

# The Potential Impact of Introducing Pregnancy Testing into Menstrual Regulation Services in Vietnam

By Trinh Huu Vach, Amie Bishop, Vuong Thi Hoa, Luong Xuan Hien, Tran Dinh Chien and Tuong I. Nguyen

**Context:** *Pregnancy testing is not routinely conducted before early abortion procedures (menstrual regulation) in Vietnam; thus, a substantial proportion of women may be undergoing unnecessary procedures.*

**Methods:** *Researchers provided pregnancy testing to 923 consecutive women seeking menstrual regulation at a government clinic in rural Thai Binh Province, Vietnam, to determine the proportion of unnecessary procedures being performed. They also estimated the costs and savings of using pregnancy testing before menstrual regulation.*

**Results:** *Of women seeking menstrual regulation, 17% had negative pregnancy tests. If this proportion is applicable to Vietnam as a whole, some 136,000 of the estimated 800,000 menstrual regulation procedures performed each year are unnecessary. Overall, these 800,000 procedures cost the Vietnamese government about \$2.2 million a year and cost women about \$7 million. By providing pregnancy tests for all women seeking menstrual regulation (at a total cost of \$720,000), the government would avoid spending \$380,000 for unnecessary procedures, for a net testing cost of \$340,000. Assuming costs of more than \$12.00 per menstrual regulation procedure for women with complications and \$8.50 for those with none, the avoidance of unnecessary procedures would save Vietnamese women an estimated total of \$1.2 million.*

**Conclusions:** *Increased access to pregnancy testing, combined with improved clinical protocols for determining pregnancy status, could prevent a substantial proportion of unnecessary procedures, resulting in reduced health risks and substantial cost savings for women.*

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Highly sensitive tests that can detect pregnancy within a day or two of a missed menstrual period have been available for some time, and many new brands continue to enter the market. Nevertheless, these tests are not used in many resource-poor settings because of their cost, which averages about US\$1. Furthermore, in many regions, knowledge of the benefits of pregnancy testing is limited, and standardized approaches for determining pregnancy status at lower levels of the health care system are not in place.<sup>1</sup>

An important use of highly sensitive pregnancy tests is confirmation of pregnancy before abortion. In this article, we explore whether the benefits of using pregnancy diagnostics in a rural setting in Vietnam outweigh the high initial costs, particularly if tests can be used to avoid unnecessary early abortion, or menstrual regulation. Specifically, we sought to determine the proportion of women seeking menstrual regulation who were not pregnant, the health impact of reducing the proportion of unnecessary menstrual regulation procedures, and the costs and potential cost-effectiveness of testing for pregnancy before performing menstrual regulation.

## Background

Vietnam has the highest abortion rate in Asia and the third highest rate in the world. Recently, the number of abortions (including menstrual regulation procedures) in Vietnam has been increasing: According to national health statistics, 760,000 abortions were carried out in 1989, 1.3 million in 1994 and 1.4 million in 1995.<sup>2</sup> In 1992, about 100 abortions were performed for every 1,000 women of reproductive age, and women could expect to have an average of 2.5 abortions in their lifetime.<sup>3</sup>

In Vietnam, abortion is legal and available as part of overall family planning services provided at various provincial, district and communal health facilities. Menstrual regulation, an aspiration (suction) abortion occurring six weeks or less after the beginning of a woman's last menstrual period, is available at most health facilities. Recent government estimates suggest that menstrual regulation accounted for approximately 45–60% (600,000–800,000) of the 1.4 million pregnancy terminations performed in 1995.<sup>4</sup>

Pregnancy testing generally is not part of routine menstrual regulation services. In some settings, women are offered free pregnancy tests only if they are using a modern contraceptive method. Those who

are not using a method must pay for testing, if it is offered to them at all. A previous study suggested that up to 25% of women undergoing menstrual regulation are not pregnant.<sup>5</sup> The extent to which introducing routine pregnancy testing might reduce the number of unnecessary procedures has never been adequately studied.

