role in whether or not they ultimately obtain surgery, which can guide how international stakeholders can grow sustainable surgical access.

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## Efficacy of brief interventions for mental illnesses in low- and middle-income countries

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**Introduction:** The lifetime prevalence of common mental disorders in low- and middle-income countries (LMICs) is estimated at 23%, accounting for 11.1% of the total burden of disease. However, due to few mental health resources in these countries, there is a large unmet need for treatment. Cost-effective, resource-efficient interventions could help increase the availability and accessibility of mental health services in LMICs. Brief interventions (BIs) are time-limited psychotherapies of 1-8 sessions developed to provide effective treatment at low cost and with little resource burden. They are widely used and proven effective in high-income countries, but their cross-applicability in LMIC settings is unclear.

**Purpose:** To review the published literature on the effectiveness of BIs in the treatment of mental illnesses in LMICs.

**Method:** A systematic search of the PubMed database was conducted to identify English-language articles published up to October 2015, using the keywords: "mental disorder", "mental health", "brief intervention", and "low and middle income countries". Additionally, a manual search of the reference lists of sourced articles was performed.

**Results:** A total of 16 studies were found. The majority of these studies examined BIs for depression and anxiety (n=6), followed by posttraumatic stress disorder (PTSD) (n=3), drug and alcohol use disorders (n=3), panic disorder (n=2), and suicide prevention (n=2). Results showed that 4-8 sessions of relaxation, problemsolving, and cognitive therapy techniques reduced symptoms of depression and/or anxiety in women; 4-6 sessions of narrative exposure therapy reduced symptoms of PTSD in refugees; single-session motivational interventions reduced moderate drug and/or alcohol use; and 7 sessions of behavioural exposure therapy reduced symptoms of panic disorder. There were mixed results for the benefit of a single information session with short-term follow-up in suicide prevention.

**Conclusion:** There is preliminary evidence that BIs are effective in treating mental illness in LMICs. Limitations of the data include the small number of studies, small samples, few randomized investigations, and high dropout rates. Given the significant unmet need for mental health care in LMICs and the potential cost- and resource- advantages of BIs, more research with larger, controlled trials would be valuable to confirm and extend these results.

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## Contraception use in communities surrounding Trujillo, Peru

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**Background:** In choosing a contraceptive method, a woman may take into account cost, availability, side effects, feasibility, and duration of use. The role that her partner plays in the selection of a method of contraception is often a consideration, as well. Partner awareness in contraception has remained largely uninvestigated in the literature. The purpose of this study was to identify trends in contraceptive use, including partner awareness, among the women of periurban Trujillo, Peru.

**Methods:** Investigators performed a standardized survey of 99 women in communities around Trujillo, Peru. Surveys were administered in the local language and were recorded and analyzed electronically to assess reported use and trends in contraception and partner awareness.

**Findings:** Results show that 38% of surveyed women have used a method in which their partner must be aware of contraceptive use (condom, female condom, sponge or jelly, withdrawal, vasectomy), while 67% of women have chosen to use a method in which their partner is not required to know (oral contraceptive, intrauterine device, implant, injection, tubal ligation, diaphragm, emergency contraception). 19% of women chose a method that did not fit into either category (lactation amenorrhea, calendar).

**Interpretation:** This data demonstrates that methods that do not require partner involvement are generally more appealing to women surveyed in these communities. This provides useful insight to providers of contraception services in these communities, as they must also consider partner awareness when providing contraceptive options and counseling.

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## Occupational hazards to ambulance providers in low and middle-income countries

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**Program/Project Purpose:** Provision of pre-hospital care in low and middle income countries (LMICs) has been traditionally modeled after systems found in developed nations. However, studies have shown that pre-hospital care providers in LMICs face occupational hazards often unaddressed in developed country models. To better characterize the spectrum of hazards faced by

ambulance providers in LMICs, a systematic review of articles was conducted.

**Structure/Method/Design:** An initial search of PubMed/Medline, Embase, Cochrane Library, Scopus, Global Health, and gray literature yielded 11366 studies. Twenty eight articles quantifying the occupational hazards faced by pre-hospital care providers in LMICs were included in the final analysis, 15 of which were cross-sectional surveys, 4 were cohort studies, and 2 were systematic or literature reviews.

**Outcome & Evaluation:** Our study revealed four major categories of hazards for pre-hospital care providers: workplace violence, poor physical and mental health, inadequate work conditions, and occupational accidents. It was found that while pre-hospital care providers in both developed and developing countries confront similar challenges, providers in developing countries often face these hazards to a greater extent. Rates of life-threatening and non-life threatening physical assault, of PTSD, and of chronically high stress levels among providers in

LMICs are greater. In addition, the poor quality or lack of equipment and safety protocols leads to greater likelihood of morbid exposure to biological hazards and radiation, while benefits such as mental health care and adequate pay are lacking. Due to public disenchantment with ambulance providers, misuse of ambulances to provide non-medical transport or by rerouting from hospitals, is routine, which leads to significant loss of time for pre-hospital care providers and is a unique challenge to particular LMICs.

**Going Forward:** Our study highlights the occupational hazards of providing pre-hospital care in LMICs and demonstrates a need for protection of these ambulance providers both by pre-hospital care systems and by local and international governments. In addition, it recommends further research into the occupational hazards of pre-hospital care in LMIC settings so that models of pre-hospital care can better account for the unique features of the environments in which they operate.

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