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## ARTICLE

# Deconstructing Dissonance: Ontario Midwifery Clients Speak about Their Experiences of Testing Group B Streptococcus–Positive

by Mary Sharpe, RM, PhD; Kristen Dennis, RM; Elizabeth C. Cates, RM, PhD; Sophia Kehler, BA; and Kory McGrath

**Mary Sharpe** has been a practicing midwife in Ontario since 1979. Since 1994, she has taught in the Ryerson University Midwifery Education Program, where she is currently an associate professor and director. She has made a proposal to study the use of the probiotics *Lactobacillus rhamnosus* GR-1 and *Lactobacillus reuteri* RC-14 in the eradication of group B streptococcus from pregnant women who are rectally and vaginally colonized.

**Kristen Dennis and Elizabeth Cates** are registered midwives practicing in Toronto.

**Kory McGrath and Sophia Kehler** are midwifery students at Ryerson University.

### ABSTRACT

Group B streptococcus (GBS) is a bacterium commonly found in the vaginal flora and is usually of no consequence to women. However, vertical transmission of GBS to the baby during pregnancy and/or birth can lead to GBS-associated disease, a leading cause of neonatal morbidity and mortality in Canada and throughout the world. Screening for GBS at 35–37 weeks' gestation and administration of intrapartum antibiotic prophylaxis for colonized women has become standard practice; however, there is little research surrounding clients' experiences, knowledge, and perceptions of both the test and of testing positive for the bacteria. This phenomenological study used semi-structured interviews guided by open-ended questions to explore the experiences of six midwifery clients in southern Ontario who tested GBS-positive in 2009. Transcribed interviews were analyzed using grounded theory to identify key themes. The diagnosis sharply affected women's experiences during pregnancy and labour and often led to dissonance for them regarding questions of risk, health, the concept of normal, the midwifery model, their birth plans, and the competence of their midwife. The themes are discussed in terms of their relevance to midwifery practice.

### KEYWORDS

*midwifery, group B streptococcus, prenatal screening, pregnant women's experiences, qualitative research*

This article has been peer reviewed.

# Déconstruire la dissonance : Des clientes de sages-femmes ontariennes s'expriment au sujet de leurs expériences quant à l'obtention d'un résultat positif au dépistage des streptocoques du groupe B

par Mary Sharpe, s.-f. aut., PhD; Kristen Dennis, s.-f. aut.; Elizabeth C. Cates, s.-f. aut., PhD; Sophia Kehler, BA; et Kory McGrath

## RÉSUMÉ

Les streptocoques du groupe B (SGB) sont des bactéries dont la présence est fréquemment constatée dans la flore vaginale et qui n'occasionnent habituellement aucun problème chez les femmes. Toutefois, la transmission verticale des SGB à l'enfant pendant la grossesse et/ou l'accouchement peut mener à la manifestation d'une maladie associée aux SGB (une des principales causes de morbidité et de mortalité néonatales au Canada et de par le monde). Le dépistage des SGB à 35-37 semaines de gestation et l'administration d'une antibioprofylaxie intrapartum aux femmes colonisées sont devenus des pratiques standard; cependant, peu de recherches se sont intéressées aux expériences, aux connaissances et aux perceptions des clientes en ce qui concerne le test de dépistage et l'obtention de résultats positifs à la suite de ce dernier. Cette étude phénoménologique a fait appel à des entrevues semi-structurées guidées par des questions ouvertes en vue d'explorer les expériences de six clientes de sages-femmes du sud de l'Ontario qui ont obtenu des résultats positifs au dépistage des SGB en 2009. La transcription de ces entrevues a été analysée au moyen de la théorie ancrée afin d'en identifier les thèmes principaux. Le diagnostic a exercé une influence marquée sur les expériences de ces femmes pendant la grossesse et le travail, et a souvent mené à une dissonance chez ces femmes en ce qui concerne les questions liées au risque, la santé, le concept de normalité, le modèle de pratique sage-femme, le plan d'accouchement et la compétence de la sage-femme. Les thèmes sont abordés en fonction de leur pertinence en ce qui a trait à la pratique sage-femme.

## MOTS CLÉS

*Pratique sage-femme, streptocoques du groupe B, dépistage prénatal, expériences des femmes enceintes, recherche qualitative*

Cet article a été soumis à l'examen collégial.

**Mary Sharpe** est une sage-femme praticienne qui exerce en Ontario depuis 1979. Depuis 1994, elle enseigne la profession au sein du programme de formation en pratique sage-femme de l'Université Ryerson (elle y occupe actuellement les postes de professeure agrégée et de directrice). Elle a déposé un projet visant l'étude de l'utilisation de probiotiques (*Lactobacillus rhamnosus* GR-1 et *Lactobacillus reuteri* RC-14) pour l'éradication des streptocoques du groupe B chez les femmes enceintes qui présentent une colonisation rectale et vaginale.

