Midwifery 38 (2016) 21–28

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/midw

Risk talk: Using evidence without increasing fear

Vicki Van Wagner, RM, PhD (Associate Professor, Midwifery)

Ryerson University, 350 Victoria St., Toronto, ON, Canada

ARTICLE INFO

Article history:
Received 11 May 2015
Received in revised form
3 April 2016
Accepted 15 April 2016

Keywords:
Risk
Risk communication
Evidence-based practice
Evidence-informed practice
Informed consent
Informed choice

ABSTRACT

Objective: this paper explores unexpected findings about how to "do risk talk" which emerged during a broader research project on of the application and misapplication of evidence-based practice in Canada.
Design: the study used qualitative methods such as semi-structured interviews and thematic analysis of inter-professional maternity care conference presentations.
Setting: Canada
Participants: fifty Canadian midwives, doctors and nurses involved in maternity care were interviewed to uncover the "how and whys" of differing interpretations and uneven application of evidence.
Results: care providers described a "lean to technology" as an unexpected result of using evidence in their discussions with pregnant women. They perceived risk talk as undermining low intervention approaches and reassurance about the safety of birth. Across professional groups, interviewees described how they attempted to mitigate this unwanted effect. Their strategies to put risk in perspective include finding comparable everyday risks, using words and pictures to describe numbers and using absolute risk and numbers needed to treat rather than relative risk. They warned about the need to balance a culture of fear combined with maternal altruism. Time, reassurance, awareness and humility were seen as key tools.
Key conclusions and implications for practice: midwives and other maternity care providers can use a variety of techniques to put risk into perspective. It is important to discuss evidence and risk with an awareness that the process itself can exaggerate risk. Care providers in all professional groups were motivated to avoid contributing to a culture of fear about childbirth and increasing rates of intervention.

Introduction

The research presented in this paper emerged unexpectedly during a broader research project conducted with health care providers in Canada, called “Reconsidering Evidence”. My PhD dissertation research explored the application and the misapplication of evidence-based practice (EBP) in maternity care. I used qualitative interviews with the health care providers involved in maternity care in Canada: midwives, nurses, family physicians and obstetricians. My goal was to uncover the “how and whys” of differing interpretations and uneven application of evidence. I explored the unexpected effect of EBP, or how “things bite back” (Tenner, 1996), and examined the social context and politics that produce particular “operations of evidence” in maternity care.

Although an exploration of how concepts of risk impact the application of EBP was part of my research, I did not set out to explore how care providers “do risk talk” and yet the subject repeatedly appeared in my interview data. Risk talk can be defined as the process of discussing pregnancy and childbirth care using estimations of risk based on numerical data from the best available evidence, often randomized controlled trials (RCTs). I use the term “talk” rather than “communication” to reflect how routine and ordinary the work of communicating risk has become in the day-to-day work of the care providers I interviewed. “Doing” risk talk is a reference to what Montelius and Nygren (2014) call the “performativity of risk”. Many informants experienced risk talk as a required performance.

During my interviews, informants consistently described a “lean to technology” as an unexpected result of using evidence in their discussions with pregnant women. Many had enthusiastically adopted EBP as an approach which they hoped would decrease the use of technology in childbirth. Despite this hope, they found introducing “risk talk” seemed to steer women's choices towards intervention. Providers from each of the professional groups volunteered that they used specific techniques to try to nurture a culture of risk tolerance rather than fear. This paper explores these themes and the strategies they described.

E-mail address: vvanwagn@ryerson.ca

http://dx.doi.org/10.1016/j.midw.2016.04.009
0266-6138/

The context of maternity care in Canada

The Canadian health care system provides universal access to health care for residents and is organized at a provincial/territorial level. Maternity care in Canada is challenged by geographic diversity with densely populated urban areas, decreasing populations in rural areas and very sparsely populated remote communities. Most Canadian births take place in large urban hospitals however births also occur in small rural hospitals, at home and in small birth centres. The majority of maternity care in Canada is provided by doctors who act as the primary care or "most responsible" provider for antenatal, intrapartum and post partum care. Nurses staff the labour floors and monitor and support those admitted under the care of doctors.

Although midwifery was an integral part of both aboriginal and immigrant societies in early Canadian history, midwifery was replaced by medical and nursing care by the mid-twentieth century in all but the most isolated parts of Canada. Public demand for alternatives to medicalized childbirth catalyzed a rebirth of the practice of midwifery outside the formal health care system in the 1970s and 1980s and activist movements called for recognition and funding of midwifery services (Allemang, 2013). Midwifery was established as a self-regulating profession and integrated into the health care system in many provinces during the 1990s, however the profession remains unregulated (and therefore alegal or illegal) in several of the country's health systems.

