Promoting Maternal and Child Health in Kosovo

Policies to Address the Overuse of Cesarean Sections

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Prepared by Adina Harri ’18, Andrew Weckstein ’18 and Kennedy Jensen ‘18

Dartmouth Global Health Policy Lab

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The Global Health Initiative at the Dickey Center for International Understanding

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The Nelson A. Rockefeller Center at Dartmouth College
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Contact:
Nelson A. Rockefeller Center, 6082 Rockefeller Hall, Dartmouth College, Hanover, NH 03755
http://rockefeller.dartmouth.edu/shop/ • Email: Ronald.G.Shaiko@Dartmouth.edu

Dickey Center for International Understanding, 6048 Haldeman, Dartmouth College, Hanover, NH 03755
http://dickey.dartmouth.edu/health • Email: Anne.N.Sosin@Dartmouth.edu

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KEY TERMS & ABBREVIATIONS

ACOG	American Congress of Obstetricians and Gynecologists
AIHA	American International Health Alliance
AMC	Action for Mothers and Children
ANC	Antenatal Care
CS	Cesarean Section(s)
FMC	Family Medical Center
FSSHK	Federata e Sindikatave te Shëndetësisë së Kosovës (Trade Union Health Federation of Kosova)
HIF	Health Insurance Fund
HIS	Health Information System
HV	Home Visiting
IMC	Independent Media Commission
KOGA	Kosovo Obstetrics and Gynecological Association
LMIC	Low and Middle Income Countries
MFMC	Main Family Medicine Centers
MLCC	Midwife-Led Continuity of Care
MoH	Ministry of Health
PCK	Press Council of Kosovo
P4P	Pay-for-Performance
PHC	Primary Health Care
UCCK	University Clinical Center of Kosovo
UNFPA	United Nations Population Fund
VBAC	Vaginal Birth After Cesarean
WHO	World Health Organization
WHRC	Women's Health Resource Center
WWC	Women's Wellness Center

EXECUTIVE SUMMARY

The 1999 conflict in Kosovo left the country with some of the worst maternal and infant health outcomes in all of Europe. Although many maternal and infant health indicators have since improved, the fragmented system has allowed other health outcomes to worsen, including dramatically increasing cesarean rates. The overall cesarean section (CS) rate grew from 7.5 percent to 27.3 percent between 2000 and 2015, exceeding international guidelines.[1] Given the country's resource constraints and history of poor maternal and infant health, the potential health risks and excessive financial burdens associated with medically unnecessary CS represent a serious concern for Kosovo. In 2016, the Kosovar Ministry of Health identified the dramatic rise in the CS rate as a principal target for policy interventions to improve child and maternal health.

In partnership with AMC, the Dartmouth Global Health Policy Lab sought to investigate possible causes of rising cesarean rates in order to develop policy interventions. Following extensive preparation and desk review, the Dartmouth team commenced fieldwork in Kosovo, conducting a mixed methods study consisting of semi-structured interviews with various healthcare actors and analysis of existing data and literature sources. From June 21 through August 18, 2017, the Dartmouth Global Policy Health Policy Lab team conducted more than 40 interviews with health workers, government officials, health administrators, NGO leaders, and other healthcare experts in Kosovo. Additional literature review and data analysis supplemented interview findings.

Through these methods, the Dartmouth team identified six major factors linked with rising rates and overprovision of CS in Kosovo that may be susceptible to policy interventions. These major factors included: *maternal misconceptions surrounding birth, underutilization of antenatal care at the primary level, diminished midwife autonomy, absence of established national cesarean guidelines*, *financial and informal incentives, and legal and media pressures.* Although many other health system and economic factors contribute to cesarean overuse, these six areas of interest emerged as the most feasible targets for policy intervention. A detailed outline of key findings and associated policy options can be found in Section 3 of this report.

STUDY FINDINGS

- **Widespread maternal and cultural preferences for CS in Kosovo ultimately lead to medically unnecessary cesareans.** Many women in Kosovo hold negative views of natural births and perceive CS as a less painful and more convenient mode of delivery. Lack of alternative modes of pain control in childbirth and perceptions of poor quality of care in delivery wards contribute to these views. Additionally, the paucity of formal education for both mothers and families on maternal and neonatal outcomes associated with different modes of delivery, combined with underutilization of existing maternal education services, may contribute to these preferences for CS.

- **Inadequate and underutilized antenatal education services, particularly at the primary care level, may also be linked with higher cesarean rates and other poor maternal and infant health outcomes.** Failure to provide community-based antenatal care (ANC) at primary healthcare (PHC) institutions leads to overburdened secondary

and tertiary hospitals, which may contribute to increased time pressures and higher cesarean rates. Furthermore, underutilization of these "gatekeeper" primary care services suggests that many women do not receive the preventative educational services that can promote healthy pregnancy and address maternal misconceptions surrounding birth. This problem represents incomplete implementation of the family medicine concept and has many negative consequences for the health system beyond rising cesarean rates.

- **Another major factor representing a system-wide inefficiency is the underutilization of midwives in antenatal counseling and intrapartum care and limited midwife autonomy in providing these services.** Midwife counseling in Kosovo has been shown to reduce the odds of CS,[2] thus failure to provide these services at many health institutions may have consequences for rising cesarean rates. Lack of legally defined midwife roles and normative management pressures further restrict midwife autonomy in providing antenatal and intrapartum care across the public sector system in Kosovo.

- **Physician decision-making could also be improved within the Kosovo healthcare system.** There is a lack of national guidelines for cesarean indications. Absence of standardized clinical guidelines contributes to significant ambiguity and variation in what physicians view as medically necessary cesareans. This prevents physicians from basing clinical decisions on accepted best practices, allowing doctors to provide sub-standard care by delivering medically unnecessary CS. Limited or ineffective accountability mechanisms further exacerbate this problem.

- **The dearth of monitoring has also facilitated widespread informal incentives in the form of dual practice demands and informal payments.** It has been found that patients may provide informal payments in order to receive more involved care, or to express gratitude towards physicians after the successful execution of complex treatments. There is reason to believe that similar patterns apply to CS. Furthermore, dual practice incentives from physicians working in both the private and public sector may have consequences for medical overuse. Additionally, the fee-for-service system at private, for-profit hospitals provides a clear financial incentive for medically unnecessary cesareans, contributing to cesarean rates as high as 92 percent at some private facilities.[3]

- **The rapidly developing medicolegal environment in Kosovo may be linked with rising cesarean rates.** Fear of litigation and sensational media coverage of the obstetrical field pressures physicians to deliver unnecessary care, including medically unnecessary CS. The lack of formal mechanisms for addressing malpractice complaints and the absence of nationalized CS guidelines amplify these pressures. This phenomenon has been observed in many other countries, but the rapidity with which the frequency of malpractice litigation and cesarean procedures have grown remains unique to Kosovo and provides substantial grounds for research and policy interventions.

POLICY OPTIONS

Additional interviews and a literature review helped formulate low-cost behavioral and regulatory interventions that can be feasibly implemented in the Kosovar health system to address rising CS rates. Some of the policy options also address broader system-wide issues including litigation pressures, informal incentives, and unregulated referral systems. Further details on policy implementation in the Kosovo context are provided in Section 4 of this report.

- **To address maternal preferences for CS, augmented access to intrapartum pain control may relieve some pressures for elective CS by creating options for mothers to undergo less painful traditional deliveries.** Increased awareness and incentive provision for maternal attendance in antenatal classes covering mode of delivery education could also address misconceptions regarding CS and natural delivery by ensuring the mothers are exposed to evidence-based information.
- **To ensure that the primary care system is delivering adequate ANC services and counseling, existing programs could be strengthened and accompanied by clear protocols that clarify the scope of practice of family physicians.** Midwives and trained nurses could accompany physicians in providing antenatal education to expand the population of women reached. Mothers must also be made aware of the services offered at PHC institutions and practitioners should be empowered, to the greatest extent possible, to provide quality antenatal care. Improved antenatal care and counseling would likely increase the frequency of informed-decision making surrounding mode of delivery, in addition to promoting overall maternal and infant health.
- **Increasing midwife independence and responsibility in the care of childbearing women in Kosovo may provide an effective measure for reducing cesarean rates.** The establishment of protocols to encourage midwife autonomy in antenatal counseling and low-risk births may help relieve physician burdens and create a care model that capitalizes more fully on midwife training and skills. Formal guidelines and regulations that legally define the role of midwives may help empower them to take on more of the clinical responsibilities for which they have been trained. Additionally, hospital norms and protocols that grant midwives authority to complete low-risk deliveries as autonomous caregivers could help alleviate pressures placed upon physicians by large patient volumes. Similarly, protocols that result in midwives performing a greater portion of antenatal counseling may also reduce physician workloads, thereby moderating the effects of physician shortages,[4] reducing cesarean rates, and improving maternal health.[5]
- **The development and dissemination of clinical standards for cesarean indications based on internationally recognized classification systems may remove ambiguity from the physician decision-making process.** The decision for performing CS could also be shared among a team of physicians according to a clinical protocol further outlining a group consultation procedure. Such an intervention would similarly be targeted at reducing subjectivity in physician decision-making. In addition to adopting guidelines centered on team decision-making and clinical standards, policies fortifying streamlined management and systems of accountability could increase guideline adherence and contribute to other health system improvements in quality of care.
- **Informal incentives in the healthcare system could be addressed by strengthening partnerships between professional health worker groups and government agencies.** There are a number of organizations that could potentially facilitate the implementation of state policies combating this practice. Informal incentives and dual practice could also be addressed in the upcoming Health Insurance Reform—an opportunity to restructure the payment models within the healthcare system. Furthermore, public education around informal payments could target the perception that patients are required to make out-of-pocket payments. This might encourage patients to seek high-quality care in the public sector, thereby reducing informal incentives.

- **Formal mechanisms for reviewing malpractice claims and supporting physicians in following established clinical guidelines could be implemented to reduce physician fears of media defamation or wrongful legal action.** Activating the Medical Chamber could achieve this purpose. Another potential option is the establishment of a review board to improve the quality and truthfulness of the media. Such a board could aid in the reduction of exaggerated media claims and serve as an accountability mechanism encouraging reliable reporting. Limiting sensationalized media reports would help address physician fears that contribute to medically unnecessary CS and other defensive medicine practices.

CONCLUSION

The Dartmouth team has provided policy options that offer alternative strategies for addressing Kosovo's rising cesarean rates. However, this concerning trend is largely a symptom of more widespread health system issues, including incomplete health reform implementation, significant resource constraints, unregulated referral systems, and other fragmented systems of care. Sustainable solutions require commitment to these larger health system problems.

Policy options to address overprovision of CS and larger health system challenges provide Kosovo health system experts and governing bodies an opportunity to rededicate themselves to the mission of improved maternal and child health. As one of the most important indicators of progress and stability, maternal and child health and its related issues present a high priority target for policymakers in Kosovo.

1. BACKGROUND

In the last decade, cesarean section (CS) rates have steadily increased across Kosovo.[6] Although rates vary among institutions,[7] the overall rate grew alarmingly from 7.5 percent to 27.3 percent between 2000 and 2015. In 2015, the World Health Organization (WHO) released guidelines suggesting an ideal cesarean section rate of 10 to 15 percent of all births, noting that cesarean section rates above 10 percent are not correlated with reductions in maternal mortality and morbidity.[8] More recent review by a team of experts sought to raise the maximum recommended rate to 19 percent,[9] but even this amended level lies well below the current cesarean rate in Kosovo.