**Kristen Dennis et Elizabeth Cates** sont des sage-femmes autorisées qui exercent à Toronto.

**Kory McGrath et Sophia Kehler** sont des étudiantes du programme de pratique sage-femme de l'Université Ryerson.

## INTRODUCTION

Group B streptococcus (GBS), a common part of the human microbiome, can harmlessly colonize the surfaces of membranes in the genital or lower gastrointestinal tract. However, vaginal colonization of GBS during pregnancy and labour can lead to vertical transmission of the bacteria to the baby. This can result in GBS-associated disease, a leading infectious cause of neonatal morbidity and mortality in both Canada and the rest of the world.<sup>1</sup>

In North America, pregnant women are routinely tested for GBS with the use of a vaginal-rectal swab at 35–37 weeks of pregnancy. The reported incidence of GBS colonization varies widely in accordance with the site and design of each study, but current statistics indicate that between 10% and 30% of pregnant women in North America have positive results when screened for the bacteria.<sup>2</sup> In Canada, reported colonization rates are similar, ranging from 11% in one study published in 1998 to 30% in a study published in 2008.<sup>2</sup> Approximately 50% of infants born to untreated GBS-positive women are colonized at birth, and about 1%–2% of babies born to GBS-colonized mothers develop early-onset group B streptococcus disease (EOGBSD), defined by the presentation of infection within the first week of life.<sup>1,2</sup> Of these babies, 5%–9% will die from EOGBSD; this number increases to 20%–30% for preterm infants and falls to 2%–3% for babies born at term.<sup>2</sup>

In Canada, the most widely accepted strategy for reducing the incidence of EOGBSD is the use of intrapartum antibiotic prophylaxis (IAP) during labour, in response to a positive GBS screening result or when there are additional risk factors that have been shown to increase the likelihood of GBS transmission.<sup>1</sup> The Clinical Practice Guidelines of the Association of Ontario Midwives (AOM) support midwives' presenting clients in Ontario with the options to screen or not screen for the bacteria and to make an informed choice about whether or not they would like to use IAP. Discussions about informed choice are expected to include information about the incidence of risks associated with both the disease and the use of IAP; these risks include maternal anaphylaxis and yeast infections, increased *E. coli* infections, thrush, antibiotic resistance, and potential long-term effects in the infant.<sup>1</sup>

Colonization with GBS is a challenging topic because aspects of the pathogenicity of GBS are contradictory and elusive. The organism is considered to be a common vaginal bacterium; for a small number of babies, however, it poses potentially serious effects. Group B streptococcus is different from some other pregnancy-related health

concerns that can be prevented or managed through behavioural modification. GBS is transient, and there are no preventative strategies. Communicating such complex information to clients in an informed-choice discussion is a challenge, and a positive screening result can potentially disrupt the client's confidence in the process of normal physiological pregnancy and childbirth.

Much literature concerning the biological and clinical aspects of GBS exists. This information plays an important role in providing significant, up-to-date information for midwives and clients. However, midwives must attend to a wide variety of clients' needs, and little research has been done on the psychological, social, and emotional ramifications of GBS testing and treatment. Qualitative research to date has focused on women's perceptions of the GBS testing process, but there is little research on women's experiences of being colonized by GBS. This study begins to address this by exploring the experiences of six midwifery

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clients in Ontario who tested positive for GBS and by discussing the issues that emerged for them. Analysis of the interviews yielded a variety of themes. These themes are grouped into three sections corresponding to the participants' responses concerning GBS before being tested, after being tested, and during labour. Common to each section is an overarching feeling of dissonance experienced and articulated by the women involved in this study. The presence of GBS disturbed and affected the participants' principal ways of viewing their pregnancy, midwives, and birth plans. Understanding clients' experience of having GBS-positive test results can help inform midwifery practice and encourage care that attends to women's varied needs.

## REVIEW OF THE LITERATURE

The existing qualitative literature on GBS focuses primarily on women's perceptions of the GBS testing process and not on women's experience of being GBS colonized. Darbyshire and colleagues performed nine focus-group interviews with 35 women in Australia to explore women's

perceptions of the GBS test and disease and to determine the extent of women's knowledge of both the bacteria and the screening practice.<sup>3</sup> The study found that GBS continues to be poorly understood by pregnant women and that women struggle to comprehend and weigh the risks and implications, both physically and "morally," of GBS for themselves and their babies.<sup>3</sup> The women involved in the study explained that they had participated in screening because the process was seen to be "best for baby," relatively easy to undergo, and part of routine antenatal care.<sup>3</sup>

Patten and colleagues' study in Alberta focused on concerns and issues that emerged in focus-group discussions both with women (n = 22) and with health care providers (n = 25) with regard to neonatal GBS disease and the potential of GBS vaccination.<sup>4</sup> The study found that women were open to future vaccination strategies that could reduce colonization. However, only women who had had a baby with EOGBSD despite their having received IAP said that they would definitely consider the vaccine.<sup>4</sup> Most relevant here is the section on women's emotional responses to GBS infection. Patten et al. found that many women stated that they did not take GBS seriously unless they or someone they knew had a baby with the disease. Women who had lost a baby or given birth to a baby who was infected were angry because they felt that the situation was preventable and that their health care providers had not adequately informed them of its seriousness. These women also expressed feelings of personal responsibility for their baby's infection.<sup>4</sup>

Cheng et al. looked at women's level of anxiety associated with testing for GBS.<sup>5</sup> Their study found that testing did not increase women's anxiety before the test and that women with positive test results did not have increased levels of anxiety one week postpartum compared to women who had negative results. However, women with positive results on screening had higher levels of anxiety directly after being given their diagnosis than women with negative test results.<sup>5</sup> The study revealed the significant impact a positive diagnosis can have on women's feelings of well-being.

