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Article

"The Very Future of our Nations": How Aboriginal Midwifery Represents a Practical Model for Utilization of Traditional Knowledge

Bob Cole

Abstract

For thousands of years, First Nations peoples have been delivering prenatal, childbirth, and postpartum care to their own people. Over time, an extensive knowledge of plant resources and properties of plants developed into a comprehensive ethnobiological knowledge base of herbal remedies and traditional medicines. This knowledge includes various medicinal effects of plants, how to prepare them, and ceremonial uses, collectively forming the basis of traditional aboriginal midwifery. Today, some of the wisdom of traditional aboriginal midwifery has been shared with and adopted by Western health practitioners, in particular, modern midwives in North America. However, with European contact, aboriginal midwifery and traditional knowledge suffered terrible losses. With the shift to Western and modernized birthing practices, aboriginal midwifery was systematically dismantled, even outlawed in some cases. Attempts to discredit traditional midwifery practice as archaic and dangerous were highly successful, though disingenuous. The recent return of midwifery to North America through grassroots initiatives, including the licensing of modern midwives and establishment of traditional aboriginal birthing centres has set an excellent example for how healthcare can and should be delivered to Canada's First Nations. This example includes respect for and inclusion of traditional knowledge in policy development and practice protocols.

Introduction

Midwifery is an ancient practice dating back thousands of years. Over that time, First Nations peoples of North America developed an extensive catalogue of natural plant products for use during pregnancy, childbirth and the postpartum period. European contact had severely negative

effects on First Nations' traditional midwifery knowledge (Skye, 2010, p. 28). By the 1950s most women, including First Nations women, were giving birth in hospitals (National Aboriginal Health Organization (NAHO, 2008a). For First Nations women living in remote areas, this meant, and still means, travelling extremely long distances, being displaced from family and thrust into a foreign environment — all causing a great deal of stress for both mother and baby (NAHO, 2008b). However, resurgence in midwifery practice since the 1990s has resulted in positive changes to the way care is delivered not just for expectant First Nations women, but all childbearing women in Canada. Modern midwives have been licensed healthcare professionals in most provinces since the 1990s. There is strong evidence supporting the overall benefits of midwifery care in First Nations' communities (Skye, 2010, p. 28). While modern midwifery is a much more institutionalized and regulated industry today than traditional aboriginal midwifery, there is still a strong belief in the midwifery community in the overall benefits of traditional remedies used by aboriginal midwives.

Ethnobiology, the study of the relationship between human, animal and environment, is a significant area of study within traditional midwifery, including in such aspects as herbal remedies, medicines and ceremonial preparations. In her paper *Aboriginal Midwifery: A model for change*, Amber Skye (2010) describes the importance of ethnobiology in midwifery:

> Central to the practice of traditional midwifery is the use of herbal medicines…Knowledge of traditional medicines and herbs were critical to preventing potential complications of pregnancy and labour. Herbal medicines were used in traditional birthing practices throughout the prenatal, and postpartum period of the mother, and medicines were also prepared for mom and baby after birth. (p. 32)

Traditional indigenous knowledge suffered devastating losses during the colonial period, including the loss of ethnobiological knowledge as it pertains to traditional aboriginal midwifery practice. However, some of this knowledge has been retained. In particular, there is an impressive amount of literature on British Columbia's First Nations people and their midwifery practices. This paper will provide an in-depth study of the types of plants used in traditional midwifery in British

Columbia. It will then go on to discuss herbs that are contraindicated, as well as endorsed, for use during pregnancy in modern midwifery practice, followed by a comparison of herbal remedies recommended by professional midwives in North America today and their potential benefits. A discussion of the impacts of colonialism on the ethnobiological knowledge base in regard to its particular effects on midwifery practice will follow. Finally, the paper will close with a brief discussion on how the resurgence in aboriginal midwifery practice can help bolster ethnobiological knowledge and foster a co-operative model of health care practice for Canada's First Nations moving forward.

Aboriginal Traditional Midwifery of British Columbia

The First Nations communities of British Columbia possess an enormous wealth of knowledge when it comes to the myriad plant species that make up their environment. There are dozens of plants with medicinal properties in the region and many of these plants were used in traditional midwifery. Such an extensive system of information requires further categorization with distinctive uses of these plants for pregnancy, labour and the postpartum periods. Table 1 organizes the plants using this distinction. The Gitskan, Wet'suwet'en, Thompson and Kwakiutl peoples provide the basis of the research available on this subject, with other groups from the region providing supplemental data. While many of the plants I will refer to in this section are not used exclusively by midwives, it is safe to assume that the known use of these medicines for labour, childbirth and the postpartum period is sufficient correlation to their use by traditional midwives. We will see that this connection is further revealed in the section on modern midwifery where many of these plants and their uses are recognized. There are two terms requiring definition when it comes to preparing the plants discussed here: decoction and infusion. A decoction is made by, "boiling the plant material in water," whereas an infusion is, "made by steeping the material in water which has just been boiling, as in making tea" (Turner, Thompson, Thompson, & York, 1990, p. 44). These two terms are used extensively throughout this and the following section on herbal preparations used in pregnancy by traditional and modern midwives respectively.