Canadian midwives work in continuity of care models and attend births at home, in birth centres and in hospitals. There is strong public demand for midwifery care and the profession is growing rapidly, however the increase in midwifery attended births has largely compensated for a decreasing numbers of family doctors involved in maternity care in urban communities. The majority of births in the country continue to be attended by the obstetrician and nurse team (CIHI, 2007; PHAC, 2012). Unlike most settings where midwifery is standard care for normal births and obstetricians act as consultants, most normal births in Canada are attended by high risk specialists working in large high risk centres (CIHI, 2007).

Methodology

Setting

Interviews were conducted in participants' workplaces. This included hospitals and midwifery and clinician practice offices. Participants came from across Canada. They worked in seven of the ten Canadian provinces and two of the three territories, with experience in rural, urban and remote settings. They worked in ten of 16 academic health science centres in the country. As part of my research, I attended professional conferences which took place in six of the 10 provinces in nine different cities.

Ethics

Ethics approval was obtained from the Research Ethics Committee of York University, Toronto, Canada in accord with the Tri-Council Policy Statement (CIHR, 1998). A consent form was provided to all participants in advance of the interview. Written consent was obtained from all participants.

Design

This study used qualitative research methodologies to understand how research evidence is used in clinical practice. Data was collected through key informant interviews and analysis of evidence-based practice tools, such as clinical practice guidelines and professional conference presentations. The research was designed as an inter-professional inquiry seeking to understand commonalities and differences between the professions. An interview guide was used to conduct semi-structured interviews with 50 care providers.

Recruitment

Care providers from across Canada with an identified interest in EBP were invited to participate with the goal of including approximately equal groups from the main maternity care provider professions: midwifery, nursing, family practice and obstetrics. My sampling was purposive, but also snowballed, with key informants letting me know about others who they thought should be interviewed. Some were identified through published literature, relevant conferences or participation in an inter-professional online chat group hosted by the College of Family Physicians of Canada called the Maternity Care Discussion Group (MCDG). I attempted to include both those who could be identified primarily either as advocates or as critics of EBP, and prioritized those who had published or spoken on the topic. I attempted to include a balance of those identified as front-line practitioners or as professional leaders. Some from each profession were selected because they were known as EBP researchers; others had never done research and focused on clinical practice. My sample cannot be seen to be representative of the professions, as informants expressed individual views and were selected for their interest in EBP.

Data analysis

Interviews were transcribed verbatim. Quotes were edited for readability only. A thematic coding guide was created based on themes that emerged from the literature, conference presentations and the interviews. This guide was used to conduct an analysis of the interviews and conference presentations. Transcripts were coded using NVIVO qualitative data analysis software. Interviewees consented to being named in my dissertation, however several asked to be anonymous in any subsequent publications and all are identified by profession only.

Findings

Care providers spoke about feeling compelled to use evidence in their conversations with the people they care for using terms that conveyed both pressure and regret. Some observed that EBP functioned less as a way of providing information and choice and more as a risk management approach. One obstetrician explained that "Discussing [evidence] with patients becomes something you better do or you're in trouble". For one midwife, concerns about the "heaviness" of discussions about risk and how much "space" risk talk takes in antenatal care, made her disillusioned with EBP:

> … it's a very heavy process and I feel that pressure. I feel that it has changed my practice. Of course it is informed choice but [I am concerned about] how much space it has taken in the whole time we spend with women about pregnancy. I'm just so fed up with that … weighing the relative risks of doing the screening, not doing the screening, doing the test, not doing [the test].

Some told me that in past practice they had recommended low intervention approaches such as a trial of labour after a previous caesarean section, expectant management of post-term pregnancy or vaginal birth for breech and twins. The obstetrician quoted

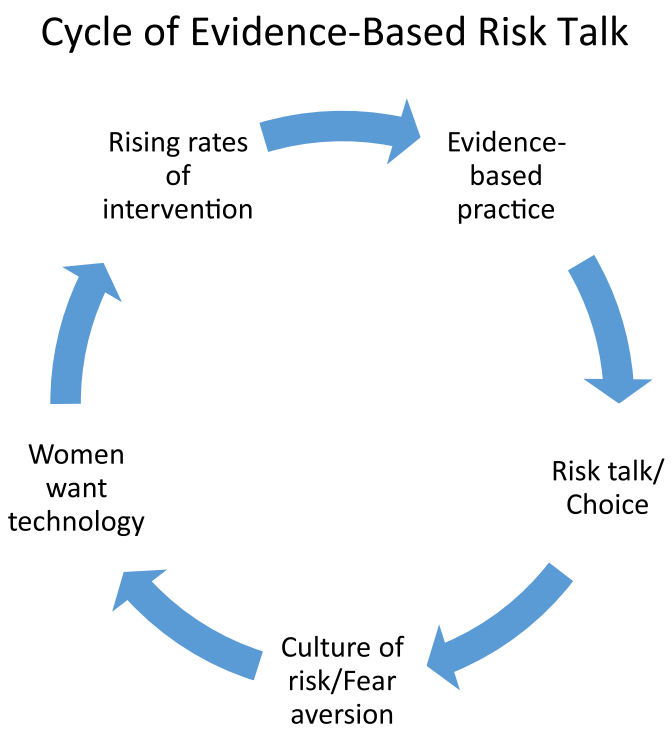

Fig. 1. Cycle of evidence-based risk talk.

