



Review

Midwives' and obstetricians' views on appropriate obstetric sonography in Norway

Tove A. Fagerli^{a,*}, Ingrid Mogren^b, Annsofie Adolffsson^c, Kristina Edvardsson^{b,d}, Annika Åhman^b, Sophia Holmlund^b, Elisabeth Darj^e, Torbjørn M. Eggebø^{a,f}

^a National Center for Fetal Medicine, Trondheim University Hospital, Trondheim, Norway

^b Department of Clinical Sciences, Obstetric and Gynecology, Umeå University, Umeå, Sweden

^c Department of Health Sciences, Örebro University, Örebro. University College of Southeast Norway, Tønsberg, Norway

^d School of Nursing and Midwifery, College of Science, Health and Engineering, La Trobe University, Australia

^e Department of Public Health and Nursing, Norwegian University of Technology and Science and Department of Women's Health, StOlavs Hospital, Trondheim, Norway

^f Department of Laboratory Medicine, Children's and Women's Health, Norwegian University of Science and Technology, Trondheim, Norway

ARTICLE INFO

Keywords:

Ultrasonography
Health care professionals
Non-medical ultrasound
Safety

ABSTRACT

Introduction: The primary aim of this study was to investigate midwives' and obstetricians' views on how many ultrasound examinations should be part of standard care during pregnancy in Norway. **Material and methods:** This study is a part of a larger study, the CROss-Country Ultrasound Study (CROCUS), an international investigation of midwives' and obstetricians' experiences of and views on the use of ultrasound. We distributed 400 questionnaires to respondents in all five health regions in Norway: 40 to municipal midwives, 180 to midwives working in hospitals and 180 to obstetricians. The questionnaire included specific questions about the appropriate number of examinations during pregnancy, examinations without medical indication, non-medical ultrasound, commercialisation and safety. **Results:** The response rate was 45%. Of the respondents, 58% reported satisfaction with the offer of one scheduled ultrasound examination during pregnancy, as recommended in the Norwegian guidelines. Health care professionals who used ultrasound themselves were significantly more likely to want to offer more ultrasound examinations: 52% of the ultrasound users wanted to offer two or more ultrasound examinations vs. 16% of the non-users ($p < .01$). The majority of obstetricians (80%) reported that pregnant women expect to undergo ultrasound examination, even in the absence of medical indication. **Conclusion:** The majority of Norwegian health care professionals participating in this study supported the national recommendation on ultrasound in pregnancy. Ultrasound users wanted to offer more ultrasound examinations during pregnancy, whereas non-users were generally content with the recommendation. The majority of respondents thought that commercialisation was not a problem at their institution, and reported that ultrasound is often performed without a medical indication. The ultrasound users thought that ultrasound is safe.

Introduction

Sonography is an important part of pregnancy care. Ultrasound examinations can be performed as a screening test, on medical indication or in response to maternal request. All pregnant women in Norway are offered sonography in the 17th to 19th week of pregnancy. This routine ultrasound examination provides information on estimated date of delivery, number of fetuses, placental location, any structural abnormalities, and fetal development [1]. The examination is voluntary; however, 98% of all pregnant women in Norway attend this ultrasound examination [2]. Almost all routine ultrasound examinations are

performed at public hospitals in Norway, and low-risk pregnancies are usually managed within public primary care, shared approximately equally between physicians and midwives. However, private care is increasing in Norway. According to the Norwegian Medical Birth Registry and the Norwegian Abortion Registry, the number of congenital anomalies in 2015 in Norway was 4% [3]. The detection rate in Norway is similar to that in other high-resource countries (around 60% for fetal heart defects and close to 100% for abdominal wall defects) [4–6].

In most other high-resource countries, pregnant women are also offered a first-trimester scan as part of standard care, which includes a risk estimation of trisomies. Early detection of structural abnormalities

Abbreviations: CROCUS, cross-country ultrasound study; ISUOG, International Society of Ultrasound in Obstetrics and Gynecology; WFUMB, World Federation of Ultrasound in Medicine and Biology; ALARA, as low as reasonably achievable

* Corresponding author at: National Center for Fetal Medicine, Trondheim University Hospital, Olav Kyrres street 11, 7006 Trondheim, Norway.

E-mail address: tove.anita.fagerli@stolav.no (T.A. Fagerli).

<https://doi.org/10.1016/j.srhc.2017.12.006>

Received 7 April 2017; Received in revised form 19 October 2017; Accepted 31 December 2017
1877-5756/ © 2018 Elsevier B.V. All rights reserved.

and chorionicity in multiple pregnancy can improve pregnancy management [7]. A third-trimester scan, which includes fetal weight estimation, is routinely performed in some countries, but its overall benefit is a matter of debate [8]. A recently published study documented that the detection rate for fetuses small for gestational age (SGA) might increase with routine use of ultrasound in the third trimester, but the false positive rate is also increased [9]. Ultrasound examination during pregnancy has been described as ‘meeting and connecting with the baby’ and the examination may now be considered an important part of parenthood [10,11]. However, non-specific ultrasound findings or soft markers of chromosomal abnormalities may sometimes lead to unnecessary concern for the prospective parents [1].

Even though only one ultrasound examination is part of standard pregnancy care in Norway, most pregnant women have at least two [12]. More than 70% of pregnant women in 2014 and 2015 were examined before the second-trimester scan due to a medical indication or at their own request in the five largest cities in Norway [13], but this frequency is probably lower in rural areas. It is assumed that the subjective opinions of the examiners will influence the number of ultrasound examinations. The main aim of this study was to investigate midwives’ and obstetricians’ views on how many ultrasound examinations should be part of standard pregnancy care in Norway. A secondary aim was to investigate the respondents’ views on and experiences of commercialisation, women’s requests for ultrasound examinations and ultrasound safety.