High cesarean rates warrant concern on multiple fronts. The procedure is linked to higher risk of future complications and increased hospital recovery time for the mother[10] as well as both short- and long-term complications for the infant.[11] Furthermore, unnecessary cesarean sections place an undue burden on the healthcare system, which can inflate health costs and serve as a barrier to universal health coverage.[12] The resource constraints found in Kosovo, particularly following the 1999 conflict, make the drastic increase in CS especially remarkable, as some patients undergo unnecessary CS while others lack access to sufficient care. This paradox may point to deeper underlying failures within the provision of healthcare. In light of the financial strain CS overuse places on the healthcare system, together with the potential risks to maternal and child health stemming from this trend, this report seeks to investigate its possible causes and explore potential policy solutions.

- **Overall Objective:** To support Kosovo in improving the quality of Maternal and Child Healthcare and in promoting greater health in childbirth.
- **Project Specific Objectives:** Identify factors linked with rising cesarean rates in Kosovo and develop policy options to address this trend.

This report begins with an overview of the global situation regarding medical overuse of cesareans, and discusses factors contributing to these trends in other settings. It then moves into background on the healthcare system in Kosovo to provide context for the research undertaken. Subsequent sections present the research findings and formulated policy options based upon in-country fieldwork.

GLOBAL CONTEXT

Overprovision of medical services in obstetrics and other disciplines has begun to receive global attention for its potential negative consequences on health outcomes and healthcare costs.[13] CS rates around the globe have risen significantly in the last decade, generating concern among a number of international institutions.[14] In 2010, the global cost of medically unnecessary CS was estimated at over 2.32 billion dollars.[15] Beyond the costs of unnecessary care, some studies have demonstrated a link between rising CS rates and poorer health outcomes for mother and child.[16] Together, these excessive costs and potential health risks have motivated

efforts to address rising CS rates in many countries. Research in other settings has revealed a vast array of factors contributing to unnecessary CS. For this review, factors with demonstrated links to higher CS rates in various global settings will be structured into three primary levels: The Health System level, Health Worker level, and Family and Community level.

Family and Community

Despite substantial contrary clinical evidence,[17] the general public in various global settings perceive CS to be the safer mode of delivery, especially for the child.[18] Parents often cite infant health and safety as justification for cesareans, which creates additional maternal risk.[19] Another commonly held misconception is that vaginal births after cesarean (VBACs) carry excessive risk, leading to the "once a cesarean, always a cesarean" rule of thumb. This misconception, along with reluctance to perform VBACs, cause the greatest portion of medically unnecessary cesarean sections in many countries.[20] Such erroneous common knowledge leads to misinformed decision-making on the part of mothers who believe they are opting for a safer mode of delivery.[21]

Maternal and family preferences play significant roles in delivery outcomes throughout many international settings.[22] Societal norms, expectations, and perceptions of status all heavily shape these preferences.[23] Mothers also commonly cite strong fears associated with the pain of childbirth as another justification for CS. Without education and counseling about the reality of postoperative recovery and the discomfort it entails, mothers in various global settings have been shown to conceptualize CS as pain-free and "easy" compared to natural vaginal delivery.[24] These misperceptions lead to greater numbers of women requesting CS, which may contribute to elevated cesarean rates.

Health Worker

A global lack of knowledge at the health worker level and variation in clinical behaviors contributes to delivery decisions inconsistent with clinical guidelines and recommendations.[25] Physician misinformation or lack of complete education can lead to misguided and inconsistent decision-making. Evidence suggests that changes in training over time may leave physicians unprepared or less confident to handle more complicated vaginal deliveries, thereby increasing the likelihood of CS.[26] Experts also suspect that the growing use of technology in childbirth contributes to a bias towards cesarean deliveries, especially among young medical professionals.[27]

Physicians in many settings commonly cite convenience and time pressures as reasons for performing a cesarean delivery in otherwise ambiguous or "gray" sets of indicators.[28] As cesareans require less time than natural vaginal deliveries, physicians with overloaded schedules may have an incentive to perform medically unnecessary CS. Some of these time-related pressures may stem from inefficient distribution of responsibilities. The underutilization of midwives, for example, leaves more responsibilities to physicians and has been shown to increase the probability of CS in several countries.[29] Time pressures affecting the decisions of health workers are also linked to financial incentives, particularly in systems where doctors divide their time between the public and private sectors. In many cases, limited supply of healthcare workers, financial resources, and other assets necessary for providing care exacerbate time pressures. Lastly, increased reliance on obstetric specialists may have consequences for rising CS rates; midwife-led care has been shown in many countries to lead to significantly lower odds for cesarean as compared to obstetrician care.[30]

Health System

Although a body of literature outlines clinical standards for obstetric care, including medical indications for cesarean sections,[31] appropriate use of different medical interventions and technologies during birth,[32] and medical responses to birth complications,[33] research shows that physicians in many settings do not adhere to these updated standards.[34] Without national programs of clear clinical standards and guidelines, individual facilities or medical practitioners are left to make decisions independently. Autonomous decisions can be prone to bias and subjectivity that then contributes to unnecessary CS.

Depending on the financial structure of the healthcare system under review, monetary incentives for physicians, often in the form of informal payments,[35] may exist. These incentives can motivate physicians to operate unnecessarily and over provide CS.[36] In dual sector systems globally, cesarean rates tend to be higher among patients seeking obstetric care in the private sector.[37] This suggests that fee-for-service compensation models in private sector institutions may create financial incentives for providers to perform procedures with higher reimbursement rates. In these ways, monetary justifications allow health financial systems to drive cesarean rates higher.

The characteristics of individual healthcare facilities—including staff composition and structure, obstetric volume, and resource availability—are shown to influence CS rates in various global settings.[38] Since CS typically require less time than vaginal deliveries, facilities with high patient to physician ratios may exhibit higher cesarean rates.[39] Limited availability of facility resources, such as operating rooms or anesthesia, can also increase time pressures.[40] Staff composition may further contribute to these pressures. An obstetric unit with few obstetricians, absent or underutilized midwives, and lack of supportive labor companions or childbirth assistants[41]may impair a health worker's capacity to make evidence-based clinical decisions regarding delivery.

HEALTHCARE IN KOSOVO

In March 1998, war erupted between Albanians and the Serbian army in the territory of Kosovo. NATO forces entered Kosovo in June of 1999, effectively ending the war and bringing the Kosovo territory under United Nations Administration. In 2008, the former Yugoslav country declared its independence as the Republic of Kosovo.

The inefficient health system under the former Serbian government included poor health worker education, rampant informal payments, excessive levels of specialization, and lack of adequate equipment and means of quality control. Although Albanians responded to these inefficiencies by establishing a parallel health system called the Mother Theresa Organization in the midst of conflict, the quality of care remained insufficient. Following the conflict, international intervention worked to reconstruct the decimated health system, and the WHO guided the creation of health policies for Kosovo. However, the hierarchical structure inherited from the former socialist government continues to reverberate throughout the healthcare system in Kosovo.[42]

Following the war in 1999, lagging economic growth and incomplete reform of the health system contributed to poor population health in Kosovo.[43] The conflict reduced healthcare quality assessment and impaired systems of guideline implementation,[44] contributing to a fragmented and inefficient health system. Health reform after the war centered on developing a multi-tiered public healthcare system,[45]which sought to improve access to healthcare by emphasizing primary care and establishing functional family medicine centers in all 36 municipalities.[46] Although implementation of the family medicine concept and progress on other reforms have been mixed, reform regulations drawn following the war significantly shaped the current health system.

Health System Structure

Today, the public health sector in Kosovo is divided into three levels—primary, secondary, and tertiary care. Within the primary care level, several classifications of facilities were established to address different components of health, with varying levels of utilization (see Appendix B for more information). Main Family Medicine Centers (MFMCs) and Family Medical Centers (FMCs) both provide general care. Women's Wellness Centers (WWCs) are associated with MFMCs and aim to provide antenatal care and counseling to pregnant women. Women's Health Resource Centers (WHRCs) are located within secondary and tertiary facilities and offer educational classes and materials to promote women's health during pregnancy. If necessary, primary care centers refer patients to secondary and tertiary care levels, which are comprised of regional and municipal hospitals as well as the University Clinical Center in Pristina (UCCK).[47] The public health system is funded from the Kosovo Consolidated budget, with government spending on healthcare accounting for 9.67 percent of the total government budget in 2015.[48] Health insurance reform, which aims to raise revenues for the public health sector and improve access to care through risk pooling, is also currently underway.[49]

Despite significant reform progress, the utilization of public primary healthcare centers and hospitals remain low today. A high proportion of the population accesses specialist care directly,[50] demonstrating incomplete implementation of the family medicine concept. This pattern suggests that the perceived quality of primary care is poor, and barriers to healthcare persist for vulnerable groups, while groups of higher means receive healthcare from the private sector.[51] Furthermore, lack of funding and low salaries in the public sector lead to dual practice, where physicians work in both the public and private sectors.[52] This may further contribute to inequities in care and informal payment practices.[53] In total, Kosovo spends less on health than all other EU and Eastern European countries,[54] indicating that Kosovo's health system remains under-resourced.

Maternal Health

Because the conflict left Kosovo with some of the worst maternal and infant health outcomes in all of Europe, maternal and child health has been a significant focus of health sector reforms. In 2000, the infant mortality rate reached as high as 45 per 1,000 births, nearly three times higher than the European average. Perinatal mortality was 29.2 per 1000 births in 2000, [55] demonstrating similarly poor outcomes in late gestation and the first six days of life. Maternal mortality data at the time was limited and unreliable, but reports estimate that maternal health services were of poor quality and that maternal health outcomes were among the worst in Europe.[56] In response to these weak health outcomes, Kosovo attracted significant external support and pressures for reform from 1999-2002,[57] specifically targeting maternal, child, and reproductive health.[58] Although many maternal and infant health indicators have since improved with the renewed investment,[59] the fragmented system has allowed other maternal and infant health outcomes to worsen, including dramatically increasing cesarean rates.

The overall cesarean rate grew from 7.5 to 27.3 percent between 2000 and 2015, exceeding international guidelines.[60] Private hospitals have significantly higher CS rates, ranging from 56 percent to 92 percent across private facilities in 2015. [61] Rates also vary among public institutions, with the highest CS rates in Peja (35 percent), Prishtina (33 percent) and Gjakova (28 percent).[62] These rates are all far above international guidelines, suggesting that medically unnecessary CS was provided.[63] Given its resource constraints and history of poor maternal and infant health, the potential health risks and excessive financial burdens associated with medically unnecessary CS represent a serious concern for Kosovo. In 2016, the Ministry of Health identified the dramatic rise in the CS rate as a principal target for policy interventions to improve child and maternal health.

Many of the factors implicated as drivers of rising cesarean rates in other countries may also be relevant in the Kosovo context. However, much of the international evidence stems from countries with health systems different from the postwar system in Kosovo. The country's limited resources and fragmented health system make the Kosovo setting different from many other nations with rising CS rates. Ultimately, Kosovo presents a unique combination of factors and conditions that have contributed to the recent trend in rising CS.