below described how he had presented these approaches as best practice without extensive or numeric discussion of the risks and benefits. For this informant, as the EBP paradigm became the norm and specific research generated numeric estimations of risk, it became imperative to have a different type of discussion. The impact of this risk talk was perceived by many to contribute to a dramatic change in practice which increased rates of intervention:

> Right now you can't sell a VBAC. It changed overnight. Before I never discussed it and it was a standard practice to labour everybody …. And then all of a sudden the New England Journal came out and we had to start discussing rupture rates and fetal complication rates as a result of rupture. So right now the more I talk to them the more they're asking for caesarean sections. And our VBAC rate went phsssssh, straight down. Our section rate went straight up ….

What emerges is a cycle of evidence-based risk talk, illustrated graphically in Fig. 1. Care providers described the way in which rising rates of intervention have inspired research to determine best practice. As evidence is generated the need to explain risks and benefits of different approaches increases. The process of providing information based on evidence creates risk talk, which is both constructed by and constructs a culture of fear and risk aversion. This leads many care providers such as the obstetrician above to perceive that "women want technology". Rates of intervention continue to rise even when evidence indicates benefit or equal outcomes with low intervention approaches.

The unexpected interaction between an informed choice process which values open discussion of risk and benefits and the broader cultural context of risk aversion led many of my interviewees to develop specific strategies to discuss risk without increasing fear. Most conceptualized this process as "putting risk into perspective". Several common themes emerged across care provider groups when they discussed how to do risk talk. The themes are discussed in this paper under the categories of "numbers and more than numbers", "avoiding risk and using risk" and "risk talk as a work in progress".

Many stressed the importance of using numbers and numerical data in context with an awareness of the need for "more than numbers". Most advocated comparing risks in pregnancy and birth to common risks in day-to-day life. This was closely linked to the concept of using words instead of numbers. When using numbers, informants warned against using relative risk only and advocated using absolute risk and number needed to treat. To avoid creating fear and a default to technology, care providers emphasized the need for active listening skills, taking time for a meaningful discussion and avoiding giving a menu or list of seemingly neutral options.

Many interviewees spoke about how to use the word and concept of risk. Some care providers tried to avoid the word risk altogether. Several informants emphasized the need to balance "maternal altruism" as a powerful lens through which evidence can become fear. Others warned about a focus on short term outcomes and stressed the value of including research evidence about long term effects. All advocated for the discussion of more than risks and noted the need to include benefits and alternatives. Many saw a tendency in health care in general, and maternity care specifically, to emphasize the risks of non-intervention and the benefits of intervention, and as a result consciously tried to include or even "lean towards" understandings of the evidence that support normal birth.

A final set of themes coalesced around the idea of risk talk as a flawed "work in progress". Care providers across the professions advocated awareness of the limitations of EBP and informed choice. They discussed the importance of understanding power inequities and how evidence is "framed". Many spoke passionately about the need for openness in sharing what is not known about best practice and being humble in the claims we make based on evidence.

These three overarching themes and the concepts and strategies that fall under each themes are illustrated in Fig. 2.

Numbers and more than numbers

Most informants talked about the importance of doing more than simply using numbers to describe risk. Many described ways of comparing pregnancy risks to common every-day risks. Driving a car was commonly posed as an effective way to position the risks of pregnancy and childbirth as just another of the common risks in each of our daily lives. One nurse explained that her goal was to contextualize decisions which seemed to be perceived by pregnant women as more fraught with danger than they should be:

> Women don't do well with numbers in my experience. You have to make an analogy that this is about as risky as … crossing the street or driving a car in bad weather, as compared to in good weather. I don't use airplanes as examples any more though.

Keeping Risk in Perspective

Numbers and More than Numbers	Avoiding Risk and Using Risk	"Risk Talk" as a Work in Progress
Comparing to everyday risks	Avoiding the word risk	Understanding power and limitations
Using words	Accounting for maternal altruism	Taking time to build confidence
Using visual aids	Including long term outcomes	"Both/and" permission giving
Using absolute risk	Listening versus listing	Sharing uncertainty
Using numbers needed to treat	Leaning toward normal	Awareness/humility
	Risks, benefits and alternatives	

Fig. 2. Keeping risk in perspective.

Words Instead of Numbers	
Risk	Word
1 in 1	Certain
1 in 2	Likely
1 in 10	Common
1 in 100	Uncommon
1 in 1,000	Rare
1 in 10,000	Very rare
1 in 100,000	Negligible
1 in one million	Theoretical

Fig. 3. Using words instead of numbers.

