

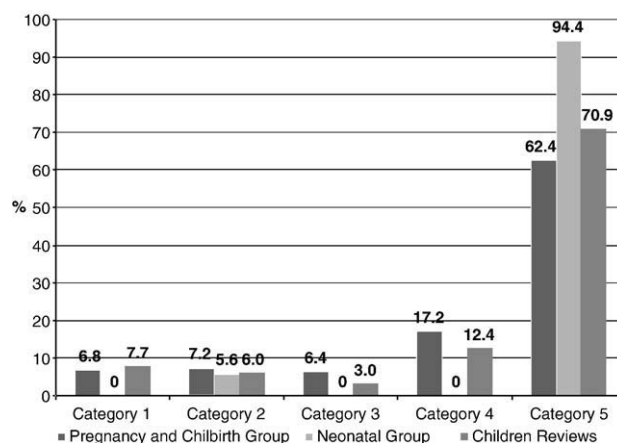
made a distinction between interventions where consumer involvement is a factor and when it plays no role:

- Category 3: interventions are provided by the health system, but the consumer could improve the outcome by early identification of a problem and be assisted by the health system (e.g. corticosteroids in preterm labor, interventions for infant eating disorders);
- Category 4: interventions provided by the health system, but where knowledge and participation of the consumers can influence the healthcare system (e.g. support during labor, family-centered care for children in hospitals); and
- Category 5: interventions with no participation from the consumer (a health system decision); for example, intensive care interventions, cesarean delivery surgical technique, treatments for chronic diseases in childhood.

Within the Pregnancy and Childbirth CRG interventions 62.4% (174 of 279) of the reviews were classified as category 5. Only 6.8% of the reviews focused on interventions conducted solely by an individual consumer. From the Neonatal CRG, 94% (236 of 250) of the reviews were classified as category 5; the majority of them were related to neonatal intensive care. From the reviews relating to children, 234 reviews were obtained and, of these, 166 (70.9%) were classified as category 5 and 7.7% were interventions that the family alone could apply to the child (Fig. 1).

Any classification can have some limitations and overlap in the different categories. However, extremes of the classification show quite different patterns.

This analysis shows that maternal and child research is seldom focused on interventions that can be conducted solely by the consumers. The vast majority of research is performed on interventions that are solely in the realm of the providers. Maternal and child health research needs to be directed toward innovative interventions involving consumer participation, particularly those that can be implemented in middle- and low-income countries where the accessibility and quality of the health systems are poor.



**Fig. 1.** Classification of Cochrane Reviews from the Pregnancy and Childbirth Group (279 reviews), Neonatal Group (250 reviews), and reviews of children from 0–5 years excluding neonates (234 reviews), according to the provider's involvement in care. Key: Category 1, no assistance from health system; Category 2, minor assistance from health system; Category 3, consumer knowledge of early identification of the problem could improve the outcome; Category 4, knowledge and participation by the consumers could assist the health system; Category 5, no participation by the consumer.

### Conflict of interest

We declare that we have no conflicts of interest.

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## Acceptability of the intrauterine device among women in El Salvador

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The intrauterine device (IUD) is a safe and effective form of contraception; however, it is used by only 4.1% of women in Latin America [1]. In El Salvador, less than 1% of contraception users choose the IUD [2], with prior research indicating that myths regarding the safety of the method are significant barriers to its use among Salvadoran women [3–5]. The aim of the present study was to investigate the comprehension and apprehension among rural Salvadoran women with regard to the IUD.

A cross-sectional survey was performed in 2007 during 2 medical delegations conducted by the non-governmental organization Basic Health International; the survey locations were Arcatao, which is a small rural town in the north of El Salvador, and Cojutepeque, which is a larger city in central El Salvador. The Institutional Review Boards of the New York University Medical Center and the Superior Council of Public Health of El Salvador approved the study procedures and survey instrument. Women aged 14–50 years were invited to participate in

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**Table 1**  
Knowledge of and interest in the IUD.<sup>a</sup>

|  | Total<br>(n = 187) | 95% confidence<br>interval |
|--|--------------------|----------------------------|
| Knowledge of the IUD (correct answers)                   |                    |                            |
| Is the IUD more effective than the pill? <sup>b</sup>    | 47 (25.3)          | 19.2–32.1                  |
| Is the IUD more effective than injectable contraception? | 29 (15.5)          | 10.6–21.5                  |
| Does the IUD protect against STIs?                       | 69 (36.9)          | 30.0–44.2                  |
| Does the IUD cause infertility?                          | 53 (28.3)          | 22.0–35.4                  |
| Source of IUD-related information                        |                    |                            |
| Friends or family  | 33 (17.6)          | 12.5–23.9                  |
| Healthcare provider                                      | 84 (44.9)          | 37.7–52.3                  |
| Magazine or book   | 4 (2.1)            | 0.5–5.4                    |
| Media source   | 2 (1.1)            | 0.2–3.8                    |
| No information   | 64 (34.2)          | 27.5–41.5                  |
| Interested in using the IUD <sup>b</sup>                 | 37 (19.9)          | 14.4–26.3                  |

Abbreviations: IUD, intrauterine device; STI, sexually transmitted infection.

