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MATERNAL MORTALITY REDUCTION AND CULTURAL PRACTICES: A COMPARATIVE STUDY OF BURKINA FASO AND CANADA

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ABSTRACT

Achieving SDG 3 (Good Health and Well-Being) requires reducing the global maternal mortality ratio (MMR) to less than 70 per 100,000 live births by 2030 (Target 3.1). Since 2000, maternal mortality has declined globally from 385 to 223 per 100,000 live births (2020), but progress is uneven: sub-Saharan Africa accounts for 70 percent of maternal deaths, while high-income countries have achieved MMR below 10. Maternal mortality is sensitive to health system factors, socioeconomic determinants, and cultural practices.

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This study conducts a comparative analysis of maternal mortality reduction and cultural practices in Burkina Faso and Canada, two countries with vastly different MMRs (Burkina Faso: 325 per 100,000, Canada: 8 per 100,000) and contrasting cultural contexts, health systems, and policy trajectories. Burkina Faso, a low-income Sahelian country, faces high maternal mortality driven by low skilled birth attendance (68 percent), traditional birth attendants (30 percent of births), dietary taboos, and decision-making delays. Canada, a high-income country, has achieved low maternal mortality through universal health coverage, high skilled birth attendance (99 percent), and midwifery integration. However, Indigenous populations (First Nations, Inuit, Métis) experience maternal mortality ratios 2 to 3 times higher than non-Indigenous Canadians due to geographic isolation, racism, and colonial suppression of traditional midwifery.

Using a qualitative comparative case study methodology, the study analyzes secondary data from government reports, WHO and UNICEF databases, peer-reviewed literature, and program evaluations over the period 2000–2025. Findings indicate that Burkina Faso has reduced MMR from 580 (2000) to 325 (2020) through free caesarean policy, emergency obstetric care scale-up, and community health worker programs. However, cultural barriers limit progress. Canada has achieved MMR below 10, but Indigenous maternal mortality gaps and cultural safety challenges persist.

The study concludes that maternal mortality reduction requires both health system strengthening and culturally respectful integration of traditional practices. Recommendations for both countries and the international community are provided.

Keywords: Maternal mortality; cultural practices; Burkina Faso; Canada; SDG 3; traditional birth attendants; Indigenous midwifery; respectful maternity care

RÉSUMÉ

Atteindre l'ODD 3 nécessite de réduire le taux de mortalité maternelle mondial à moins de 70 pour 100 000 naissances vivantes d'ici 2030 (cible 3.1). Le Burkina Faso (PIB par habitant 880 USD) a un ratio de mortalité maternelle de 325 pour 100 000 (risque à vie 1 sur 35). Le Canada (PIB par habitant 55 000 USD) a un ratio de 8 pour 100 000. Le Burkina Faso a réduit son ratio de 44 pour cent depuis 2000 grâce à la politique de césarienne gratuite et aux soins obstétricaux

d'urgence. Cependant, les barrières culturelles persistent : accoucheuses traditionnelles (30 pour cent des accouchements), tabous alimentaires, retards dans la prise de décision. Le Canada a un ratio très bas, mais les femmes autochtones ont un risque de mortalité maternelle 2 à 3 fois plus élevé que les non-autochtones. Les sages-femmes autochtones sont en cours de revitalisation. L'étude conclut que la réduction de la mortalité maternelle nécessite à la fois le renforcement des systèmes de santé et l'intégration respectueuse des pratiques culturelles. Des recommandations sont fournies pour les deux pays et la communauté internationale.

Mots-clés : mortalité maternelle, pratiques culturelles, Burkina Faso, Canada, ODD 3, accoucheuses traditionnelles, sages-femmes autochtones, soins de maternité respectueux

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1. INTRODUCTION

Achieving SDG 3 (Good Health and Well-Being) requires reducing the global maternal mortality ratio (MMR) to less than 70 per 100,000 live births by 2030 (Target 3.1). Since 2000, maternal mortality has declined globally from 385 to 223 per 100,000 live births (2020), but progress is uneven: sub-Saharan Africa accounts for 70 percent of maternal deaths (MMR 545), while high-income countries have achieved MMR below 10 (Australia 5, Germany 7, Canada 8, Sweden 4).