## Thai Binh Province

Thai Binh, a rural province with a population of 1.7 million, is located in the Red River Delta of northern Vietnam. Its population density is two times the average in the Red River Delta as a whole and is the third highest, after Hanoi and Ho Chi Minh City, in the country.<sup>6</sup>

Although abortion rates in urban regions of Vietnam are, on average, three times those in rural areas, Thai Binh's abortion rate of 126 per 1,000 women aged 15–44 is comparable to the rates in provinces encompassing Ho Chi Minh City (127 per 1,000) and Hanoi (132 per 1,000).<sup>7</sup> In 1994, 67% of the approximately 57,000 abortions performed in this province were menstrual regulations, compared with 29% and 42% of abortions performed in Hanoi and Ho Chi Minh City, respectively.<sup>8</sup>

Several factors may contribute to Thai Binh's high rates of abortion and menstrual regulation. In Thai Binh, local authorities in many communes strictly enforce the two-child policy through in-kind incentives and disincentives. Limited contraceptive choice and high contraceptive failure and discontinuation rates (primarily for the IUD and traditional methods) also have been linked to Thai Binh's high abortion rate.<sup>9</sup> One reason for the high proportion of menstrual regulation procedures is that women fear the more

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**Table 1. Percentage distribution of women undergoing menstrual regulation, by selected characteristics, Vietnam, 1996–1997 (N=923)**

Characteristic	%
<b>Age</b>	
<20	0.5
20–24	13.8
25–29	27.6
30–34	25.6
35–39	20.8
40–44	9.6
45–49	2.0
<b>No. of living children</b>	
0	6.7
1	44.2
2	43.4
≥3	5.6
<b>No. of previous menstrual regulation procedures</b>	
0	23.4
1	34.8
2	27.6
≥3	14.2
<b>Contraceptive use</b>	
None	26.2
IUD	2.1
Oral contraceptives	3.0
Condom	13.0
Rhythm/withdrawal	55.5
<b>Total</b>	<b>100.0</b>

complicated abortion procedures that are necessary at a later gestational age.<sup>10</sup> Finally, menstrual regulation is the least expensive procedure, costing about 15,000–20,000 Vietnamese Dong (VND) or US\$1.25–1.67; the charges for pregnancy termination increase with gestational age after six weeks, the upper limit for menstrual regulation.

## Methodology

### Study Location and Participants

This study was integrated into an ongoing project designed to improve family planning and abortion services in 10 communes of Thai Binh province. The project, which included the introduction of pregnancy testing, was being implemented by the Research Center for Rural Population and Health at the Thai Binh Medical College with technical assistance from the International Health Care Research Unit at the Karolinska Institute in Sweden and financial support from the Swedish International Development Authority.

The primary site for the study was the Thai Binh Provincial Maternal and Child Health/Family Planning Center, which serves as a referral center for 13 surrounding communes and performs approximately 100 menstrual regulation procedures per month. We recruited three

\*Quickstick is an immunological test used to detect human chorionic gonadotropin (hCG) in the urine; hCG, an antigen primarily comprised of glycoprotein, is excreted from the placenta soon after conception.

obstetricians and two midwives from the center who had been trained in menstrual regulation and abortion procedures as part of the ongoing project.

The study group consisted of 923 consecutive women aged 15–49 who sought menstrual regulation services at the center from June 1996 through March 1997. The procedure was performed only after testing confirmed that a woman was pregnant.

Approximately five months into the study, we recruited a comparison group for inclusion in our analysis of complications related to menstrual regulation. We enrolled 55 women who had undergone menstrual regulation at three district hospitals where pregnancy testing is not performed—Thai Binh Provincial Hospital, Thai Binh Town Hospital and Vu Thu District Hospital. Inspection of extracted tissue after the procedure indicated that none of these women had actually been pregnant; comparisons between these women and the study group enabled us to determine if there were differences in complications between pregnant and nonpregnant women. For our analysis of complications, five women from the first group who had undergone menstrual regulation after false-positive pregnancy test results were analyzed with the second group, for a total of 60 women.

### Determination of Pregnancy Status

Before having a menstrual regulation, all women in the study group were checked for pregnancy using the Quickstick test.\* Women who tested positive and confirmed that they wanted to terminate their pregnancy underwent menstrual regulation. After each procedure, the extracted tissue was visually examined for products of conception; if pregnancy could not be confirmed, the tissue was sent for microscopic analysis. Women who tested negative were asked to return one week later for a second test. If the second test was negative, they were asked to return one week later for a third test and a pelvic examination.