2. METHODOLOGY

The Dartmouth Global Health Policy Lab team aimed to supplement and augment existing research from Action for Mothers and Children (AMC) with the ultimate aim of providing evidence-based policy recommendations to the Ministry of Health (MoH). The research methodologies focused on identifying factors with links to rising cesarean rates in Kosovo and on developing normative and regulative interventions to address CS trends. The team undertook a mixed methods study that consisted of semi-structured interviews with various healthcare actors and analysis of existing literature and data.

In preparation for in-country work, the Dartmouth team completed a desk review focused on maternal and child health and the current healthcare system in Kosovo. Publicly available documents containing health statistics and reports were analyzed. In addition, an extensive literature review explored the overuse of healthcare services in other international contexts, factors contributing to rising CS rates, and policies implemented in various cultural settings that attempted to address overuse of healthcare services. In-country work drew from a literature review that provided an assortment of policies addressing rising CS rates in other settings.

From June 21 to August 18, 2017, the Dartmouth team conducted more than 40 interviews with health workers, government officials, administrators, and other healthcare experts. The research team visited a variety of healthcare facilities at all levels of the healthcare system. Within Prishtina, the team visited the UCCK tertiary hospital, Women's Health Resource Center within the UCCK gynecology clinic, Main Family Medicine Center (MFMC), and Women's Wellness Center (WWC). The team also visited several private gynecology clinics in Prishtina. Outside of Prishtina, the Dartmouth team visited three regional hospitals (Peja, Gjakova, Gjilan) and a maternity (Kaçanik). Individuals interviewed in these healthcare facilities included hospital directors, obstetrics department chairs, physicians with clinical obstetric experience in both public and private practices, nurses and midwives with clinical obstetric positions, healthcare experts with knowledge of financial and reimbursement policies, and staff and affiliates at AMC-sponsored WHRCs. These semi-structured interviews focused on identifying factors that may be contributing to the rise in CS rates and possible policy interventions to address these factors.

The team also conducted semi-structured interviews with actors outside of health facilities. The Dartmouth team interviewed a variety of health worker and patients' rights associations, including representatives from the Patients' Rights Association, FSHKK, and the Kosovo Association of Midwives. The team conducted meetings with officials at the National Institute of Public Health, the World Health Organization (WHO), and the United Nations Development Program (UNDP), as well as with department heads of both the divisions of Mother, Child and Reproductive Health and Strategy Planning in Health at the MoH. These interviews provided valuable insight into system-wide healthcare trends and allowed the Dartmouth team to evaluate

existing channels for policy interventions and the feasibility of various regulative options. Follow-up interviews with key stakeholders helped to refine and validate findings and supported the development of policy options achievable within the Kosovo context.

Lastly, semi-structured interviews and continual guidance from AMC partners were invaluable at all stages of the research process. AMC also provided access to a variety of data sources that enlightened our understanding of the perinatal health situation in Kosovo (*see Appendix A).* Analysis of these data sources supplemented interview results with quantitative findings.

Areas of Focus

The Dartmouth team has identified several areas that appear to represent the primary drivers in medically unnecessary CS in Kosovo: *maternal misconceptions surrounding birth, underutilization of antenatal care at the primary level, diminished midwife autonomy, absence of established national cesarean guidelines, financial and informal incentives, and legal and media pressures.* System-wide resource constraints and limited health budgets may exacerbate many of the aforementioned factors and hinder the effectiveness of past efforts to improve the healthcare system in Kosovo. Different combinations of these factors across health institutions provide some explanatory power for the wide variation in cesarean rates observed among different facilities in Kosovo.

These primary topics were selected for 1) perceived relative importance as contributors to cesarean trends and 2) susceptibility to amelioration through feasible policy interventions. Therefore, while various additional factors may have roles in generating rising CS rates, they will not be addressed in this report. Similarly, interventions that have been effective in other settings but were deemed impractical for the Kosovo context will not be included.

For example, the current economic situation makes factors such as maternal socioeconomic status and health worker income difficult to address. Thus, such factors will not be discussed within the scope of this report. Additionally, certain policy interventions proven successful in other settings, but not feasible in the Kosovo context, are not included. For example, this report does not cover promoting VBAC, a health policy successful in addressing CS in other countries, given the potential negative consequences of encouraging this high-risk procedure for a developing and under-resourced health system.

3. STUDY FINDINGS

This report consists of six study findings sections for each of the six selected areas determined most relevant to rising rates of CS in Kosovo. Each section contains a brief introduction followed by a discussion of key findings from the Dartmouth Global Health Policy Lab's research. Next follow outlined policy directions and options, with a focus on normative and regulative solutions that could be implemented within existing Kosovar health structures at minimal cost.

It should be noted that each factor does not contribute to the cesareans trend in Kosovo in isolation. Rather, the selected factors, in addition to others, combine to create an environment enabling rising CS trends. Thus, policy recommendations addressing interrelated factor areas, divided into six sections for convenience and organization, may include overlap.

MATERNAL MISCONCEPTIONS SURROUNDING BIRTH

Research findings reveal that cultural and maternal preferences for CS in Kosovo contribute to rising cesarean rates.[64] These preferences may originate in misconceptions and lack of education surrounding pregnancy, which have been well-documented in Kosovo in previous studies.[65] As in other low and middle income countries (LMICs),[66] many women in Kosovo lack education regarding the maternal and neonatal risks associated with different modes of delivery. These shortcomings in maternal education may contribute to misconceptions or maternal preferences that reinforce concerning CS trends.

The key findings listed below review the status of maternal preferences and mode of delivery education in Kosovo. Subsequent policy options address the contribution of maternal misconceptions to rising cesarean rates and provide ways to improve maternal understanding of childbirth.

Key Findings

- *Negative perceptions of vaginal delivery*

Interviews with healthcare workers suggest many women hold negative perceptions of vaginal delivery and positive views of CS. A 2015 survey from AMC administered to over 800 mothers in Kosovo revealed that women commonly regard CS as easier, pain-free, faster, and more convenient than natural birth.[67] Although only 13.6 percent of surveyed women indicated painless delivery as the reason for requesting CS,[68] a study of low-risk pregnancies in Kosovo found that deliveries involving maternal or familial request for CS are over three times more likely to end in CS.[69] Thus, even a small portion of women or families expressing these preferences presents cause for concern. Anecdotal accounts from interviews with physicians further describe maternal and family pressures to perform CS during delivery, often to relieve maternal distress or alleviate fear. Doctors frequently cited maternal preferences and lack of education as major contributing factors to rising cesarean rates and emphasized the importance of educating mothers and their families earlier in pregnancy.

- *Limited access to alternative modes of intrapartum pain control*

Limited access to obstetric analgesia and alternative modes of intrapartum pain relief in the public sector may contribute to negative experiences of natural childbirth. Although private clinics possess pain control methods, public hospitals throughout the country still lack epidural anesthesia or other forms of obstetrical analgesia.[70] A 2008 report assessing obstetric care in Kosovo identified missing resources for pain relief, such as anesthetic agents and epidural kits, in facilities throughout the country.[71] Obstetric department heads and other key stakeholders confirmed this situation has not significantly improved in the last decade. Lack of public sector options may compel mothers to choose CS if they feel unprepared for the pain of natural childbirth.

- *Lack of information covering disparities in maternal and neonatal outcomes associated with modes of delivery*

In interviews, maternal health experts suggest women are uninformed about the maternal and neonatal outcomes associated with different modes of delivery. Experts cited this incomplete information as a significant factor in maternal decision-making regarding mode of delivery. According to a study on quality and access to antenatal care in Kosovo, informal conversations, media, and internet accounts provide the majority of information women receive, aside from discussions they may have with their healthcare provider.[72] Just under 30 percent of women received most of their information from friends, and 68 percent of women received the majority of their information from the internet.[3] Interview findings suggest that in the absence of evidence-based information, together with informal anecdotes, influence maternal preferences for CS.

The findings of the Dartmouth team are supported by a previous study in Kosovo that showed half of interviewed women believed they had not received sufficient information about mode of delivery during antenatal care.[73] These findings further confirm that women's understandings rely heavily on anecdotes and personal accounts, which may not offer a complete representation of evidence-based information.

- *Underutilization of existing educational services*

Evidence from other settings suggests educational programs for expectant mothers can successfully reduce maternal preference for CS.[74] Women's Wellness Centers (WWCs) and Women's Health Resource Centers (WHRCs) in several municipalities in Kosovo provide maternal counseling with experienced midwives on pregnancy and birth. However, interviews reveal that these resources are currently underutilized. Obstetricians at regional hospital lacked an awareness of these centers, indicating that they are unlikely to refer mothers to services offered there. A report from the Kosovo Women's Network found that only 35.3 percent of responding women knew MFMCs provide gynecological and reproductive health services,[75] supporting interview findings.

Additionally, partners and family members of mothers are not adequately involved in antenatal education, despite their important roles in the decision-making process surrounding mode of delivery.[76] A comprehensive 2009 UNICEF evaluation of antenatal care in Kosovo reported that, depending on the region, individuals other than the pregnant woman herself make between 15 percent and 45 percent of all decisions regarding antenatal visits.[77] Furthermore, in 70 percent to 90 percent of antenatal care visits, spouses accompany the pregnant women.[78] Doctors report that families or partners often pressure physicians to perform a CS, revealing further need for broad family and partner antenatal education.

An MoH-published pregnancy booklet presents another underutilized educational tool. For the past decade, the MoH printed up to 30,000 pregnancy booklets annually with information

regarding mother and developing infant health. However, officials within the ministry confirmed that distribution of the booklet failed, largely because only certain public healthcare facilities successfully distributed them. In fact, a 2006-2007 UNICEF study evaluating booklet use found that over 40 percent of women reported never having received one,[79] causing the MoH to discontinue booklet publication. Nevertheless, this document provides a promising avenue for disseminating health information related to mode of delivery. Physicians and health-system experts consider the booklet a valuable next step in advancing antenatal care services.

- *Lack of mode of delivery information in antenatal education*

Interview findings reveal that most antenatal education in Kosovo does not sufficiently cover mode of delivery. WHO guidelines for antenatal care strongly recommend substantial maternal education on delivery,[80] which may prove effective in addressing maternal misconceptions leading to elective CS.[81] In accordance with the Dartmouth team's findings, a 2015 survey of births in Kosovo found that only 49.5 percent of women reported receiving sufficient information about mode of delivery during antenatal care.[82] Mode of delivery is not the only topic neglected in antenatal education. In an AIHA study, 16.5 percent of women received no offering of health advice related to pregnancy, and over 50 percent of women received no advice concerning reproductive health or family planning during pregnancy.[83]

These shortcomings may stem from time pressures on physicians, a lack of emphasis on physician-patient communication, and inadequate incentives to support patient counseling in the public sector. Some physicians reported a preference for providing counseling in private sector antenatal appointments because they are reimbursed for that time. Supplementary classes offered for pregnant women may help fill gaps in the public sector. However, visits and interviews at WWCs and WHRCs reveal that many of the programs lack a structured class for making informed decisions on mode of delivery and a way to document that choice for the mothers' physicians.

Discussion

Many women in Kosovo hold negative views of natural births and perceive cesarean sections as a less painful and more convenient mode of delivery. Lack of alternative modes of pain control in childbirth and perceptions of poor quality of care in delivery wards contribute to these views. Additionally, the paucity of formal education for both mothers and families on maternal and neonatal outcomes associated with different modes of delivery, combined with underutilization of existing maternal education services, may contribute to these preferences for CS.