Harris and colleagues' systematic review of the psychological effect of a number of screening tests (including GBS screening) on pregnant women compared the impact that screening has in conditions that affect the mother's health to its impact in conditions that affect the fetus' health.<sup>6</sup> They found that after having a high-risk test result, pregnant women have higher anxiety about the health of their fetus than they have about their own health.

It was hypothesized that this may be due to a perceived sense of control in regard to threats to oneself that does not exist in regard to threats to the fetus. Harris et al. referred to a study by Hagger and Orbell to explain that a greater sense of control over a health threat tends to translate into less anxiety about that threat.<sup>7</sup> These results are significant, considering that GBS is an infection that typically does not affect the mother, does not respond to behavioural modification, and can affect the fetus.

## **METHOD**

This qualitative phenomenological study used semistructured interviews, guided by open-ended questions, to explore the experiences of six midwifery clients whose test results were positive for GBS. The clients came from six different midwifery practices in Toronto, Ontario, and interviews were undertaken in 2009, within six months of the participants' giving birth. Approval for this study was obtained from the Research Ethics Board of Ryerson University; participation was voluntary, and consent was obtained.

Husserlian phenomenology provided a conceptual and theoretical framework for the study because this framework encourages exploration through the subjective experiences of those interviewed.<sup>8</sup> The interviewer asked women about their midwifery care in general and specifically inquired about their GBS testing and diagnosis. The questions and discussions about GBS explored the women's feelings upon hearing their diagnosis and their subsequent experiences related to being colonized by GBS. The interviewers began by asking the women to describe how they first learned about GBS. They continued by exploring the women's process of decision making regarding GBS, the circumstances under which they heard their test results, whether the results altered their birth plan, and whether or not they received IAP. The interviews were recorded, transcribed, and analyzed with grounded theory, a qualitative methodology used to generalize descriptive theory when little is known about a phenomenon.<sup>9</sup> This process was used to identify and articulate key themes and significant findings.

## **FINDINGS**

A variety of themes and insights were gathered after the interviews were analyzed. These themes are addressed chronologically, starting with women's knowledge and experiences before being tested, after being tested, and during labour. The research revealed that for the women involved, a positive diagnosis of GBS colonization was

*article continued on page 28...*

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## art feature

# Fertility

Fertility and fecundity of women has been important to the human race since the beginning of time. Beyond the obvious need for continuation of the species, the ability to bear children was {and is} important for family subsistence and economic well-being. In addition, it is through children that family and cultural traditions are transmitted. Today's population demographers study fertility rates around the world and theorize about too many or too few people; while on the more personal side many women and their families have an emotional story to tell about their experiences of fertility and infertility.

Infertility presents a difficult and sad dilemma for those who wish children. They often struggle as they contemplate childlessness, adoption, surrogacy or in vitro fertilization. The costs of the science and practice of artificial fertility and impregnation are enormous for individual families and the broader society.

Fertility symbols are objects used by early societies as reminders of the importance of fertility. Representations of some of these symbols are even worn today by women as they hope for pregnancy. Fertility symbols take many forms: jewelry, figurines, tapestries, pottery, paintings and sculpture. A search of "fertility" on the website of the Metropolitan Museum of Art in New York reveals over 200 objects related to this topic. A sampling of these works is presented as follows:

*Figure 1:* One of the earliest fertility symbols to be discovered is the Venus of Willendorf. This statuette of a female figure is estimated to have been made between 24,000 and 22,000 BCE. She is the oldest



Figure 1: Artist Unknown, **Venus of Willendorf**  
H: 11 cm (4.3 in), clay, Naturhistorisches Museum,  
Vienna, Austria.

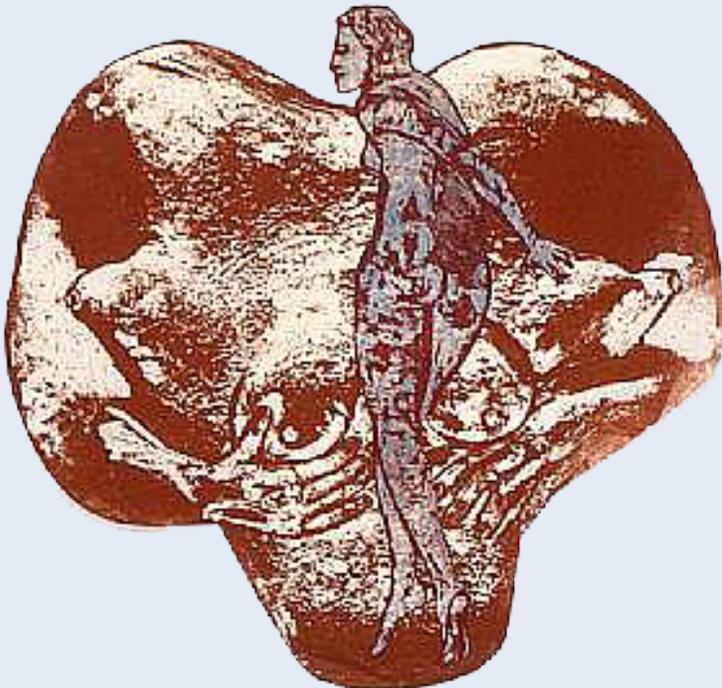


Figure 2: Nancy Spero, **Fertility**, 1986  
Hand printing and printed collage on paper,  
Brooklyn Museum, USA.



