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Swedish women's expectations about antenatal care and change over time – A comparative study of two cohorts of women

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ABSTRACT

A decade ago a national cohort of Swedish-speaking women were surveyed about their expectations on antenatal care. Today, antenatal care in Sweden still operates under similar circumstances while changes have occurred in society and the pregnant population.

Objective: To compare expectations of antenatal care in pregnant women recruited 2009–2010 to those of pregnant women from a national cohort in 1999–2000. An additional aim was to compare antenatal expectations in women recruited to a clinical trial and subsequently received group based or standard antenatal care.

Methods: A cross-sectional pre-study of 700 women recruited to a clinical trial and a historical cohort of 3061 women from a Swedish national survey. Data was collected by a questionnaire in early pregnancy for both cohorts and before the clinical trial started.

Results: In early pregnancy 79% of the women in the study sample reported a preference for the recommended number of visits, which is slightly higher than in the national cohort (70%). Continuity of the caregiver was still important with 95% vs 97% of the women rated it important to meet the same midwife at subsequent antenatal visits. The content of care rank order showed a change over time with lower expectations in health check-ups and emotional content and higher expectations in information needs, respect and partner involvement.

Conclusion: Women approached in early pregnancy had lower expectations about medical and emotional check-ups and parent education but higher expectations regarding information, being met with respect and the involvement of the partner compared to women 10 years ago. Continuity of a midwife caregiver was still important and women seem more willing to follow the recommended number of antenatal visits.

Clinical implications: Asking women about their expectations regarding antenatal care could be a means to individualize the care.

Introduction

Current antenatal care in Sweden incorporates medical check-ups of the mother's and baby's health and psychosocial issues, such as discussing life style issues and in some places screening for domestic violence and depressive symptoms [1]. Antenatal care plays an important role in preventing unfavorable outcomes of pregnancy; identifying circumstances important for the health of the mother and the unborn baby, and to prepare parents for labour, birth and the forthcoming parenthood [2,3].

Women's expectations of care are closely linked to what they believe is possible to achieve rather than what might be the best option [4]. Expectations and satisfaction have also been demonstrated to be positively correlated [5] with fulfilment of expectations being one of the most consistent predictors of satisfaction [6].

Previous international studies have shown that certain aspects of antenatal care are important for women, regardless of their background. Access to antenatal care, medical check-ups, adequate information, good communication with caregivers, and being treated with respect are some reported expectations of antenatal care [7–9]. As recommended by Green [10] women's views and expectations should be an integrative part of clinical work and research.

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In recent years the childbearing population in Sweden has changed with an increased age when having the first baby, more complicated pregnancies, and a higher proportion of primiparas [11]. The level of higher education in women aged 16–44 years increased from 30% in 2000 to 39.7% in 2012 [12], while the proportion of smoking decreased from 12.3% in 2000 to 6.2% in 2011 [11]. Access to health information is another change in society with the growing use of online health information on the Internet [13,14].

In the years 1999–2000 the first national survey of Swedish-speaking pregnant women was performed. When the content of antenatal care was rank ordered, medical aspects such as checking the woman's and the baby's health was highest in priority followed by making the partner feel involved in the care [15]. Other issues reported in the national survey were that women valued enough time to talk during antenatal visits, to be seen as a unique individual, and wanting parent education offered to all women, not only to first time parents, as they wanted to get to know other parents [16].

The number of antenatal visits and especially the space between visits has been associated with women's experiences and satisfaction with antenatal care. Following randomized controlled trials in several countries during the 1990's, the British model introduced in the 1940's was replaced by a program with fewer antenatal visits. The randomized trials did not find any adverse medical outcomes of a reduced visiting program. However, women who were allocated to the reduced program were less satisfied [17,18]. The reduced visiting program was also introduced in Sweden in the mid 1990's. From a previous program comprising a total of 13 visits to a midwife during an uncomplicated pregnancy, 6–9 visits were recommended. When women were asked in early pregnancy about their preferences regarding antenatal care, the majority (70%) preferred to follow the standard visiting program, 23% wanted more visits and 11% fewer [15].