Maternal mortality is a sensitive indicator of health system performance, reflecting access to skilled birth attendants, emergency obstetric care (EmONC), antenatal care, family planning, and safe abortion services. It is also shaped by socioeconomic determinants: poverty, female education, nutrition, child marriage, and gender inequality. Cultural practices—including birth rituals, traditional birth attendants (TBAs), dietary taboos, postpartum practices, and decision-making authority—also influence maternal outcomes, sometimes positively (social support, traditional medicine, postpartum rest) and sometimes negatively (delaying care seeking, restricting nutritious foods, obstructing emergency transport).

Effective maternal health programs respect cultural practices where safe and work to shift harmful practices through respectful engagement, community dialogue, and culturally safe care. This study examines two countries that offer profound and contrasting insights into maternal mortality reduction and cultural practices: Burkina Faso and Canada.

Burkina Faso, a low-income Sahelian country in West Africa with a population of 23 million and GDP per capita of $880, has an MMR of 325 per 100,000 live births (2020, WHO), down from 580 in 2000 (a 44 percent reduction). Key interventions include free caesarean section policy (2006, eliminated user fees for caesarean sections), free EmONC (2016, covering caesarean, blood transfusion, laparotomy, neonatal resuscitation), community health workers (ASBC, with 5,000 trained in maternal, newborn, and child health), and midwife training (1,200 midwives graduated annually). However, cultural practices limit progress: TBAs attend 30 percent of births (rural, remote areas) but are not integrated into the health system (no training, no supplies, no referral protocols). Dietary taboos restrict protein-rich foods (eggs, meat, fish) during pregnancy, causing anemia in 50 percent of pregnant women. Decision-making authority lies with husbands and mothers-in-law, delaying care seeking (the first delay in the Three Delays Model).

Canada, a high-income country with a population of 38 million and GDP per capita of $55,000, has achieved an MMR of 8 per 100,000 (2020, WHO). Universal health coverage (Medicare, Canada Health Act 1984) covers all medically necessary hospital and physician services, including maternity care. Skilled birth attendance is 99 percent (obstetricians, family physicians, midwives). Facility delivery rate exceeds 99 percent. Emergency obstetric care is accessible in all hospitals with obstetrics. Midwifery is integrated into the public system (regulated in seven provinces, funded, with hospital, birth centre, and home birth options, serving 10 to 15 percent of births).

However, Indigenous populations (First Nations, Inuit, Métis, approximately 5 percent of the population) experience worse maternal outcomes. Indigenous MMR is estimated to be 2 to 3 times higher than non-Indigenous (approximately 20 to 30 per 100,000 versus 7 to 8). Contributing factors include geographic isolation (remote fly-in communities with limited maternity services; many First Nations women are evacuated from reserves to urban hospitals for delivery, separated from family and cultural supports), racism and discrimination in hospitals

(reports of neglect, mistreatment, dismissal of pain, forced procedures, lack of culturally safe care), social determinants (poverty, poor housing, lack of clean water, food insecurity, higher rates of chronic disease), and historical trauma (residential schools, forced hospitalization, undermining of traditional midwifery).

Cultural practices in Canada affecting maternal health include traditional Indigenous midwifery (Grandmothers, traditional birth knowledge, plant medicines, ceremonies) that was suppressed by colonial policies (Indian Act, forced hospitalization from the 1970s to 1990s, criminalization of Indigenous midwifery) and is now being revitalized through Indigenous-led midwifery programs. Postpartum practices among Indigenous communities include a "lying-in" period (seclusion, rest, special foods, ceremonies). Immigrant communities (South Asian, Chinese, African, Latin American) bring practices such as confinement (zuo yue zi, a Chinese postpartum ritual of 30 to 40 days of rest, no cold, no bathing, specific foods), home birth preferences, and refusal of certain procedures (episiotomy, induction, caesarean section without medical indication).

Canada has implemented culturally safe care policies, including Indigenous midwifery funding ($15 million per year), cultural safety training for health professionals (required for licensure in some provinces), interpretation services, patient navigators for immigrant and refugee women, and respectful maternity care frameworks. However, inequities persist: Indigenous MMR remains elevated, racism and discrimination continue (the National Inquiry into Missing and Murdered Indigenous Women and Girls in 2019 documented medical neglect, forced sterilization, denial of pain medication), and immigrant women face language barriers and lack of knowledge of the Canadian health system.

The contrast between Burkina Faso and Canada illuminates critical questions for maternal mortality reduction, cultural practices, and SDG 3, which this study addresses.

2. LITERATURE REVIEW

The literature on maternal mortality reduction spans epidemiology, health systems, medical anthropology, and public health. The "Three Delays Model" (Thaddeus & Maine, 1994) explains

maternal deaths through delay 1 (decision to seek care), delay 2 (reaching a facility), and delay 3 (receiving care at a facility).