Moving forward, policy options will address bolstering and expanding existing educational programs and resources, providing incentives for the completion of these educational programs, and increasing the accessibility of alternative methods of pain control methods. Delivering information to both expectant women and the wider population could allow friends and families to help women make informed decisions regarding pregnancy.

Policy Options

- **Incorporate mode of delivery information into existing educational outlets and bolster usage**
  - Incorporate mode of delivery information into materials and curriculums of UNICEF home visits, NIPH campaigns, and CSE educational programs
  - Resume publication of MoH pregnancy booklet
  - Increase awareness of WWCs, WHRCs, and online sources of pregnancy information
- **Provide mothers with incentives for completing mode of delivery education**
  - Provide small tokens, gifts, or certificates of completion for educational programs
  - Provide additional days of maternal leave for attending antenatal classes
- **Efforts for increased access to alternative methods of pain control**
  - Adapt laws to allow for redistribution of drugs from facilities with excess supply
  - Engage international partners for support in the supply and distribution of pharmaceuticals

- *Incorporate mode of delivery information into existing educational outlets and bolster usage*

The MoH may consider incorporating information detailing the disparities in maternal outcomes for different modes of delivery into educational materials disseminated to pregnant mothers. Potential options include the educational materials distributed in the UNICEF home delivery program during the final months of pregnancy[84]and the National Institute for Public Health of Kosovo[85] maternal health pamphlets geared towards pregnant mothers. To expose youth to these issues, schools could also incorporate mode of delivery into the school-based comprehensive sexuality education (CSE) program established by UNFPA.[86] For ease and convenience, information outlines could be adopted from WHRC materials. Another possible method for disseminating information is by resuming publication of the MoH Pregnancy Booklet and improving booklet distribution.[*] If pursued, the MoH should update the booklet to include information on mode of delivery options. Furthermore, mothers must be made aware of existing educational services include antenatal classes at WWCs and WHRCs, as well as free online resources with more information. Examples include Beba, Childbirth Connection, or Birthrites (*see Appendix C for web links).*

- *Provide mothers with incentives for completing mode of delivery education*

The MoH may wish to incentivize mothers to complete an educational course or similar program providing information about healthy pregnancy and childbirth, including mode of delivery. Small tokens of recognition could encourage mothers to attend educational sessions offered at WWCs, WHRCs, and other facilities. Incentives could be simple certificates acknowledging a mother's attendance or small gifts for the soon-to-arrive baby. These tokens would likely increase positive perception of the courses and may also increase word-of-mouth advertisement. They would also allow physicians to cite an end goal (e.g., "graduation from the program") when promoting the classes. Providing additional days of maternity leave specifically

[*] The model used by Ferizaj regional hospital could be considered. Multiple stakeholders reported the facility's success in using the booklet effectively. In addition to WHO recommended case notes, the booklet could then serve as a "passport" detailing a woman's antenatal counseling progress and providing birth plan documentation.

for antenatal education classes presents another method to incentivize more women to attend antenatal classes. New maternity leave laws could designate one to three additional days of maternity leave in the third trimester for these visits. Signed documentation from the course administrator could verify attendance. Action for Mothers and Children (AMC) advocates for such a policy within the current redrafting of maternity leave laws.

- *Efforts for increased access to alternative methods of pain control*

Although resource constraints often impede access to adequate volumes of necessary drugs, the MoH may consider efforts to provide pregnant mothers with alternative options for pain relief during childbirth. With additional options for reducing pain during labor, women may increasingly attempt traditional vaginal deliveries. Interviews with healthcare experts revealed that policies for drug allocation prohibit the redistribution of drugs from facilities with excess quantities to institutions that have run out, which may result in inefficient allocation of pharmaceuticals. Revising these laws, particularly for intrapartum pain relief supplies, may aid in increasing women's access to these options. International aid may assist in providing these necessary resources and creating sustainable supply and distribution systems.[*] Already, NGOs including AMC,[87] Americares,[88] and Project HOPE[89] have worked to deliver medications to areas of need in Kosovo.

- *Additional Policy Options*

Additional policy solutions for addressing maternal preferences due to lack of information include public dissemination via a mass media campaign using outlets such as social media, SMS messaging, television and radio; standardization of counseling within mandated antenatal education; and increasing the number of physician referrals to existing services by adding elements to physician performance measures.

DIMINISHED MIDWIFE AUTONOMY

Following a study of Kosovo births that showed midwife instruction prior to delivery associated with lower likelihood for CS,[90] midwifery care has been identified as a potential target for addressing rising CS rates within Kosovo. In a global context, increasing the role of midwives in both antenatal and intrapartum care is shown to significantly reduce the likelihood of cesarean births.[91] The WHO finds midwives capable of providing the majority of care for women and newborns[92] and identifies them as "the most appropriate and cost effective type of healthcare provider to be assigned to the care of normal pregnancy and normal birth."[93]

Prior to the conflict in 1999, midwives in Kosovo handled uncomplicated deliveries at maternity centers in municipalities across the country. However, recent health system shifts diminished the role of maternities, and midwives currently work primarily at higher level facilities. This shift, combined with other behavioral changes, significantly reduced the autonomy and established roles of midwives, which may be a factor in rising cesarean rates.

The key findings listed below review the current status of midwifery care in Kosovo. Subsequent policy options to increase midwife autonomy and strengthen midwifery care provide strategies to address rising cesarean rates.

[*]One proven model for consultation on successful medical equipment donations includes the International Hospital Equipment Trust, which has facilitated donations from the NHS to hospitals in developing countries.

Key Findings

- *Lack of defined roles for midwives*

Midwives lack legally defined and clearly delineated responsibilities in antenatal care, counseling, and delivery. The current Reproductive Health Law allows midwives to offer care before and during pregnancy and birth "within their duties and responsibilities."[94] However, interviews revealed that many midwives remain unsure of what these duties and responsibilities entail, as their roles in antenatal care, counseling, and delivery have not been clearly and legally defined. This absence of legally defined roles may partially explain the widespread utilization of midwives as assistants to obstetricians, despite their training in independent care.

- *Barriers to Midwife Involvement in Antenatal Education*

Midwives are currently underutilized in ANC counseling services at most facilities, despite research in Kosovo demonstrating that midwife involvement in antenatal education reduces the likelihood for CS.[95] In a 2009 Antenatal Report survey, only 4.4 percent of women reported visiting a midwife during antenatal visits, and only 9.1 percent of women reported visiting a nurse during antenatal visits.[96]

When prompted, physicians and midwives alike expressed strong support for midwife counseling services and agreed that they would help mitigate rising CS rates. However, several barriers to increasing the use of midwives in ANC exist. First, utilization of midwife counseling and antenatal education services vary widely across public sector institutions. Women's Wellness Centers (WWCs) and Women's Health Resource Centers (WHRCs) in some municipalities possess robust midwife counseling services, while other facilities maintain limited midwife involvement in antenatal education. With only 28.7 percent of women visiting public institutions during pregnancy,[97] increased reliance on private sector antenatal services and midwifery may partially explain underutilization of midwives at some public sector institutions.

The lack of designated spaces for midwives to provide maternal counseling creates another barrier to increasing the utilization of midwife educational services. Both physician and midwife interviews commonly cited a need for midwife counseling spaces, separate from physicians. Although midwives frequently accompany a physician during ANC counseling, interviews reveal that they may feel constrained in their ability to provide honest maternal education with a physician present. Physicians and midwives express the desire for greater midwife autonomy in antenatal education and counseling, as well as for designated private spaces for these services in PHC facilities. Such a model appears to be successful in facilities dedicated to maternal health (WWCs and WHRCs).

- *Role of midwives in delivery*

The general consensus from a variety of health workers interviewed in Kosovo is that midwives can independently handle uncomplicated deliveries without physician assistance or direct supervision. This finding is supported by many studies, from both low- and high-income countries, demonstrating that autonomous midwife care during delivery decreases the likelihood of CS.[98] However, most facilities in Kosovo require physician presence at some point during delivery.[*] In addition to being an inefficient use of health worker personnel, requiring physician supervision at low-risk deliveries could increase patient burden on physicians and contribute to time pressures or convenience factors shown to increase cesarean rates in other settings.[99] During interviews, one physician suggested that the very presence of doctors at low-risk deliveries could contribute to medically unnecessary CS, as physicians may be more likely to

[*]When asked to explain further why facilities mandate physician presence at birth, interviewed health workers indicated that these facility norms stem from management pressures, often from obstetricians working in a managerial capacity.

misidentify indications for cesarean.[100] Additionally, since many PHC facilities lack gynecologists, midwives cannot conduct deliveries in those facilities. This often forces women to travel to secondary facilities or UCCK to give birth.[*] When asked to comment on the feasibility of expanding the midwife's role during deliveries in Kosovo, interview subjects largely agreed that the MoH should take measures to increase midwife autonomy in low-risk vaginal deliveries.

- *Perception of midwives*

Despite midwives' standing as competent health professionals, many patients perceive midwifery care as sub-standard and may not trust them to deliver obstetric care. Interviews revealed that although physicians and MoH officials recognize the competency of Kosovo midwives and support increased midwife autonomy and responsibilities in ANC and delivery, patients often perceive midwives as physicians' assistants and hold strong preferences for receiving care directly from gynecologists. However, interview findings also suggest that patient perception and trust of midwives improves as they develop relationships and rapport through ANC and counseling, introducing a potential avenue for change in perceptions. Unfortunately, interviews reveal that women rarely have the opportunity to see the same midwife for multiple antenatal services, resulting in a lack of continuing care. This presents a barrier to improving patient trust in midwives.

Discussion

The lack of defined roles restricts midwife autonomy to provide antenatal and intrapartum care across the public sector system in Kosovo. Increasing midwife independence and responsibility to care for childbearing women may provide an effective measure for reducing cesarean rates, moderating the effects of physician shortages,[101] and improving maternal health.[102]

Proposed policy options seek to increase midwife autonomy and empower midwives as primary caregivers during low-risk deliveries. However, interviews revealed that fragmented midwife services, lack of formal hand-off protocols, and limited staffing at secondary and tertiary facilities as potential barriers to successful implementation of these policy options. The MoH may consider pilot programs to determine the appropriate model for Kosovo.

[*]Interview subjects also expressed the desire for laws permitting midwife-led home deliveries, a common and accepted practice in many countries. However, underdeveloped transportation systems and lack of a referral system hinder the expansion of midwives' roles in this area. Given that midwives may not be trained to handle certain complications and that advanced medical equipment may be needed in serious cases, mothers must be able to access care at higher levels if necessary. Interviews reveal that the underdeveloped transportation systems in Kosovo may prevent rapid transport to secondary or tertiary facilities, presenting an increased risk for adverse maternal and infant outcomes during home births. The requirement for gynecologist supervision of births could also limit the feasibility of midwife home births. AMC aims to address these barriers in implementing a Neonatal Referral System for improved communication and transportation between health facilities in case of complications. This system does not directly address Kosovo's underdeveloped transportation structure, but it could facilitate increased midwife autonomy at primary or secondary facilities.