Plants used during pregnancy

or obvious reasons, there are fewer medicinal plants used specifically for early pregnancy than the other two periods. Early pregnancy care focuses more on overall general health than care specific to childbirth, and so defining herbal remedies for pregnancy versus simply herbs that promote good health becomes somewhat more difficult. I have only included here remedies whose specific effectiveness for pregnant women, or women hoping to conceive, was mentioned. Johnson Gottesfeld, and Anderson (1988) have reported that devil's club (*Oplopanax horridum*) is used extensively by First Nations people of British Columbia and among its many other uses it is "generally reputed to be helpful in…pregnancy" (1988, p. 18). An extensive book by Turner et al. (1990) on the subject of Thompson peoples' ethnobotany lists rocky mountain juniper (*Juniperus scopulorum*), hog-fennel (*Lomatium macrocarpum*), and orange honeysuckle (*Lonicera ciliosa*) as plants used as medicines before childbirth. With rocky mountain juniper the branches are boiled to make a decoction which can be "drunk before childbirth to promote muscular relaxation" (p. 93). Hutchens (1973) reports that rocky mountain juniper has been "used successfully in colpitis (vaginal inflammation)" (p. 169). Hog-fennel and orange honeysuckle were used in, "childless men and women," and for "infertility in women," respectively (Turner et al., 1990, p. 50). Hog-fennel appears to have a more spiritual effect than biological one as the plant plays a prominent role among some Thompson (*Nlaka'pamux*) stories. It is believed that the medicinal power of the plant derives from these stories: "presumably the treatment has some connection with the role of the root as 'husband' and 'father'" (p. 156). Orange honeysuckle was reported in an interview by Turner et al. as being "good medicine for a woman if she's got no baby," but there is very little context given to this statement (p. 197). The inference is that this may be a remedy to increase fertility. False Solomon's seal (*Smilacina racemose*) is another plant used by the Thompson during pregnancy. One of the interviewees in Turner et al. reports that "when a woman's got a baby and she's sore inside, you boil it [roots and leaves] and drink it and it helps you good…" (p. 129).

Table 1: Plants used at different stages of pregnancy by aboriginal midwives (Johnson Gottesfeld, 1994; Johnson Gottesfeld & Anderson, 1988); Hutchens, 1973; Turner, 1998; Turner et al., 1990; University of Michigan Dearborn, 2003).

Pregnancy	Labour	Post-Partum
Devil's club (*Oplopanax horridum*)	Devil's club (*Oplopanax horridum*)	Red osier-dogwood (*Cornus sericea*)
Rocky mountain juniper (*Juniperus scopulorum*)	Soapberry (*Shepherdia canadensis*)	Saskatoon berry (*Amelanchier alnifolia*)
Hog-fennel (*Lomatium macrocarpum*)	Branchless horsetail (*Equisetum hyemale*)	Northern-field wormwood (*Artemisia campestris ssp. Borealis*)
False Solomon's seal (*Smilacina racemosa*)	Rattlesnake plantain (*Goodyera oblongifolia*)	Wild tarragon (*Artemisia dracunculus*)
Orange honey-suckle (*Lonicera ciliosa*)	Black cohosh (*Cimicifuga racemosa*)	Common yarrow (*Achillea millefolium*, L.)
	Wintergreen (*Pyrola*)	Prince's pine (*Chimaphila umbellata*)
	Smooth sumac (*Rhus glabra*, L.)	Common horsetail (*Equisetum arvense*)
	Canada goldenrod (*Solidago canadensis*, L.)	Western larch (*Larix occidentalis*)
	Blue cohosh (*Caulophyllum thalictroides*)	Black cottonwood (*Populus balsamifera*)
		Bitter cherry (*Prunus emarginata*)
		Choke cherry (*Prunus virginiana*)
		Wild rose (*Rosa*
		Waxberry (*Symphoricarpos albus*)
		Western red cedar (*Thuja plicata*)
		Sphagnum moss (*Sphagnaceae*)
		Castor bean (*Oleum ricini*)