Continuity of the caregiver is also important for women both in terms of meeting the same midwife during the antenatal visits, or having the same midwife throughout the episodes of care. Caseload midwifery with continuity of the caregiver during pregnancy, birth and the postnatal period show greater satisfaction compared with standard fragmented care [19]. Group based antenatal care is another concept that has been introduced in several parts of the world and it appears women have increased health benefits and overall satisfaction as a result [20].

Context of antenatal care in Sweden

Antenatal care in Sweden is organized within the primary health care system with the midwife as the primary caregiver. The compliance rate is high, with almost 99% of pregnant women attending antenatal care. Usually parents meet the same midwife during their antenatal visits [1]. During a normal pregnancy women have between 6 and 9 visits to a midwife and there is no routine visit to a medical doctor, but the midwife can refer women to more specialized care if needed. First time parents are offered parent education classes. Prospective fathers are encouraged to participate during the antenatal visits and parent education. There are only a few antenatal clinics in Sweden that offer continuity between episodes of maternity care or group based antenatal care.

Problem area

Antenatal care in Sweden operates under similar circumstances as 10 years ago while changes have occurred in society and in the pregnant population. Given the demographic changes in the pregnant population and the increased access to information available, the aim of this study was to compare expectations of antenatal care in pregnant women recruited 2009–2010 to those of pregnant women from a national cohort in 1999–2000. Another aim was to compare antenatal expectations in women recruited to a clinical trial and subsequently received group based or standard antennal care.

Method

This is a cross-sectional study comparing pregnant women recruited in 2009–2010 with a historical cohort of pregnant women from a national sample recruited in 1999–2000.

Participants

The study sample

The study group of 700 women came from a clinical trial where women were allocated to receive care from 31 midwives, working in 12 clinics spread over Sweden. Originally 48 midwives working in 16 antenatal clinics evenly spread over Sweden responded to an open invitation to be part of the clinical trial. For the clinics to be eligible, a minimum of two midwives were needed. The interested midwives were invited to attend workshops about the trial and got extensive information about the study design and their participation. The midwives were thereafter randomized to provide either group based or standard care. Midwives randomized to provide group based antenatal care were informed to followed a pre-designed schedule of nine 2-h visits where the first hour contained information and discussion about a pre-defined topic and the second hour individual health assessments were performed, 10 min/woman. Midwives randomized to provide standard (individual) care followed the national guidelines which recommend 6–9 visits of 20 min each. To assess the effectiveness of the clinical trial pregnant women who received care in the two models were invited to respond to questions about their expectations and experiences of the care received.

Only Swedish-speaking women were approached and invited to the clinical trial. Invitations to participate took place at approximately 10 weeks of gestation. Data reported in this study was collected at baseline, before the intervention started. Pregnant women who contacted the antenatal clinics for a booking appointment were informed about the trial and invited to participate. If they consented to participate they were allocated to a named midwife, but they were not allowed to choose the model of care for themselves. They received a questionnaire at the first antenatal visit. In total 786 women consented to participate and baseline data was gathered from 700 women.

The comparison group

For comparison, data from a historical cohort of 3061 women recruited to a national survey about women's expectations on antenatal care conducted in 1999–2000, were used [15]. They represent around 66% of approximately 4600 eligible women, based on calculation obtained from the Medical Birth Register [15]. In total 3455 women consented to participate and of those 89% (n = 3061) completed the first questionnaire.

Data collection

Data was collected by a questionnaire with similar questions used in the national cohort. For the study group the questionnaire was handed out by the antenatal midwife after written consent was obtained. The questionnaire could be filled out at the clinic or taken home and returned in a prepaid envelope.

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In the national survey women were recruited by the antenatal midwife at the first booking visit during three evenly spread weeks in 1999–2000 and those who chose to participate gave their written consent and a questionnaire was sent to women's home address of those who consented to participate.

The questionnaire included questions about the preferred number of visits, the importance of caregiver continuity and the rank ordered of the content of care [15]. The question about the preferred number of visits had three alternatives: as recommended (standard visiting program), fewer or more than the standard visiting program. The importance of meeting the same midwife at all antenatal visits was assessed on a 4 point rating scale ranging from 1 = not at all important to 4 = very important. Questions about the women's expectations on the content of antenatal care consisted of 12 questions and were assessed on a 5 point scale with the anchors verbally defined "not important at all" (1) and "Very important"(5). Women were asked to mark their opinion on the scale. The scale was used as a continuous variable but was also dichotomized into "Very important" vs all other options, as it was in the national cohort [15].