Policy Options

- **Increase midwife autonomy and responsibilities in antenatal care and maternal counseling**
  - Establish legally defined roles for midwives in these services
  - Replicate WWC models of midwife counseling at secondary and tertiary facilities
  - Establish designated spaces for autonomous midwife counseling at each facility
- **Adapt protocols and norms to empower midwives as primary caregivers during low-risk births**
  - Strengthen midwife technical capacity through training
- **Improve public perception of midwives as competent providers of care**
  - Support the Kosovo Association of Midwives in efforts to educate the public on midwifery care
  - Improve continuity of midwife care throughout pregnancy
  - Emphasize the professional capabilities of midwives in education for managers and physicians
- **Establish protocols to improve referrals and coordination of midwife counseling care**
  - Integrate information on prior maternal counseling history within Health Information System
  - Require inclusion of past counseling care in referrals from PHC and private clinics

- *Establish legally defined roles for midwives*

Development of formal guidelines and regulation that provide midwives with legally defined roles in ANC, maternal counseling, and deliveries could empower midwives and improve midwifery care. A clearly defined scope of practice could be provided to management staff, physicians, and midwives in facilities across Kosovo. Recognition of midwives as competent healthcare providers may address informal norms and perceptions that claim midwives incapable of providing certain aspects of pregnancy care. In addition, it could facilitate midwife care as an accepted component of all services provided at health institutions in Kosovo.

- *Adapt protocols and norms for midwife care during low-risk births*

After granting midwives legal authority to finish low-risk deliveries, norms and protocols could be adapted to empower midwives to be more autonomous caregivers in intrapartum and delivery care. This would address existing management pressures that currently prevent midwives from providing care during low-risk births without direct physician supervision. If this policy option is pursued, safeguards should be developed to ensure that midwives do not exceed their scope of practice and that doctors remain readily available to intervene when necessary. This policy should be framed as empowerment of midwives as autonomous care providers, not as a regulation on physician presence at low-risk deliveries.

Interview findings indicate that successful implementation of this recommendation requires additional interventions to ensure that norms and protocols effectively change behaviors without increasing the risk of poor birth outcomes. First, education for managers and physicians could emphasize the professional capabilities of midwives, the possible health benefits of midwife counseling to mothers, and the potential cost savings from increased midwife autonomy in

intrapartum care and delivery of low-risk births.[103] Physicians and midwives could counsel patients beforehand to establish the expectation of midwives as primary caregivers during labor in low-risk pregnancies. Furthermore, midwives could receive increased technical training on care during delivery, with an emphasis on recognizing complications and identifying the need for physician assistance. Lastly, policymakers should consider developing safeguards that prevent regression on maternal and infant health outcomes. Models developed in other countries to increase midwife responsibility in low-risk births may offer important resources.

- *Protocols and norms should empower midwife autonomy in ANC counseling*

In addition to allowing midwives to provide maternal counseling without direct physician supervision, policy efforts should strengthen existing counseling services. As suggested in interviews, WWC midwifery care presents a model for strengthening midwife autonomy in educational services. Making midwife services a standard part of ANC could encourage more referrals by gynecologists and family physicians. Each facility could create designated spaces *outside* of the doctor's office or patient examination room for midwife counseling, as interviews reveal this leads to more honest education and better relationships between midwives and mothers. AMC and other non-governmental actors could facilitate such changes, given their experience in establishing WHRCs. Partnerships with international organizations could also provide training for midwives and other obstetric professionals that emphasizes the importance of midwife-led maternal education programs. Modification of the previously used clinical microsystems model with a focus on increased midwife utilization[104] could further empower midwives in providing antenatal education services.

- *Establish protocols to improve referrals and coordination of midwife counseling care*

Interviews with midwives and physicians revealed the need for designated referral protocols to identify a woman's past midwife counseling history at primary or private institutions. Such protocols could help midwife staff at secondary and tertiary facilities identify areas where women need further counseling or interventions. The Health Information System (HIS) could integrate background information on maternal counseling to allow midwives and physicians at different institutions to better coordinate counseling and antenatal education care. Such protocols would require inclusion of past counseling-specific care as a mandatory aspect of referrals from PHC or private clinics.

- *Support the Kosovo Association of Midwives in improving public perception of midwives*

The MoH and other health institutions can partner with the Kosovo Association of Midwives in efforts to represent midwives and improve public perception of midwives as competent healthcare providers. Association members described how the Kosovo Association of Midwives has already conducted symposiums and media outreach to promote midwifery care, and further efforts could be made to improve the public perception of midwives and to raise awareness of midwifery services. Public outreach and communication could emphasize the qualifications of midwives and the advantages of midwifery care. Interviews revealed that further partnership with the Chamber of Nurses and other health worker unions could contribute to improved perceptions of health workers in general.

- *Additional Policy Options*

Additional policy options include implementation of a modified Midwife-led Continuity of Care (MLCC) model[105] or integration of midwife services into Kosovo's existing Home Visit (HV)*

*The MLCC model ensures continuity of midwife care throughout a pregnancy and allows mothers to receive maternal education and intrapartum care from a trusted and familiar midwife professional. The HV program implemented in five municipalities across Kosovo has progressed significantly, with a total of 5,910 home visits and 1,312 pregnant women receiving

program, though Kosovo's resource constraints and fragmented health system present major barriers to implementation for these options. Lastly, partnerships between WWCs, the Institute of Public Health, and the Kosovo Midwives Association could provide free midwife counseling sessions and other services that increase convenience and use of midwifery care.

ABSENCE OF ESTABLISHED NATIONAL CESAREAN GUIDELINES

Following the conflict in 1999, a focus on developing a multitier healthcare system improved access to healthcare.[106] Many health indicators, such as maternal and neonatal mortality, have improved since the reform's implementation.[107] However, unification of existing facilities and systems, standardization of procedures and protocols, and establishment of quality control measures all require further attention and effort on the part of policymakers. The MoH Department for Quality Assurance, recently established for healthcare oversight and monitoring in Kosovo, lags in functioning effectively. The fragmented structure and lack of nationally-established clinical standards, protocols and accountability systems have allowed other health indicators, such as CS rates, to worsen. Current use of evidence-based guidelines and monitoring systems are left to the individual efforts of clinicians or institutional leaders. The Dartmouth team's findings reveal that the lack of guidelines and monitoring in Kosovo likely contribute to rising CS rates.

Key Findings

The key findings listed below review the status of clinical guidelines and monitoring systems in Kosovo. Subsequent policy options to establish national clinical guidelines and strengthen accountability mechanisms provide strategies to address rising cesarean rates.

- *Lack of uniform or complete clinical standards for CS*

Although clinical standards for CS exist in Kosovo, facility implementation of standards varies in uniformity and degree of completion. Despite the known CS trend, the MoH has failed to establish such protocols and has left individual facilities or physicians to develop their own. Lack of standardized guidelines can lead to variation among obstetric practices. When incomplete guidelines grant physicians latitude to decide whether or not a CS is medically necessary, time pressures, convenience factors, and fear of legal repercussion can bias identification of cesarean indications and result in higher rates of unnecessary CS,[108,109,110] as studies from developing countries document. Obstetricians in Kosovo express need for a national protocol with clearly outlined guidelines to assure that their practices comply with accepted clinical standards for optimizing maternal and child health outcomes. While some individual clinicians and organizations such as the Kosovo Obstetrics and Gynecology Association (KOGA) have attempted to standardize care, findings reveal the need for a national governing body to establish standards uniform across the country.

- *Lack of alternative delivery options*

Physicians in Kosovo rarely, if ever, perform vaginal births after cesarean (VBACs). Consensus within obstetrics declares VBAC deliveries safe in well-resourced healthcare settings and recommends VBAC for women who have undergone previous CS.[111] However, even with proper training and access to the newest technology, VBAC can carry significant risks for mothers.[112] Kosovo's developing and under-resourced healthcare system, combined with inadequacies in physician training and the unavailability of many modern technologies in the Balkans,[113] generate barriers to safely implementing VBACs. Current obstetric practices in

at least one antenatal visit in 2015. Nurses currently conduct home visits, but the opportunity to integrate midwifery care into the current HV model may arise.

Kosovo tend to adhere to a "once a cesarean, always a cesarean" rule, excluding mothers with a previous CS from deciding mode of delivery. Without VBAC as an option, small increases in the number of first-time CS exponentially affect overall CS rates, as all subsequent births become CS deliveries.[114]

- *Variation and mixed effectiveness in existing team-delivery decision models*

Existing team-delivery decision models exhibit mixed effectiveness and use. Uniform protocols for team decision-making, or group physician consultation before making clinically important decisions such as CS performance, do not exist in Kosovo. A 2015 AMC survey found that fewer than 25 percent of all cesarean deliveries receive team consultation before the delivery decision.[115] In interviews, physicians and healthcare experts described a variation in modes of consultation across facilities.[*] On the whole, physicians perceive facility-level regulations positively and believe they eliminate unnecessary CS. However, other health sector personnel argue that physicians merely conduct consultations as a reporting formality. Interviews suggest that some physicians simply consult with colleagues who agree with their initial decision rather than review clinical indications as a team.

- *Inadequate systems for monitoring and accountability*

Kosovo lacks adequate health system monitoring and accountability. Without substantial programs for auditing physicians, facilities, and national programs, no accountability exists for enforcing the few published guidelines or standards. This deficiency occurs at two levels. First, many individual obstetric units and facilities lack systems for measuring physician performance. Second, national systems fail to provide oversight or to redirect efforts towards more successful programs and interventions. Since only one staff member monitors healthcare quality control, the MoH lacks sufficient staffing for national-level oversight. Stakeholder interviews frequently cited the lack of adequate supervision and oversight as major shortcomings of the healthcare system and barriers to improving quality of care. Without monitoring systems that hold physicians and facilities accountable for CS rates, performance of unnecessary CS continues.

Discussion

The lack of national guidelines for cesarean indications contributes to significant ambiguity and variation in what physicians view as medically necessary cesareans. This prevents physicians from basing clinical decisions on accepted best practices, allowing doctors to provide sub-standard care by delivering medically unnecessary cesarean sections. Limited or ineffective accountability mechanisms further exacerbate this problem.

In order to address rising CS rates, policymakers could publish and implement uniform clinical standards for providing maternal care across Kosovo. As cited previously, successful implementation at individual facilities suggests that nationwide changes could help address CS overuse. To ensure adherence to clinical standards, efforts could be made to strengthen systems of monitoring and accountability.

Policy Options

- **Development and dissemination of clinical standards for cesarean indications**
- **Implementation of a team delivery decision protocol**

[*] At UCCK, a physician who decides to perform a CS first consults with another physician of equal or greater experience. Physicians and healthcare staff at the secondary facility in Peja described a similar program. Interviews at Gjakova described a slightly different model, where two specialists and five gynecologists meet each morning to review ongoing cases and discuss mode of delivery options.