Because pregnancy testing was not part of routine abortion services in the three sites from which the women in the comparison group were drawn, pregnancy status was determined by visual examination and, if necessary, microscopic analysis of the extracted tissue.

### Data Collection and Processing

The methods and results of pregnancy testing, as well as the results of the visual inspection and microscopic analysis of extracted tissue, were recorded on a standardized form. We also used two other

data collection approaches to gather information on participant characteristics. First, we developed an expanded clinic record form to collect general demographic information and record reproductive health status. These data were collected by clinic staff as part of routine clinic procedures at the time that each woman was enrolled in the study. Second, we used structured interviews to collect data on perceived complications associated with menstrual regulation among pregnant women and nonpregnant women, on client and clinic costs for menstrual regulation procedures and services, and on demand for and acceptability of pregnancy testing.

An eight-member interview team of medical doctors from the Thai Binh Medical College collected the client and clinic cost information at the time of the client's enrollment. Data on acceptability of pregnancy testing, reported complications and client needs were collected at the women's home 60 days after the procedure.

## Results

Table 1 presents selected demographic and reproductive health measures for the women in the study group. Most were aged 25–39 (although this group may include some younger, unmarried women who represented themselves as older), 14% were younger than 25 and almost 12% were 40 or older. The great majority (88%) had one or two living children, and approximately 77% had had one or more prior menstrual regulation procedures. Although contraceptive prevalence was high (74%), women were much more likely to be using a traditional method (rhythm or withdrawal) than a modern method (56% vs. 18%). Among the 242 nonusers in the group, more than 22% cited fear of side effects as their main reason for not practicing contraception, 19% were unwilling, 13% lacked awareness or understanding of contraceptive methods, 12% reported difficulty getting pregnant, 9% wanted more children, 6% said their husband was away and 20% gave other reasons (not shown).

**Table 2. Percentage distribution of women who received one or more pregnancy tests, by test outcome, according to test number**

Test results	All (N=923)	First (N=923)	Second (N=89)	Third (N=33)
<b>Positive</b>	<b>83.0</b>	<b>80.7</b>	<b>19.1</b>	<b>12.1</b>
Menstrual regulation	81.7	79.6	16.9	12.1
Continued pregnancy	1.3	1.1	2.2	0.0
<b>Negative</b>	<b>17.0</b>	<b>19.3</b>	<b>80.9</b>	<b>87.9</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 3. Percentage distribution of women seeking menstrual regulation, by initial test results, and measures of test accuracy, all according to number of days menses were delayed**

Days menses delayed	All (N=923)	Positive (N=745)	Negative (N=178)	Test accuracy	
				Sensitivity	Specificity
5-8	16.0	11.7	34.2	96.6	83.6
9-12	48.4	50.7	38.8	99.5	94.2
13-15	35.6	37.6	27.0	99.3	85.4
Total	100.0	100.0	100.0	na	na

**Estimate of Unnecessary Procedures**

Table 2 summarizes pregnancy test results for women in the study group. Of the 745 women (81%) whose results on the first test were positive, 10 decided to continue their pregnancy and 735 opted for menstrual regulation. Some 178 women (19%) received negative test results; 89 of these women (50%) resumed menstruation, while 17 (10%) tested positive and 72 (40%) negative on the second test one week later. Of the women who tested negative, 39 started their menstrual period within the following week. Thirty-three were tested a third time, of whom four (12%) tested positive and 29 (88%) negative.

After up to three tests, a total of 157 women (17%) had received negative results. Among the women who received positive results and underwent menstrual regulation, seven had no evidence of gestational tissue. Therefore, a total of 164 women (18%) seeking menstrual regulation were not in fact pregnant, and pregnancy testing averted 157 unnecessary procedures (assuming that other measures of pregnancy confirmation would not have been used in the absence of testing).

