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Review

Reproductive health during conflict

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Key content
- Reproductive health (RH) outcomes worsen during conflict and displacement, the causes of which are considered multi-factorial.
- In conflict and displacement settings, there are unique challenges in providing emergency obstetric care.
- There has been increased recognition of the need to provide adequate RH in emergency responses.
- Providing appropriate assistance to populations affected by conflict requires continued monitoring and evaluation, and the further development of life-saving interventions.

Learning objectives
- To understand the effect of conflict on RH.
- To discuss the reasons why RH outcomes worsen during conflict and displacement.
- To consider the ways in which responses can be made during an emergency.

Ethical issues
- Should RH be considered a priority during an emergency response to conflict and disasters?
- Does offering RH assistance to conflict-affected populations put other local groups at a disadvantage?
- Will greater knowledge of how conflict and displacement affect RH help in understanding and treating refugees and asylum seekers in the UK?

Keywords: conflict / emergency / humanitarian / refugees / reproductive health

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Introduction

The act of war and its associated societal effects pose specific challenges to ensuring that the reproductive health (RH; Box 1) needs of the affected population are met. It is estimated that approximately 1.5 billion people are currently living in countries affected by conflict, fragility, or large-scale violence.[1] Conflict can negatively impact all aspects of RH,[2] directly through damage to services, gender-based violence (GBV), and forced displacement of populations, and indirectly through reductions in the availability of basic health care and breakdown of normal social institutions.

This article takes a broad definition of conflict, encompassing any armed violence between groups, including state or non-state actors, either within or between existing states. Whereas the focus is on conflict, the issues raised are applicable to most crisis settings, such as following natural disasters or economic collapse. The primary purpose of this broad review is to raise awareness among obstetric and gynaecological clinicians of the wide implications that conflict has on the RH of affected populations. The literature used in this review will also serve as an excellent resource for those who wish to read further around these topics.

Reproductive health

A universal human right

For 20 years, RH has been formally recognised as a human right; in 1994, the Women's Commission for Refugee Women and Children called for greater recognition of unmet RH needs among displaced populations, something largely ignored until then.[3] The International Conference on Population and Development,[4] held in Cairo the same year, widened the international community's definition of RH and identified it as a basic human right, recognised in law and

Box 1. Definition of reproductive health

'Within the framework of WHO's definition of health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, reproductive health addresses the reproductive processes, functions and system at all stages of life. Reproductive health, therefore, implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so.'
Source: http://www.who.int/topics/reproductive_health/en/

existing treaties,[5,6] that should be equal to women in all situations, thus recognising the rights of those who are displaced or stateless.[7] The right to RH among such groups has since moved further up the agenda with international conferences, treaties, and the formation of several high-profile collaborative groups.[8–11] Nevertheless, there remains significant scope for improvement, particularly in areas of family planning, safe termination of pregnancy, and in accessing higher-risk groups (for example, adolescents and internally displaced persons).[12]

Relevance to practice

The extent of global migration continues to rise;[13] women fleeing conflict and disaster may take huge risks in order to reach a perceived place of safety. In the UK, particularly in urban areas, migrant populations are large. Women with or without refugee status may have arrived from areas of conflict, and an understanding of the conditions and difficulties that these people have faced may enhance the way that care is delivered. The barriers of language, culture, and education may lead to frustrated and difficult consultations, for both parties. The additional trauma of war and displacement, a sense of isolation or separation, and the loss of financial security may all contribute to poor patient–clinician relationships. A working knowledge of RH during conflict allows the clinician to approach subjects sensitively with women, building a contract of trust and understanding, allowing women to gain access to the services they need. Clinicians are well placed to provide information and referral to relevant community and non-governmental organisations[14–16] serving the patient's community, or to those working with women arriving from areas of conflict.

Vulnerability and resilience

The effect of conflict on individuals and communities varies depending on their capacity to withstand the resulting complex social, political, and economic changes. As an individual's resilience to manage these shifts decreases, their vulnerability to detriment increases;[17] hence the most vulnerable members of society are likely to face the greatest risks.[1]