Figure 3: Paul Klee, **The Pathos of Fertility**, 1921  
Watercolor and transferred printing ink on paper,  
bordered with ink, Metropolitan Museum of Art,  
USA.

known fertility symbol, which is housed at the Naturhistorisches Museum in Vienna.

*Figure 2:* Nancy Spero, an American visual artist (1926-2009) has written and drawn extensively in the area of fertility.

*Figure 3:* Paul Klee (1879-1940) was a European modern artist. In this painting Klee depicts a pregnant woman as a flowerpot, incubating sprouting plant forms. Her intense anguish is magnified by the tilted head and awkward angles of her arms and legs.”

*Figure 4:* This Modern work by sculptor Louis Archambault was a donation by the artist to the National Gallery of Canada and was created at the Royal Canadian Academy of Arts.

*Figure 5:* This tall, sensuously modeled and delicately painted terracotta figurine represents Isis-Aphrodite, a goddess combining attributes of the Egyptian goddesses Isis and Hathor and the Greek goddess Aphrodite. Although otherwise nude, she wears elaborate accessories, including an exaggerated calathos (the crown of Egyptian Greco-Roman deities) emblazoned with the sun disk and horns of



Figure 4: Louis Archambault , **Fertility**, 1959  
Bronze with wood base,  
National Gallery of Canada,  
Ottawa, Canada.



Figure 5: Artist Unknown,  
**Terracotta Figure of Isis-  
Aphrodite**, Roman period,  
2nd–3rd century, Egyptian,  
Alluvial clay; brown, black,  
red, and pink paint on white  
engobe, H. 19 1/2 in. (49., 5  
cm), Metropolitan Museum of  
Art, New York, USA

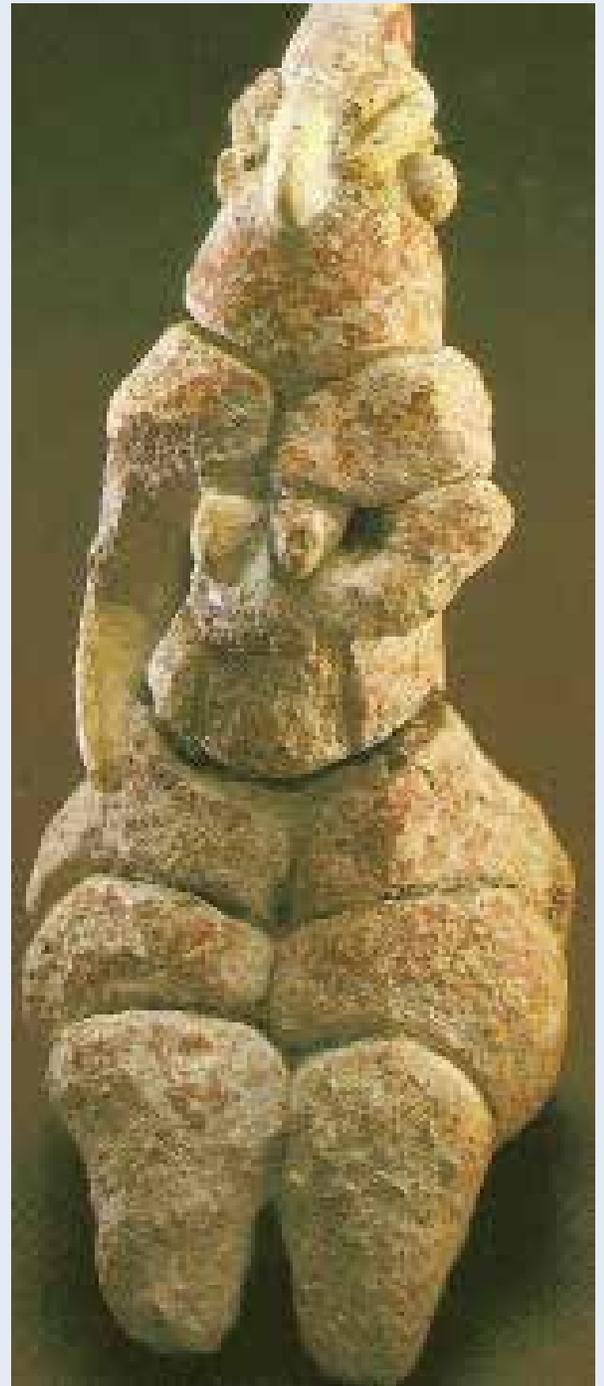


Figure 6: Artist Unknown, **Seated woman**,  
Horvat Minha (Munhata)  
Neolithic, 6th millennium BCE, Pottery,  
H: 11 cm; W: 6.5 cm, The Israel Museum,  
Jerusalem.

Isis. Her long corkscrew curls are arranged in the semblance of a traditional Egyptian hairstyle.

Similarly garbed figures of goddesses and female figures associated with marriage, conception, and childbirth are found throughout the Greco-Roman world. The Egyptian version is distinguished by its compressed, frontal, and rather rigidly upright pose, and by its occurrence in burials. These features relate to pharaonic prototypes whose efficacy seems to have extended into the afterlife for women and men alike.<sup>1</sup>

*Figure 6:* This figure is representative of the early Mother Goddess form -- wide hips and ample buttocks -- intended to depict fertility. This piece was made using separate pieces of clay added to a central core. This sculpture was unearthed during excavation of Horvat Minha (Munhata), south of the Sea of Galilee.