•*Test accuracy.* The initial test accurately identified 738 of 759 pregnant women (97% sensitivity) and 157 of 164 nonpregnant women (96% specificity). Repeat testing improved sensitivity but not specificity, be-

**Table 4. Percentage distribution of women seeking menstrual regulation, by number of symptoms and signs of pregnancy, according to pregnancy status**

	Pregnant (N=759)	Not pregnant (N=164)
<b>No. of symptoms</b>		
0	9.2	28.7
1	17.0	51.2
2	40.7	15.2
3	27.5	4.9
4	4.8	0.0
5-6	0.8	0.0
<b>No. of clinical signs</b>		
0	2.4	20.1
1	7.6	53.7
2	40.1	25.0
3	41.4	1.2
4	8.5	0.0
Total	100.0	100.0

cause the majority of the women who tested positive at the initial test had a menstrual regulation procedure and were not tested again.

The positive and negative predictive values of the pregnancy test were also high (99% and 88%). This would be expected, given that the majority of the women in the study (82%) were pregnant. The high negative predictive value suggests that women testing negative would do well to wait before proceeding with menstrual regulation, because they probably are not pregnant.

•*Delay in menses.* As Table 3 shows, the majority of women (84%) sought menstrual regulation services when their menses were 9-15 days late. A woman's likelihood of being pregnant was correlated positively with the number of days of delay: Only 59% of women who sought services when their period was 5-8 days late were pregnant, compared with 85% of those who did so after delays of 9-12 days or 13-15 days (not shown).

The test's sensitivity (without repeat testing) increased slightly with the number of days menses are late, rising from almost 97% among women whose menses were 5-8 days late to more than 99% among those whose menses were at least nine days late. The test's specificity was also greatest (94%) at 9-12 days, but was considerably lower (84-85%) at 5-8 days of delay and 13-15 days of delay.

**Clinical Signs and Symptoms**  
In this study, women seeking menstrual regulation were asked to report symptoms and the provider noted clinical signs in the patient record. In addition to delayed menses, symptoms included fatigue, nausea and vomiting, breast tenderness, frequent urination, change in nipple color and change in food desires (e.g., dislike for rice or desire for sweet or sour food). Before being tested for pregnancy, all women seeking menstrual regulation received pelvic and general examinations to assess pregnancy status. Clinical signs included darkened nipples, more pronounced Montgomery glands, enlarged and softened uterus and softened cervix.

Some 58% of all pregnant women reported 1-2 symptoms of pregnancy when they requested menstrual regulation services, and an additional 28% reported three symptoms (Table 4). Among the

nonpregnant women in the study group, 66% reported 1-2 symptoms and 5% reported three, while 29% reported no symptoms. The table also shows that 90% of pregnant women seeking menstrual regulation services exhibited two or more clinical signs of pregnancy, as did 26% of nonpregnant women.

Table 5 illustrates the relationship between numbers of signs and symptoms and pregnancy status. The likelihood of pregnancy rose from 61% among women reporting one symptom to 93% among those with two and 96% among those with three symptoms. All women with four or more reported symptoms were pregnant. Although the presence of multiple symptoms increased the probability of pregnancy, an absence of symptoms did not guarantee the contrary: Nearly 60% of women who reported no symptoms were actually pregnant.

The same pattern was apparent for clinical signs of pregnancy. The proportion of women who were pregnant rose from 35% of those exhibiting no clinical signs to 88% of those with two and 100% of those with four.

**Perceived Complications**

For our analysis of complications associated with menstrual regulation, we found and interviewed 507 (68%) of 747 women from the study group who had been pregnant and had undergone menstrual regulation. The analysis also included a comparison group consisting of 55 women who had not been tested and whose clinical findings after their procedure indicated that they had not been pregnant, as well as five women from the study group who had undergone menstrual regulation after a false-positive pregnancy test. All women were interviewed 60 days after their procedure.

