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Background: Displacement due to conflict and persecution is occurring at levels not seen since World War Two. Exposure to conflict and displacement are risk factors for mental health disorders and substance use. We aimed to systematically review the literature about alcohol and illicit use among refugees, internally displaced people (IDPs) and asylum seekers, and identify priority areas for intervention and future research.

Methods: Structured searches of seven medical, allied health and social science databases were conducted in accordance with PRISMA guidelines, identifying 54 relevant original peer-reviewed articles. We present here findings from 41 quantitative studies, drawing preferentially on studies using validated measures to assess prevalence and risk factors for substance use.

Findings: Over two thirds of studies focused on resettled refugee populations in high-income countries, predominantly in the United States and Central Europe. Seven studies were conducted in camp settings. Most studies used cross-sectional methods (80%); only two cohort studies and one brief intervention study were identified. The highest-quality prevalence estimates of hazardous/harmful alcohol use ranged from 17%–36% in camp settings and 4%–7% in community settings. Best estimates of alcohol dependence were 4%–42% and 1%–25% in camp and community settings, respectively. Prevalence of drug dependence was below 5% in the five studies conducted in community settings, and 20% in the one study conducted in a camp setting. Male sex, trauma exposure and mental health symptoms were commonly identified as independent risk factors for substance use.

Interpretations: Our understanding of substance use among these populations remains limited, particularly in low and middle-income countries, where over 80% of the global refugee population resides. Nonetheless, best estimates suggest that as many as one in three displaced persons in camp settings may be using alcohol in harmful or hazardous ways. Less is known about illicit drug use. Findings suggest a need to integrate substance use prevention and treatment into services offered to refugees, IDPs and asylum seekers. Longitudinal research is required to examine changes in substance use across the migration trajectory. There is also a need to develop and evaluate interventions to reduce substance use and related harms among forced migrant populations.

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Three year review of anti-jiggers education and treatment intervention programming in Sabatia District, Western Province, Kenya

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Project Purpose: Jiggers (*Tunga penetrans*) is a vector-borne disease. An estimated 2 million Kenyans are affected. Limited resources from the Ministry of Health (MOH) due to competing public health priorities and no standard practice of care have made addressing this neglected disease a challenge. In partnership with the MOH and community health workers (CHWs), Students for International Development (SID) implemented three anti-jigger campaigns in 2012–2014 during May–August in Sabatia District, Western Kenya.

Structure: Consultation with dispensary staff and health district officers informed the site of intervention each year in Wunundi, Wodanga and Munungi regions, respectively. CHWs identified most severe households cases for treatment – 30 cases (2012), 120 cases (2013), 50 cases (2014). In the 2012 pilot year, treatment took place at a public health camp. Individuals soaked the infected area in potassium permanganate (PP) for 20 minutes. Project managers and CHWs did home follow-ups with: 1) home fumigation using a non-toxic insecticide 2) dispelled common myths 3) introduced accessible alternative of tobacco and petroleum jelly. 2013 year was scaled up with: 1) home cleaning with cow dung 2) fumigation 3) 10 consecutive PP treatment days 4) shoes upon completion. 2014 year held home visits (cleaning/fumigation) for 10 treatment days, and had an education emphasis.

Outcome/Evaluation: Campaigns led to a 90% case reduction rate. Consistent treatment (7–10 days) is most effective. This builds rapport between CHWs and patients, reduces stigma, and increases personal hygiene practices. Home interventions eliminate financial barriers. A pre/post count of individual's jiggers and a survey of jiggers health education (beliefs, interventions, causes) were administered by CHWs pre-, mid-, and post-intervention. Overall, there was a positive shift in health-behaviour knowledge, though a limitation of interviewer bias exists.

Going Forward: An unmet goal is quarterly follow-ups by CHWs when SID is absent. Sparse evidence for best practices of care has been challenging in guiding treatment of “severe” cases. We hope to standardize treatment guidelines with Kenya MOH and support their efforts in making this a key public health priority, through monitoring and evaluation.

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Trends in between-country health equity in Sub-Saharan Africa from 1990 to 2011: improvement, convergence and reversal

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Background: With substantial amounts of foreign aid invested in sub-Saharan Africa, it remains unclear whether health inequity in this region decreased over time.