Although women are not an intrinsically vulnerable group (indeed there are many examples of women taking active roles in conflict and human rights abuses[18]), in many societies women continue to hold a low social status,[19] or are targets for acts of violence. Thus, a potential for increased vulnerability may be seen among women, and this has been reflected in RH outcomes during conflict and displacement. In addition, women and children disproportionately account for approximately 75% of those displaced by conflict.[20] Approximately 20% of people displaced are women of reproductive age,[21] of whom one in five will be pregnant.[20] The loss of normal social structures and health services removes women's established coping strategies. Furthermore, there is evidence that removal from the home environment significantly diminishes their personal security.[2] GBV, sexually transmitted infections (STIs; including HIV), and maternal and neonatal mortality and morbidity all flourish under these circumstances. The loss of access to adequate family planning and basic health services also increases reliance on traditional or harmful methods, including unsafe termination of pregnancy.[2] Evidence suggests that conflict will exacerbate the inequities between the most and least vulnerable groups, such that those already most marginalised will be at even greater risk.[1]

Conflict and development

High maternal mortality is frequently encountered in conflict-affected populations. Eight out of the ten countries with the highest maternal mortality ratios (MMRs) have experienced current or recent conflict.[22] Whereas poverty is an independent risk factor for poor maternal outcomes, it is also correlated with violent conflict and lack of resilience. Since World War II, 90% of conflicts have been in developing countries, Sub-Saharan Africa accounting for more conflicts than any other region.[23] Allocation of global development funding, however, has not reflected the need to prioritise these countries; between 2003 and 2006, non-conflict-affected least-developed countries received >50% higher RH funding than those affected by conflict.[24]

Humanitarian responses

A structured response to meet the RH needs of conflict-affected populations has been increasingly recognised by humanitarian actors.[11] Guidance for these actors was spearheaded by the Inter-Agency Working Group on Reproductive Health in Refugee Situations (IAWG), an international high-level collaboration which released its original *Field Manual* in 2000.[25] The manual describes the Minimum Initial Service Package (MISP) for Reproductive Health in Crises, which should be implemented at the onset of an emergency. This targets specific interventions to minimise morbidity and mortality, particularly among women and girls, including specifically designed kits for rapid deployment to field-based aid workers. All subsections of the MISP should be enacted simultaneously, with

Table 1. Minimum Initial Service Package (MISP) and comprehensive reproductive health (RH) services

RH components	Crisis Minimum RH services (MISP)	Post-crisis Comprehensive RH services
Family planning	Provide contraceptives, such as condoms, pills, injectables and intrauterine devices, to meet demand	Source and procure contraceptive supplies. Provide staff training. Establish comprehensive family planning programmes. Provide community education.
Gender-based violence (GBV)	Coordinate mechanisms to prevent sexual violence with the health and other sectors/clusters. Provide clinical care for survivors of rape. Inform community about services.	Expand medical, social, psychological, and legal care for survivors. Prevent and address other forms of GBV, including domestic violence, forced/early marriage, female genital mutilation. Provide community education. Engage men and boys in GBV programming.
Maternal and newborn care	Ensure availability of emergency obstetric and newborn care services. Establish 24/7 referral system for obstetric and newborn emergencies. Provide clean delivery packages to visibly pregnant women and birth attendants. Inform community about services.	Provide antenatal care. Provide postnatal care. Train skilled attendants in performing emergency obstetric care and newborn care. Increase access to basic and comprehensive emergency, obstetric and newborn care.
Sexually transmitted infections (STIs), including HIV, prevention and treatment	Ensure safe and rational blood transfusion practice. Ensure adherence to standard precautions. Guarantee the availability of free condoms. Provide syndromic treatment as part of routine clinical services for patients presenting for care. Provide anti-retroviral treatment for patients already taking medication, including for prevention of mother-to-child transmission, as soon as possible.	Establish comprehensive STI prevention and treatment services, including STI surveillance systems. Collaborate in establishing comprehensive HIV services as appropriate. Provide care, support and treatment for people living with HIV/AIDS. Raise awareness of prevention, care and treatment services for STIs, including HIV. Provide community education.

Reproduced with kind permission from IAWG ('MISP Cheat Sheet') [http://misp.rhrc.org/archive/pdf/cheat%20sheet/MISP%20cheat%20sheet%20rev.04%202010.pdf]

comprehensive RH services following as soon as possible (Table 1).