<sup>a</sup> Values are given as number (percentage) unless otherwise indicated.

<sup>b</sup> n = 186 because of missing values.

the study if they were able to provide verbal consent and exhibited no barriers to communication. Survey questions included an assessment of knowledge and attitudes regarding the IUD, and measures of its perceived effectiveness and risk. Logistic regression was used to analyze the factors associated with willingness to use the IUD. Crude and adjusted odds ratios were reported for the pertinent variables; 95% confidence intervals (CIs) and corresponding *P* values (which were 2-sided) were also reported. *P* < 0.05 was considered statistically significant.

In total, 187 women completed the survey. The mean age of participants was 28.4 years (95% CI, 27.2–29.5) and average parity was 2.2 (95% CI, 2.0–2.5). A total of 35.3% of respondents (95% CI, 28.5–42.6) reported that they did not currently use any method of contraception. The most popular method was injectable contraception (33.7%; 95% CI, 26.9–40.9), followed by sterilization (15.0%; 95% CI, 10.2–20.9). Only 2.1% (95% CI, 0.6–5.4) of women reported that they currently used the IUD; however, all IUD users were satisfied with their method of contraception, compared with only 57.1% (95% CI, 18.4–90.1) of condom users and 77.6% (95% CI, 64.7–87.5) of those using injectable contraception. Of the women who had been sterilized, 21.7% (95% CI, 7.5–43.7) reported that they were dissatisfied with that method because they subsequently wanted to have more children.

Overall, participants had a poor comprehension of IUD efficacy and adverse effects (Table 1). A minority of women thought that the IUD was more effective than contraceptive pills (25.2%) and injectables (15.5%). The most common reasons for not using the IUD were fear of insertion (33.7%; 95% CI, 27.0–40.9) and fear of partner disapproval (9.1%; 95% CI, 5.4–14.2). Other misconceptions

included concerns that the IUD could travel around the body and cause damage (15.5%; CI, 10.6–21.5) and that the IUD could cause cancer (3.2%; CI, 1.2–6.9).

Despite the low rate of current IUD use, 19.9% (95% CI, 14.4–26.3) of respondents were interested in using the method. Several factors were associated with willingness to use the IUD (Table 2); women who were using any contraception were 3 times more likely to be interested in the IUD, and women who received IUD information from a healthcare provider were 5 times more likely to be interested than were those who received information from friends or family. Willingness to use the IUD also differed significantly based on the survey location; respondents in Arcatao were 6.2 times more likely to be interested in using the IUD for contraception than were women in Cojutepeque. This finding is probably secondary to differential access both to information regarding the IUD and to the device itself between the 2 survey communities.

Women in El Salvador prefer relatively small family sizes, with estimated total fertility rates ranging from 1.9 to 3.2 [2]. This preference may encourage young women to resort to sterilization because of limited access to effective and reversible contraceptive methods. In the present study, 25% of women who had been sterilized were younger than 30 years of age, all of whom reported that they were dissatisfied with their contraceptive method. Where early childbearing is normative and small family sizes are preferred, the IUD would be an excellent contraceptive option.

Because the present survey covered a convenience-based rather than a population-based sample, it may have been subject to selection bias; furthermore, it was administered by healthcare professionals, which may have encouraged biased and socially desirable responses. Moreover, the quantitative nature of the study may not have adequately assessed women's attitudes or experiences.

Despite these limitations, the findings reveal important factors among Salvadoran women regarding their acceptability of and willingness to use the IUD. The data indicate that there would be an elevated interest in the IUD if accurate information were available and if the IUD were readily accessible. Research designed to investigate further the logistic, psychologic, and cultural barriers to IUD use may be required to make this method an accessible contraceptive option for women in El Salvador.

The data also indicate that healthcare providers have a crucial role in influencing women's acceptability of the IUD. Therefore, research is also warranted to investigate barriers to the provision of the IUD from a provider's perspective. Addressing these cognitive and logistic barriers by equipping providers with accurate information and a feasible modality with which to educate young women about the benefits of the IUD could increase the acceptability and use of this safe, effective, and reversible method of contraception.