*Figure 7:* *Taweret* is protective ancient Egyptian goddess of childbirth and fertility. The name *Taweret* means, "she who is great" or simply, "great one," a common pacificatory address to dangerous deities.<sup>2</sup> The deity is typically depicted as a bipedal female hippopotamus with feline attributes, pendulous female human breasts, and the back of a Nile crocodile. She commonly bears the epithets "Lady of Heaven," "Mistress of the Horizon," "She Who Removes Water," "Mistress of Pure Water," and "Lady of the Birth House."<sup>3</sup>

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3. Jennifer Houser-Wegner, "Taweret," in *The Ancient Gods Speak : A Guide to Egyptian Religion*, ed. Donald Redford (Oxford: Oxford University Press, 2002), 351-352.



Figure 7: Artist unknown, **Statuette of the Goddess Taweret**, Ptolemaic Period, ca. 332–30 B.C. Egypt, glassy faience, H. 4 1/4 in. (10.8 cm), Metropolitan Museum of Art, USA.

## Miscarriage

*By Kevin Young*

One week after, we make  
love, again, for the first  
time, hopeful  
you're healed.  
And the wind

still loud  
against new windows-----

the day dances  
around us into

dark.  
What remains

besides pain?  
How to mourn what's just  
a growing want?  
The baby books  
put away, the hand-me-downs  
we'll never hand.

The heat shudders on  
and against your chest  
I nod

off, hearing your lone  
heart whisper:

uh-huh, uh-huh, uh-  
huh, uh-huh.

*From "Book of Hours" 2014*

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# about the poem

## **Commentary by Chris Sternberg**

I first heard this poem read by the author, the African-American poet Kevin Young, on "Fresh Air", the American National Public Radio show hosted by Terry Gross. Young was being interviewed about his new book of poetry, *A Book of Hours*. The title is a play on "Hours" - a medieval handmade prayer book and "Ours" - a book belonging to us. The poems in this book move from the death of the poet's father to the birth of his son about two years later, chronicling the writer's experience of the cycle of life.

During the interview, the author discusses the process of writing about a personal experience of loss. At such times, there is an urge to write immediately, but this does not result in anything beyond the expression of raw grief. The actual poems require, as with any other poem, painstaking work with the language, as well as reflection on the experience and its significance over time.

One such poem in the book is "Miscarriage", a beautifully drawn portrait of a couple as they move from the sadness of losing a pregnancy to hope for a future baby. The hopefulness is tentative, as the loss is recent and this is the first lovemaking since - a concrete step toward embracing the future, while at the same time a worry about the woman's having "healed". And what is meant here by "healed"? - there are both physical and emotional layers of healing after a miscarriage, and perhaps here they are taking the first steps towards emotional healing. This poem also introduces the uniqueness of the loss of a pregnancy compared to other losses, questioning exactly what is being mourned and how the experience of loss can increase the desire for a baby - a "growing want".

The poem ends on a sweet note: the writer and potential father hears the heater come on, bringing warmth and life into the house, then falls asleep listening to the soothing sound of his partner's heartbeat. Although a common occurrence, miscarriage is not often talked about. This poem allows us an intimate glimpse into the experience.

## about the poet

Kevin Young was born in 1970 in Lincoln, Nebraska. He has published eight books of his own poetry and edited eight other collections and has won numerous literary prizes and awards. He teaches English and writing at Emory University where he is also the Curator of Literary Collections and of the Raymond Danowski Poetry Library. He lives in Atlanta with his family.

From a 2006 interview in *Ploughshares* magazine:

*"I feel like a poem is made up of poetic and unpoetic language, or unexpected language. I think there are many other vernaculars, whether it's the vernacular of the blues, or the vernacular of visual art, the sort of living language of the everyday."*

highly significant and frequently created dissonance—an uncomfortable state resulting from the coexistence of contradictory ideologies.<sup>10</sup> This theme of dissonance recurs throughout the following analysis.

### ***Women's Experiences Prior to Being Tested***

#### *Lack of Prior Knowledge*

The women in this study had virtually no knowledge of GBS prior to midwifery care, even if they had previously given birth. Even while in midwifery care, few women knew details about GBS such as the transient nature of the infection or the options associated with a positive screen result. Prior to being tested, some women did not know that they could decline IAP following a positive diagnosis or that a midwife could administer IAP in the home setting. The women also did not know the various options available to them, including the option of refusing to be tested and the option of having IAP administered only when there were additional risk factors.

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The sense of empowerment and feelings of autonomy associated with self-swabbing are lost when little information is provided.

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Prior to its administration, the test seemed straightforward and not very important for some women, and the treatment was seen as minimally invasive. One woman noted that the topic was not discussed in a way that made her feel worried: “The information...about the test itself and about the implications of getting antibiotics, it was all sort of conversational, and I was trying to piece it together in my head.” Such comments bring to question the balance between providing information and doing so without increasing women’s anxiety.<sup>11</sup>

#### *Self-Swabbing: Autonomy and Confusion*

The women in this study appreciated the general sense of partnership they felt between themselves and their midwife. As one woman said, “We were sharing the responsibility of the pregnancy and birth.” One of the ways midwives encouraged autonomy with regard to GBS testing was by encouraging women to perform the swab on their own. Self-swabbing has been found to be accurate, and it

explicitly involves women in their own care.<sup>12–15</sup> Women expressed an appreciation of the control they were given over whether or not they would do the test, as well as the ownership of performing the swab themselves. However, women experienced dissonance with respect to self-swabbing, as they were uncertain of how to perform the test; felt somewhat shy, uncomfortable, and strange engaging in this new experience; and felt reluctant to ask for more detailed information about the procedure. As one woman reported, “I tend to need more, you know, very detailed specific information; yet I’m shy, so I don’t want to ask for it...I probably would have felt a little more comfortable doing it if I’d had a little more detail, you know, how far to insert or where, or that sort of stuff.” Experiences such as this woman’s reveal that the sense of empowerment and feelings of autonomy associated with self-swabbing are lost when little information is provided.