    - Evaluation and expansion of policies currently utilized at UCCK or Gjakova regional hospital
    - Pair with interventions such as audit and feedback to maximize effectiveness
- **Publication and dissemination of cesarean section rates**
    - Public dissemination for general population, allowing for informed consumer decisions
    - Confidential dissemination to healthcare providers
- **Development and implementation of systems for review and accountability**
    - External review using regional expert
    - Internal review with regular meetings paired with incentives for improved performance

- *Development and dissemination of clinical standards for Cesarean indications*

Policymakers should develop clinical standards based on internationally recognized classification systems that clearly outline cesarean indications.* The WHO recommends the use of the 10-group classification system, otherwise known as the Robson Classification system,[116] and also offers guidelines for its implementation that could prove useful in the Kosovo context.[117] Physicians in Kosovo believe that a standard set of protocols from the MoH would address rising CS rates by reducing ambiguity in identifying cesarean indicators and subjectivity in physician decisions, thus ensuring that physicians only perform medically required CS. Additionally, nationally recognized clinical standards may help protect physicians against litigation pressures, as has been demonstrated elsewhere.[118] Implementation of facility-level mechanisms to encourage compliance with these clinical standards would greatly increase policy impact.

- *Implementation of team delivery decision protocol*

The MoH should consider implementation of clinical protocols for team consultation on delivery decision for all secondary facilities. Such protocols could aim to ensure physician compliance with established clinical standards for accepted indicators of medically necessary CS. Expanding the team delivery protocols currently utilized at UCCK or Gjakova regional hospital could provide a model for other facilities.† Before expanding existing programs, the MoH should thoroughly evaluate and modify them as necessary to ensure compliance with international standards. Importantly, in other international settings, team delivery decision-making has proven most effective when used in conjunction with other interventions.[119] In order to prevent physicians in Kosovo from undergoing physician review as a mere formality, as some stakeholders report, it is recommended that peer review activity, including audit and feedback, accompany the protocols.

- *Publication and dissemination of cesarean section rates*

To promote accountability, constructive competition, and transparency, the MoH could make CS rates publicly available. Several experts in the field, particularly in the U.S., argue for public dissemination of individual and institutional cesarean rates.[120] Others recommend a confidential

* Interviews confirm that some individual facilities across Kosovo have independently implemented this system. Extending this system to all facilities presents one option for nationally regulating clinical standards.

† UCCK protocols require physicians to confer with a fellow colleague of equal or greater experience before confirming mode of delivery. This presents one model for developing team consultation protocols. Teaching hospitals in the United States utilize a similar second-opinion program and demonstrate its success in several studies. Gjakova utilizes a similar three-physician Consultation Committee.

system among healthcare facilities to prevent patients from misinterpreting raw data.[121] Either of these systems could be adapted for the Kosovo context. Publicizing CS rates would allow physicians to analyze their own rates relative to peer and internationally recommended rates.[122] With either option, facilities should account for potential provider opposition,[123] as researchers studying the effects of public CS rates in the U.S. recommend.

- *Development and implementation of systems for review and accountability*

One possibility for external review consists of a program in which experts from each region review case notes from another region to evaluate CS use according to MoH-established clinical standards. External review encourages institutional scale improvement while also identifying facilities with high numbers of medically unnecessary CS that could be primary drivers of the increasing CS rate. Experts conducting reviews should be specially trained, as done in other settings.[124] External review will help reduce bias, as physicians would no longer review their own cases. Such programs have had demonstrated success in several other settings and may serve useful in Kosovo.[125]

Several internal review models also exist. One option mandates that the physicians and specialists of obstetric departments in each institution meet on a regular basis (e.g., weekly, bi-weekly) to discuss all cases since the previous meeting, delivery decisions, and cesarean indications that led to those decisions. These meetings could ensure that physicians perform CS according to nationally established clinical standards and that physicians hold each other accountable for their decisions. Following the effective establishment of a Health Information System (HIS), a reward or incentive system in which physicians are compensated based on explicit performance standards (e.g., falling below a cap on the proportion of cesarean sections performed relative to total number of deliveries) could accompany these programs.[*] The National Healthcare Purchasing Institute (NHCPI) in the United States has designed and published a variety of provider incentive models to improve quality of care online that could be considered in light of the Kosovo context (*see Appendix C for the web link*).[126]

- *Additional Policy Options*

Beyond the policy suggestions outlined above, additional policy options to explore include establishment of institutional management positions for monitoring quality of care and patient outcomes, bolstering MoH capacity for healthcare facilities audit and review, and development of local trainings to establish skillsets for difficult deliveries.

UNDERUTILIZATION OF ANTENATAL CARE AT THE PRIMARY LEVEL

Following the conflict in 1999, health reform in Kosovo focused on implementation of the family medicine concept in order to strengthen primary care and reduce reliance on specialists for routine health services.[127] Given high maternal and infant mortality, the reform also identified maternal, child, and reproductive health as top priorities.[128] To address priorities within the family medicine concept, family medicine physicians at Primary Health Care (PHC) institutions became designated providers of maternal and child healthcare, including antenatal care (ANC).[129] This represented a shift from the former model in which gynecologists at maternities largely provided antenatal services.

Over the past fifteen years, several efforts to strengthen ANC capacity at the primary care level have attempted to accelerate implementation of the family medicine concept. In 2008, the USAID-funded “Partnership to Improve Health of Women and Children in Kosovo” specifically

[*] Successful incentives can be non-monetary, such as institutional recognition or merit-based promotion.

targeted ANC at the primary care level.[130] Similarly, the 2009 Kosovo-Dartmouth Alliance for Healthy Newborns provided trainings and other support to improve ANC capacity at FMCs across the Gjakova region. The Global Development Alliance later expanded the antenatal pilot project to 27 FMCs in nine different municipalities.[131]

Though initially successful in expanding the ANC role and the capacity of PHC institutions, these programs failed to establish long-term sustainable family medicine ANC programs.[132] Full implementation of the PHC model has faltered, and utilization of antenatal and maternal health services at the primary care level remains low. In combination with other factors, failure to provide community-based ANC care at PHC institutions may have consequences for rising cesarean rates.

The following section reviews the status of ANC availability at PHC institutions and its relationship with rising cesarean rates in Kosovo. Subsequent policy options aim to address these issues.

Key Findings

- *ANC services within PHC are underutilized*

Despite efforts to implement the family medicine concept and make Family Medicine Centers (FMCs) the primary providers of ANC, findings reveal continued underutilization of Primary Care Providers as sources of ANC and education. A UNICEF study of ANC in Kosovo found that ANC visits occur primarily in the private sector (71.3 percent),[133] followed by visits to secondary and tertiary public sector facilities. Only 2.7 percent of women reported visiting a family physician for ANC services. [134]

- *Negative stigma and lack of awareness contribute to underutilization of ANC*

Interview findings reveal that underutilization of PHC ANC may be partially due to patient perceptions that private sector, regional, and tertiary facilities provide "better" care. Lack of awareness of antenatal services in PHC compounds the issue; interview findings demonstrate that many women and families do not know about ANC offered at PHC institutions. The findings of the Dartmouth team confirm the results of a 2016 KWN health survey, in which only 35.3 percent of respondents knew that MFMCs provided reproductive health services.[135] Even for women and families aware of these services, many incorrectly assume that only gynecologists can provide adequate care during pregnancy. This leads to underutilization of family medicine physicians, midwives, and nurses as ANC providers.

- *Unregulated referral systems and overburdened secondary and tertiary facilities*

Key stakeholders emphasize the adverse consequences of Kosovo's unregulated referral system and incomplete health information system (HIS). Coupled with negative perceptions and lack of awareness of PHC care, this leads to frequent patient self-referrals to secondary or tertiary institutions for ANC. Interviews with physicians at all levels of care reveal that family physicians also improperly refer pregnant women to higher levels of care, despite their responsibility in providing select antenatal services.*

These improper referrals and failures to provide antenatal services at PHC institutions contribute to patient overload at secondary and tertiary levels of care. Discussions with physicians at higher levels of care suggest that excessive patient burdens may contribute to inferior care, as demonstrated in Prishtina, where facilities do not allow partners into delivery

* Physicians also emphasize that an incomplete health information system (HIS) prevents them from tracking patients throughout pregnancy, which may lead to duplication of care at different facilities and otherwise uncoordinated or inferior care.

rooms due to limited, overcrowded spaces. Physician interviews also suggest that increased time pressures from excessive patient load may contribute to increasing CS rates, confirming results from several studies in which obstetric providers listed convenience and time-pressures as reasons for performing a cesarean delivery.[136] Within Kosovo, researchers have demonstrated a positive association between delivery during office hours and the increased likelihood for CS, [137] further confirming time pressures and convenience factors lead to CS in Kosovo hospitals.

- *Inadequate mode of delivery education at private clinics and secondary and tertiary facilities*

Findings demonstrate that excessive patient loads at secondary and tertiary public hospitals may also reduce the overall quality of ANC educational services, contributing to maternal misconceptions surrounding birth. Physicians at regional hospitals state that they often do not have time to counsel women or discuss mode of delivery options during antenatal visits since they must use limited appointment time to focus on the essential clinical aspects of care.*

Similarly, interviews and a recent a 2016 KWN[138] report suggest that during pregnancy, private gynecology clinics may provide fewer educational services than public centers. Since most women visit private clinics or higher level facilities for ANC,[139] these findings suggest that many women fail to receive crucial maternal education services during pregnancy. These educational services can promote healthy pregnancy and postpartum behaviors, and mode of delivery education plays an integral role in addressing maternal preferences shown to increase odds for cesarean delivery.[140] Therefore, insufficient mode of delivery counseling at private clinics and higher levels of public care could contribute to misconceptions leading women and families to request unnecessary CS.

- *PHC institutions are uniquely situated to provide more effective maternal education services*

ANC services at the PHC level, particularly maternal education services, may address rising CS more effectively than providing such services at other levels of care. Community-based PHC institutions may be more *accessible* to patients and families and more able to reach women *earlier* in pregnancy. First, as the "gatekeepers" of care, PHC institutions may be able to educate patients earlier in pregnancy, or even before pregnancy. Interviews with physicians and midwives at regional and tertiary facilities revealed that mothers have often settled on their preferred mode of delivery before their first ANC visit, thus physicians strongly suggest providing maternal education earlier in pregnancy to mitigate these durable preferences for medically unnecessary CS. With only 22 percent of women beginning ANC in the first three months of their pregnancy,[141] reaching women earlier through community-based antenatal and educational services at the PHC level provides a potential avenue for significantly improving maternal and child health. Second, providing educational services at more accessible PHC facilities may also reduce transportation cost barriers that have been cited as an impediment to accessing ANC services.[142] This could lead to higher ANC enrollment numbers, increased dissemination of evidence-based mode of delivery information, better educated mothers and families, and improved maternal and child health outcomes.

- *Mixed ANC capacities at PHC institutions across Kosovo*

Limited PHC capacity to provide clinical ANC presents barriers to increasing ANC activities at the primary care level. While several PHC institutions retain the capacity for providing high quality ANC, many FMCs lack the necessary medical equipment for effectively implementing the

* These time pressures may be partially attributed to excessive patient loads at secondary and tertiary hospitals due to underutilization of PHC institutions.

clinical activities outlined in the WHO 4-visit ANC model.[143] Physicians and administrators also revealed that limited medical equipment at some PHC facilities may further contribute to a negative stigma towards primary level care. For example, interviews cited that women in Kosovo expect to receive ultrasounds during their pregnancy, but that lack of ultrasound technology at PHC facilities causes women to seek services elsewhere, despite MFMC capacity to provide other essential antenatal services.