The questionnaire also contained information about the women's socio-demographic background (age, parity, civil status, level of education, country of birth, tobacco use). Depressive symptoms were assessed using the Edinburgh Depression Scale (EPDS) [21]. A cut off point of 12/13 was used, as suggested by researchers evaluating the scale during pregnancy [22]. Major worries were assessed using the Cambridge Worry Scale [23,24]. The scale contains 16 items related to work, finances, relationship, health, pregnancy, birth and early parenthood, hospital admission and risk of miscarriage. Each item was assessed on a scale ranging from 0 to 5 where 4 and 5 was regarded as 'Major worries' [24].

Analysis

Descriptive statistics were used to present the data for the study sample and women included in the national survey 1999–2000 [15]. For comparison *t*-test, chi-square test and odds ratios with a 95% confidence interval were used. Chi square test was also used to calculate differences between women who assessed their expectations with 'Very important' compared to all other options for the study sample and the national cohort [25]. Comparisons were made between the study group and the national cohort but also between women who subsequently received group based or standard (individual) antenatal care.

Ethical approval

The Regional Ethical Review Board at Karolinska Institutet made approval of the study (File record 2007/553).

Results

Of the total 786 women who consented to participate 700 (399 who subsequently received group based care and 301 who received standard care) returned the questionnaire, giving a response rate of 89% for the study sample. The baseline questionnaire was filled out in early pregnancy prior to the onset of antenatal care, but women were informed about the model of care they would receive when they completed the questionnaire. Reported reasons for not returning the questionnaire were miscarriage ($n = 21$), legal abortion ($n = 6$), regret of participation ($n = 30$) and unknown ($n = 29$).

The historical cohort from the national survey comprised 3061 women recruited in early pregnancy (mean gestational week 16).

Socio-demographic background

Table 1 shows the distribution of background factors between the women. The majority of the study sample was 25–35 years old, living with a partner and born in Sweden and 66% was expecting their first baby. When compared to women in the national cohort from 1999–2000 differences were found regarding parity, level of education and use of tobacco. A higher proportion of first-time mothers were found in the study sample and there were more women with a high level of education and fewer who used tobacco in the study sample when compared to the national cohort of women. There were also some differences between women who subsequently received group based or standard care, with more primiparas ($p < 0.001$) and more women with university level of education (p 0.002) receiving group based antenatal care.

Table 2 shows the distribution of women's mental health and major worries. In total 11% of the women in study sample scored 12 or more on the EPDs scale. Around 30% had major worries about something being wrong with the baby and the risk of miscarriage, 25% reported major worries about giving birth. When compared to the national cohort more women in the study sample reported major worries related to financial issues and work related worries as well as worries about miscarriage, own health and relationship with partner. There were no differences in mental health and worries between the women who subsequently received group based or standard antenatal care.

Women's expectations about the number of antenatal visits

In early pregnancy 79% of the women in the study sample reported that they preferred to follow the recommended number of visits, while 18% preferred more and 2.5% fewer visits than recommended. Compared with the national data from 1999–2000, adjusted for parity and level of education, there were statistically significant fewer women who preferred more (OR 0.7; 95% CI 0.2–0.8, $p = 0.019$) visits. There were no differences in preferred number of visits between women who later received group based or standard antenatal care.

Table 1
Socio-demographic data of study sample and a national cohort of women recruited in 1999–2000.

	Study sample $n = 700$ n (%)	National survey $n = 3061$ n (%)	p-value
Parity			
Primiparas	462 (66.1)	1302 (42.5)	0.000
Multiparas	237 (33.9)	1759 (57.5)	
Age groups			
<25 years	135 (19.4)	626 (20.5)	
25–35 years	493 (70.7)	2119 (69.2)	
>35 years	69 (9.9)	316 (10.3)	0.479
Civil status			
Living with partner	661 (95)	2888 (94.8)	
Not living with partner	37 (5)	159 (5.2)	0.929
Country of birth			
Sweden	635 (92)	2760 (90.1)	
Other country	55 (8)	300 (9.9)	0.137
Level of education			
Compulsory school/high school	306 (44.5)	1882 (61.9)	
University education	381 (55.5)	1154 (38.1)	0.000
Tobacco use			
Yes	41 (6.0)	333 (10.8)	
No	645 (94.0)	2728 (89.2)	0.001

Percentages might not add up to 100% due to internal missing values.