Method: We use the World Health Organization's data about of 46 nations in sub-Saharan Africa to run a convergence model to track the variation of health indicators (under-5 mortality, U5MR

and life expectancy, LE) from 1990 to 2011. We use both σ convergence to track whether the standard deviation of the study variable decreased over time and the β convergence to track whether the less developed entities moved toward the average level in the group. Our control variables include the natural logarithm of gross domestic product per capita, the natural logarithm of health care expenditure per capita, the natural logarithm of development assistance for health per capita, and the share of urban residents in the population.

Results: The variation of U5MR between countries became smaller for the first decade of the study period. Yet this sigma convergence trend is not sustainable as after 2002 this variation of U5MR became larger. Life expectancy in Africa from 1990–2011 demonstrates a consistent convergence trend, even after controlling for the initial difference of country-level control variables.

Discussion: The lack of consistent convergence in U5MR partially result from the fact that countries with higher U5MR in 1990 eventually performed better than those countries with lower U5MRs in 1990, constituting a reversal in between-country health inequity. While domestic investment in population health remains important, international aid agencies might need to reassess the priority and focus about which countries to invest health care resources, especially in the field of early childhood health.

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Community engagement in the development of cervical cancer educational programs in rural Nigeria

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Background: In Nigeria, cervical cancer is the second most common cancer and the second leading cause of cancer deaths among women 15 to 44 years of age. About 14,089 cervical cancer cases and 8240 cervical cancer deaths occur annually. Visual Inspection with Acetic Acid (VIA) Screen and Treat approach for cervical cancer prevention has been proven as safe, effective and appropriate in resource poor settings like Nigeria; however, it needs to be complemented with cervical cancer education and awareness that resonate with the target population. This study aims to understand women's perception of cervical cancer and their preferences on cervical cancer information delivery with a view to developing culturally appropriate cervical cancer educational programs.

Methods: This qualitative study utilized semi structured one to one interviews and focus group discussions for data collection and occurred between January and March 2015 in Ifon community, Osun State. Thirty three participants purposively sampled included 15 local women, 4 peer educators, 9 cervical cancer survivors and 5 community health workers aged 20 to 69 years living or working in the target community. Informed consent was obtained from participants and participation was voluntary. Interviews and FGDs were audiotaped, transcribed and analyzed for recurring themes and patterns.

Findings: Women had little or no knowledge of cervical cancer and the availability of screening services. There were various myths

and misconceptions regarding cervical cancer, its causes and treatment. Women preferred interpersonal, one on one verbal communication with individuals familiar with the people and culture of the community such as community health workers, religious and community leaders, volunteers and survivors. They believed contextualization of cervical cancer information will improve comprehension and that the use of frequently visited forums such as village meetings, women's groups, religious gatherings, and traditional healing centres will help to reach more women with cervical cancer information.

Interpretation: Perspective of the community is vital in the development of culturally appropriate cervical cancer educational programs. Cervical cancer education initiatives should be adapted to local context. It should also be interpersonal and community driven with genuine community ownership and participation.

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The PRIDE (populations, research, interventions, diseases, exposures) model: a new framework for defining global health

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Purpose: In the decade or so since global health emerged as a common term, the global health umbrella has come to cover a wide variety of activities. Because the boundaries of the field remain undefined, many universities and research centers are uncertain about the appropriate types of activities to include their global health portfolios. We propose a five-point framework for defining the projects, programs, policies, and papers that might most appropriately be labelled as global health activities and included as priorities for institutional planning and outreach. The main points of the framework can be summarized with the acronym PRIDE.

Structure/Design: (1) Population: Global health focuses on public health issues that affect a diversity of populations and world regions. To fall under the global health umbrella, a clinical activity, research study, or intervention must have a population-focused orientation that addresses transnational issues. (2) Research: Global health uses a multidisciplinary set of comparative research methods to explore the economic, environmental, epidemiological, political, social, and other factors that influence health. Global health research also examines health transitions, identifies emerging public health priorities, and tests the effectiveness of interventions. (3) Interventions: Global health is committed to identifying, designing, implementing, and evaluating cost-effective, sustainable, and scalable technologies and interventions for improving large-scale population health status. Global health prioritizes the reduction of health disparities and the prevention of disease, disability, and premature death. (4) Diseases: Global health covers the full spectrum of health issues across the lifespan and recognizes the "one health" concept of the interconnectedness of human, animal, and ecological health. (5) Exposures: Global health uses a human rights and equity lens