Although PHC clinical ANC capacity is limited, interviews with physicians and administrators reveal that PHC institutions may be better equipped to provide or develop *accessory* antenatal services. This is because these accessory services tend to be less reliant on costly medical technologies as compared to more intensive clinical ANC activities. These services include the educational components of ANC,[144] which can promote healthy pregnancy behaviors and address common misconceptions surrounding birth, including misinformation that contributes to preferences for cesarean deliveries. Unfortunately, despite the capability to provide these accessory ANC services, utilization of such primary care services remains limited. Interviews revealed that nurses and physicians are often unaware of their responsibility to provide maternal education and counseling services. Post-conflict health system shifts have diminished the number of midwives working in PHC facilities, presenting further barriers for ANC counseling at the primary level.

- *WWCs and WHRCs associated with some MFMCs provide quality ANC*

Despite significant limitations of ANC within primary care, WWCs and WHRCs successfully provide educational and counseling resources for large numbers of pregnant women and families. WWCs in Pristina, Prizren, and Gjilan and WHRCs in six municipalities are perceived by patients as trustworthy sources of information and providers of ANC. Interviews with midwives and physicians suggest that mode of delivery education provided at WWCs seems to effectively address misconceptions that contribute to maternal preferences for cesarean deliveries.[*] Physicians and policy makers highlight WWCs as model ANC facilities, and support expansion of these types of educational services as an approach to address cesarean rates.

Discussion

Bolstering accessory ANC and maternal education services at the primary care level may provide an effective strategy for combatting rising cesarean rates. Findings suggest that not all PHC institutions have the capacity to provide all of the clinical aspects of ANC. However, the majority of PHC institutions and family medicine physicians can provide high quality accessory ANC services shown to improve maternal and infant outcomes.[145] The ability of PHC to reach more patients earlier in pregnancy makes these services most effective when provided at community-based MFMCs and FMCs.

Moving forward, major policy priorities may include strengthening ANC accessory capacity of PHC institutions, increasing awareness of existing ANC services, and refocusing on implementation of the family medicine concept through reforms within health insurance arrangements. Increasing educational and counseling roles of FMCs may present an intermediate step towards ultimately bolstering all ANC activities.

[*] In contrast to perceptions of ANC services provided in PHC institutions, patients perceive WWCs in Prishtina, Prizren, and Gjilan as trustworthy sources of ANC information. Unlike most PHC institutions, WWCs employ midwives to provide counseling and ANC. Interviews and site visits reveal that WWCs have greater ANC capacity, including better health infrastructure and medical technology, compared to PHC facilities. These services remain distinct from MFMCs and FMCs, although the two are often located together and have closely associated activities. Policymakers and FMC physicians and administrators desire to one day fully integrate these services into FMCs.

Policy Options

- **Strengthen PHC capacity to provide accessory ANC services**
  - Adapt PHC services to fit WWC and WHRC models
  - Designate specific rooms for midwife counseling
  - Consider adapting maternity infrastructure to focus on antenatal counseling
- **Raise awareness of existing accessory ANC services offered at PHC institutions**
  - Encourage intra-institution referrals
  - Media outreach campaigns to increase awareness of services
  - Distribution of outreach materials through existing NIPH programs
- **Establish protocols that define the distinct ANC responsibilities of family physicians**

- *Strengthen PHC capacity to provide accessory ANC services*

To strengthen ANC capacity within primary care, WWC and WHRC educational and counseling services could serve as models for accessory ANC and organizational structures needed within PHC institutions. Physicians and policy makers employed in a wide range of healthcare settings agree that WWCs serve as model ANC facilities and suggest that expansion of these services may help address cesarean rates. Maternal education programs in MFMCs, FMCs, and maternities could use WWC or WHRC-produced educational materials and curricula, and family planning and reproductive health programs currently offered at FMCs could integrate mode of delivery and pregnancy education into their programs. Each FMC or MFMC facility could designate specific rooms for midwife counseling and midwife or nurse-led maternal education programs, as midwives can provide more honest modes of delivery education in a private setting without physician supervision. These measures would empower midwives and nurses as autonomous providers of PHC maternal education and counseling services. Also, some municipalities should consider adapting maternity infrastructure to focus specifically on maternal education and counseling. Since only five percent of births in Kosovo take place in PHC maternities,[55] these venues present underutilized capacities that could adapt to educate pregnant women and families.

- *Establish protocols that define the distinct ANC responsibilities of family physicians*

In order to prevent an overlap in family physician and gynecologist ANC provision, policymakers should consider establishing protocols that emphasize the accessory ANC responsibilities of family physicians. This could reduce competition between specialists and family physicians, a common phenomenon described in interviews. Dartmouth-Kosovo Alliance strategies for building relationships between family physicians and obstetricians may help to accomplish these goals.[146] Protocols could enable and require family physicians to provide accessory antenatal services and education to women and families, with efforts made to reach women and their partners early in pregnancy or before pregnancy. Additionally, protocols could encourage family medicine physicians to refer patients to WWCs or midwife counseling services as a mandatory component of ANC care**.**

- *Raise awareness of existing accessory ANC services offered at PHC institutions*

Interviews with MoH officials suggest that lack of awareness and failure to provide effective community outreach may have contributed to the limited success of the Kosovo-Dartmouth Alliance and Partnership to Improve Health of Women and Children in Kosovo. To address these previous shortcomings, advertising and outreach interventions could aim to attract more

women and families to accessory ANC services at PHC institutions. The Prishtina MFMC campaign for raising awareness of pediatric services could serve as a model for advertising accessory ANC services in all municipalities. Local media channels including newspapers and television outlets could perform community outreach. Efforts to recruit patients receiving other PHC care could also increase awareness of services. Other settings attempting to raise awareness of public health issues have found these outlets successful in social marketing and outreach campaigns.[56] Advertising and outreach campaigns could improve the public perception of care at the primary level by emphasizing the qualifications of family physicians, nurses, and midwives. Interviews reveal an opportunity for Partnership with the National Institute of Public Health (NIPH) to help with a campaign, given their existing health outreach programs and health information distribution centers in each municipality. These channels could provide avenues for low-cost distribution of health materials promoting ANC services at PHC institutions.

- *Additional Policy Options*

Additional policy options include strengthening the HIS to better track care during pregnancy, and introduction of regulatory mechanisms within health insurance reform to prevent inappropriate referrals to higher levels of care. Additional modifications to the health insurance scheme could include introducing novel financing mechanisms that provide incentives for women and doctors to increase ANC activities at PHC institutions.[*]

FINANCIAL AND INFORMAL INCENTIVES

Failure to implement complete health reform and low health worker salaries have allowed informal incentives to flourish in Kosovo. In 2014, 70 percent of UNDP survey participants found the Kosovo health sector corrupt or extremely corrupt, despite only four percent to 20 percent of respondents experiencing corruption in the form of bribes.[147]

Informal incentives in Kosovo take several forms, including informal payments and incentives related to dual practice. The increased prevalence of informal payments contributes to increasing cost burdens on the public sector and shifts the payment burden onto patients, especially in birth; approximately a third of women report difficulty paying delivery-associated expenses.[148] Findings reveal that informal incentives related to dual practice and informal payments in obstetrics may be linked to rising cesarean rates.

The key findings below review the current status of informal incentives and potential links with rising cesarean rates in Kosovo. Subsequent policy options to address informal incentives offer strategies for reducing medical overuse across Kosovo.

Key Findings

- *Presence of Informal Payments*

Interviews reveal the existence of informal payments in obstetrics; citizens often feel obligated to pay informally in order to receive quality care.[149] An estimated four to 16 percent of people seeking health services in Kosovo pay informally,[150] and studies confirm that surgical interventions and obstetrics and gynecology units most commonly solicit informal payments.[151]

[*] The Health Insurance Fund (HIF) could define service coverage obligations for ANC among institutions at different levels of care and could deny institutions reimbursement for providing services outside of their mandated service coverage. A second option consists of applying a co-payment scale with higher co-pay rates for patients attempting to receive ANC at secondary and tertiary institutions in the absence of appropriate referral from their family physician. Further research could also assess the feasibility of a fee-for-service or pay-for-performance (P4P) system as strategies for incentivizing increased accessory ANC activities of family physicians, nurses, and midwives.

Interview findings suggest that informal payments can lead to overprovision of care, particularly of cesareans, as some physicians admitted that these payments may play a role in obstetrical decisions. Additional studies on informal payments in Kosovo found that the general public may perceive that informal payments guarantee better, more attentive care.[152]

Although not a definitive finding, the combination of maternal preferences for CS and informal payments could be linked to medically unnecessary CS. Interviews with physicians and other stakeholders suggest that this is both a patient- and physician-driven problem: obstetricians may expect informal payment if they deliver by medically unnecessary CS, and patients may offer informal payment with the hope that they will receive their preferred mode of delivery.[153]

- *Public Perception of Informal Payments*

Interviews suggested that reported mistreatment or lack of communication towards women and families in public hospitals may drive the use of informal payments to "improve" treatment. Interviews with physicians and other hospital staff also suggest that the media reinforces and exacerbates the perception that patients cannot receive quality care without payment. As a result, patients who equate more complicated care with better care, especially in an under-resourced health system, might prefer CS over natural birth.

In turn, this may lead to informal payments that incentivize physicians to deliver by CS. Interviews with physicians and hospital administrators suggest that informal payments made explicitly by patients who want to delivery by CS are rare. However, key stakeholders in interviews identified several other informal incentives that could encourage overprovision of CS or other excessively complex forms of care.

- *Informal incentives in dual practice and the private sector*

Interview findings reveal that lack of funding and limited salaries in the public sector has contributed to growth of dual practice, where physicians work in both public and private facilities. The Dartmouth team conducted interviews with obstetricians who practiced in both the private and public sector, and found that, in general, physicians work until the afternoon in public hospitals before retreating to their private practice. Private sector healthcare is reimbursed via an out-of-pocket fee-for-service model, thereby allowing for significant increases in total physician income. Studies in Kosovo reveal that physicians often use low salaries relative to their extensive education as justification for dual practice informal incentive activities.[154] The Dartmouth team found that physicians in the private sector often have financial incentives to perform CS due to higher rates of reimbursement as compared to natural deliveries. These private sector and dual practice financial incentives provide explanations for the alarmingly high CS rates in the private sector—CS rates ranged from 56 percent to 92 percent across private facilities in 2015.[155]

- *Lack of legal regulation of informal incentives*

Findings reveal a lack of systems for regulating informal incentives in Kosovo. Despite past legislative efforts to address physician conflicts of interest, little has been done to ameliorate the issue.[*] Furthermore, the state does not enforce[156] caps on the size of monetary gifts physicians may legally accept from patients, allowing informal incentives to flourish in the health system. Without regulation, these incentives may contribute to performing unnecessary procedures that are likely to garner additional payments, including cesareans.

[*] In 2012, lawmakers suspended articles that modified the Health Law to reduce physician conflict of interest. Failure to adopt the amendments allows current practices to persist.

- *Informal incentives in antenatal care provision*

In Kosovo, as in other settings,[157,158,159] the likelihood of undergoing CS is much greater when the same doctor presides over both ANC and delivery.[160] Most women who receive ANC in the private sector ultimately deliver in public hospitals, with only three percent of births occurring in private clinics.[161] In the public sector, interviews reveal that many women prefer that the same physician who previously provided private sector ANC preside over their delivery.[162] Dual practice pressures on physicians' schedules may increase the likelihood that they recommend CS for these mothers.[163] Furthermore, leading up to delivery, these same pressures may also limit the ANC and counseling time physicians spend with patients, providing potential links between ANC informal incentives and rising CS rates.