One obstetrician noted that many risks in pregnancy and birth occur in the range of 1 in 500 to 1 in 1000. He cited this as the range for the risk of stillbirth at 41–42 weeks gestation or the risk of GBS infection when a woman is screen positive but chooses not to treat with antibiotics. He said he likes to discuss these kinds of risks in comparison to himself and his own similar age related risk of death, as a 40 year old non-smoking male living in Canada. A family doctor advocated using an actuarial table to identify every day risks that occur at similar rates to those in pregnancy and birth. The goal of these strategies is to attempt to reassure women and families that the risks of pregnancy and birth are not as high as they might perceive they are.

Many spoke about the importance of using words instead of numbers to mitigate what they perceived as a heightened sense of danger associated with quantifying the risk. A chart used by one obstetrician to substitute words for numbers is included in Fig. 3. Some advocated using words *and* numbers, or visual aids and numbers. A midwife who advocated using words and numbers reflected on how she tries to reassure about risks she would label as "rare" while still openly acknowledging their reality. She spoke about the importance of what I call a "both/and" approach to risk talk. She consciously avoids framing a risk as more common than it is, but also works to avoid minimizing the impact on the person affected:

> You know I sort of go back and forth. I say it's rare, it's 1 in 1000, and unlikely to happen to you or your baby. But then I say the consequences can be grave. I weave back and forth, then I end up often with 'You know I used to think rare meant almost never, that I would never see a case, but I have'. So there's some way in which I weave back and forth …between those two poles [reassurance and risk talk].

Many of the midwives I interviewed recommended this type of "both/and" approach and actively gave permission for alternate perspectives and values by integrating more than one way of presenting risks.

Many debated the merits of different ways of using numbers. Discussion centred on the problematic impact of using odds ratios or relative risk without also including absolute risk or numbers needed to treat. Care providers across all of the groups worried about the use of numeric estimates of relative risk in many key studies about maternity care. They perceived that relative risk estimates can tend to exaggerate risk. Most advocated the use of absolute risk instead of, or alongside, relative risk. A family doctor used the example of expectant management compared to induction in a normal post term pregnancy:

> When discussing you could say "it's twice as dangerous" or you could say "it's only one in a thousand." I try and give both. When you're discussing it with patients you have to give both.

The use of numbers needed to treat (NNT) was also seen as key to giving a clear picture of the benefits of the decisions they are making. Several interviewees pulled diagrams from their desk drawers or bulletin boards which illustrate how few might benefit from a screening test or an intervention in order to show me how they use visual aids to support understanding of numbers. A family doctor used the concept of NNT to create a permission-giving approach:

> Lots of interventions for low risk people are a NNT of 1 in 150, 1 in 200. Which means 199 put up with it for one. And of course if you're the one, all those others are worth it. But if you're all the others….

One obstetrician brought in the concept of heuristics to explain why care providers react to some perceived risks and not others. He made a detailed critique of the application of evidence on post-term pregnancy arguing that it shows that the risk at 41 weeks is actually very low, about 1 in 1,000. He argues that this is lower than the risk at 37 weeks of pregnancy and yet this is not normally focused on as a concern in the same way post-term pregnancy is. He asks why the perception of risk is out of proportion to the evidence:

> What's going on here? You know what it is? It's the heuristic of availability. The availability error. We goof off intellectually. We think there's a tiger. It's actually only a cat. And the cat is actually very friendly, and if you leave it alone it'll walk back into the daffodils.

Avoiding risk, using risk

Informants both struggled to avoid the framework and construct of risk, while others tried to use risk in a contextualized way and use approaches that mitigate rather than increase fear. Several midwives reported they try not to use the word risk at all, perceiving the word itself contributes to risk aversion. One reported using other words such as "incidence, chance, possibility, likelihood …. even if they're not technically accurate". Another reported using alternate language to avoid the "charge" the term risk has come to have in our society:

> Talking about risk, I really try to avoid that word because, I don't care how epidemiologists and statisticians and medical researchers regard that word, I think it has charge. Like it has a huge charge for pregnant people. It still means danger. It means something to be anxious about.

Several care providers worried that using the word risk in pregnancy unfolds in the context of maternal altruism or the social expectation that women as mothers will put their children before themselves. They noted a tendency for women to accept risks to themselves to minimize even very small risks to the fetus. For one obstetrician:

> The problem is that once you get into any difference in the fetal side at all, women are so altruistic towards their babies, that no matter what the side effects, women will say well I'm out of there … [if there is] any risk to the baby, even if it's very small.

Comparing risk perception in pregnancy to our society's willingness to accept risk in every-day activities such as sports or adventure, a midwife pointed to the dilemma women face when making decisions for the fetus, rather than for themselves:

> The thing about skiing or skydiving is it's about you making decisions about you. It becomes so much more complicated when you're making decisions about somebody else, and incredibly more complicated when that somebody else is completely and absolutely dependent, completely helpless, a baby. And we only have 1.4 each.