Overall, 12% of the pregnant women in the study group reported complications. About 3% reported retained placenta and

**Table 5. Percentage distribution of women seeking menstrual regulation, by pregnancy status, according to number of symptoms and signs**

	Pregnant	Not pregnant	Total
<b>No. of symptoms</b>			
0	59.8	40.2	100.0
1	60.6	39.4	100.0
2	92.5	7.5	100.0
3	96.3	3.7	100.0
4	100.0	0.0	100.0
5-6	100.0	0.0	100.0
<b>No. of clinical signs</b>			
0	35.3	64.7	100.0
1	39.7	60.3	100.0
2	88.1	11.9	100.0
3	99.4	0.6	100.0
4	100.0	0.0	100.0

**Table 6. Average costs (in U.S. dollars) to client for one menstrual regulation procedure, by type of expense, according to presence of complications**

Type of expense	All (N=60)	No complications (N=53)	Complications (N=7)
<b>Total</b>	<b>\$8.87</b>	<b>\$8.42</b>	<b>\$12.15</b>
Procedure	1.37	1.37	1.37
Additional food	4.50	4.49	4.55
Lost income	1.94	1.68	3.89
Medicine	0.81	0.73	1.43
Traveling to/from clinic	0.13	0.13	0.13
Per-diem expenses*	0.06	0.01	0.36
Laboratory tests	0.06	0.01	0.42

\* Mostly costs of lodging. Note: US\$1=12,000 VND.

shock, which could be confirmed in the woman's clinic record. The extent to which other complications, such as prolonged bleeding and menstrual irregularities, were directly attributable to the menstrual regulation procedure could not be verified. Minor complications were also reported by 12% of the 60 nonpregnant women who had undergone menstrual regulation. No cases of major complications such as uterine perforation or hemorrhage occurred in this study; a much larger sample would have been necessary to determine the rates of these rare events among women undergoing menstrual regulation.

### Costs Saved by Pregnancy Testing

The average cost to clinics supported with state health funds for one menstrual regulation procedure is estimated to be about 33,000 VND (\$2.75), which includes costs for the provider's time, drugs and equipment. Assuming that about 800,000 menstrual regulation procedures are performed in Vietnam each year, they cost the government about \$2.2 million annually. If 17% of these procedures can be avoided through pregnancy testing, \$380,000 of that expenditure is unnecessary.

Theoretically, menstrual regulation services are provided free of charge or at very low cost. However, women having a menstrual regulation procedure may be faced with costs for travel, food and "off-the-books" payments to medical staff. Table 6 indicates that women seeking menstrual regulation services generally were charged 16,400 VND (about \$1.40). When all associated costs were included, one menstrual regulation procedure cost women an average of 106,300 VND (about \$9.00). If a woman experienced complications, the procedure and related care could cost her 145,700 VND (about \$12.00), a great expense in a country where the average an-

nual income is \$250. Assuming that the mean cost per procedure to women in this study represents the average cost across the country, Vietnamese women spend the equivalent of more than \$7 million for menstrual regulation procedures each year, and they would save \$1.2 million of this amount if unnecessary procedures were avoided through pregnancy testing.

Pregnancy tests procured and distributed using government funds cost about \$0.90 each. Thus, the total annual cost to the government of providing free pregnancy testing to each of the 800,000 women seeking the procedure would be about \$720,000. The savings that would result from elimination of most unnecessary menstrual regulation procedures (\$380,000) would reduce the net cost of pregnancy testing to \$340,000.

However, since both the government and the private sector contribute to providing tests to women, and in some cases, women must pay for tests through clinics or pharmacies, the true net cost to the government probably would be somewhat lower. In addition, not all women seeking menstrual regulation would necessarily need to be tested, since in some cases providers may be able to ascertain pregnancy status correctly through clinical examination.

### Acceptability of Pregnancy Testing

The majority of women interviewed regarding demand for and acceptability of pregnancy testing believed that testing is needed before proceeding with menstrual regulation (97% of 632 respondents). When asked why, 72% cited avoidance of complications and side effects associated with menstrual regulation in nonpregnant women. More than half of the women mentioned avoiding pain, and 37% cited avoiding nervousness and anxiety before and after the procedure or "being economic."

Almost 88% of women felt that the current charge of 15,000 VND (\$1.25) for a pregnancy test at the Thai Binh Maternal and Child Health/Family Planning Center was acceptable. Among those who said the charge was too high, half cited 3,000–5,000 VND (\$0.25–0.42) as an acceptable fee and half mentioned a payment of 6,000–10,000 VND (\$0.50–0.83).

