

HTA REPORT | VOLUME 10 | EXECUTIVE SUMMARY**Ultrasound in Pregnancy****Rosery H, Maxion-Bergemann S, Rosery B,
Bergemann R**HTA Schriftenreihe, Band 10, Hrsg.: Rütger, Dau-
ben, Warda, Niebühl, 2004, ISBN 3-89906-733-9.**OBJECTIVE**

Routine examination with pre-natal ultrasound (PUSE) is used for a more precise definition of the gestation stage and early detection of the fact if it is a single or a multiple pregnancy. Additionally, it is used to check for any abnormalities of the fetus. The German Maternity Code introduced a third routine PUSE in 1996. Whilst the first PUSE is intended to prove the presence, vitality and age of one or more fetuses, the second and the third PUSE shall more precisely determine that the values still correspond to the normal and on time development of the fetus. In other European countries, e.g. Switzerland, Austria, Italy, Holland, and Sweden there are less than three PUSE during pregnancy. Scaling up the costs to 750,000 deliveries per year, the health-economic consequences of a third, additional examination for the statutory health service of the Federal Republic of Germany are considerable. It is rational to weigh the incremental benefit of a third PUSE against the cost of this extra examination. The objective of this Health Technology Assessment report (HTA report) is to provide a summary of the facts to be considered.

METHODS

The first step in carrying out the HTA report was to gather the relevant information about the quantitative and the qualitative provision of routine PUSE in Germany and to evaluate it. One aspect of this evaluation was to describe the integration of the PUSE in the overall maternal care program. Having conducted a systematic search and selection of literature, the quality, the sensitivity, and the specificity as well as the values of PUSE had to be scientifically proven. In addition, the psychosocial and

economic implications of a third PUSE were evaluated and described. A systematic search strategy, comprising ten steps, was developed for the evaluation of the selected publications. Altogether, ten literature databases, eighteen HTA institutes, and ten guideline-providers' databases were consulted. Epidemiological data about service utilisation were based on two comprehensive regional longitudinal surveys in the field of neonatology. The identified references were selected using a predefined filter.

RESULTS

This study found that

- 29 publications, three longitudinal surveys, and two reimbursement codes were useful for the assessment.
- Each year almost 910,000 routine PUSE are performed in the first third of the pregnancy, 750,000 in the second, and 675,000 in the third.
- The content of the third PUSE was – with the exception of the location of the fetus – identical with the content of the second PUSE performed circa two weeks before the third examination.
- There was no empirical evidence of the quality of the performed examinations, at least no representative surveys could be found. Primary studies reported deficiencies in the quality of process and structure of the focused PUSE.
- Interviews with 721 registered members of the Swiss Society of Gynaecology and Obstetricians in 1996 showed that the participants tended to be satisfied with the quality of PUSE.
- Among the outstanding publications on the value of PUSE, this study found a meta-analysis from Bricker et al. of the year 2000 as well as two Cochrane reviews of the years 1999 (Neilson et al.) and 1998 (Bricker et al.).
- The primary studies included in the leading overviews were difficult to compare due to the methodological differences. The studies were reported to be deficient with respect to the qualification of the investigator, the applied examining techniques, the duration and the frequency of examinations as well as the study population and the pre test probability. Most of the studies were conducted at an ultrasound center that does not reflect the German health service because the treatment is administered by outpatient gynaecologists. Therefore, the

study data should be treated with some reservation.

- The studies were found to be very specific, whereas the sensitivity values differed from study to study according to the examined organ system.
- A psychosocial benefit of PUSE seems to be evident.
- The macroeconomic implication of a third PUSE was shown to be considerable. The extra expenses of the statutory health insurance are incremental costs of 23.6 million EURO annually for the examination alone. Additional costs or prevented consequential costs were not taken into account.

CONCLUSION

The German Maternity Code does not contain any special requirements regarding the skills of the examiner. This report is based on studies that show a connection between the number of determined fetal abnormalities and the qualification of the examiner. It is essential to optimise their training by a higher investment while reducing three to two PUSE. Extra training for examiners could be financed with increased rates charged for the second PUSE. The service "Betreuung einer Schwangeren Einschließlich Ultraschallüberwachung" - as defined in the "Einheitlicher Bewertungsmaßstab (EBM)" should be split into two reimbursement rates in line with the "Gebührenordnung für Ärzte (GOÄ)".

All HTA reports are available for free as full texts in the HTA database (only in German). (www.dimdi.de – HTA)

Contact at DAHTA@DIMDI

Head: Dr. Alric Rüther

E-Mail: dahta@dimdi.de



German Agency for Health Technology Assessment at the German Institute of Medical Documentation and Information