Several informants discussed how they take maternal altruism into account. One midwife noted that she openly discusses guilt and self-blame to try and help women understand the kind of pressures they face within the social construction of motherhood:

> The bar is so high for women as mothers, as mates, as women. So much pressure … and you're always blaming yourself for it. Deciding, not deciding, deciding this, not that.

This worry about maternal altruism links with a focus in the evidence on short term risks rather than on long term outcomes for both the mother and fetus/newborn. Many care providers advocated for the inclusion of long term impacts in risk talk and used the example of caesarean section to critique the focus on the short term fetal benefits, while neglecting maternal risk and risk for future pregnancies. For one family doctor:

> We don't talk about the risk of caesarean section in terms of how it applies to a future pregnancy. The risk of uterine rupture in a future pregnancy, infection, tubal blockage, adhesions, miscarriage, [the research] suggesting an increase in stillbirths. It's problematic in many ways."

Many noted the tendency to focus on the risks of non-intervention and the benefits of intervention, rather than including the risks and benefits of both in discussions of evidence. Many informants called for a balanced approach which acknowledges the potential cascade of interventions. One midwife stated:

> Well for first-time moms I like to quote [Phillip] Hall and say that if you have an induction and it's your first baby then we're possibly looking at a 50 per cent chance of having a caesarean section. I think that's fairly significant and that really sort of gets them to hear. Against the 1 in 500 babies possibly having a problem.

Several midwives expressed concern about how EBP tends result in presentation of a list of options rather than a deeper conversation about the meaning of decisions for the woman in the context of her life and her values, a theme I called "listening versus listing". This midwife focused on the importance of relationship as a decision support rather than on techniques of risk communication:

> So the way I deal with evidence is related to the way she deals with me, to relationship. As a midwife I am an evidence for her about natural birth or breast feeding. If I want to be able to move away from fear I need to help her to move and not to be alone. This is different than if informed choice is a technique you apply… I'll give you the list and I just need your choice. I don't need to hear you or listen to you.

A similar focus on dialogue and relationship was explained by a family doctor:

> Well the other thing for me is dialogue. It's not me giving you the information and then you decide. It's 'So what do you think?' Because a huge part for me is understanding what's important to this woman and what is she afraid of. So if somebody has had a cousin who just had a baby that died at 41 weeks and 6 days and she's kind of pushing for induction, that's pretty important information to have in the context of her life. I listen carefully to women and what they say.

Many providers across all groups discussed how common interventions in birth have become and advocated for the importance of a counterbalancing approach I call "leaning towards normal". One of my informants was very interested in decision psychology and emphasized the importance of highlighting normalcy to balance the human tendency to exaggerate risk. This obstetrician felt it was very important to actively counter this tendency both in how health providers interpret evidence and in the way evidence is presented:

> One of the things psychological theory of risk has proven is that humans … grossly overestimate the odds that bad things will happen and they vastly under estimate the odds that normal things will happen. Given that 95 per cent of the time normal things happen, we get possessed by the tiny little minority where they don't ... We need to understand and balance this in the way we talk to women.

Many referenced the need to mitigate the widespread culture of fear and risk aversion. A midwife spoke about why she tries to minimize discussion of risk:

> I try to minimize [talk about] risk because I think that there's way too much of it about. And I think that the whole world lives in fear. You can't go for a walk at night and you can't walk to school.

Risk talk as a work in progress

Risk talk was seen by most of the interviewees as necessarily flawed and incomplete. The difficulty of providing balanced information while taking responsibility for the power embedded in the care provider role was a worry for many. Care providers across the professional groups saw their attempts to use evidence in risk discussions as a work in progress. The process was seen to be vulnerable to systems issues, relationship and to the limitations of resources and time. The responsibility to tailor risk talk to the individual, the impact of authority, and how care providers consciously and unconsciously frame the discussion was hesitantly expressed by one of the obstetricians:

> There's no such thing really as complete and non-directive counselling. There's always some degree of your own take on things. Your body language. Your tone of voice … And I must admit that I'm prone to change how I am to different people … If I think somebody has the resources to make a complex decision, I'll try my best to be completely neutral. Or for someone else I'll try to reduce it to be more simple … and try to give them the same choice in their own terms. I hope that doesn't sound condescending.

Time, or lack of time, was seen by many as part of what can determine whether using evidence about risk to inform women about care decisions directs care towards intervention. A nurse saw time as part of "the manner in which" risk communication is done and one of the factors that can make it "backfire":

> EBP really backfires in a lot of cases because somebody talking about the evidence can be totally different than someone else talking about the same evidence … it's the manner in which it's done. It's your body language. It's time. It's the whole thing.

One obstetrician illustrated the dilemma of wanting to balance heightened risk perception and lack of time in a discussion of EBP and internet access. Time becomes more significant to the health care provider who has to try and assist people who have access to "too much information":

> So right now patients have too much information and quite often they perceive things as more risky than they are. So our job is to actually discuss with them what the real information is and what are the implications. The problem is that none of us has time.