2.1 Burkina Faso's Maternal Health

The literature on Burkina Faso's maternal health (Ministry of Health, INSD, EmONC assessments; Ouattara et al., 2010; Soubeiga et al., 2014; Nguyen et al., 2013) documents the impact of the free caesarean policy, TBA practices, and dietary taboos. Studies show that the free caesarean policy increased facility delivery and caesarean section rates, but progress has been slowed by insecurity in the Sahel region.

2.2 Canada's Indigenous Maternal Health

The literature on Canada's Indigenous maternal health (Van Wagner et al., 2012, 2017; O'Driscoll et al., 2019; Lawford & Giles, 2012; National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019) documents Indigenous midwifery revitalization, evacuation policies, and racism in maternity care. These studies show that colonial policies suppressed traditional midwifery, and that revitalization efforts have improved outcomes but remain underfunded.

2.3 Comparative Studies

Comparative studies across high- and low-income countries on cultural practices in maternal health are rare. Most studies focus on either high-income or low-income contexts separately. This study fills that gap by providing a structured comparison of Burkina Faso and Canada.

3. RESEARCH QUESTIONS

This study addresses the following research questions:

1. What are the maternal mortality trends, determinants, and health system responses in Burkina Faso and Canada?
2. What cultural practices influence maternal health in each country, including traditional birth attendants, dietary taboos, postpartum practices, decision-making authority, Indigenous midwifery, and immigrant practices?

3. How have policies in each country addressed (or failed to address) cultural practices, including integration, regulation, and cultural safety?
4. What can Burkina Faso learn from Canada, and what can Canada learn from Burkina Faso, about maternal mortality reduction and culturally respectful care?

4. METHODOLOGY

This study employs a qualitative comparative case study methodology to examine maternal mortality reduction and cultural practices in Burkina Faso and Canada.

Burkina Faso and Canada were selected as cases that offer maximum variation (most-different systems design). Burkina Faso is low-income, with high MMR, a Sahelian context, a francophone background, and a French colonial history. Canada is high-income, with low MMR, a northern context, a bilingual (English and French) background, and a British and French colonial history with Indigenous peoples.

The research design integrates secondary analysis of multiple data sources spanning the period 2000–2025. Government sources include: for Burkina Faso—the Ministry of Health (MOH), National Institute of Statistics and Demography (INSD), and EmONC assessments (UNFPA, UNICEF, WHO); for Canada—the Canadian Institute for Health Information (CIHI), Public Health Agency of Canada (PHAC), Health Canada, and Indigenous Services Canada (ISC). International databases include WHO and UNICEF MMR data, the World Bank, and UNESCO. Peer-reviewed literature and reports from WHO, UNFPA, UNICEF, and Indigenous organizations such as the National Aboriginal Council of Midwives (NACM) are also analyzed.

The analytical framework examines five dimensions: MMR trends, health system interventions, cultural practices, policy responses, and outcomes.

5. RESULTS

Table 1: Comparative Summary – Maternal Mortality and Health Systems

Dimension	**Burkina Faso**	**Canada**
Population (2024)	23 million	38 million

GDP per capita (USD)	$880 (low-income)	$55,000 (high-income)
MMR (2020, WHO)	325 per 100,000	8 per 100,000
MMR reduction (2000-2020)	44% (580 to 325)	60% (20 to 8)
Lifetime risk of maternal death	1 in 35	1 in 3,500
Skilled birth attendance	68%	99%
Facility delivery rate	70%	>99%
Antenatal care (4+ visits)	55%	>95%
Health facilities with basic EmONC	35%	100% (hospitals with obstetrics)
Caesarean section rate	8%	28% (range 20-35%)
Modern contraceptive prevalence	30%	75%
Female literacy	35%	99%
Total fertility rate	5.5 children/woman	1.5 children/woman
Indigenous population (%)	Not applicable (majority indigenous but not recognized; Fulani, Mossi, Tuareg, etc. are “ethnic groups,” not “Indigenous” as per UN definition in Canadian context)	5% (First Nations, Inuit, Métis)

Indigenous MMR	Not available separately (but rural north has higher MMR)	20-30 per 100,000 (2-3x non-Indigenous)
Source	INSD 2021; WHO 2023; EmONC 2021	CIHI 2022; PHAC 2023; NACM 2020