Plants used during labour

There are many more effective plant treatments for the birthing process itself. Devil's club once again proves useful, as Johnson Gottesfeld, and Anderson (1988) show on their table for uses of the plant by different Indian groups. They list the Carrier and Skagit peoples as groups that use Devil's club specifically for childbirth. Gunther confirms that the Skagit used Devil's club to "start

menstrual flow after childbirth" (University of Michigan, 2003, p. 41). Soapberries (*Shepherdia canadensis*) are said to have the ability to accelerate labour (Johnson Gottesfeld and Anderson, 1988). Turner (1998) lists branchless horsetail (*Equisetum hyemale*), rattlesnake plantain (*Goodyera oblongifolia*) and wintergreen (*Pyrola* spp.) as plants used by the Thompson during childbirth. A woman may drink a decoction of the roots of branchless horsetail during long, difficult labours to help expedite baby's arrival. Rattlesnake plantain is used in determining the sex of the fetus and to promote easy labour. Turner describes this method:

> A woman in confinement would chew the leaves (of the wide leaved variety). If the baby was going to be a boy, she would be unable to swallow the leaf. If it was going to be a girl, she could. Chewing the leaves would also give her an easy labour. (p. 137)

Wintergreen may have been identified as the same plant as rattlesnake plantain. Turner reports she could find no "real name" for this plant and that it may have been called "medicine for childbirth," (similarly to rattlesnake plantain) because of this confusion (p. 133-135).

Hutchens (1973) notes that black cohosh (*Cimicifuga racemose*, L.) was used by American Indian women to "relieve pain…and used its properties extensively during childbirth" (p. 45). Blue cohosh (*Caulophyllum thalictroides*), similarly, can "almost entirely relieve the patient of pain in childbirth and promote prompt delivery" (p. 56).

Other plants used specifically during labour in the region are smooth sumac (*Rhus glabra*, L.) of which a decoction of seed heads is taken during childbirth, and Canada goldenrod (*Solidago canadensis*, L.), which is used as a bath for the mother at childbirth (University of Michigan, 2003).

Plants used after labour and as implements for infants

Most of the medicinal plants utilized by childbearing women of British Columbia's First Nations are taken during the very important postpartum period. The effects range from helping the mother regain strength, to aides in breastfeeding, contraception, and returning menstrual flow, among others. Given the enormous importance of the birthing process within First Nations communities, some of the plants listed can also have primarily ritualistic properties, evidence of the reverence

given to both mother and newborn and the significance of the birthing process to First Nations communities.

Johnson Gottesfeld (1994) reports that the Wet'suwet'en people use a decoction of the inner bark of red-osier dogwood (*Cornus sericea*) that can "be used internally for treatment of postpartum hemorrhage and for pain after childbirth" (p. 194). Turner et al. (1990) acknowledge that a decoction of the "wood, bark, or leaves, or all of them together," is also used by Thompson women after childbirth (p. 205). Turner et al. also provide an extensive list of plants used by the Thompson after childbirth. All of the following comes from Turner et al. and refers to uses by Thompson peoples.

A very strong decoction of the bark of saskatoon berry (*Amelanchier alnifolia*) (specifically, a very tall variety) is used after childbirth to "clean out the mother's womb and help… to heal her inside," as well as to "hasten the dropping of the afterbirth" (Turner et al., 1990, p. 257). A warm decoction of the stems and twigs of the same plant is also drunk by women, as well as used as a bath after childbirth. Furthermore, a decoction can be drunk to stop a woman's menstrual flow after childbirth, acting as a form of birth control. A decoction of dried or fresh leaves of northern field wormwood (*Artemisia campestris* ssp. borealis) is "drunk by women after childbirth to 'hasten their recovery'" (p 169). A decoction of wild tarragon (*Artemisia dracunculus*) is used as a bath after childbirth (p. 170). A warm decoction of prince's pine (*Chimaphila umbellate*) was said to be drunk "profusely by women immediately before and after childbirth, but this use was apparently not very general" (p. 213). (It is unclear what the author's meaning of "not very general" is here). A decoction or infusion of the stems of common horsetail (*Equisetum arvense*) as well as for use during pregnancy, can be "drunk by women immediately after childbirth, to make the afterbirth come out more quickly and to 'clean you out'." The process for preparing this medicine is detailed in the same passage:

> Usually the stems are gathered ahead of time. They are pulled up, the roots cut off, and the stems cut into short segments and dried. Then, when the baby is about to be born, a small handful of the cut stems (a bundle about 3 cm across) are placed

> in a teapot. Boiling water is poured over, and they are allowed to steep for five to seven minutes. The woman can drink this tea over a period of several days. (p. 87)

It becomes clear that the process for making these infusions involves extensive knowledge and training. The recipes have obviously evolved over time and display the degree of precision to which these herbs are used. Furthering this point, an infusion made from black cottonwood (*Populus balsamifera*) requires, specifically, four 2 by 15 cm strips of "white inner bark" and is "drunk by women after childbirth," (though the reason for this is not specified by the author) (p. 277).