One midwife suggested that time was essential to discussing risk and building confidence. Her comments point to a combination of time and relationship that allows both acknowledgement of risk and risk tolerance, another "both/and" approach:

> As midwives we're in a wonderful position to really work with a woman and … [build] her confidence while giving her information … In a five minute doctor's visit, you don't have the time. You can get the information and that's all you get. And it's out of context. You need time ... There is risk. And we can understand and accept it and this is what we choose. I think it's a time thing.

Informants from all groups called the experience of discussing evidence and risk "humbling", and acknowledged the responsibility involved in framing the information. The tension between providing reassurance that balances risk aversion while avoiding inappropriate influence on decision-making was expressed by one obstetrician:

> It's really humbling. I mean you do your best and you find out it's sometimes not enough. And I'm not sure if this is right or wrong, but sometimes I say something like'You come to your doctor not only for a choice but for an opinion and please don't judge everything by this, but I think most people in this corridor would choose not to have an amniocentesis because the risk of the baby having an abnormality is so small that to go to the risk of an amnio would seem bigger. But then again, none of us are going to be bringing this baby home, but you can bear that in mind if you want to.

Many informants from all professions spoke about the need to share with pregnant women not only what we know, but also what we do not know. One of the obstetricians called for care providers to be "humble in our claims". One of the family doctors coined the term "precise uncertainty" to illustrate the difference between population-based information and being able to counsel the individual woman about the best decision for her:

> All the evidence tells us about is a group of people. And so it leaves the outcome for an individual what I call precisely uncertain. What evidence has done for us is made us precise in our uncertainty. We can now say for a group of similar people we can say very exactly how uncertain we are about which outcome will come.

At one conference a dialogue between an "evidence expert" and a midwife highlighted the need to balance care provider authority with humility and awareness:

> Once you recognize that the way you frame evidence is going to determine the answer, you subtly start framing it in a less authoritarian way. You are the authority … [and you may be] abdicating your responsibility if you don't try to present things the way you think is best. But at the same time, once you start to question, you are no longer like the authoritarian who says 'Do it my way.' You are already allied with the woman who has to decide. The answer is to doubt yourself.

Discussion

Care providers across the maternity care professions enthusiastically shared their opinions about how to do risk talk. It was a subject that engaged and interested them. It is important to note that although the informants in this study cannot be seen to be representative, care providers from all Canadian maternity care professions tried to find ways to do risk talk to reduce fear and balance a default to technology. The findings provide what Rothman calls "a glimpse into the ways in which people intelligently, creatively and determinedly balance risks"; however unlike the literature Rothman (2014) is referring to, it is care providers who we glimpsing. Many informants referenced the idea of "risk culture" (Beck, 1992; Füredi, 2002) or the "risk epidemic" in health care (Skolbekken, 1995). Like many scholars, members of all of the professions were concerned that a pervasive culture of fear can undermine normal birth and contribute to rising rates of interventions (Symon 2006; Bryers and van Teijlingen, 2010). These findings fit within and contribute to large bodies of literature on risk communication in health care and risk and normal birth.

The findings often illustrate practical applications of theories of risk communication. The struggle of my informants to put risk into the context of everyday life is reflected in the scholarship of risk. Lothian (2012) and Symon (2006) for example, compare the risks of pregnancy and birth risks with driving, an analogy that was common for my informants. Pregnant women are described as risk averse (Searle, 1996; Lyerly et al., 2007), particularly in relation to fetal health. Social theorists wonder if choices in other parts of life carry the same "moral weight" as pregnancy choices (Rothman, 2014; Stengel 2014). My informants resisted both risk aversion and the weight of risk talk, and described how they consciously try to lighten pregnancy choices by nurturing risk tolerance.

Although most of the evidence for risk communication comes from outside maternal and newborn care, research evaluating best practices provides support for many of the specific strategies used by my informants. Fagerlin et al., (2011), writing in the context of cancer care decisions, advocates the use of absolute risk and pictographs. A study of numeracy related to lay understanding of pregnancy risks discussed by Pighin et al. (2011) advocates using words as well as numbers in antenatal genetic counselling. Use of pictographs is also supported by Jordan and Murphy (2009) in avoiding fear during pregnancy risk assessment. Perneger and Agoritsas (2011) show that the use of absolute risk and multiple formats for the presentation of evidence will most accurately inform both doctors and patients. Declercq (2013) uses the examples of vaginal birth after a previous caesarean and home birth to illustrate the importance of absolute risk, rather than relative risk, to avoid increasing rates of intervention. Consistent with my informants' suggestions to focus on normalcy, Kaimal and Kuppermann (2010) describe the effectiveness of "… reporting the likelihood of having a healthy child rather than the likelihood of having an affected child" and notes the "effect not only on the patient's risk estimate, but on her likelihood of choosing to proceed with an invasive diagnostic procedure." Although many of the approaches my informants suggest are supported in the literature, it is important to note that there is ongoing research and debate about which techniques work in which contexts. For example, Mason et al. (2014) document the potential harms of using bar graphs as visual aids to increase numeracy. They show that this visual aid may confuse rather than support understanding for those with low numeracy and as a result may increase health inequities.