Table 2: Burkina Faso – Maternal Mortality and Cultural Practices

Element	**Description**
MMR trends	2000: 580, 2005: 520, 2010: 460, 2015: 380, 2020: 325. Reduction 44% over 20 years. Progress slowed due to insecurity (Sahel region, jihadist insurgency 2015-2025, 1,500+ health facilities closed).
Health system interventions	Free caesarean section (2006, policy eliminated user fees for caesarean). Extended to free EmONC (2016 – caesarean, blood transfusion, laparotomy, neonatal resuscitation). ASBC (community health workers) – 5,000+ trained in maternal, newborn, child health, family planning, nutrition, malaria. Midwife training: 1,200+ midwives (sages-femmes) graduated annually, deployed to district hospitals, primary health centers. Family planning: community-based distribution of contraceptives (pills, injectables—Depo-Provera, implants, IUDs at health centers).
Traditional birth attendants (TBAs – matrones)	30% of births attended by TBAs (rural areas, remote villages). TBAs often older women, respected, low-cost, accessible (no travel). Services: prenatal palpation, herbal remedies, massage, delivery (unhygienic conditions—no sterile gloves, no clean delivery kit, no emergency supplies), cord care (traditional substances—butter, herbs, ash—risk of infection). TBAs cannot manage hemorrhage (leading cause of maternal death), eclampsia, obstructed labor, retained placenta, sepsis. Ministry of Health policy: non-collaboration (TBAs discouraged, not trained, no supplies, no referral protocols). But de facto coexistence.
Dietary taboos during pregnancy	Restriction of protein-rich foods: eggs (believe causes large baby, difficult labor, malformations), meat (especially bushmeat, believed to cause birthmarks, respiratory disease), fish (thought to cause skin disease, parasites). Result: protein-energy

	malnutrition, anemia (Hb <11g/dL) prevalence 50% among pregnant women. Nutrition education not culturally adapted.
Postpartum practices	"Sortie de couche" – 40 days confinement (stay inside, no going out, no heavy work, no sexual intercourse). Rest beneficial for recovery, breastfeeding. Special foods: millet porridge (sounf), soups, sweetened tea. Traditional massage (massage du palper) – may be beneficial. Herbal baths (sitz baths). However, seclusion may delay recognition of postpartum hemorrhage (if family does not check bleeding), sepsis (fever not reported).
Decision-making authority	Women lack autonomy. Husband, mother-in-law, senior woman in compound decides: whether woman attends antenatal care (if husband permits), where to deliver (home vs health facility, TBA vs clinic), whether to accept referral to hospital (if complication), whether to accept caesarean (fear of surgery, cost, cultural belief that caesarean is failure, affects future fertility). Men often not present during antenatal care (lack of male-friendly services).
Free caesarean policy impact	Caesarean section rate increased from 2% to 8% (2000-2020). Facility delivery increased from 40% to 70%. Direct out-of-pocket costs reduced. However, informal payments still occur (bribes for drugs, supplies, blood, "gifts" to staff).
Challenges	Insecurity (Sahel – 1,500 schools/health facilities closed, 2 million displaced). TBA non-integration. Dietary taboos persist. Decision-making delays. EmONC coverage low (35% facilities basic, 15% comprehensive). Emergency transport absent (no ambulances in most rural areas, family must hire cart, motorcycle, or walk – delay 2).

Table 3: Canada – Maternal Mortality and Cultural Safety

Element	**Description**
MMR trends	2000: 20, 2005: 12, 2010: 10, 2015: 9, 2020: 8. Lowest in world. Indigenous MMR (First Nations, Inuit, Métis) estimated 20-30 per 100,000 (2-3x higher), but data incomplete (provincial differences, underreporting).

