

Review Article

Worldwide use of intrauterine contraception: a review☆☆

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Abstract

**Background:** Globally, 14.3% of women of reproductive age use intrauterine contraception (IUC), but the distribution of IUC users is strikingly nonuniform. In some countries, the percentage of women using IUC is <2%, whereas in other countries, it is >40%. Reasons for this large variation are not well documented. The aims of this review are to describe the worldwide variation in IUC utilization and to explore factors that impact utilization rates among women of reproductive age in different continents and countries.

**Study Design:** Published literature from 1982 to 2012 was reviewed, using Medline and Embase, to identify publications reporting diverse practices of IUC provision, including variation in the types of IUC available. Local experts who are active members of international advisory groups or congresses were also consulted to document variations in practice regulations, published guidelines and cost of IUC in different countries.

**Results:** Multiple factors appear to contribute to global variability in IUC use, including government policy on family planning, the types of health care providers (HCPs) who are authorized to place and remove IUC, the medicolegal environment, the availability of practical training for HCPs, cost differences and the geographical spread of clinics providing IUC services.

**Conclusions:** Our review shows that the use of IUC is influenced more by factors such as geographic differences, government policy and the HCP's educational level than by medical eligibility criteria. These factors can be influenced through education of HCPs and greater understanding among policy makers of the effectiveness and cost-effectiveness of IUC methods.

**Implications:** Globally, 14.3% of women of reproductive age use IUC, but the percentage of women using IUC is in some countries <2%, whereas in other countries, it is >40%. This paper reviews the reasons for this diverse and highlights possible starting points to improve the inclusion of IUC in contraceptive counseling.

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**Keywords:** Health care professional; Intrauterine contraception; Intrauterine device; Utilization; Variability

1. Introduction

Globally, 14.3% of women aged 15–49 years who are married or in union use intrauterine contraception (IUC) [1]. However, among women who use contraception, the percentage that use IUC varies greatly between continents/regions; from 1.8% in Oceania to 27.0% in Asia (Fig. 1) [1]. The distribution of IUC users is also geographically skewed: more than 80% of the world's IUC users live in Asia, with almost two-thirds (64%) of them living in China (Fig. 2) [1].

International experts in contraception have been suggesting that increasing the very low update rate of long-acting reversible contraception (LARC) may reduce the rate of unintended pregnancy [2]. This fact is also supported by an

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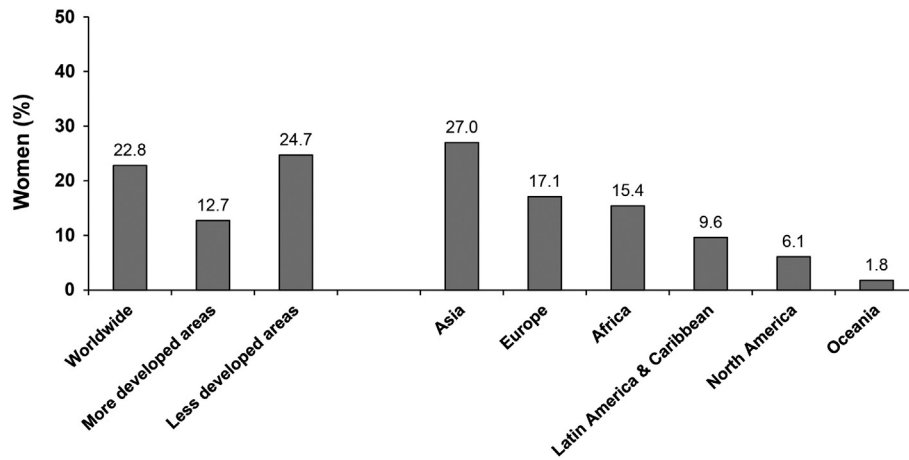


Fig. 1. Percentage of contraceptors (the subset of women who are using any form of contraception) aged 15–49 years, married or in union, who use IUC [1].

actual published study comparing different long-acting reversible contraceptives with other commonly prescribed contraceptive methods. The authors could show that the LARCs were superior to the other methods [3]. Although the evidence would suggest that these methods can be offered to most women of reproductive age, regardless of parity, in some countries only a small percentage of contraceptive users take up this method [4]. In this article, we aimed to explore the worldwide diversity of practice with regard to IUC, and the underlying factors that might explain the differences were noted. We aimed to use both the published literature and sought first-hand experience about local practices from experts across the globe.

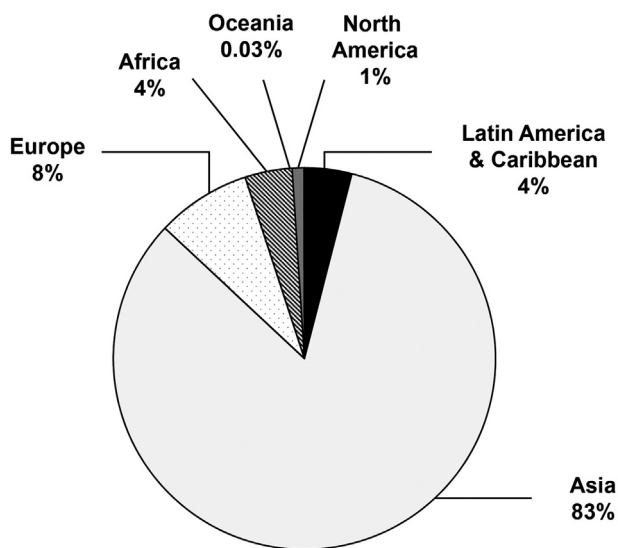


Fig. 2. Worldwide distribution of IUC users. Eighty-three percent of the world's IUC users are in Asia. The remaining 8%, 4%, 4%, 1% and 0.03% are in Europe, Latin America/Caribbean, Africa, North America and Oceania, respectively. Data have been calculated from United Nations 2011 data tables based on data from surveys of women aged 15–49 years who are married or in union [1].

## 2. Methods

We undertook a review of published literature using EMBASE, PubMed and Medline between 1982 and 2012 to explore IUC practices in various countries using the search terms “intrauterine contraception,” “IUD” “practices,” and “training.” We also drew on a pool of experts from across the globe to explore disparities that existed but that were not necessarily documented in published studies, especially variations in national guidelines, differences in placement recommendations and nation-specific differences in the costs of various types of IUC and the reimbursement systems in place. We consulted with clinicians in different countries and cross-checked information about prices and country-specific guidance from a number of sources including key professional organizations and national pharmaceutical databases.

## 3. Results

### 3.1. Geographical variability in the prevalence of IUC use

Only 62.7% of women worldwide use any form of contraception, although the use of contraception is more prevalent in more developed areas (72.4% of women) than in less developed areas (61.2% of women) (Table 1) [1]. Globally, 14.3% of women and 22.8% of women using contraception use IUC (Table 1; Fig. 1). However, the use of IUC is more prevalent in the less developed areas of the world (15.1% of women; 24.7% of contraception users) than in the more developed areas (9.2% of women; 12.7% of contraception users) (Fig. 1; Table 1) [1].

#### 3.1.1. Variation between continents

The highest rate of IUC use is in Asia (17.9% and 27.0% of women and contraception users, respectively), followed by Europe (12.4%; 17.1%), Africa (4.4%; 15.4%), Latin America/Caribbean (7.0%; 9.6%), North America (4.8%; 6.1%) and Oceania (1.1%; 1.8%) (Table 1; Fig. 1) [1].

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