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Table 2
Depressive symptoms and major worries in study sample compared to a national sample of women recruited in 1999–2000.

	Study sample $n = 702$ n (%)	National survey $n = 3061$ n (%)	p-value
Depressive symptoms			
EPDS < 12	583 (89.1)	2668 (87.2)	
EPDS > 12	71 (10.9)	393 (12.8)	0.169
Major worries			
Housing	40 (5.7)	193 (6.3)	0.486
Money problems	89 (12.7)	304 (9.9)	0.044
Problems with law	8 (1.1)	21 (0.7)	0.230
Relationship with partner	14 (2.0)	105 (3.4)	0.046
Relationship with family and friends	17 (2.4)	68 (2.2)	0.792
Own health	28 (4.0)	185 (6.0)	0.027
The health of someone close	90 (12.8)	367 (12.0)	0.642
Employment problems	11 (15.8)	340 (11.0)	0.009
Something being wrong with the baby	197 (28.0)	752 (24.5)	0.089
Going to hospital	45 (6.4)	178 (5.7)	0.553
Internal examination	33 (4.7)	105 (3.4)	0.125
Giving birth	161 (22.9)	607 (19.8)	0.100
Coping with the newborn baby	33 (4.7)	118 (3.8)	0.192
Giving up work	35 (5.0)	76 (2.5)	0.006
Partners presence at birth	18 (2.6)	64 (2.0)	0.474
Risk of miscarriage	195 (27.7)	674 (22.0)	0.002

Percentages might not add up to 100% due to internal missing values.
Major worries = 4–5 on Cambridge Worry Scale ranging from 0 to 5.

Continuity of caregiver

Expectations about continuity of the caregiver, in terms of having the same midwife at the antenatal visits was high, with 95% of the women rating it as very important or important. This is 2% less than reported in the national survey ($p = 0.013$) [15]. No differences were found between women allocated to group based or standard care.

Expectations about the content of antenatal care

Table 3 shows women's expectations about their antenatal care rank ordered by the responses from the study sample. Most important was to check the health of the baby followed by being treated with respect and involvement of the partner. Least important were to be able to attend parent education classes and attention to emotional well being. When compared to the national sample from 1999–2000 there were statistically significant differences between the study sample and the national cohort mostly viewed as lower expectations (lower mean values or assessing the variable less than 'Very important') in health related variables (both medical and emotional issues) and participation in parent education. Higher expectations were found in information related variables, respectful treatment and partner involvement compared to the historical cohort.

As parent education mostly is offered to first-time parents we also checked for parity. The mean scores in ranking was 3.94 (SD 0.95) for primiparas and 2.78 (SD 1.30) for multiparous women in the study sample. The corresponding figures for the national sample was 4.03 (SD 1.08) and 2.90 (SD 1.41). For the majority of information-related variables primiparas scored higher compared to multiparas, which also was found in the national cohort [15].

When women the study group was compared regarding their expectations two statistically significant differences were found between the groups. Women who subsequently received group based care showed higher mean scores in *Information about breastfeeding* (mean 4.16, SD 1.03) and the *Importance of attending parent education* (mean 3.74, SD 1.08) compared to women allocated a midwife providing standard care (mean 3.98 SD 1.14 and 3.29, SD 1.33). There were no differences between the groups in assessing any of the items 'Very important'.

Discussion

The main findings of this study were that women seem to prefer the recommended number of antenatal visits and still rate the importance of midwife continuity high. The pattern of importance of the content of care changed over time with lower expectations in health check-ups and emotional content and higher expectations in information needs, respect and partner involvement. Nearly all variables differed between the study sample and the national cohort recruited in 1999–2000. Only minor differences were found between women who received group based and standard antenatal care, which probably mirrors the skewed distribution of parity between the groups.