Health system	Universal health coverage (Medicare) – all medically necessary hospital and physician services covered (no out-of-pocket). Maternity care: obstetricians (60% of births), family physicians (20%), midwives (10-15%). Hospital birth (98%), birth centre (1%), home birth (1%). EmONC available in all hospitals with obstetrics (tertiary care for high-risk).
Indigenous midwifery (traditional)	Pre-colonial: Indigenous midwives (Grandmothers – okiskinwahamakewak (Cree), kikinwahamâkow (Algonquin), iiyiit (Inuit), grand-mères, matrones autochtones) attended births using traditional knowledge, plant medicines, ceremonies, massage, positioning. Suppression: Indian Act (1876, 1951 revisions), forced hospitalization (1970s-1990s), criminalization of Indigenous midwifery (only physicians allowed). Result: loss of knowledge, intergenerational trauma.
Indigenous midwifery revitalization	Since 1990s: Indigenous-led midwifery programs (Six Nations Maternal and Child Health Centre, Ontario; Inuit midwifery in Nunavik – Ullivik; Nunavut – Rankin Inlet Midwifery (1993), Iqaluit Midwifery; Manitoba First Nations midwifery – Onashowewin). Funding: Health Canada, Indigenous Services Canada ($15 million/year). Programs integrate traditional knowledge with clinical training (newborn resuscitation, emergency skills, sterile technique, pharmacologic oxytocics). Practicing midwives: ~100 Indigenous midwives across Canada (target 500). Outcomes: Inuit midwifery in Nunavik reduced evacuation rate (women birth in community, not flown south), improved breastfeeding, increased cultural continuity.
Evacuation policy	First Nations women from remote reserves (fly-in communities) evacuated to urban hospitals (often 500-2,000 km away) at 36-38 weeks gestation to wait for delivery. Consequences: separation from family (husband, children, elders, support network), cultural isolation, financial stress (lost income, travel costs), emotional distress (depression, anxiety), discontinuity of care (different providers, no traditional midwife, no cultural practices).
Racism and discrimination	National Inquiry into Missing and Murdered Indigenous Women and Girls (2019) documented: medical neglect (dismissal of pain, prolonged labour without intervention, refusal of caesarean when indicated), forced sterilization (reports of Indigenous women

	sterilized without informed consent – 1970s-1990s, continuing?), denial of pain medication, verbal abuse, denial of Indigenous midwife access.
Culturally safe care policies	Cultural safety training (mandatory for licensure in BC, Manitoba, Ontario – Indigenous health competencies for physicians, nurses, midwives). Patient navigators for Indigenous women (some hospitals). Indigenous birth support workers (doula programs). Smudging, traditional medicines, ceremonies allowed in some hospitals. Land-based birthing programs (return to traditional birth territory).
Immigrant and refugee women	Canada receives 300,000+ immigrants/year (South Asia, China, Philippines, Africa, Latin America, Middle East, Eastern Europe). Cultural practices: confinement (zuo yue zi – Chinese, 30-40 days rest, no cold, specific foods). Refusal of episiotomy, induction, caesarean. Home birth preferences. Language barriers (interpretation services available in some hospitals, not all; telephone-based (200+ languages) but limited in rural areas). Fear of authority (overuse of intervention, child apprehension, deportation).
Challenges	Indigenous MMR gap persists (2-3x higher). Racism and discrimination continue (reports of mistreatment, 2021, 2023). Evacuation policies not reformed (still fly out pregnant women from remote reserves). Midwifery not available in all provinces (Prince Edward Island, New Brunswick – not regulated; Northwest Territories, Nunavut – limited services). Immigrant women face language, access barriers.

Table 4: Comparative Cultural Practices and Policy Responses

Cultural practice	**Burkina Faso**	**Canada (Indigenous)**
Traditional birth attendants	TBAs attend 30% of births. Policy: non-integration (parallel).	Indigenous midwives suppressed 1970s-1990s. Policy: revitalization (1990s-present).
Dietary practices	Pregnancy taboos (eggs, meat, fish) restrict protein. Policy: standard nutrition education (not culturally adapted).	Indigenous traditional foods (moose, fish,

		berries) displaced by colonialism. Policy: nutrition programs (not well integrated with midwifery).
Postpartum confinement	"Sortie de couche" (40 days). Policy: not integrated (midwives not trained to support).	"Lying-in" period. Policy: some hospitals allow traditional practices (smudging, ceremonies).
Decision-making	Male/family decides. Policy: male involvement programs (limited).	Indigenous women reclaiming autonomy. Policy: Indigenous-led midwifery, community governance.
Home birth	30% at home (with TBA). Policy: discouraged (midwives not funded for home birth).	1% at home (with registered midwife). Policy: funded home birth (regulated).
Integration	None (parallel).	Strong (Indigenous midwifery in public system).

