluster surveys. *Glob Public Health* 2013; **8**: 284–97.
- 5 Chynoweth SK. Advancing reproductive health on the humanitarian agenda: the 2012–2014 global review. *Confl Health* 2015; **9** (suppl 1): 11.
- 6 Casey SE, Chynoweth SK, Cornier N, Gallagher MC, Wheeler EE. Progress and gaps in reproductive health services in three humanitarian settings: mixed-methods case studies. *Confl Health* 2015; **9** (suppl 1): S3.
- 7 Liu H, Oza S, Hogan D, et al. Global, regional, and national causes of under-5 mortality in 2000–15: an updated systematic analysis with implications for the Sustainable Development Goals. *Lancet* 2017; **388**: 3027–35.
- 8 Wise PH, Darmstadt GL. Confronting stillbirths and newborn deaths in areas of conflict and political instability: a neglected global imperative. *Paediatr Int Child Health* 2015; **35**: 220–26.
- 9 Bhutta ZA, Das JK, Bahl R, et al. Can available interventions end preventable deaths in mothers, newborn babies, and stillbirths, and at what cost? *Lancet* 2014; **384**: 347–70.
- 10 Ba I, Bhopal RS. Physical, mental and social consequences in civilians who have experienced war-related sexual violence: a systematic review (1981–2014). *Public Health* 2017; **142**: 121–35.
- 11 Vu A, Adam A, Wirtz A, et al. The prevalence of sexual violence among female refugees in complex humanitarian emergencies: a systematic review and meta-analysis. *PLoS Curr* 2014; **6**: ecurrents.dis.835f10778fd80ae031aac12d3b533ca7.
- 12 Inter-Agency Standing Committee. Guidelines for integrating gender-based violence interventions in humanitarian action: reducing risk, promoting resilience and aiding recovery. 2015. <https://gbvguidelines.org/en/home/> (accessed April 12, 2018).
- 13 WHO, Department of Reproductive Health and Research—UNFPA and UNHCR. Clinical management of rape survivors: developing protocols for use with refugees and internally displaced persons. Geneva: World Health Organization/United Nations High Commissioner for Refugees, 2004.

Authors' reply

In response to our Series paper¹ calling for more rigorous research on health interventions in humanitarian settings, we very much welcome the letter by Sarah Chynoweth and colleagues, which raises the important issue that humanitarian health actors can also fail to apply existing evidence, particularly with regard to sexual and reproductive health. In their letter, the authors note that there are proven examples of effective interventions for family planning, neonatal health, and sexual violence that the

humanitarian community still fail to adequately deliver.

What might explain this failure to use existing evidence? In our paper,¹ we noted several reasons why the humanitarian sector has been slow to meaningfully assess interventions, and some of these reasons could also explain the low uptake of existing evidence. One fundamental explanation is that many humanitarian actors are unaware of available evidence, and instead prefer to rely on usual practice and instinct. Changing this requires a cultural shift within humanitarian organisations, including building skills and capacity to better identify, analyse, interpret, and apply evidence (particularly from epidemiological and economic data).

The failure of the humanitarian community to adequately use evidence also suggests that researchers are not effectively communicating their findings, or that the research being done has little relevance to humanitarian actors. Addressing this shortcoming requires academic institutions to better understand the needs of operational agencies and decision makers and their perceptions on the use of evidence, and to provide more relevant and timely evidence. There are some initiatives seeking to promote humanitarian and academic research collaborations, such as the RECAP project, ALNAP, and Evidence Aid, and these should be strongly encouraged. Improved open access digital platforms are also required in order to better share information, data, and evidence among the various actors in the humanitarian system.

The failure to sufficiently use evidence-based interventions also highlights weaknesses in humanitarian governance. Donors to humanitarian agencies should have greater incentives and sanctions to require such agencies to use evidence-based approaches. Similarly, UN agencies responsible for coordinating humanitarian responses and setting normative standards should apply and enforce evidence-based approaches. The use

of evidence should not be viewed as a luxury in humanitarian settings, but as an essential means of improving humanitarian responses and as a core part of humanitarian accountability.

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- 1 Blanchet K, Ramesh A, Frison S, et al. Evidence on public health interventions in humanitarian crises. *Lancet* 2017; **390**: 2287–96.

PRIMA, non nocere: a reply from the authors

We thank John Harvin and Lillian Kao for their Comment¹ on our Article.² Harvin and Kao stated, on the basis of the results of the PRIMA trial, that we cannot conclude that there are no increased short-term risks associated with use of prophylactic mesh. The short-term results were published in *Annals of Surgery* in 2015,³ and it is true that we did not specifically power our study with the short-term outcomes in mind.

However, several meta-analyses that have pooled data regarding primary mesh augmentation have not been able to detect a significant improvement in short-term outcomes or a significant improvement in quality of life.^{2,4–8} The quality of these studies can be questioned. The small differences in quality of life that were found in the PRIMA trial, did not appear to have any clinical effect. Thus, no conclusions regarding the quality of life can be made from our study, since it was not powered to identify differences in quality of life between treatment groups.

Harvin and Kao also commented on the number of radiological examinations done in the study, and whether these were equally divided among groups. 59% of all patients received radiological examinations. We did investigate whether the percentage of radiological



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For more on **ALNAP** see <https://www.alnap.org>

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