Women’s sense of autonomy and feelings of confidence were further compromised because the women were unable to confirm whether they had performed the swab correctly. One woman’s concern was illustrative: “I think I was a little bit concerned that I wasn’t doing it properly, just because, well, I’d never done it before and because...there’s no way of after, immediately after testing, [knowing] you did it right. So, you just put it in the container and hope you did it right.”

### ***Women's Experiences after Being Tested***

#### *Imparting Results: Time and Place*

Midwives are responsible for sharing the results of a GBS test in a timely manner. How and when midwives deliver this information can vary and proved to affect clients’ experiences. Two of the women were given their results in person, and four were told over the phone. For two of the latter women, being told over the phone was upsetting; something that previously was felt to be insignificant suddenly took on greater importance, as one woman noted when she said, “The call made it seem more serious, more worrying, because it felt like it was something that couldn’t wait until a visit, like it was too important.” She felt dissonance between her previous understanding of GBS and the perceived importance placed on her positive diagnosis when her midwife phoned to impart the results. One woman reflected that this dissonance could be avoided if the results were given in person, since the midwife “would have been able to respond to [her] cues” and provide appropriate comfort and information.

### *Reactions and Reassurance*

The women in this study reacted to their positive diagnoses in a variety of ways. Some felt calm whereas others felt frustrated and annoyed. One woman felt alarmed by her diagnosis and noted, “I sort of went into like, outer space by myself at work for a while there. And I think, you know, they say when you tell people they have cancer, which is a terrible comparison, but they sort of stop listening after you get some kind of diagnosis.”

Another woman was less worried about the actual diagnosis, as she was annoyed with the “implications of it while being pregnant,” such as possibly receiving IAP or needing to change her birth plans.

Women generally spoke about how supportive and non-alarmist their midwives were. The reassurance midwives provided also created a sense of trust and safety for some women despite feelings of uncertainty. This reassurance came from discussing the efficacy of antibiotics, the potential course of treatment, and the prevalence of positive test results. The information on antibiotics was particularly reassuring for some; one woman stated, “[The midwife] could see I was upset, and she very quickly followed up with... ‘there’s antibiotics.’”

For some women, the reassurance midwives provided created dissonance between the women’s own alarm and their midwife’s lack thereof and between their initial confidence in their midwives and the waning confidence they felt after their diagnosis. One woman began to doubt her midwife’s ability to appropriately assess the situation when she was told, “Oh, it’s no big deal. We may not use [the antibiotics].” The contradictory feelings between her reaction to the results and the response of the midwife “didn’t all jive in [her] head” and left her feeling confused and uncertain. Another woman spoke of temporarily questioning her trust in her midwives when they said she could receive IAP at home but that they might not choose to unless she had an additional risk factor. These comments made her feel as if the midwives were not adequately addressing the situation and that “maybe [it] was being managed less conservatively than it should be.” This woman started to question whether she should change her home-birth plans, and these feelings led her to confer with another health professional who came “from a different point of view.”

### *Knowledge and Information Seeking*

The women in this study changed their approach to information seeking upon learning of their GBS-positive

status. Other studies have noted that when people learn of a new diagnosis, they frequently engage in their own research, and their health information-seeking behaviour (HISB) changes.<sup>16,17</sup> Broad research on HISB shows that it can play an important role in reducing uncertainty and in increasing an individual’s sense of control and predictability.<sup>17</sup> Self-guided research certainly helped calm one woman after she was told her results. She stated, “I sort of spent a good portion of that day, you know, educating myself about what it meant, and very quickly kind of came back down to earth and realized that it wasn’t the end of the world, and it wasn’t such a big deal.”

### *Language and Semantics: Positive and Normal*

The discourse on GBS proved to be significant in the experiences of the women in this study. The word “positive,” associated with being GBS colonized, was challenging because some women associated it with human immunodeficiency virus (HIV) and other sexually transmitted infections (STIs). This is consistent with Pirotta and Garland’s research, which also found the word “positive” to be highly associated with HIV and to be connected to “moral connotations, feelings of uncleanness and stigmatization.”<sup>18</sup> This association created dissonance for women when they had positive test results. Some women thought that they would have negative results in the same way that they might continue to have negative results for STIs if no behavioural changes had been made. Having a positive test result felt contradictory to some of the women. One woman expressed indignation, saying that “it’s not like I went out and did something.” For some of the women, the association of the word “positive” with STIs created a sense of responsibility that did not correspond to their view of themselves and their behaviour. This sense of responsibility led one woman to try to change her diagnosis by actively promoting her health. She was frustrated by the short period of time between diagnosis and labour, as she felt it did not give her adequate time to change her situation.