6. DISCUSSION OF RESULTS

6.1. Explaining Burkina Faso's MMR Reduction and Persistent Gaps

Burkina Faso reduced MMR by 44 percent from 2000 to 2020 through free caesarean policy, EmONC scale-up, midwife training, and community health workers. However, the MMR remains high at 325. Persistent gaps include:

- **TBA non-integration:** Thirty percent of births are attended by TBAs who lack emergency skills, referral pathways, and training. TBAs cannot manage hemorrhage, eclampsia, or obstructed labor.
- **Dietary taboos:** Protein restriction causes anemia in 50 percent of pregnant women. Anemia increases the risk of hemorrhage, which is the leading cause of maternal death.
- **Decision-making delays (first delay):** Women cannot decide to seek care independently; husbands and mothers-in-law decide.
- **Low EmONC coverage:** Only 35 percent of facilities have basic EmONC.
- **Lack of emergency transport:** Women die en route to facilities (delay 2).
- **Insecurity in the Sahel region:** More than 1,500 health facilities have closed.

6.2. Explaining Canada's Low MMR but Indigenous Gaps

Canada's universal health coverage, skilled birth attendance (99 percent), EmONC access, and midwifery integration have driven MMR below 8. However, the Indigenous MMR gap persists at 2 to 3 times higher. Contributing factors include:

- **Colonial policies:** The Indian Act and forced hospitalization (1970s to 1990s) suppressed Indigenous midwifery, disrupted intergenerational knowledge, and created distrust.
- **Evacuation policies:** Pregnant women from remote reserves are flown out to urban hospitals, separated from families and cultural supports.
- **Racism in hospitals:** Reports of neglect, forced sterilization, dismissal of pain, and denial of culturally safe care deter Indigenous women from seeking care.
- **Revitalization underfunding:** Indigenous midwifery revitalization has improved outcomes (reduced evacuation, increased breastfeeding, cultural continuity) but remains underfunded ($15 million per year, 100 midwives versus a target of 500).

6.3. Traditional Birth Attendants: Burkina Faso's Missed Opportunity

Burkina Faso's policy of non-integration of TBAs is a missed opportunity. TBAs attend 30 percent of births, are trusted, accessible, and could be trained to recognize danger signs (hemorrhage, eclampsia, obstructed labor), provide clean delivery kits (sterile blade, cord tie, plastic sheet, gloves), administer misoprostol to prevent postpartum hemorrhage (as recommended by WHO), and refer patients to EmONC. Countries that have successfully integrated TBAs (Nepal, Bangladesh, Ethiopia) have reduced MMR through community-based midwifery, TBA training, and referral systems.

Burkina Faso should formalize TBA training, equip TBAs with clean delivery kits, misoprostol, and referral communication tools (mobile phones, radios), and link them to health centers through a community health worker integrated approach.

6.4. Indigenous Midwifery: Canada's Model for Burkina Faso

Canada's Indigenous midwifery revitalization offers lessons for Burkina Faso. Canada recognized that suppressing Indigenous midwifery was harmful and that revitalization (funding, training, regulation, integration) improves maternal outcomes, cultural continuity, and community empowerment.

Burkina Faso does not have "Indigenous midwifery" in the same sense (TBAs are not recognized as "Indigenous midwives" with cultural knowledge systems), but the principle applies: respect traditional birth knowledge, integrate TBAs into the formal system (not suppression), train them in emergency skills, equip them, and link them to EmONC. Burkina Faso could create a "Traditional Birth Attendant Certification Program" in which TBAs who complete training receive certification, clean delivery kits, misoprostol, a mobile phone, referral network access, and a small incentive (performance-based). This would shift TBAs from a parallel to an integrated system, improving safety while respecting cultural preferences.

6.5. Dietary Taboos: Culturally Adapted Nutrition Education

Burkina Faso's dietary taboos restricting eggs, meat, and fish during pregnancy are based on cultural beliefs (large baby, difficult labor, birth defects, skin conditions). Standard nutrition

education ("eat eggs, meat, fish, leafy greens") is ineffective because it does not address the underlying beliefs.

Culturally adapted nutrition education should engage elders, husbands, and TBAs (who are trusted), explain pathophysiology (eggs provide protein for the baby's brain development, not a large baby; meat provides iron to prevent anemia and reduce hemorrhage risk; fish provides omega-3 for the baby's brain), use role-play and storytelling, include cooking demonstrations (preparing eggs, meat, and fish in culturally acceptable ways), and leverage positive deviance (communities where taboos are not observed have better outcomes).

Canada could learn from Burkina Faso in this area. Indigenous traditional foods (moose, fish, berries) were displaced by colonialism, leading to food insecurity and poor nutrition. Culturally adapted nutrition programs should restore traditional food systems (hunting, fishing, gathering) and integrate them into antenatal care.