Concern that focus on risk to the fetus may cause harm by increasing medicalization of birth is a theme that has long worried feminist authors (Weir, 2006; Lyerly et al., 2007; Rothman 2014). Lyerly et al. (2007) have pointed out how when reassuring

evidence emerges, it is rarely given the same attention as evidence of danger. Midwifery scholars have described how concepts of risk can undermine normal birth (Downe, 2004; Symon 2006, Walsh 2006, Scamell and Stewart, 2014), a concept that is strongly affirmed by my findings. My informants adapt their risk communication to take maternal altruism and medicalization into account. Some of the strategies they use to balance maternal altruism are echoed in the literature, for example in the work of Cox (2014) on counselling about birth after previous caesarean section. Like Cox, informants emphasized the importance of overtly addressing long term impacts and maternal as well as fetal risks and benefits in the decision-making process. In addition, many of the care providers I interviewed advocate a "lean towards normal" in the framing of evidence consistent with a plethora of normal birth policies and statements from many countries (Young, 2009). As Coxon et al.'s (2014) work on choice of birth place in the UK illustrates however, shifting the culture towards normalcy is a complex and multi-layered process and involves shifting much more than professional communication about risk.

Active listening, sharing uncertainty and contextualizing information in a way that respects people's goals and values are widely considered to be best practices in risk communication, but how often care providers succeed in implementing these approaches in stressed health systems is not well understood. Some of the approaches suggested by my informants, such as avoiding the word risk, taking time to tailor discussions and deliberately build confidence, and "both/and" permission giving represent common sense and creative responses to the dilemmas care providers face. In their work on vaginal exams in labour, Scamell and Stewart (2014) also identify creativity and time as important factors for midwives in hoping to promote normal birth within a risk adverse environment.

The comments of my informants reveal a discomfort and a struggle with the power dynamics inherent to risk talk, illustrating that the process is "a site where power relations are mobilised and enacted" (Montelius and Nygren, 2014). However, although one informant talked about different versions of risk talk for those with more or less literacy, none directly addressed the potential for inequity if risk communication happens differently across differences (Jomeen, 2012). This a gap in my research that is consistent with the broader literature which is only beginning to address issues of pregnancy, risk and health equity (Coxon, 2014; Olofsson et al., 2014; Montelius and Nygren, 2014).

Although many care providers expressed varying degrees of disillusionment about the unexpected effects of EBP, most remained committed to using evidence in communicating with those they care for. The question for many was not if it was appropriate to "do risk talk", but rather how. Because these findings were uncovered during data analysis rather than in response to structured questions, I cannot comment on how many of my informants were aware of theories of risk communication. It is obvious from their comments that a few were familiar with the literature of risk and decision-making. However it is my impression that most were not, and that they had evolved their strategies for risk communication out of the day-to-day dilemmas of trying to apply the principles of evidence-based practice. Nonetheless, there is a clear resonance with scholarly work on risk in maternity care and the risk communication literature more broadly. These findings provide a grounded context for this literature, both in the dilemmas the informants point to and the solutions they have sought and developed.

Conclusion

My findings reveal that Canadian maternity care providers from all backgrounds have concerns about the "lean to technology" that can be an unexpected effect of EBP within a social context of risk aversion. There was broad agreement that is important to discuss evidence and risk with an awareness that the process itself can exaggerate risk. Care providers use a variety of techniques to try to mitigate the way in which risk talk can create fear and a default to intervention. Some of the strategies that care providers use in practice have been evaluated as effective in helping to put risk in perspective, while others require further research. Although many informants worried that "women want technology", they actively involved themselves in finding ways to nurture a culture of risk tolerance rather than risk aversion. This shared concern across the professions about the unexpected effects of risk talk and the shared thoughtfulness about strategies for mitigation may create a common ground for finding ways to address rising rates of intervention.

Conflict of interest

None.

Acknowledgements

This research was supported by funding from York University Centre for Health Studies (Canadian Institute for Health Research), Canadian Health Services Research Foundation, and Ryerson University Office of Research Services. Thanks to Natalie McClure, RM, BHSc Midwifery who contributed as a research assistant and Elizabeth Allemang RM, MA for her editorial expertise.