The majority of women from both cohorts wanted to follow the recommended number of visits during antenatal care and also ranked the importance of continuity of care high, e.g. meeting the same midwife at all antenatal visits. This could be one expression of "what is must be best" (4), that people tend to prefer the options available or recommended although research has shown that even fewer antenatal visits [17] is sometimes enough to detect medical problems and that continuity of caregiver organized as case load midwifery [19] creates higher satisfaction without jeopardizing the health of the mother or the baby.

Despite the fact that women reported lower expectations in certain issues, compared to national data collected 1999–2000 [15], medical check-ups of the baby, being met with respect and that the partner was involved in the care were still of certain importance to women in early pregnancy. Similar to results from other studies medical check-ups was highly ranked. These results are in accordance with the main goal of antenatal care of preventing, detecting and treating adverse maternal, fetal and infant outcomes [2,3,26].

Interestingly, involving the partner in antenatal care still seems to be a delicate issue in antenatal care and of higher importance than a decade ago. Prospective fathers/partners have been invited and encouraged to participate during antenatal visits in Sweden

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Table 3
Expectations of the content of antenatal care in the study sample compared to a national sample of women recruited in 1999–2000.

	Study sample *n* = 700 *n* (%)	National survey *n* = 3061 *n* (%)	*p*-value/adjusted OR (95% CI)[a]
To check my baby's health			
Mean (SD)	4.87 (0.39)	4.93 (0.34)	<0.001
Very important *n* (%)[b]	598 (85.2)	2875 (93.9)	0.5 (0.4–0.8)
To treat me with respect (as a unique individual)			
Mean (SD)	4.71 (0.62)	4.49 (0.83)	<0.001
Very important *n* (%)[b]	524 (74.6)	2003 (65.4)	1.7 (1.3–2.2)
To treat my partner in a way that makes him feel involved			
Mean (SD)	4.69 (0.66)	4.53 (0.80)	0.001
Very important *n* (%)[b]	488 (69.5)	2077 (67.8)	1.0 (0.7–1.2)
To check my own health			
Mean (SD)	4.48 (0.75)	4.61 (0.70)	<0.001
Very important *n* (%)[b]	414 (58.9)	2180 (71.2)	0.6 (0.5–0.8)
To be informed about pregnancy			
Mean (SD)	4.44 (0.83)	4.18 (1.06)	<0.001
Very important *n* (%)[b]	415 (59.1)	1631 (53.3)	1.1 (0.9–1.4)
To be informed about labour and birth			
Mean (SD)	4.43 (0.87)	4.21 (1.07)	<0.001
Very important *n* (%)[b]	425 (60.5)	1700 (55.5)	1.2 (1.0–1.5)
To receive time to talk (e.g. about my own problems and thoughts)			
Mean (SD)	4.15 (0.89)	4.36 (0.85)	<0.001
Very important *n* (%)[b]	292 (41.6)	1778 (58.1)	0.6 (0.5–0.7)
To receive information about breastfeeding and infant care			
Mean (SD)	4.08 (1.06)	3.81 (1.30)	<0.001
Very important *n* (%)[b]	322 (46.0)	1327 (43.3)	0.9 (0.7–1.1)
To pay attention to my emotional well-being			
Mean (SD)	3.65 (1.03)	3.90 (1.07)	<0.001
Very important *n* (%)[b]	159 (22.6)	1143 (37.3)	0.5 (0.4–0.7)
To receive support in order to cope with labour			
Mean (SD)	3.55 (1.22)	3.38 (1.39)	<0.001
Very important *n* (%)[b]	416 (59.2)	1564 (54.0)	1.2 (0.9–1.5)
To be able to participate in parent education			
Mean (SD)	3.55 (1.22)	3.38 (1.39)	0.004
Very important *n* (%)[b]	175 (24.9)	890 (29.1)	0.6 (0.5–0.8)

Questions asked on a Likert scale 1 = Not important, 5 = Very important.
[a] Adjusted for parity and level of education.
[b] Reference = Women not rating the item as 'Very important'.

for almost three decades and many studies report that fathers still feel excluded in the care [27,28]. Fathers on the other hand rated the women's medical and emotional health more important than their own involvement and felt comfortable 'playing the second fiddle' during antenatal visits [29].