6.6. Decision-Making and Male Involvement

Burkina Faso's decision-making delays (men and mothers-in-law decide) could be addressed through male involvement programs, including couple counseling, male champions, and health education for men. Burkina Faso has piloted male involvement in maternal health programs through some NGOs, but government implementation is limited.

Canada's Indigenous midwifery model includes community governance (First Nations and Inuit communities run midwifery programs and decide policies). This empowerment shifts decision-making authority from external authorities (colonial, medical) to the community, including women. Burkina Faso could pilot community maternal health committees that include women, men, TBAs, religious leaders, and youth to make decisions about facility delivery, EmONC referral, and transport funds.

6.7. Transferability: What Burkina Faso Can Learn from Canada and What Canada Can Learn from Burkina Faso

Burkina Faso can learn from Canada in several areas:

- **Integrate TBAs** through certification, training, supplies, and referral systems, analogous to Indigenous midwifery revitalization.
- **Scale up midwifery training** following Canada's regulated midwifery model with high standards.
- **Universal health coverage:** Canada's Medicare has no out-of-pocket costs. Burkina Faso's free caesarean policy is a start; it should extend to full EmONC (all services free) and enforce no informal payments.
- **Emergency transport:** Canada's remote communities have air ambulance and medevac services. Burkina Faso could pilot community emergency transport schemes including motorbike ambulances, bicycle ambulances, and community emergency funds (mutuelles de santé).

Canada can learn from Burkina Faso in several areas:

- **Community health workers (ASBC):** Canada has no equivalent for maternal health (some Indigenous doula programs exist, but not nationally). Burkina Faso's ASBC model (trained in maternal health, family planning, nutrition, malaria, integrated care) could be adapted for Indigenous communities in Canada as Indigenous birth support workers or community health representatives.
- **Free caesarean policy (user fee elimination):** Canada has universal coverage, but Indigenous women face indirect costs (travel, accommodation, lost income). Canada could eliminate out-of-pocket costs for Indigenous women for transport, accommodation, meals, childcare for other children, and lost income. The Non-Insured Health Benefits (NIHB) program currently covers some but not all of these costs.

6.8. Implications for SDG 3

Maternal mortality reduction is central to SDG Target 3.1. Burkina Faso demonstrates that low-income countries can reduce MMR through free EmONC, skilled birth attendants, and community health workers, but cultural barriers (TBA non-integration, dietary taboos, decision-making delays) must be addressed respectfully. Canada demonstrates that high-income countries can achieve very low MMR, but Indigenous maternal health gaps require culturally safe care, Indigenous midwifery revitalization, elimination of racism, and attention to social determinants.

The international community (WHO, UNICEF, UNFPA, World Bank) should support TBA integration programs (training, certification, referral, supplies), Indigenous midwifery revitalization (funding, regulation, community governance), culturally adapted nutrition education, and emergency transport systems. South-South and North-South exchange (Burkina Faso, Canada, Mali, Senegal, New Zealand) on culturally safe maternal care should be promoted.

7. CONCLUSION

This comparative analysis reveals that maternal mortality reduction in Burkina Faso and Canada has progressed, but both countries face cultural challenges.

Burkina Faso reduced MMR by 44 percent from 2000 to 2020 to 325 per 100,000 through free caesarean policy, EmONC scale-up, midwife training, and community health workers. However, cultural practices limit progress: traditional birth attendants attend 30 percent of births without integration, dietary taboos restrict protein-rich foods and cause anemia, and decision-making delays (men and mothers-in-law decide) delay care seeking. Burkina Faso has not integrated TBAs (policy of non-collaboration).

Canada has achieved an MMR of 8 per 100,000 through universal health coverage, skilled birth attendants, EmONC access, and regulated midwifery. However, the Indigenous maternal mortality gap persists, with MMR 2 to 3 times higher than non-Indigenous. Colonial policies suppressed Indigenous midwifery, forced evacuation of pregnant women from remote reserves, and racism in hospitals (neglect, forced sterilization, denial of pain medication) continues. Canada is revitalizing Indigenous midwifery (Six Nations, Inuit, Manitoba) with approximately 100 midwives and a target of 500.

Several cross-cutting insights emerge:

1. Traditional birth attendants (in Burkina Faso) and Indigenous midwives (in Canada) are trusted, accessible, and culturally embedded. Integration through training, certification, referral, and supplies improves safety, while suppression causes harm.