### Discussion

While Vietnamese health authorities and providers have long suspected that a significant proportion of nonpregnant women were undergoing unnecessary menstrual regulation procedures, this study is one of the first to measure the extent of the problem. One other study that involved pregnancy testing was con-

ducted in 10 communes in a more rural region of Thai Binh Province (Kien Xuong District).<sup>11</sup> Data from that study suggested that about 25% of women seeking menstrual regulation services were not pregnant. However, the researchers did not send extracted tissue for microscopic analysis or validate the accuracy of the pregnancy test being used, so their results may be less reliable than the figure of 17% from the current study. Given the high sensitivity and specificity of the test used in our study, most women seeking menstrual regulation services received an accurate determination of pregnancy status.

While the geographic scope of this study was limited, the conditions at the Maternal and Child Health/Family Planning Center in Thai Binh, as well as the population it serves, are probably similar to those in other rural Vietnamese settings. The extent to which these data are generalizable, however, needs to be determined. If the rate found in this study can be extrapolated to the rest of the country, and if pregnancy testing (or other reliable means of detecting pregnancy) can be made available to all women seeking menstrual regulation services, up to 136,000 unnecessary procedures could be avoided every year nationwide.

This figure may be an overestimate because, in the absence of routine pregnancy testing, providers may not proceed with menstrual regulation if clinical evidence suggests that the client is not pregnant. This issue, however, is somewhat complicated by the government's practice of remunerating providers according to the numbers and types of operations (including abortion) performed as a means of supplementing providers' low base salaries. Policymakers have expressed concern that this practice may encourage the performance of unnecessary procedures and have recommended its elimination.<sup>12</sup>

Weighing the cost of unnecessary menstrual regulation procedures, to women and to the health system, against the cost of introducing pregnancy testing is difficult. Certainly, it is significant that the Government of Vietnam may be spending almost \$400,000 annually on unnecessary menstrual regulation procedures, while women may be needlessly spending more than \$1.2 million. However, given the high gross cost of providing pregnancy tests for all women seeking menstrual regulation (\$720,000), it is unlikely that the government would consider universal testing cost-effective.

Instead, the most cost-effective approaches are likely to involve testing a woman only if a pelvic examination does

not produce a conclusive determination of pregnancy status and if a woman has come to the clinic after only a few days' delay in menses and she is unable to return at a point when pregnancy status would be more apparent. The study findings indicate that reported symptoms and clinical signs, in conjunction with pelvic examination, are reliable in assessing pregnancy status; therefore, clearer algorithms for determining pregnancy status may be required, along with improvement of clinical and pelvic examination skills among providers at the lower levels of the health care system.

A combination of approaches to improving availability of testing is likely to be needed. Currently, government-procured pregnancy tests are sometimes available to women at no cost, but in other cases women must purchase them from public or private clinics or from commercial pharmacies. (Our study, however, has no data indicating whether costs for tests provided to government clinics are actually recovered when users are charged for tests.) Tests are also available through private commercial channels, and efforts to increase availability through both governmental and commercial sources should be encouraged. An important first step in developing a strategy for increasing test availability and use would be assessing the current distribution and management systems for pregnancy diagnostics at both the central and provincial levels.

In our interviews with women, the majority said that access to pregnancy tests should be increased. Many women suggested that more public information is needed regarding testing benefits and that tests should be made available at health facilities, in markets and at pharmacies. These suggestions raise the possibility of pursuing a pregnancy diagnostics "social marketing" program, through a collaboration between the public and private sectors, using nontraditional channels. It also may be possible to encourage home use of pregnancy tests through existing commercial channels or through social marketing, although the feasibility of this approach needs to be further explored.

Finally, although health complications were reported by 12% of women who had unnecessary procedures, the complications were primarily minor. Still, if providers could establish pregnancy status before proceeding to menstrual regulation, a substantial number of women who are not pregnant could be spared the discomfort, pain and menstrual irregularities that can be associated with the procedure.

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## Resumen

**Contexto:** En Vietnam, no se realizan regularmente exámenes de embarazo antes de realizar un aborto en una etapa temprana (regulación menstrual); en consecuencia, es probable que una proporción considerable de mujeres se somete a este procedimiento sin necesidad.