Conflict, displacement, and reproductive health

Maternal and newborn care

In populations experiencing low nutritional status, endemic infectious diseases (such as malaria or HIV) and poor access to healthcare facilities, the additional complications posed by conflict and displacement further increase their vulnerability. Whereas war and displacement may not always pose direct threats to the lives of pregnant women and their infants, they may exacerbate existing problems in countries that are often lacking in obstetric services.[26] In the Democratic Republic of Congo, the contrast between the war-torn east and the relatively peaceful west of the country is stark, with MMRs of 1174 and 881 deaths per 100 000 live births, respectively.[27]

Approximately 15% of displaced pregnant women will encounter a potentially life-threatening obstetric complication,[28] such as haemorrhage, sepsis, obstructed labour or eclampsia. It is estimated that 170 000 maternal deaths occur yearly during humanitarian emergencies.[29]

Appropriate and timely recognition of, and response to, obstetric emergencies is considered key to saving lives.[30] The 'three delays' model is a widely accepted explanation for the elevated maternal morbidity and mortality in resource poor settings. Delays occur in:

- recognising that there is an obstetric complication
- travelling to a medical facility
- receiving care at the facility.[31]

In the context of conflict and displacement, poor security conditions, the exodus of healthcare providers and loss of facilities, lack of transport, and difficult geographical locations result in an exacerbation of these delays, causing a deterioration in obstetric outcomes.[25,32] In crisis situations, the MISP focuses on labour, delivery, and the immediate postpartum period, as these are when the majority of complications arise (Box 2). The package aims to ensure the provision of adequate supplies, trained staff providing evidence-based interventions, and a referral system for transporting women with complications to a hospital.

Box 2. Functions provided in emergency obstetric care (EmOC) facilities

Basic EmOC

1. Administer parenteral antibiotics
2. Administer uterotonic drugs
3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia
4. Perform manual removal of placenta
5. Perform removal of retained products
6. Perform assisted vaginal delivery
7. Perform basic neonatal resuscitation

Comprehensive EmOC: all of the function provided in basic EmOC, plus

8. Perform surgery (caesarean section)
9. Perform blood transfusion

Adapted from Bailey et al.[28]

Women who are obviously pregnant but unable to reach a health centre for delivery should be given a clean delivery kit, including: soap, plastic sheets, gloves, clean razor blades, clean string for tying the umbilical cord, and cloth for drying and warming the newborn. Special attention should be given to providing this to particularly vulnerable pregnant women, including adolescents.[33]

Once conditions allow, the MISP should be expanded to meet the standards of comprehensive maternal and newborn care, providing antenatal, labour, postnatal, and newborn care.[25,33]

Following the emergency phase of a humanitarian response, when obstetric services have been established (for example in a refugee camp setting), efforts should be made to make RH services available to the local host population, and for returning refugee communities. This follows evidence that the maternal and neonatal outcomes in these more stable settings frequently improve beyond those of the country-of-origin and the host population.[34,35]

Gender-based violence

Gender-based violence is a broad term used to cover any form of harmful act committed on the basis of gender. The root causes and consequences of sexual violence within conflict settings are complex.[36] Throughout history, rape has been used as a weapon by combatants, resulting in long-lasting physical, psychological, and social trauma. The violation of women can be used as means to destroy the cultural capital that they hold in a society. The incapacity of a community to protect them symbolises their humiliation by another group.[37] The experience of GBV can also be highly stigmatising for women, leading them to remain silent and not to seek appropriate physical and psychological support. In Rwanda, rape was used as an extension of the genocide, through the violation of Tutsi women who went on to bear Hutu children and through forced, bogus marriages. These were used as a means of procuring land and livestock belonging to the Tutsi women.[37] GBV may thus be considered an intentional strategy of war, alongside being a consequence of the vulnerability resulting from war more generally.

Since the mid-1990s there has been increasing awareness of the importance of integrating GBV programmes into broader RH services in conflict. The focus has been shifting to longer-term and more comprehensive service provision including healthcare, social and emotional support, and legal and police interventions. This has included the development of prevention strategies for violence against women and children in conflict-affected areas. Efforts to ensure that there is safe passage to water and fuel sources demonstrate this recognition.[38]

Survivors of GBV require medical and psychosocial support services; awareness of how and where to access these should be clear to all sectors of the community.[33] On returning, survivors may suffer further violence from intimate partners or be ostracised from their social group. In the post-crisis period, these services should be continued and expanded to include the prevention of other forms of GBV, such as female genital mutilation, domestic violence, and forced or early marriage.[25] The fact that GBV is not necessarily purely a product of conflict, but may also exist at high rates during peacetime, is a further complication.[26] Community education programmes should be introduced, and men should be encouraged to participate in programmes combating GBV, as perpetrators, survivors, and as agents of change.[36,39]

Sexually transmitted infections and HIV

Violent conflict can increase the risk of HIV and STI transmission, and can negatively impact on treatment in multiple ways. Although STI programming is not included in the MISP, it should be integrated as soon as possible into any humanitarian response.[25]

HIV vulnerability is increased in four key ways:

- through increased population movement to higher prevalence areas
- by reducing access to HIV services and disrupting health infrastructure
- by breaking down social support structures, leading to increases in sexual violence and abuse
- through earlier initiation of sexual activity among young people in conflict.[25,40]

People living with HIV are less resilient to some of the consequences of conflict and displacement. They may require food supplements, access to safe drinking water and insecticide-treated nets, as they are less able to recover from water-borne diseases and are more susceptible to infection.[25]

The presence of peacekeeping forces has been associated with increased levels of commercial sex work among the local population[41] with concomitant potential for increased HIV/STI transmission. Similarly, peacekeeping forces have been identified as a high-risk group in the spread of HIV, both in their host populations, and on return to their place of origin.[42]

In regions with generalised epidemics, HIV voluntary counselling and testing should be initiated by healthcare providers as part of their standard service package as soon as possible following the stabilisation of the humanitarian situation.[25]

In circumstances preventing safe and rational blood transfusion from being achieved, it should be avoided. Rational blood transfusion means that blood should only be transfused when no alternatives exist. Safe blood transfusion requires that blood is collected only from donors with low risk of acquiring HIV and other transfusion-transmissible infections (TTIs); that all blood is screened for HIV and other TTIs; that donated blood is screened for blood group compatibility; and that safe transfusion and disposal of transfusion equipment practice is observed.[25]

Free condom provision should be ensured for peacekeepers, civilian, and military staff working in conflict-affected areas.[43] In addition, adequate supplies of male and female condoms should be considered essential items in any emergency relief supplies[43] and be provided for the local communities.[25]

From the onset of a humanitarian crisis, anti-retroviral therapy should be available for the prevention of mother-to-child transmission and it must be continued for those already receiving it. Likewise, when refugees return to their place of origin, continuation of anti-retroviral therapy should be ensured.[33]

All survivors of sexual violence should be offered post-exposure prophylaxis if the assailant is likely to have been HIV positive, or in populations where the HIV prevalence exceeds 15%.[25] This includes pregnant women.

In settings where there may only be limited laboratory services, it is recommended that a syndromic approach be taken to diagnosis and treatment of STIs. Treatment should be given on first contact with health services, avoiding the need for return visits. Healthcare providers should be aware that this approach may lead to asymptomatic cases being missed, or that there is the potential for overdiagnosis and treatment.[25]

Family planning

There is evidence that desired fertility may increase or decrease during times of conflict and displacement. There may be pressure to replace lost children and combatants, or there may be a reluctance to assume parenting responsibilities during times of insecurity. Fertility rates and desired fertility may also change as the crisis develops from an emergency through to a stabilised phase.[30]

Women may be pressured to engage in unsafe sexual practices in order to provide food and security for their families.[2] Without adequate family planning (FP) availability, unplanned pregnancies will rise, leading to an increase in termination of pregnancy, which may be illegal and unsafe.[44] There may also be a reduction in birth spacing, and increased rates of conception at the same time as additional burdens on women's health.

The disruption caused by conflict and displacement reduces women's and men's access to FP services; those using modern methods may no longer have access to supplies. Ensuring FP access should be a priority from the onset of an emergency. It should then be expanded as part of the comprehensive provision of RH services, as soon as the situation allows (Table 1). FP programming should include all sectors of the community, ensuring that they are accessible, appropriate, and culturally sensitive. This is of particular importance for populations in which men are the family decision-makers.[25]

A 2004 global evaluation found that FP services remained particularly neglected among conflict-affected people. The available options were often limited to condoms and oral contraceptives, frequently with unreliable supplies. Longer-acting and permanent forms of contraception were found to be particularly scarce.[45] These issues were highlighted in a study of FP in six conflict-affected areas in Africa, which found high demand for birth control among the populations, but low knowledge and usage of modern contraceptive methods. This reflected a lack of reliable FP commodities, skilled healthcare providers, and available facilities.[46]

Concerns about upsetting local customs, discussing matters considered taboo in some communities, and promoting FP methods and the use of condoms, have been identified as sources of discomfort for some donors. A reluctance to be associated with RH services, including safe termination of pregnancy services, has impacted on FP programming in conflict settings.[12]

Giving women and men the agency to address their FP needs is crucial to the advancement of their human rights and health status. It is estimated that contraceptive use has the potential to prevent 32% of maternal and 10% of childhood deaths, respectively, while additionally reducing levels of poverty and hunger.[47] Conflict-affected communities are not unique in having deficient FP services, particularly in Sub-Saharan Africa. Over the last decade there has been little or no reduction in unmet need for modern FP across the region.[48] It is estimated that unsafe termination of pregnancy accounts for 13% of maternal deaths per year globally, almost entirely in Africa.[44] It is therefore imperative that FP services remain in place not only during times of conflict and displacement, but during the transition and return to peace, so that long-term benefits can be achieved.