The result of this study showed that women expecting the first baby had higher expectations than women with previous children, especially about information, a fact that could be explained by the new situation with a lot of information needing processing when pregnant for the first time [30]. This is also in line with the recommendations in Sweden, to provide parental education classes during pregnancy mainly to primiparas [1], although women themselves often want parental education offered to all, regardless of parity [16].

The importance of the health of the baby was still highly ranked and is often regarded as a biological drive [15], and major worries are often related to the baby's health [23,24]. Surprisingly, the expectations of health checkups for mother and baby was significantly lower compared to data from the Swedish national survey conducted more than 10 years ago. We have no information about women's reasoning regarding this matter. One explanation could be that medical check-ups are taken for granted and that women rely on the caregivers to ensure this. A study from the USA investigated women's expectations about antenatal care [31]. The result revealed an 'implicit contract' that women hold with the medical system and that relying on high-tech medical care should guarantee a healthy baby. Similar results was also found in women's comments about important issues in maternity services, that they wanted to have an ultrasound examination to ensure that the baby was healthy, not to detect complications [16].

Another interesting finding is the higher expectations in need of information, despite the fact that women have increased access to information through the internet. Some researchers have stressed the importance that the midwife guide prospective parents to reliable websites and discuss information available on the Internet [13,32].

Parent education was still rated fairly low in the importance of the content of care, but differed between women expecting their first baby and women with previous children and between the samples and also between women who later received group based care. One of the differences in the study group was that more primiparas were allocated to a midwife providing group based care. The findings could also be explained by time point when the question was raised. In early pregnancy it might be that women have not thought as far as the parent education which usually occurs in the latter part of pregnancy.

In most antenatal clinics in Sweden, only first-time parents are offered parent education classes and group based antenatal care

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could be a means also to involve women with previous children. In a previous study it became obvious that multiparous women was a resource to first-time parents but also got the opportunity to understand more of the information and sometimes revenge of previous experiences [33]. Developing parent education in order to fit with parents' needs is still an issue to consider when planning antenatal care as just about half of the participants are satisfied with parent education overall [10,34].

Methodological consideration

This study has several limitations. One limitation is the fairly small study sample. Few clinics were interested in participating in the trial, which limits the representation of Swedish antenatal clinics. Reported reasons were mainly due to heavy workload and organizational changes. The long recruitment period is another issue and some midwives reported that it was difficult to get enough women due within the same month to form a group, whereby some clinics dropped off during the recruitment period. We also lack information about the number of women approached and asked to participate. The only information available is that 45 women declined to participate, but we believe that not all women were invited. It is known from previous studies that more vulnerable women, such as single mothers are less likely to be invited [35]. In this study, similar proportions of single mothers were found in the study group and in the historical cohort, thereby minimizing misrepresentation.

Merging the women allocated to two different models of care into one study sample could also have biased the results due to differences in parity and level of education. However, there were only minor differences in their expectations. The differences found (more important to get information about breastfeeding and to attend parent education) could be explained by the skewed distribution of primiparous and multiparous women in the sample.

Another issue to consider is that we chose to compare the sample with the historical cohort from the national survey, with the above mentioned differences in background characteristics such as a higher proportion of primiparas and highly educated women. Nevertheless, this choice was based on the fact that the content of care is fairly similar although society and characteristics of the pregnant population has changed over time, and must be taken into consideration when interpreting the findings. It is also important to notice the lack of information from non-Swedish speaking women, both in the study sample and in the national cohort. More research is needed about non-Swedish speaking women's needs during antenatal care.

Conclusions

Women approached in early pregnancy had lower expectations about medical and emotional check-ups and parent education but higher expectations regarding information, being met with respect and the involvement of the partner as compared to a historical cohort of women recruited to a national survey more than 10 years ago. Continuity of the midwife caregiver is still important but women seem more willing to follow the recommended number of antenatal visits.

Clinical implications

Asking women about their expectations regarding antenatal care could be a means to individualize the care. Follow up studies are needed to assess women's experiences with and satisfaction of the antenatal care received in relation to their expectations.

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