Background

Despite significant progress in reduction of absolute number of abortions over the past 10 years, abortion as a means of contraception by women remains high in the Russian Federation. In 2014 the abortion rate was 22.8 per 1000 women aged 15–49 years (1).

 Abortions have been legal in the Russian Federation since 1995. However, dilatation and curettage (D&C) remains the most common method (59.1%)(1), primarily due to a lack of knowledge and skills of reproductive health professionals on alternative methods for performing abortion. Following the Ministry of Health’s “Strategic assessment of policies, programmes and services in the area of unwanted pregnancies, abortions and contraception in the Russian Federation”, one of the main recommendations was prompt replacement of obsolete methods of pregnancy termination in the first and the second trimesters.

We hypothesized that education and training of health care providers would result in more widespread adoption of manual vacuum aspiration (MVA) procedures for abortions between 6 and 12 weeks of gestation in both outpatient and inpatient settings compared to administrative directives alone for the same procedure. To check this hypothesis a comparative assessment of the two options to facilitate introduction of MVA into practice in the Sverdlovsk region of Russia was conducted. The administrative directives (Directive of the Ministry of Healthcare of the Sverdlovsk region 1229p) empowered health care providers to use MVA both in outpatient and inpatient facilities for termination of pregnancies diagnosed not later than 10 weeks of gestation. The strategic assessment and this study was supported by the WHO Regional Office for Europe and implemented in 2013-2014.

Methodology

The participating health care facilities were divided into 2 groups. The intervention group consisted of 6 health care facilities (3 inpatient clinics, 3 outpatient antenatal clinics and 12 physicians) that received training from May 28-29, 2013. Participants in this group were educated and trained with a special course that focused on both the theoretical and practical aspects of MVA, which included training on models and in the operating room. The control group included 6 health care facilities: 3 inpatient and 3 outpatient clinics, with a total number of 12 doctors. The participants in the control group did not attend the educational training course.

Assessment of the knowledge of obstetricians and gynaecologists in the intervention group was carried out before and 6 months after training. The knowledge of the control group was initially assessed together with the intervention group and 1 year afterwards. Evaluation of statistical indicators of participating facilities and settings was carried out using data collected from health systems reports submitted 6 and 12 months after termination of the training course. To facilitate comparative analysis statistical indicators for the year 2012 were also retrieved.

Criteria used to evaluate the effectiveness of the intervention included: the quality of theoretical knowledge (academic evaluation by 5-point Likert scale); total number of abortions and the MVA/D&C ratio; methods of anaesthesia; post-abortion complications; and methods used for re-evacuation of the uterine cavity.

The results and discussion

Analysis showed that 70% of abortions were carried out in hospitals during the study period. This is an unjustifiably high rate, as the safety of abortion up to 12 weeks by MVA under combined anaesthesia in an outpatient setting has been proven by numerous studies (2). The reported incidence of early complications is 0.1% to 3.4% and serious complications requiring hospital admission do not exceed 0.1 to 0.25% (2). This is most likely a consequence of implementation of the major directive regulating abortion services in the Russian Federation. The Directive of the Ministry of Healthcare 572n “On approval of the Order of medical care provision in obstetrics and gynaecology (excluding assisted reproductive technologies)”, reads: “Pregnancy termination in terms of up to 12 weeks by surgical method is performed in the daytime inpatient units of medical facilities or in the hospitals”, while antenatal outpatient clinics, according to the same Directive, are allowed to perform abortions only in “early terms” of pregnancy (less than 6 weeks gestation). This regulation reflects what was happening 30 years ago, when MVA started to replace sharp curettage.

It was not allowed to be performed on an outpatient basis in pregnancies greater than 6 weeks due to concern of severe complications which could require the use of general anaesthesia and respiratory support. Evidence now proves this is no longer a valid concern.