Adolescents

Adolescents caught in, and uprooted by, conflict are particularly vulnerable to sexual violence, exploitation, transactional sex, trafficking, and harmful traditional practices. Separation and disruption of the family and normal social structures, loss of peer networks, schools, and community groups can expose adolescents to unsafe RH behaviours.[25] Adolescents may find themselves heading the household, or having to make difficult adult decisions. The environment may be unfamiliar and violent, particularly for young female adolescents who may find themselves in risky situations without recognising the dangers present.

Adolescent girls may be coerced into selling sex, increasing their risk of pregnancy, unsafe termination of pregnancy, STIs and HIV, and abuse. In 1999, a study in Sierra Leone found that approximately one-third of the country's sex workers were aged <15 years, and 80% of them were unaccompanied, or were children displaced by conflict.[49] Girls and boys associated with armed groups, such as child soldiers, are often sexually active at much earlier ages. They may be forced to perform sex acts, watch sexual violence, and be exposed to sexual abuse.[50]

The recognition of adolescents' special RH needs in humanitarian settings has recently increased. In response a toolkit has been compiled to assist healthcare providers to meet the unique needs of this group during and after a humanitarian crisis.[51] There is a continuing drive to raise awareness of this group's special physical, social, and psychological needs, which should encourage participation and be culturally sensitive.

Evaluation and innovations

As with all areas of health care, monitoring and evaluation are essential elements in improving RH service provision in conflict situations. There are unique challenges in this process. These include insecure conditions, mobile populations, and unreliable quality of data, particularly where political motives may influence results. Organisations may rely on alternative means of data collection in difficult circumstances, such as through satellite photography, mobile phone data, or social networking sites in order to understand what is happening on the ground.

Aside from furthering our understanding of how conflict may affect a population's RH needs, research is also aimed at discovering which new technologies and interventions may be of benefit. For example, haemorrhage remains the leading cause of maternal mortality globally. Efforts to prevent and treat bleeding in pregnancy in resource-poor settings are applicable to the needs of conflict-affected populations. These include the increased use of misoprostol as a heat-stable and inexpensive uterotonic. Misoprostol is used as prophylaxis and treatment for bleeding in the third stage of labour, especially where delivery is anticipated to be away from healthcare facilities.[52] Uterine balloon tamponades[53] and non-pneumatic anti-shock garments[54] are also being increasingly used to manage obstetric haemorrhage in difficult circumstances, providing essential time to help overcome the aforementioned delays in reaching and receiving appropriate treatment.

Conclusion

In an increasingly globalised world, it is necessary to be aware of the conditions in which women in humanitarian emergencies may find themselves. It is a frequent occurrence for women who have left areas of conflict, possibly seeking asylum, to be seen in the clinics and hospitals of host countries. Sensitivity and recognition of the unique challenges faced by these women, and their clinical needs, by medical staff will be beneficial to their care.

The RCOG has highlighted the need to collaborate with developing countries and share skills.[51] The active engagement of academic centres and professional bodies in the humanitarian response is to be encouraged in order to enhance operations and improve advocacy.[52]

RH for conflict-affected populations has advanced substantially over the last two decades, in both the recognition of its need and the formation of response. However, much more remains to be accomplished. The changing nature of geopolitics and war, as well as negotiating access to refugees outside of formal camps (e.g. urban refugees and internally displaced persons) pose challenges to policy makers, humanitarian responders, health workers and to the populations that they aim to serve.

Contribution of authorship

BB was responsible for concept and design of the manuscript, wrote or co-wrote all sections, critical revision of the article and final approval of version to be published.

PB was responsible for concept and design of the manuscript, co-wrote sections on STI/HIV and gender-based violence, critical revision of the article and final approval of version to be published.

JB was responsible for concept and design of the manuscript, co-wrote section on family planning, critical revision of the article and final approval of version to be published.

ES was responsible for concept and design of the manuscript, critical revision of the article and final approval of version to be published.

MG was responsible for concept and design of the manuscript, critical revision of the article and final approval of version to be published.

Disclosure of interests

MG is a current member of the RCOG Guidelines Committee. BB, PB, JB, and ES declare no conflicts of interests.

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