References

Allemang, E., 2013. Alegal Midwives: Oral History Narratives of Ontario Pre-legislation Midwives [Master's]. University of Toronto, Toronto.
Beck, U., 1992. Risk Society: Towards a New Modernity, First edn, Sage, London.
Bryers, H.M., van Teijlingen, E., 2010. Risk, theory, social and medical models: a critical analysis of the concept of risk in maternity care. Midwifery 26, 488–496.
Canadian Institute for Health Information (CIHI), 2007. Giving Birth in Canada: Regional Trends from 2001–2002 to 2005–2006. CIHI, Ottawa.
Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada, 1998. Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, First edn. Interagency Secretariat on Research Ethics.
Cox, Kim J., 2014. Counseling Women with a Previous Cesarean Birth: Toward a Shared Decision-Making Partnership. Journal of Midwifery & Women's Health 59, 237–245.
Coxon, K., 2014. Risk in pregnancy and birth: are we talking to ourselves? Health, Risk & Society 16, 481–493.
Coxon, K., Sandall, J., Fulop, N.J., 2014. To what extent are women free to choose where to give birth? How discourses of risk, blame and responsibility influence birth place decisions. Health, Risk & Society 16, 51–67.
Declercq, E., 2013. The absolute power of relative risk in debates on repeat cesareans and home birth in the United States. Journal of Clinical Ethics 24, 215–224.
Downe, S., 2004. Risk and normality in the maternity services. In: Frith, L., Draper, H. (Eds.), Ethics and Midwifery: Issues in Contemporary Practice, Second edn Elsevier Books for Midwives, London, pp. 91–109.
Füredi, F.,. Culture of Fear: Risk-Taking and the Morality of Low Expectation, Revised edn.
Fagerlin, A., Zikmund-Fisher, B.J., Ubel, P.A., 2011. Helping patients decide: ten steps to better risk communication. Journal of the National Cancer Institute 103, 1436–1443.
Jomeen, J., 2012. The paradox of choice in maternity care. Journal of Neonatal Nursing 18, 60–62.
Jordan, R.G., Murphy, P.A., 2009. Risk assessment and risk distortion: finding the balance. Journal of Midwifery and Women's Health 54, 191–200.
Kaimal, A.J., Kuppermann, M., 2010. Understanding risk, patient and provider preferences, and obstetrical decision making: approach to delivery after cesarean. Seminars in Perinatology 34, 331–336.
Lothian, J.A., 2012. Risk, safety, and choice in childbirth. Journal of Perinatal Education 21, 45–47.
Lyerly, A.D., Mitchell, L.M., Armstrong, E.M., Harris, L.H., Kukla, R., Kuppermann, M., Little, M.O., 2007. Risks, values, and decision making surrounding pregnancy. Obstetrics and Gynecology 109, 979–984.

Mason, D., Boase, S., Marteau, T., Kinmonth, A.L., Dahm, T., Minorikawa, N., Sutton, S., 2014. One-week recall of health risk information and individual differences in attention to bar charts. Health, Risk & Society 16 (2), 136–153.
Montelius, E., Nygren, K.G., 2014. 'Doing' risk,'doing' difference: towards an understanding of the intersections of risk, morality and taste. Health, Risk & Society 16, 431–443.
Olofsson, A., Zinn, J.O., Griffin, G., et al., 2014. The mutual constitution of risk and inequalities: intersectional risk theory. Health, Risk & Society 16, 417–430.
Perneger, T.V., Agoritsas, T., 2011. Doctors and patients' susceptibility to framing bias: a randomized trial. Journal of General Internal Medicine 26, 1411–1417.
Pighin, S., Bonnefon, J., Savadori., L., 2011. Overcoming number numbness in prenatal risk communication. Prenatal Diagnosis 31, 809–813.
Public Health Agency of Canada (PHAC), 2012. Canadian Hospitals Maternity Policies and Practices Survey. Public Health Agency of Canada, Ottawa.
Rothman, B.K., 2014. Pregnancy, Birth and risk: an introduction. Health, Risk & Society 16, 1–6.
Scamell, M., Stewart, M., 2014. Time, risk and midwife practice: the vaginal examination. Health, Risk & Society 16, 84–100.
Searle, J., 1996. Fearing the worst – why do pregnant women feel 'at risk'? Australian and New Zealand Journal of Obstetrics and Gynaecology 36, 279–286.
Skolbekken, J.A., 1995. The risk epidemic in medical journals. Social Science & Medicine 40, 291–305.
Stengel, C., 2014. The risk of being 'too honest': drug use, stigma and pregnancy. Health, Risk & Society 16, 36–50.
Symon, A., 2006. The risk choice paradox. In: Symon, A. (Ed.), Risk and Choice in Maternity Care. Churchill Livingston, London, pp. 1–11.
Tenner, E., 1996. Why Things Bite Back: Technology and the Revenge of Unintended Consequences. Alfred Knopf, New York.
Walsh, D., 2006. Risk and normality in maternity care. In: Symon, A. (Ed.), Risk and Choice in Maternity Care. LondonChurchill Livingston, pp. 89–101.
Weir, L., 2006. Pregnancy, Risk and Biopolitics: On the Threshold of the Living Subject. Routledge, New York.
Young, D., 2009. What is normal childbirth and do we need more statements about it? Birth 36, 1–3.