The use of the word “normal” to describe GBS also created dissonance and challenge for women who were GBS positive. Since midwives are experts in normal pregnancy and childbirth and tend to care for women who seek a low-intervention style of maternity care, the words “normal” and “natural” frequently arose in women’s comments. Some women understood GBS colonization as a natural or normal phenomenon; however, the “normal” diagnosis created dissonance because of the risk to the baby. Women reported

that their midwives often said that GBS is a normal part of the maternal flora of a woman's vagina and rectum in order to normalize the situation but that this created confusion for women when a treatment was then recommended.

### *Implications for Home Birth*

For the women in this study, the positive GBS diagnosis led to anxiety about their birth plans. One woman's excitement over having reached 37 weeks without complications was dashed when she received her diagnosis, because she mistakenly thought that "it might jeopardize [her] chances of having a home birth."

Similarly, one woman's positive diagnosis affected her ability to defend her decision to have a home birth to her family and consequently affected her enjoyment of the last weeks of her pregnancy. This woman experienced a dissonance between her prior belief (and confidence) in the safety of home birth and her new perception of risk, a perception she felt her diagnosis created.

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### ***Women's Experiences during Labour and Delivery*** *Timing of Intrapartum Antibiotic Prophylaxis*

The Association of Ontario Midwives currently recommends administering IAP every four hours at the beginning of active labour for women who have tested positively and/or have an additional risk factor.<sup>1</sup> However, the speed of labour or the inconvenience of inserting an intravenous (IV) during active labour can impede this. As a result, some women in this study expressed decreased confidence and increased anxiety because IAP had not been administered.

The midwifery model aims to create confidence and independence in birth by encouraging women to go into labour at home and to call the midwife when they are in active labour. This model considers the woman and acknowledges the intensity of labour and the importance of sensitively timing the insertion of the IV. A lack of attention to timing can result in an IV that is not inserted on time

and can create anxiety about when a woman should call her midwife. One woman in this study wanted to make sure of IAP coverage, but there was no coverage in the end because of the speed of her labour. She felt dissonance in this situation because of what she reported as a conflict between her desire to avoid early admission to hospital and her hopes of ensuring the administration of antibiotics.

### *Intravenous As a Construct of the Medical Model*

The timing of the administration of IAP—and the tool itself—created anxiety and dissonance for the women involved in this study. In many people's minds, the IV is part of the medical construct and "may diminish [women's] labour and birth choices."<sup>19,20</sup> The prospect of having an IV did not correspond to women's notions of midwifery care and created dissonance between what they thought "they were signing up for with midwifery care," as one woman put it, and what they found themselves experiencing. The IV made the experience feel "drastic" for one woman, who was challenged by the IV because she was "someone who is not used to medical intervention." With the IV, the woman who is GBS positive enters into a different reality and begins to compare her midwifery care with "medical care."

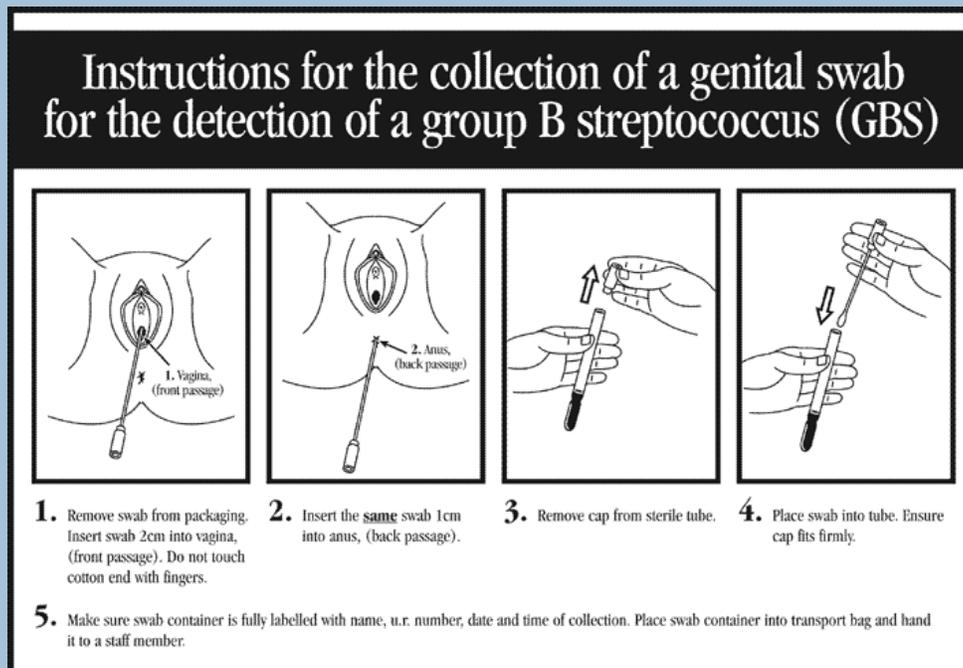
## **DISCUSSION**

Interviewing women who screened positively for GBS revealed a number of important themes during pregnancy and birth that can be used to inform and improve midwifery care in regard to GBS.

Prior to the prenatal screening, the women's lack of knowledge about GBS and the challenges of self-swabbing were key findings. Having an understanding of the implications of a positive screen result is important prior to testing, as it might help alleviate anxiety once the results are received. The transient nature of the infection, the ability of midwives to administer IAP at home, and the fact that screening or IAP or both can be declined (especially in the absence of additional risk factors) are all important topics to discuss prior to testing.