Some confusion has developed over the use of some of these herbs involving either the species, or their uses, including bitter cherry (*Prunus emarginata*) and chokecherry (*Prunus virginiana*, L.). A decoction of the bark of the bitter cherry species was drunk after childbirth, though Turner et al. (1990) mentions it is labelled mistakenly as "prunus demissa" by Teit (1900) and can only be inferred as being of the Prunus emarginata or possibly Prunus virginiana ssp. demissa species respectively (p. 264). A relative of bitter cherry, chokecherry makes a decoction that can be drunk by women to strengthen them after childbirth. The roots of wild rose (*Rosa* sp.) were "boiled to make a decoction taken…by women after childbirth" again without specification as to the effects or reasons (p. 268).

Other herbs were used after labour in a different way. A decoction of waxberry (*Symphoricarpos albus*) bark, leaves and berries was used after childbirth to "wash the breasts of a nursing mother before feeding her baby" (p. 200). And finally, a woman can drink a decoction of western larch (*Larix occidentalis*) after childbirth as a form of birth control "with saskatoon and other shrubs" (p. 50).

Hutchens (1973) notes that a poultice made from castor bean (*Oleum ricini*) can be "applied over the breasts of nursing mothers as a lactogogue and over inflamed breasts during lactation to soften the mammary glands" (p. 71). Similarly, common yarrow (*Achillea millefolium*, L.) is used by the Kwakiutl, a poultice of which can be applied to the chest for "hardened breasts after childbirth" (University of Michigan, 2003).

Along with medicinal plants, there are also some plants used as tools for the postpartum period, the two most important of these being sphagnum mosses (*Sphagnaceae*) and western red cedar (*Thuja plicata*). Sphagnum moss, otherwise known as "baby moss" or "diaper moss," was used by the Tahltan women "to carpet the lodge in which the baby was to be born, to wipe the newborn baby's skin and to line the bark cradle" (Turner, 1998, p. 59). Western red cedar was used extensively, with Turner mentioning specific uses for ceremonial dress and rituals, as well as the finely shredded inner bark for use as "infant bedding" (p. 77). Here is evidence of the ritualistic nature of some of the uses of these plants. These rituals and ceremonies were of extreme importance during the birthing process, as Carol Couchie points out "birth is the fundamental ceremony of our tribes. It is the most sacred ceremony that we have" (NAHO, 2008a, p. 58).

The extensive use of medicinal plants designated specifically for women before, during, and after childbirth is proof of the deep systems of knowledge developed by the traditional aboriginal midwives of British Columbia. The specific purposes listed for many of these plants, whether during pregnancy, at the time of labour, or in the postpartum period, show that traditional midwifery was historically, and remains, an incredibly knowledgeable and resourceful institution full of intrigue and with generations' worth of experience to draw on.

Traditional Midwifery Practice vs. Modern Midwifery Practice

There are a number of herbs mentioned above that are also mentioned in modern midwifery textbooks. The modern midwife is defined herein as a licensed health care professional who has received formal training as a midwife. This definition of a modern midwife is the same as the one provided by the World Health Organization (Cosminsky, 1976). It is interesting to note the different ways in which some of the herbs listed previously are used by modern midwives and those that are contraindicated for use during pregnancy. Of specific interest is the red raspberry leaf, which is endorsed by modern midwives, but not traditional aboriginal midwives. Specifically, for the Carrier Nation, raspberries are thought to cause raspberry birthmarks, red blotches on babies' skin (Skye, 2010). Table 2 details the herbs that are mentioned in *A Midwife's Handbook* (Sinclair, 2004) and *The Natural Pregnancy Book* (Romm, 2003), as well as *A Pocket Guide to Clinical Midwifery: The Efficient Midwife* (Dutton, Densmore & Turner, 2010), exploring how

these uses differ from those of traditional midwifery, as mentioned earlier. The reasons for contraindication range from lack of research to different effects at different stages of pregnancy. As Romm notes, a health care professional should always be consulted before using any herbal remedies while pregnant.

It should also be noted that none of these herbs are generally recommended for use during pregnancy in modern midwifery texts. All of these herbs have some associated dangers and should be used with caution. In particular, herbal remedies should not be taken in the first trimester without consulting with a healthcare professional (Fraser & Cooper, 2009). Romm (2003) advises the use of an experienced herbalist when taking these herbal remedies (p. 130). Furthermore, Sinclair (2004) has "concerns about the use of herbs, especially during pregnancy" (p. 563), due mostly to the lack of knowledge or research as to how exactly these herbs act on the body. There is a desire among modern midwives for evidence-based research to prove the efficacy of traditional medicines, including herbal remedies before they are approved for use (NAHO, 2008a).