Material and methods

We performed a questionnaire survey in Norway between September and December 2016. The questionnaire was randomly distributed to a national sample of midwives and obstetricians working at hospitals in Norway and also to midwives working in municipal clinics.

This study was a part of the larger CROSS-Country Ultrasound Study (CROCUS), which is an international investigation of midwives’ and obstetricians’ experiences of and views on the use of ultrasound and maternal/fetal roles and rights in high-, middle-, low-recourse countries. The participating countries are Australia, Norway, Sweden, Rwanda, Tanzania and Vietnam. CROCUS has both qualitative and quantitative parts. The results from the qualitative part were used to generate items for a questionnaire, that is, the content areas elicited from the qualitative studies were reformulated as a series of statements. The questionnaire was translated into Norwegian and tested in a pilot study with 20 participants; these results were not included in the present study. The questions were evaluated as satisfactory and no changes were made. The questionnaire is attached as a [supplementary file](#). CROCUS was accepted by the regional ethics committee (application number Helse Midt: 2013/662).

The questionnaires were sent by post to the heads of municipal clinics or of hospital obstetric departments. Participants received written information about the study. Return of a questionnaire was considered to constitute informed consent to participate. The questionnaires were stored in a locked cabinet at Trondheim University Hospital, to which only the main author and the supervisor had access. Data on each participant included a unique code, which was used for the sending of reminders.

According to the Norwegian Midwifery Association there were 320 municipal midwives working full-time and 1500 midwives working full-time at hospitals, and according to the Norwegian Medical Association there were 955 obstetricians in Norway in 2016 [14,15]. In all, 400 questionnaires were distributed: to 40 municipal midwives, to 180 midwives working in hospitals in Norway and to 180 obstetricians or residents in obstetrics and Gynecology. All of them were employed in public health care. The questionnaires were distributed in September 2016 to all five health regions in Norway and to local, central and university hospitals (i.e. different health care levels). We classified the respondents as obstetricians, and as midwives with and without

experience in the use of ultrasound. The study finished at the end of December 2016.

The questionnaire included background information about respondents and a large number of questions related to the use of obstetric ultrasound during pregnancy. In this study, responses to seven of these questions were analysed (see [Table 2](#)). These asked about four areas: the appropriate number of ultrasound examinations in standard pregnancy care; examinations without a medical indication/non-medical ultrasound; commercialisation; and safety. Ultrasound examinations without medical indication were those performed, for example, for fetal weight estimation when there was no concern about macrosomia or whether the fetus might be small for gestational age (SGA), or for further examination of fetal anatomy when no abnormality was suspected from the routine scan. Scans done for keepsakes or to determine fetal sex were also classified as non-medical sonography.

Statistical analyses

Results are presented as descriptive statistics; categorical variables were analysed using the chi-square test and continuous variables using the *t*-test. *P*-values < .05 were considered significant. Data were analysed with the SPSS statistical software package, version 23.0 (IBM SPSS, Armonk, NY, IBM Corp, USA).

Results

In all, 180 questionnaires were returned: a response rate of 45%. The response rate was 39% for obstetricians (*n* = 70) and 50% for midwives (*n* = 110). Two of the obstetricians and 77 of the midwives did not use sonography in their clinical work. Characteristics of the respondents are presented in [Table 1](#). The responses to the specific questions are presented in [Table 2](#).

Four respondents (2%) answered that sonography should not be part of routine pregnancy care, 106 (59%) were satisfied with one ultrasound examination during pregnancy, as recommended in

Table 1
Characteristics of the study population (N = 180).

	Obstetricians n = 70 (range or %)	Midwives who used ultrasound n = 33 (range or %)	Midwives who did not use ultrasound n = 77 (range or %)
<i>Age in years</i>	41 (28–65)	55 (35–62)	49 (26–63)
<i>Sex</i>			
Female	47 (67)	33 (100)	76 (99)
Male	23 (33)	0 (0)	1 (1)
<i>Have own children</i>			
Yes (%)	59 (84)	27 (82)	65 (84)
<i>Religious faith</i>			
Yes	26 (38)	16 (49)	36 (47)
No	41 (59)	15 (46)	36 (47)
Missing	3 (3)	2(6)	4 (5)
<i>information</i>			
<i>Marital status</i>			
Married	48 (69)	19 (58)	47 (61)
Cohabiting	11 (16)	5 (15)	16 (21)
Divorced	5 (7)	3 (9)	7 (9)
Widowed	0 (0)	0 (0)	1 (1)
Single	6 (9)	6 (18)	6 (8)
<i>Work experience</i>			
≤ 10 year	37 (53)	4 (13)	27 (35)
< 10 year	33 (47)	28 (88)	50 (65)
<i>Workplace</i>			
Health centre	0 (0)	2 (6)	24 (31)
Local hospital	21 (30)	5 (15)	19 (25)
Central hospital	18 (26)	8 (24)	7 (9)
University hospital	30 (43)	14 (42)	40 (53)
Fetal medicine centre	4 (6)	7 (21)	0 (0)

Download English Version:

<https://daneshyari.com/en/article/8565724>

Download Persian Version:

<https://daneshyari.com/article/8565724>

[Daneshyari.com](https://daneshyari.com)