In spite of research that shows that self-administration of the swab is effective, midwives might offer to administer the swab themselves or spend more time explaining how to self-administer the test. Making sure that each woman is confident of her ability to self-administer the swab or feels welcome to accept the offer of a midwife-administered swab is important in ensuring that this step of prenatal care creates in the woman a sense of autonomy and self-confidence. More detailed instructions or possibly a poster

**Figure 1.** Instructions for the collection of a genital swab for the detection of group B streptococcus.



Source: Royal Women's Hospital, Melbourne, Victoria, Australia.  
Available from: [http://www.cdc.gov/groupbstrep/downloads/gbs\\_swab\\_sheet21.pdf](http://www.cdc.gov/groupbstrep/downloads/gbs_swab_sheet21.pdf)

in the washroom that clearly shows how to do the swab may be needed. *Figure 1* provides an example of what an instructional poster might look like.

This research revealed that after a client has been tested, the time and place she receives the news that she is GBS positive are significant for her and appears to be a key factor in how she recalls and responds to discussions about GBS. Best practice is to inform women as soon as the results are available in case labour begins before the next appointment. Recognizing the need to share information with clients as soon as possible, we raised the question of how midwives might better prepare women for hearing about a positive diagnosis over the phone.

The responses of women to the reassurance they received can remind midwives of the important work they must do to accurately contextualize risk while they attend to their clients' individual perceptions of risk. It is important to follow the client's cues in order to provide reassurance that realistically articulates the risks and options while not undermining the client's fears and concerns. This study also indicated that when clients find out they are GBS

positive, they engage in their own research. The Association of Ontario Midwives (AOM) Clinical Practice Guidelines and other guidelines offered by bodies such as the Society of Obstetricians and Gynaecologists of Canada (SOGC) are important as they provide a summary of the evidence on the different screening and treatment choices clients can make. Midwives can direct clients to the AOM and SOGC documents; midwifery practice websites could link to these documents or offer paper copies as a resource to all clients. Additional easy-to-read print-based information might also be given to clients earlier in pregnancy to help them understand this complex issue. Providing clients with rigorous, valid, and clear resources is important given the abundance of available information.

The women's responses to the words "positive" and "normal" in this study shed light on the power and influence of language. While these are words used to describe and discuss GBS, midwives should be cognizant of the weight they can hold and be sensitive to clients who respond to them negatively. One might consider describing GBS as a "common" rather than a "normal" bacterium.

Ontario midwives are fortunate to have antibiotic prescription and administration within their scope of practice as well as the ability to provide IV therapy and drugs for anaphylactic reactions.<sup>1</sup> These functions can be available both in the home and in hospital. The AOM Clinical Practice Guidelines also support the administration of IAP only when additional risk factors are present.<sup>1</sup>

The midwife's ability to offer treatment in labour in any birth setting needs to be clearly outlined to women before testing is offered and after testing is completed, in order to alleviate women's anxiety about their birth plans.

This study also found that the IV itself and the timing and administration of IAP created difficulty for women during labour and birth. Midwives might mitigate clients' concerns about the timing of the IV by offering to administer the antibiotics at home prior to the client's admission to hospital for a planned hospital birth. Such options should be outlined to clients prior to labour and birth.

This study is limited by its small sample size, since clients' reactions may be tied to a myriad of factors that could not have all been represented in our sample. Our sample did not include clients for whom English is a challenge or clients who do not have access to the Internet. Resources such as print-based information, posters for use in the clinic, or seminars given for clients and families on GBS and testing could assist in these cases.

Despite the study's limitations, its findings are significant in their description of a set of particular experiences. The insights gathered and the implications for practice emphasize the significance of sensitive, inclusive, and appropriate care.

## CONCLUSIONS

The responses of the women involved in this study capture the complexities of the discourse on GBS and show how midwives can be sensitive to the dynamic needs of their clients. Because screening for GBS has become standard practice, it is important to consider the implications of such a test and the ways it may affect a client's experience during pregnancy and labour. As well, few studies elucidate the effect of GBS colonization on client's experiences and perceptions during pregnancy and labour. In an era of prenatal screening and testing, such a discussion is important to ensure that testing does not do more harm than good.

It is important to create an environment in which women feel confident owning their choices regarding

GBS. Research such as this can help inform midwives and other health care professionals of the requisites of such a discourse. This will involve a number of factors, including trusting relationships, a true sense of collaboration, a feeling of shared power and control, strict attention to the use of evidence, and a focus on resisting "risk discourse."<sup>11</sup> This discussion has centred on the "downstream" results of GBS infections. However, alternative, evidence-based approaches are needed to reduce the risk of GBS infection. These will help midwives protect normal birth and reduce the need for intervention during labour and birth.

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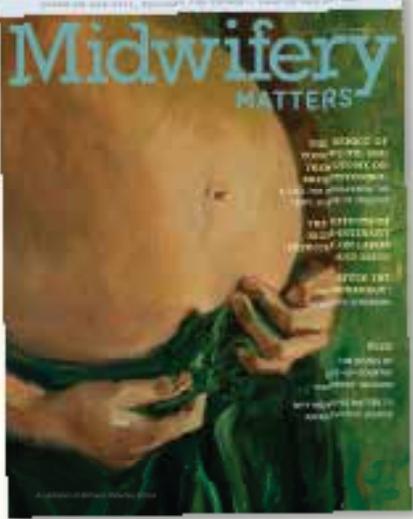
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