It does, however, remain problematic. Even the new regional regulating document, the Directive of the Ministry of Healthcare of the Sverdlovsk region 1229p, which enables abortions between 6-12 weeks gestation to be performed in antenatal outpatients clinics, failed to overcome the above mentioned restriction of the directive of a “higher” (state government) level. New directives will need to take this “contradiction” into consideration if we wish to see a decrease in the number of first trimester abortions performed in the hospital setting and an increase in the outpatient setting.

As for the knowledge of healthcare providers, those who completed the educational training course demonstrated an 80% increase, with the overall estimate of knowledge changing from 3.1 points (satisfactory) to 4.6 points (excellent) and the number of correct answers from 59% to 92%. This improvement was observed immediately after training and was also demonstrated during repeat testing 6 months later. In contrast, the group of healthcare providers who did not attend the educational training course did not show significant knowledge improvements. The quality of knowledge increased only by 11% from 3.1 points (satisfactory) to 3.3 points (satisfactory).
The number of correct answers increased slightly – from 59% to 67%, with one third of the answers remaining incorrect at 33.4%.

Application of safe abortion technologies (MVA and medical abortion) in outpatient facilities increased by 44.5% in both groups and reached 100% coverage by the end of the study period (D&C was no longer used in the outpatient setting for first trimester terminations). The ratio of D&C/MVA in the first half of the study year was 0/1 in all antenatal clinics (regardless of whether the health workers had been trained or not) in contrast to 2012, when it was 1/1, i.e. D&C and MVA were used equally as often. This may be attributed to implementation of both the national and regional directives. For inpatient facilities the use of MVA increased by 23% and reached 100% in the intervention group, while in the control group the increase was only 7.5%. However, in 2014, by the end of the second half of the study year, the method of MVA was the predominant method used, regardless of whether the study site had taken the training course or not. This would imply that the directive alone also worked, though not as quickly as together with education/training of the providers.

In our study, the initial (pre-study) number of post abortion complications for abortions performed in outpatient clinics, did not exceed average world statistics (6%) (2) and consisted mostly of incomplete abortions (5.1%). All women who experienced this complication were referred to hospitals, although repeated MVA or completion of abortion with the use of prostaglandins could be performed in an outpatient setting.

One year after the end of the educational training course the number of early post abortion complications following abortion in antenatal clinics decreased 20 and 15 times in the intervention and control groups compared with the year prior to training (from 6% to 0.3% and 0.4%). The number of complications requiring hospital admissions due to early post abortion complications in the outpatient setting in the intervention group decreased 5 times and in the control group 3.75 times (from 1.5% to 0.3% and 0.4% respectively). In the hospital setting a decrease was also seen in early post abortion complications, although much smaller in magnitude (4.6 times, from 5.6% to 1.2%, in the intervention group and and 3.2 times, from 5.6% to 1.7%, in the control group). The number of re-admissions due to post abortion complications performed in hospitals decreased 6.9 times (from 5.5 to 0.8%) in the intervention group and 5 times (from 5.5% to 1.1%) in the control group. If re-evacuation of the uterine cavity was necessary, 99.8% of providers who had received training used MVA instead of sharp curettage, while the doctors who were not trained still used the more invasive method of D&C in 33% of cases. The increased use of MVA both for abortion and for re-evacuation of the uterine cavity in incomplete abortion instead of sharp curettage should be considered a positive change. Another significant positive change was the application of the combined pain control protocol including verbal support, analgesics and cervical block with local anaesthetic preparation in 100% of abortions performed in outpatient settings.

Conclusion

Our study demonstrated that provision of education and training to healthcare providers on safe practices of MVA lead to a rapid introduction of MVA into clinical practice for termination of first trimester pregnancies in the outpatient and inpatient settings. While increase in uptake of MVA was also seen with administrative directives, this improvement was slower and of smaller magnitude. Where training had been completed MVA usage reached maximum saturation 6 months earlier than where training had not been completed. Furthermore, provision of the educational training course for health care providers contributed to an improvement of the quality of care by means of a significant reduction of early complications, hospital admissions and sharp curettage for re-evacuation of the uterus. Thus, the directive methods of introduction of modern methods of abortion, while important, should be accompanied by targeted education and training of health care providers.

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References