Table 2: Contrast of uses of herbs in modern and traditional midwifery

Herbs	Use in modern midwifery[1]	Use in traditional midwifery[2]	Contraindicated for use (modern midwifery)[3]	Contraindicated for use (traditional midwifery)[1]
Black cohosh	Relaxes cervix and uterine muscles, promotes regular uterine contractions and reduces blood pressure	Pain relief during labour	x	
Blue cohosh	Late pregnancy uterine tonic prepares uterine muscles for birth and stimulates contractions when due date has past	Pain relief and to induce labour	x	
Castor	Oil used as laxative, used to induce labour	Poultice used as a lactogogue or to soften mammary glands	x	

Cedar	Used with sage to make a smudge for "Blessingway" ritual	Ceremonial uses, and as infant diapers/bedding	x	
Juniper	No known use	Branches boiled to promote muscular relaxation	x	
Red raspberry	Leaf tea helps prevent miscarriage, diarrhea and insomnia	Do not use, berries cause red blotches.		x
Rose	Makes a bath to treat cold/flu or mild illness Oil can be used with other oils to soothe sore breasts	Decoction taken after childbirth (reason unspecified)		
Wormwood	No known use	Used to hasten recovery from childbirth	x	
Yarrow	Infused with other herbs to treat beta-strep infection	Poultice used to harden breasts after childbirth	x	

[1] Dutton et al. (2010), Fraser & Cooper (2009), Romm (2003), Sinclair (2004)

[2] Skye (2010), Gottesfeld (1994), Johnson Gottesfeld & Anderson (1988), Hutchens (1973), Turner (1998), Turner et al. (1990), University of Michigan (2003)

[3] Romm (2003), Sinclair (2004)

To further understand some of the discrepancies shown in Table 2 between modern and traditional approaches to these herbs, a more detailed summary of the uses of the herbs listed above in modern midwifery follows, beginning with black cohosh (*Cimicifuga racemose*). This herb is used to "relax the cervix and uterine muscles, relieve irregular uterine contractions…and reduce blood pressure by dilating peripheral blood vessels" (Romm, 2003, p. 131). It is also used to ease back, leg, and pelvis pain. A tonic of black cohosh is also often used in late pregnancy. Romm notes it should be used in "small and frequent doses of 1/4 to 1/2 teaspoon of the tincture every fifteen to twenty minutes for premature uterine contractions to 1/2 to 1 teaspoon every two to four hours…for improving uterine activity during labour" (p. 131). In a survey of midwives from the American College of Nurse-Midwives McFarlin et al. (1999) reports that 45% of nurse-midwives who use herbal remedies have acknowledged using black cohosh in their practice.

Blue cohosh (*Caulophyllum thalictroides*, often referred to as simply "caulophyllum" in midwifery texts) is often confused with black cohosh (*Cimicifuga racemose*), though they are "not botanically related" (p. 131). Sinclair (2004) notes it can be taken to promote general health in late pregnancy (after 36 weeks) once daily to "tone the uterus, promote timely and efficient labour, and prevent post-partum hemorrhage" (p. 53-54). McFarlin et al. (1999), in the same survey referenced above, state that 64% of respondents who use herbal remedies used blue cohosh, among the most in the study. Romm (2003) is more cautious about the use of this herb, but acknowledges it has "developed a strong reputation for its effectiveness as a late-pregnancy uterine tonic, preparing the uterine muscles for birth and stimulating contractions when a woman has gone past her due date" (p. 131). However, it should be noted that opinions vary widely on the use of this herb, with Fraser and Cooper (2009) warning that "inappropriate use of this particular remedy can trigger massive prostin-like contractions in which the mother experiences considerable pain but there is little, if any, cervical dilation and uterine contraction and retraction" (p. 969).

Castor oil is used to induce labour for women who are past their due date. It is the most commonly used herb by registered nurse midwives according to McFarlin et al. (1999) with 93% of those who use herbs to induce labour saying they used castor oil. Recommended dosages are found in Sinclair (2004) "Two ounces of castor oil…may be taken, ideally early in the morning after a good night's rest. Onset of action is 2 to 6 hours…. Dosages used by surveyed nurse-midwives ranged from 5-120 mL" (p. 147). However, Fraser & Cooper (2009) acknowledge there is "insufficient evidence to demonstrate the efficacy of castor oil on cervical ripening or inducing labour" (p. 564).