**Table 2**  
Factors that influence IUD acceptability.

| Explanatory variable                      | Crude             |                | Adjusted <sup>a</sup> |                |
|---|-------------------|----------------|-----------------------|----------------|
|   | OR (95% CI)       | <i>P</i> value | OR (95% CI)           | <i>P</i> value |
| Age, y                                    | 0.97 (0.91–1.02)  | 0.25           | 0.97 (0.90–1.06)      | 0.53           |
| Parity                                    | 0.97 (0.79–1.2)   | 0.79           | 1.04 (0.77–1.42)      | 0.79           |
| Location (Arcatao vs Cojutepeque)         | 6.2 (2.8–13.9)    | <0.01          | 5.5 (2.6–13.5)        | <0.01          |
| Currently using contraception (yes vs no) | 3.0 (1.3–7.2)     | 0.01           | 2.6 (1.1–6.6)         | 0.04           |
| Hosmer–Lemeshow $\chi^2_8$                | –                 | –              | 10.4 <sup>b</sup>     | 0.24           |
| Sexually active (yes vs no)               | 1.1 (0.45–2.6)    | 0.85           | –                     | –              |
| Satisfied with current method (yes vs no) | 1.4 (0.49–3.7)    | 0.51           | –                     | –              |
| Source of information                     |                   |                |                       |                |
| Friends or family (reference)             | 1.0               | –              | –                     | –              |
| Healthcare provider                       | 5.0 (1.1–23.3)    | 0.04           | –                     | –              |
| Media                                     | 10.5 (0.46–239.8) | 0.14           | –                     | –              |
| No prior information                      | 1.75 (0.34–9.0)   | 0.50           | –                     | –              |

Abbreviations: CI, confidence interval; IUD, intrauterine device; OR, odds ratio.

<sup>a</sup> Multiple logistic regressions adjusted for age, parity, and current contraception use.

<sup>b</sup> Statistic (not OR).

**Conflict of interest**

The authors have no conflicts of interest.

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## Intrauterine fallopian tube incarceration after vacuum aspiration for pregnancy termination

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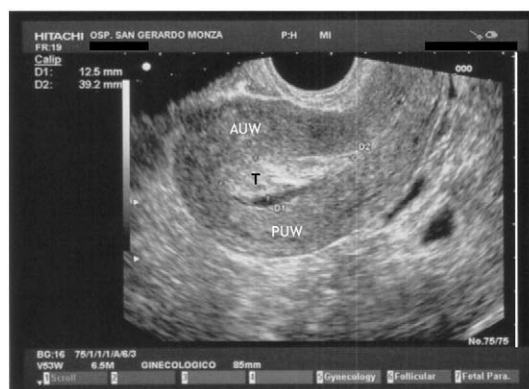
Uterine perforation

Vacuum aspiration

Vacuum aspiration is the most widely used technique for surgical termination of pregnancy in the first trimester. Uterine perforation is a rare complication, occurring in approximately 0.09–2.8 per 1000 cases [1,2].

A 31-year-old healthy woman with a 9-week intrauterine pregnancy recorded on ultrasound underwent voluntary surgical abortion. Four days after the procedure, the patient underwent a second vacuum aspiration following a diagnosis of incomplete abortion on ultrasound, indicated by hyperechogenic material within the uterine cavity. The surgeon who performed the second procedure suspected the presence of a portion of the fallopian tube within the retrieved material and recommended exploratory laparotomy. The patient deferred, but subsequently presented to our hospital with pelvic pain and minimal vaginal bleeding.

Transvaginal ultrasound demonstrated hyperechogenic, irregular tissue within the endometrial cavity (size 12 × 39 mm) resembling an endometrial polyp, and a small amount of free fluid in the pouch of Douglas (20 × 13 mm) (Fig. 1). The patient agreed to undergo diagnostic laparoscopy, which showed incarceration of the left fallopian tube in a 1-cm lesion of the myometrium on the left side of the uterine fundus (Fig. 2). During surgery, the tube was extracted from the uterine wall and the myometrial lesion was repaired using coagulation (Fig. 3). The patient was discharged 3 days after the procedure and the recovery was uncomplicated.



**Fig. 1.** Sonographic appearance of the incarcerated fallopian tube. AUW, anterior uterine wall; PUW, posterior uterine wall; T, tube.

Vacuum aspiration for pregnancy termination has been demonstrated to be effective (>99% efficacy rate) and safe, with major complications occurring in approximately 0.5% of patients. Uterine perforation is frequently asymptomatic—in the present case it was



**Fig. 2.** Laparoscopic view of the incarcerated fallopian tube.

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