**Métodos:** Los investigadores realizaron exámenes de embarazo a 923 mujeres que procuraban regulación menstrual en una clínica del gobierno, en la región rural de la Provincia Thai Binh, en Vietnam, para determinar el porcentaje de abortos innecesarios que se realizan. Asimismo, calcularon los costos y ahorros de someter a las mujeres a exámenes de embarazo antes de la regulación menstrual.

**Resultados:** De las mujeres que procuraban la regulación menstrual, el 17% presentó resultados negativos en el examen del embarazo. Si este porcentaje se aplica a Vietnam en general, aproximadamente 136.000 de los 800.000 procedimientos de regulación menstrual que se realizan anualmente en ese país son innecesarios. En general, estos 800.000 procedimientos tienen un costo para el gobierno de Vietnam de unos US \$2,2 millones al año, y a las mujeres les cuestan aproximadamente US \$7,0 millones. Al ofrecerles exámenes de embarazo a todas las mujeres que procuraban obtener la regulación menstrual (a un costo total de US \$720.000) el gobierno ahorraría US \$380.000 por concepto de procedimientos innecesarios, y el costo neto de los exámenes sería de US \$340.000. Suponiendo que los procedimientos con complicaciones ascienden a US \$12 cada uno y a US \$8,50 en los casos en que no hay complicaciones, al evitar los procedimientos innecesarios la mujer vietnamita ahorraría un total de aproximadamente US \$1,2 millones.

rraría US \$380.000 por concepto de procedimientos innecesarios, y el costo neto de los exámenes sería de US \$340.000. Suponiendo que los procedimientos con complicaciones ascienden a US \$12 cada uno y a US \$8,50 en los casos en que no hay complicaciones, al evitar los procedimientos innecesarios la mujer vietnamita ahorraría un total de aproximadamente US \$1,2 millones.

**Conclusiones:** Un mayor acceso a los servicios de exámenes de embarazo junto con un mejoramiento de los protocolos clínicos para determinar la situación de los embarazos, podría prevenir un importante porcentaje de procedimientos innecesarios, lo cual redundaría en la reducción de los riesgos de salud y en el ahorro de gastos para la mujer vietnamita.

## Résumé

**Contexte:** Les procédures de régulation menstruelle ne sont pas toujours précédées d'un test de grossesse au Viet Nam; une proportion considérable de femmes en subissent probablement des procédures inutiles.

**Méthodes:** Les chercheurs ont fourni des tests de grossesse à 923 clientes consécutives venues chercher des services de régulation menstruelle dans une clinique d'Etat de la province rurale de Thai Binh, au Viet Nam, afin de déterminer la proportion de procédures inutiles qui y étaient pratiquées. Ils ont également estimé le coût et l'économie que pourraient représenter ces tests s'ils étaient pratiqués avant les procédures de régulation menstruelle.

**Résultats:** Pour 17% des femmes considérées, le test de grossesse s'est avéré négatif. Si cette proportion peut être appliquée à l'ensemble du Viet Nam, des 800.000 procédures de régulation menstruelle pratiquées chaque année, selon les estimations, quelque 136.000 seraient inutiles. Dans l'ensemble, ces 800.000 procédures coûtent environ 2,2 millions de dollars par an au gouvernement du Viet Nam et environ 7 millions de dollars aux femmes. En soumettant toutes les femmes désireuses de réguler leur menstruation à un test de grossesse (au coût total de 720.000 dollars), l'Etat économiserait 380.000 dollars de dépenses inutiles, soit un coût de test net de 340.000 dollars. Au coût estimé de 12 dollars par régulation menstruelle pour les femmes présentant des complications et de 8,5 dollars par procédure pour celles n'en présentant pas, l'élimination des procédures inutiles épargnerait aux Vietnamiennes un total estimé à 1,2 million de dollars.

**Conclusions:** L'accès accru aux tests de grossesse, combiné à une amélioration des protocoles cliniques de détermination des grossesses, permettrait d'éviter une proportion importante de procédures inutiles, avec moins de risques pour la santé des femmes et, à leur avantage aussi, de nettes économies monétaires.