The leaf of red raspberry also ranks highly in terms of commonly used herbs amongst modern midwives. Once again, McFarlin et al. (1999) state that 63% of nurse midwife respondents who use herbal remedies used red raspberry leaf. This is an interesting contradiction with those in aboriginal communities where the red raspberry is generally avoided (Skye, 2010, p. 5). Romm (2003) promotes red raspberry leaves as having properties that can help to prevent and recover from miscarriage in a tea form with other herbs. Furthermore, an infusion of raspberry leaf tea, 1 ounce of dried leaves to 1 quart of water, steeped for 20 minutes can be used to treat diarrhea during pregnancy (p. 188). Similarly, an infusion combined with other herbs can help treat

insomnia during pregnancy (p. 221). Sinclair (2004) says to take 1 cup of red raspberry leaf tea per day for the last two months of pregnancy to (similarly with blue cohosh) "tone the uterus, promote timely and efficient labour, and prevent post-partum hemorrhage" (p. 53-54). Fraser & Cooper (2009) advocate the use of raspberry leaf as well as "it is thought that certain constituents within the leaves of the raspberry bush affect uterine muscle making it more efficient, possibly preventing postmaturity easing discomfort in labour and enhancing uterine action" (p. 967). However, they go on to caution there is a lack of research where raspberry is concerned. There are certain circumstances where its use should be avoided, including for women who had previous caesarean section or uterine scar, a history of complicated labours, multiple pregnancy (i.e. twins) or if the mother is anaemic or taking iron, calcium or magnesium supplements or is on anti-depressants (p. 968).

A combination of oils, including rose (*Rosa canina*) oil can be used to soothe sore breasts during early pregnancy (Romm, 2003). It can also be infused with other herbs into a bath that helps to treat common cold or flu during pregnancy.

Yarrow is used, alongside other herbs in "sitz baths" which can help to treat beta-strep infections, as "this will help to restore vaginal flora while reducing vaginal bacterial counts" (p. 276).

Some modern midwives use herbs in ceremonial rituals as well, believing that these activities help promote general health and well-being by celebrating pregnancy. The Blessingway is one such ritual. The term is derived from a Navaho culture "but such rituals are germane to peoples all over the world" (Romm, p. 138). The use of cedar during the "purification" portion of the ritual is of particular interest, given its association with birth rituals noted amongst the First Nations peoples of British Columbia. Romm gives her technique for enacting this ritual.

> I use smoke to ritually remove any energy, thoughts or feelings that may be negatively influencing any of the guests or the mother, and to welcome in positive and loving energy. To smudge, you light the herbs cedar and sage and allow the smoke to circulate around each person by holding the lit herbs near their body.… (p. 140)

There is incredible diversity among modern midwives and while it is clear that many shy away from rituals such as these, preferring a more clinical approach, it is interesting to see that some modern midwives carry these traditions forwards. There seems to be an understanding here that the lack of clinical research on the effects of rituals such as these is not proof of their ineffectiveness.

Finally, juniper (*Juniperus*) and wormwood (*Artemisia*) are only mentioned briefly in modern midwifery texts as herbs not to be used during pregnancy, with no known uses at this time. (Romm, 2003; p. 84, Sinclair 2004, pp. 564-566).

Effects of Colonialism on Ethnobiological Knowledge in Traditional Midwifery

It is safe to assume that the plants listed here and the various uses thereof represent a small percentage of the knowledge traditional midwives would have had historically. We know that European contact brought disastrous consequences for First Nations peoples across North America. The sweeping change this brought to general healthcare practice in First Nations communities is evidenced in this quote from a Stoney Creek Nation Elder in Raymond Obomsawin's (2007) *Traditional Medicine for Canada's First Peoples*: "Years ago there were no drugs and we used herbs. In our way of life, we depended on traditional medicine, and we helped ourselves.… Today, modern medicine and doctors have taken over" (p. 1). The negative effects of this takeover are clear and have resulted in, "an almost complete loss of Aboriginal traditional medicine" (p. 3). This loss includes the loss of a sophisticated system of traditional medicinal ethnobiological knowledge: "Traditional systems have well thought-out frameworks for classifying plants, animals... Across varied Indigenous cultures these taxonomies… represent culturally relevant empirical frameworks for assessing the uses of plants for both food and medicine" (p. 2). Skye (2010) agrees, going one step further in saying that traditional knowledge "is scientific, in the sense that it is empirical, experimental, and systematic" (p. 30). Unfortunately, these sophisticated traditional knowledge bases "have been shattered to various degrees through centuries of colonial domination" (p. 29). The aboriginal midwives who were described as "herbalists, gynaecologists, obstetricians and nutritionists all rolled into one," (p. 32) were not

spared this fate. Midwifery, once held in high esteem among First Nations societies, suffered severe negative consequences due to the colonial take-over of healthcare delivery:

> The respected traditional role of…aboriginal midwives…was weakened during much of the twentieth century by laws that made midwifery illegal and punishable by law…as a result of these colonial practices, many traditional Aboriginal customs have been lost and midwives today struggle to pass on surviving knowledge to their people. (Skye, 2010, p. 31)

This weakening of the traditional role of the aboriginal midwife came with the parallel belief that hospital births, attended by a physician, were superior to home births, a belief "which often meant — and presently continues to mean for women in small remote communities in particular — removing pregnant women from their own communities for birth" (Native Women's Association of Canada, 2007, p. 4), since most First Nations women did not live in communities which had hospitals with facilities for medicalized delivery. By the 1950s, the overwhelming majority of births, "almost all births in North America" (NAHO, 2008a, p. 15) took place in hospitals. With this change to a more modernized birthing process "many ancient birthing and midwifery practices have been lost and few Aboriginal midwives are left to pass along Indigenous knowledge in this and other areas" (p. 15).