2. Dietary taboos (in Burkina Faso) and displacement of traditional foods (in Canada's Indigenous communities) require culturally adapted nutrition education that engages elders, TBAs, and husbands.
3. Decision-making delays (in Burkina Faso, where men and families decide) and evacuation policies (in Canada, where women are flown out) remove women's autonomy. Community governance, male involvement, and birth in the community restore autonomy.
4. Free EmONC (in Burkina Faso) and universal health coverage (in Canada) reduce financial barriers, but informal payments (in Burkina Faso) and indirect costs (in Canada for Indigenous women) remain.
5. Racism and discrimination (in Canada) and disrespectful care (in both countries) require cultural safety training, accountability mechanisms, and Indigenous patient advocates.

For Burkina Faso, priorities include: formally integrating TBAs into the health system (certification, training in clean delivery, misoprostol, danger sign recognition, referral protocols, clean delivery kits, mobile phones); addressing dietary taboos through culturally adapted nutrition education (community dialogues, cooking demonstrations, engaging elders, TBAs, husbands); promoting male involvement in maternal health (couple counseling, male champions, male-friendly antenatal care); scaling up midwifery training and deployment (especially to rural areas and the conflict-affected Sahel region); strengthening emergency obstetric transport (community emergency funds, motorbike ambulances, bicycle ambulances, referral communication); and fully implementing free EmONC (zero informal payments, accountability).

For Canada, priorities include: scaling up Indigenous-led midwifery (funding of $50 million per year target, 500 midwives by 2030, regulatory recognition in all provinces); eliminating racism in maternity care (mandatory cultural safety training with evaluation, accountability mechanisms for hospitals, Indigenous patient advocates, independent complaints process); ending evacuation policies (invest in remote birthing facilities, Indigenous midwifery, tele-health support for high-risk pregnancies); addressing social determinants for Indigenous populations (housing, clean water, food security, income support, child care); improving language access (interpretation services in all hospitals, translated materials, patient navigators) for immigrant and refugee women; and scaling up Indigenous doula programs (birth support workers).

For the international community, the lessons are clear. Maternal mortality reduction requires both health system strengthening (EmONC, skilled birth attendants, family planning) and culturally respectful integration of traditional practices (TBAs where safe, Indigenous midwifery revitalization). Cultural practices are not static or monolithic; they can be protective or harmful, but coercive approaches fail. Respectful engagement, community dialogue, and culturally safe care work. Funding for TBA integration and Indigenous midwifery revitalization is cost-effective and saves lives.

The ultimate measure of success for maternal health policy is not MMR alone, but whether every woman—in rural Burkina Faso and in a remote First Nations reserve—gives birth safely with respect for her body, her culture, and her autonomy.

8. LIMITS OF THE STUDY

This study has several limitations:

1. Reliance on secondary data (government reports, WHO, CIHI, peer-reviewed literature) means the analysis is constrained by data availability, quality, and comparability. Burkina Faso's maternal mortality data in conflict-affected regions are incomplete. Canada's Indigenous MMR data are incomplete because there is no national mandatory reporting of Indigenous identity in vital statistics.
2. The comparative case study design cannot establish causality as rigorously as experimental or quasi-experimental methods.
3. The study does not include primary data collection (interviews with TBAs, Indigenous midwives, women, or health workers), which would provide richer insights.
4. The study period (2000–2025) captures recent progress, but longer-term historical dynamics are not fully explored.
5. The focus on national-level systems obscures subnational variation within Burkina Faso (north versus south, Sahel region) and within Canada (provinces, First Nations versus Inuit versus Métis).
6. The study does not quantify the cost-effectiveness of TBA integration or Indigenous midwifery revitalization.

Despite these limitations, the comparative analysis provides valuable insights for policy and future research.

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10. AUTHOR CONTRIBUTIONS

SAWADOGO AGBOHOUNKA Francine conceived the study, designed the methodology, conducted the literature review and document analysis, synthesized findings, and drafted the complete manuscript.

11. COMPETING INTERESTS

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential competing interest.

12. FUNDING INFORMATION

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13. DATA AVAILABILITY

All sources are publicly available documents cited in the bibliography and accessible through the referenced publications and organizations (WHO, UNICEF, UNFPA, CIHI, PHAC, ISC, INSD, Ministry of Health Burkina Faso).

14. DISCLAIMER

The views expressed in this article are solely those of the author and do not necessarily reflect the views of any institution or organization with which the author may be affiliated. The analysis is provided for scholarly purposes and should not be construed as policy guidance or programmatic advice.

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