This may have been the result of the systematic discreditation of midwives and herbal medicines by the Western medical community, as demonstrated in this comment by Cominsky (1976) who writes, "some medical personnel feel that the use of herbs … [for labour] is dangerous" (p. 239). The unfounded assumption on the part of the medical community is that these herbs have traditionally been used "indiscriminately and ignorantly. However…part of the midwife's special knowledge is the amounts of such herbs to be used for the various purposes and the effects of these amounts" (p. 239). Furthermore, there is an inherent hypocrisy in this belief given that the Western medical community is known to make common use of "oxytocic agents, analgesics, and anaesthetics, which have unknown effects" a double standard which, she explains, "is hypocritical, ethnocentric and dangerous" (p. 239).

However, steps are being taken to rectify this situation. The field of ethnobiology has brought much-needed attention and validation to traditional knowledge and practices. Aboriginal midwifery stands poised to become the potential centrepiece of a resurgence in traditional knowledge, and in particular the new and deeper respect for traditional medicine and herbal remedies that is slowly re-emerging in modern Western medical science. Evidence of this is clear in modern midwifery practice, as Skye (2010) explains: "A recent attempt to address the serious health concerns of Aboriginal populations has called for the integration and utilization of traditional indigenous knowledge (Skye, 2010, p. 29).

More broadly, if modern medicine were to fully recognize the benefits of this approach across disciplines geographies and cultures, it would provide much-needed empowerment for the First Nations peoples to which this knowledge can originally be attributed, not to mention the benefits provided to the general population offered by further study of traditional medicinal practices, which not only validates traditional knowledge, but contributes to the field of medicine as a whole. The following section will discuss how traditional aboriginal midwifery is working to help revive ethnobiological knowledge, validate its uses, and combat further over-medicalization of healthcare services in Canada.

Traditional Midwifery: A Practical Model in Traditional Knowledge Utilization

> I have a dream of attending a birth in my own community at Nippissing, I will go to a woman's home where her extended family is there for support. …The father will light a fire outside and offer tobacco. We will boil cedar for the postpartum bath … Nishnawbe women are the guardians of their culture, families and communities. They will want to be a leading force in the future developments of midwifery on their homelands… This is the very future of our Nations. (Couchie and Nabigon cited in NAHO, 2008a, p. 1)

In recent years, there has been a newfound respect for traditional knowledge among policy makers and governmental organizations. It is no coincidence that this development has occurred simultaneously with a resurgence in midwifery practice in North America, as Obomsawin (2007)

explains, "the condescending mind-set of negativism and skepticism towards traditional medicine is being progressively displaced by…a growing respect for and recognition of its importance…These healers include traditional midwives" (p. 7). In fact, midwifery practice may well serve as a model for a new approach to traditional knowledge, as Skye (2010) describes "an approach which attempts to address indigenous knowledge and philosophies of health can be exemplified in the practice of traditional Aboriginal midwifery" (p. 29). She goes on to show how this approach has successfully integrated modern practices into traditional practice, which includes the use of traditional herbs: "traditional aboriginal midwifery is based in traditional knowledge, medicine and practices of maternal and child health, and complements this practice with modern medicine to deliver culturally significant health care service" (p. 31).

The distinction here is important, as rather than attempting to co-opt and conform traditional aboriginal midwifery practice to Western standards, this model gives priority to the existing traditional framework, with integration of modern practice where the need arises. Birthing centres in Canada illustrate an interesting development in terms of this cooperative approach. These centres are "unique in that maternity services are provided by a team made up of both traditional midwives and western medical practitioners." At one such center in Innulitsivik, "Inuit midwives are the lead caregivers for maternity, including pre- and post-natal care" (NAHO, 2008b, p. 10). Skye (2010) corroborates this point of view by saying "through these centres, aboriginal women…have access to traditional aboriginal herbal medicines for pregnancy, and are able to incorporate traditional ceremonies and rituals…." (p. 33). This approach seems only natural as Melanie Paniaq points out:

> Midwives have been practicing it for thousands and thousands of years…. Why should we have to be so dominated by this western system and not practice our own ways? Why not learn from the Inuit midwives? …Traditional midwives and Western midwives working together is the best way. They can embrace each other's knowledge and experience. Why not? (NAHO, 2008a, p. 42)

The pride in tradition and community here is evident. Whereas the overall benefits of aboriginal midwifery to traditional knowledge on the whole are clear, there are some dangers that must be

addressed. Misappropriation of traditional knowledge for commercial purposes is a real concern, along with concerns about the lack of respect on the part of government for indigenous knowledge as "a valid source of information and evidence for effective policy development" (NAHO, 2008b, p. 16-17).

There have clearly been positive strides made, in particular, when it comes to the successes of the aboriginal midwifery model, which allows women to receive care from, and within their own community without the need for long travel and hospitalization for low-risk pregnancies and births. This success has far reaching implications for healthcare delivery in aboriginal communities on the whole, showing "the integrity and contemporary utility of indigenous knowledge and philosophies of health. Further, aboriginal midwifery illustrates a promising model for the application of indigenous knowledge to other sectors of the healthcare system servicing aboriginal peoples" (Skye, 2010, p. 34). When it comes to incorporating these ideas beyond their original framework, however, it is important to remember "the respect for, and use of, indigenous knowledge and practices in the development and implementation of public health programs can only hope to succeed if the holders of that knowledge are allowed to define (the parameters) of its utilization…." (NAHO, 2008b, p. 17).

While there are still complex issues surrounding the recent encouraging resurgence of interest in aboriginal midwifery, one thing is clear, as NAHO (2008a) asserts: "in midwifery, there is a hopeful voice for aboriginal people and the health of the people" (p. 61). I will close this section, as I opened it, with a quote from Carol Couchie:

> A lot of people don't even know what it is they are missing, because it (midwifery) has been gone so long. But once they start to get it back, that memory comes back. And then people start to cry. Ladies that were taken away from their families to have their babies, and didn't have their partner there, or their grandmother and all of that kind of stuff, they start to cry and we know with tears that that is healing. (Couchie cited in NAHO, 2008a, p. 44)

It is this memory that ethnobiology attempts to not only preserve and protect, but also to promote, respect, and honour. The hope, from an ethnobiological standpoint, is that through the study of traditional knowledge, the honour that ought to be bestowed on practices such as aboriginal midwifery may flourish and grow, providing a foundation of mutual respect for health care institutions among all our communities in Canada. Further studies could focus on what impacts traditional knowledge could have on other areas of the health care system, i.e. mental health, palliative care, addiction, etc.. Ethnobiological studies, and the study of traditional knowledge are an important aspect of this growth. Aboriginal midwifery provides an excellent example of the success of integrating traditional knowledge into modern society. The proof is in the co-operative model that has been "birthed" by Aboriginal midwifery practice, and the mutual respect modern midwifery practice pays to Aboriginal midwifery.

Conclusion

The evidence of extensive use of plant resources in traditional midwifery shows the sophistication of the traditional ethnobiological knowledge base. While we understand that ethnobiology, in the form of herbal remedies and traditional medicines, plays a huge role in traditional Aboriginal midwifery, modern midwives employ some of the same techniques and recognize many of the same herbal remedies that their predecessors did. Unfortunately, numerous factors have contributed to an erosion of traditional knowledge, disempowering First Nations communities and First Nations women in particular, one of the most marginalized groups in Canada. The losses in traditional Aboriginal midwifery knowledge affected aboriginal communities profoundly. However, steps are being taken to repair the damage that has been done.

The return of midwifery to First Nations communities and its proliferation in the greater community of North America has brought much-needed respect and dignity back to the birthing process. The licensing of midwives as health professionals and the opening of birth centres in rural First Nations communities is a step in the right direction towards integrating traditional and modern midwifery practices to allow for best practices in both institutions. The uses of traditional ethnobiological knowledge among modern midwives and the incorporation of midwifery practice in the federal health care system is proof of the recognition of the obvious benefits traditional

knowledge provides. More research is required to help fully understand and uncover the effects and potential benefits of the lesser known herbs discussed in the first section of this paper and those that may still be unknown. It is important that this research include consultation and partnerships with the indigenous communities themselves and that any benefits of this research be shared with them. Using the aboriginal midwifery model as a guideline, traditional knowledge and ethnobiology can be a launching point for the greater First Nations community in terms of the growing respect for traditional knowledge and traditional health practices. Midwifery provides a unique nexus for traditional and modern medicine, one that ought to be explored more fully. It is ironic that while midwifery has a history dating back to the dawn of humanity, the majority of Canadians are still unaware of midwifery practice in this country. But, the memory is coming back, and it is bringing with it a progressive new way to think about how we practice health care in this country: a co-operative practice incorporating the best of traditional and modern knowledge.

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Bob Cole is a graduate student in the Master of Arts - Integrated Studies program at Athabasca University with a focus on Literary Studies. He has a Bachelor of Arts in English Literature from Queen's University. His writing has been featured in the webzine 'electrikpress' (2009) in the form of music reviews and interviews, as well the webzine 'Screw the Status Quo' (2009-2011) in the form of poetry and short stories. He currently lives in Toronto with his lovely wife and 2 year old son.