Discussion

Informal and financial incentives from informal payments and dual practice contribute to corruption, which weakens health systems and negatively impacts both quality[164] and the public perception of healthcare.[165] Informal incentives can increase patient costs, hinder access to adequate antenatal care, and generate both financial and non-financial barriers to accessing quality healthcare. Findings reveal that informal incentives may also contribute to medically unnecessary CS.

To address these issues, health officials could implement systems of accountability and monitoring, strengthen professional partnerships, and address patient misperceptions that lead to informal payments through public education. It should be noted that the following policy options hinge largely on strengthening health insurance and the judicial systems in Kosovo.*

* Many of these changes may be incorporated in the Health Insurance and Financing Reform.

Policy Options

- **Strengthen partnerships to address informal incentives from both supply and demand sides of healthcare system**
  - Partnership with health worker unions, patient groups, and government agencies
- **Incorporate mechanisms to address informal incentives within Health Insurance Reform**
  - Formalize informal payments or develop co-payments
  - Regulative approaches to address dual practice informal incentives
- **Address patient perceptions that lead to informal payments**
  - Undertake efforts to educate patients about their rights within the health system

- *Strengthen partnerships between professional health worker groups and government agencies*

Partnerships between supply-side and demand-side stakeholders could be useful in establishing efforts to address informal incentives in the health system. Potential facilitators include chief doctors or hospital managers, the currently underutilized Health Inspectorate employed through the Ministry of Health, the Patient's Rights Association, and the Anti-Corruption Agency, an independent body responsible for implementation of state policies combating corruption.

- *Incorporate mechanisms to address informal incentives within Health Insurance Reform*

Current health insurance reform offers an opportunity to address informal incentives for CS overprovision. Policymakers may be able to take advantage of the universal approach in the new Health Insurance Law[166] to achieve similar results as other settings.[167] Development of risk pooling, formalization of informal payments, and establishment of co-payments[168] could aid in preventing direct out-of-pocket payments to physicians. Policies to regulate an environment that facilitates informal incentives should therefore be considered *in conjunction* with the Health Insurance Law. Various options for regulating dual practice have also been proposed in other settings[*] and could be adapted for the Kosovo context.[169]

- *Address patient perceptions contributing to informal payments through public education*

Using existing routes of public health education, healthcare officials could make clear to citizens that informal payments are not required to assure high-quality care by disseminating information about health system payment structures. Health education could emphasize that informal payments undermine the health financing system which may help patients understand the damaging effects of this practice.[*] In other countries attempting to address similar issues, patient knowledge and information significantly reduced the frequency of informal payments. This policy option is a potentially effective strategy for reducing CS from informal incentives.[*]

[*] For LMICs, proposed methods for addressing adverse dual practice incentives include: restricting services in the private sector to those not offered in public sector, requiring a license for dual practice, limiting dual practice to more senior physicians, and implementing promotional incentives such as career or recognition incentives in the absence of dual practice. Interviews with healthcare experts in Kosovo added eliminating public salaries for physicians engaging in dual practice as an additional potential policy option. Given potential adverse market effects of such policies and the shortage of health workers in Kosovo, regulative options should be considered with caution.

LEGAL AND MEDIA PRESSURES

Findings reveal that legal and media pressures in obstetrics have increased rapidly over the last several years in Kosovo, providing a potential explanation for rising CS. The connection between physician fear of malpractice litigation and medically unnecessary CS has been well documented in many global settings.[170] In response to litigation pressures, physicians may choose to deviate from standard medical practices in order to safeguard against litigation or to avoid complaints or criticism from patients and their families.[171,172] This tendency to provide treatment perceived as "lower-risk," a well-documented concept termed *defensive medicine*, can be a response to litigation fears or pressures.

In obstetrics,[173] defensive medicine behaviors include providing medically unnecessary cesareans, as they are often perceived to reduce the risk of birth injuries that could attract costly litigation.[174] In addition to direct litigation fears, media exposure of physicians and exaggeration of unfortunate medical events may further contribute to fear of litigation and rising cesarean rates, as has been implicated in Turkey and Italy.[175]

The Dartmouth team conducted an evaluation of the developing legal and media environments and their relationship to rising CS rates in Kosovo. In addition to medically unnecessary CS,[176] the medicolegal environment has widespread consequences for unnecessary and inefficient care across the healthcare system. Policy options aim to facilitate an environment that allows physicians to focus on clinical guidelines and best practices, rather than delivering unnecessary care in response to excessive litigation and media pressure.

Key Findings

- *Fear of litigation and legal pressures contributes to medically unnecessary CS*

Nearly all interviewed physicians in a variety of healthcare contexts in Kosovo identify fear of litigation as a major driver in a physician's decision to perform CS, even when medically unnecessary. Additionally, maternal preferences and requests for CS augment the existing tendency to practice defensive medicine, as physicians may fear complaints or litigation from families who do not receive their preferred mode of delivery. Physicians also express concerns that patients and families might publicize complaints in the media if unsatisfied with the final delivery mode, even if their preferences do not correlate to accepted best practices. Interviews with physicians suggest that litigation pressures and medicolegal events have increased significantly over the last 15 years, providing a potential explanation for rising CS trends.

- *Lack of national CS guidelines*

The Ministry of Health has yet to develop and disseminate national guidelines for cesarean indications across all health facilities. Without these guidelines, interviews suggest that physicians are more susceptible to maternal and legal pressures to deliver medically unnecessary CS, since they lack a strong basis for making objective clinical decisions. Physicians emphasize that defensive medicine and medically unnecessary CS occur more frequently in cases of ambiguous cesarean indicators, a phenomenon also documented in other settings.[177]

Furthermore, lack of established national guidelines contributes to confusion among patients and the media as to what constitutes a medically necessary CS. Interviews with midwives, physicians, and other maternal health experts suggest that patients may not know about the definition of a clinically necessary CS or the risks associated with a cesarean delivery. This lack of knowledge can lead to maternal and family pressures pushing physicians to deliver care inconsistent with internationally accepted best practices, as documented in Kosovo. Lack of

national guidelines also prevents the courts and the media from having a reliable benchmark for assessing the legitimacy of malpractice claims.

- *Media pressures contribute to defensive medicine practices*

Findings demonstrate that physician fears of media defamation, even in the absence of litigation, contribute to defensive medicine practices in obstetrics. Media reports in Kosovo often associate unfortunate health outcomes or patient complaints with medical malpractice, even in absence of any physician error. Interviews and a review of media reports revealed that media historically sensationalize patient-reported stories of adverse obstetric events. Additionally, these reports often publicly reveal the physician's identity prior to formal review of the medical decision. Interviews with physicians identified fear of adverse career effects from media publicity as a major contributor to defensive medicine practices and medically unnecessary cesareans.

Furthermore, prior to any review of accuracy, sensationalized media reports have encouraged legal institutions and the police to prematurely investigate and prosecute health workers. A recent case at Gjilan regional hospital, in which media exposure and public pressure led to the arrest of two gynecologists who were later acquitted, exemplifies this phenomenon.* CS rates at Gjilan have risen dramatically since that event,[178] suggesting that media exposure and subsequent legal action triggered increases in obstetric defensive medicine. Research on malpractice litigation in other settings documents similar responses.[179] Physicians, health worker unions, and policy makers identify the lack of a buffer between the media and the legal system as a serious concern that may further contribute to defensive medicine and unnecessary CS.

- *Existing mechanisms for patient complaints are often overlooked*

Despite the existence of exaggerated or false media reports, physicians and health administrators admit that patient complaints are often warranted. However, interviews with MFMC administrators and Patients' Rights representatives reveal that the majority of complaints stem from the poor conditions of under-resourced health facilities, rather than physician malpractice or medical error concerns. Although Kosovar hospitals generally have strong mechanisms for collecting and responding to these patient complaints,[180] patients often forego formal mechanisms and take their complaints directly to the media. This compounds legal and media pressures that may result from not understanding the difference between poor conditions and events that actually constitute medical malpractice.

- *Mechanisms to review medical malpractice complaints remain non-functional*

Interviews reveal the need to activate institutional mechanisms to address more serious malpractice concerns. A Medical Chamber charged with handling malpractice cases exists, however, the Ministry of Health has failed to transfer competencies and the chamber is currently nonfunctional. Among other responsibilities and committees, the Medical Chamber includes a Board of Ethics. The Board is intended to serve as a mediator between patients filing malpractice claims and physicians accused of malpractice, before the case reaches court. Physicians and policy makers see this as essential, as it creates a needed buffer to safeguard professional activity in the healthcare sector and prevents premature involvement of the legal system. The legal background and governing statute of the Medical Chamber has been approved and the leadership of the chamber has been elected, yet physicians express frustration at the slow-pace with which the MoH has transferred competencies. Currently, there

* Although the media extensively reported the initial claim at Gjilan and pressured legal institutions to act, review of media reports revealed minimal coverage on the final court decision of acquittal. The tendency to sensationalize initial reports coupled with failure to publicize physician acquittals may contribute to public perceptions of widespread physician malpractice, when in reality, the large majority of malpractice claims do not end in successful litigation.

does not seem to be a functioning and formal mechanism for dealing with malpractice complaints, thus, the media and legal system often take the lead.

Discussion

Although patients should have the right to seek justice in the case of malpractice, it is necessary to address excessive litigation fears and media bias that pressure physicians to deliver unnecessary care. These fears are further amplified by the widespread media bias against the healthcare system, lack of a buffer between the media and legal system, and maternal preferences and pressures for CS.

Policy interventions should focus on creating an environment that allows physicians to follow clinical guidelines and best practices, rather than altering practice behaviors in response to excessive litigation and media threats. Policy options could activate mechanisms for addressing malpractice complaints and promote more truthful media reporting to reduce excessive media fears that can lead to rising CS. Creation of partnerships between media groups, patient representative groups, and health worker unions may prove necessary for improved quality and media veracity.

Policy Options

- **Aid Medical Chamber in becoming fully functional**
- **Establish and disseminate CS clinical standards and methods to ensure compliance**
    - Disseminate standards to media, patients' groups, and general public
    - Couple with establishment of team delivery protocols or similar policies
- **Establish a review board to improve quality and truthfulness of media**
    - Partnerships with IMC, PCK, KMI, and FSHHK
- **Promote collaboration between media, health worker, and patient groups**
    - Disseminate public information on formal malpractice complaint processes
    - Educate the public on the distinction between malpractice and unfortunate obstetric events
    - Establish standards of reporting for media groups

- *Aid Medical Chamber in becoming fully functional*

Establishment of formal mechanisms for reviewing malpractice claims may reduce physician fears of media defamation or wrongful legal action, which could support physicians in following clinical guidelines and avoiding medically unnecessary CS. In Kosovo, activation of the Medical Chamber should serve this purpose. The MoH, which currently holds authoritative position over these cases, could hand over authority and competencies to the chamber. As the Medical Chamber already established a legal and governing background, implementing this area of health reform should prove feasible in a short time period. Following transfers of MoH competencies, the functional chamber's Board of Ethics could serve as a mediator between patients filing malpractice claims and physicians accused of malpractice before cases reach court.[181]

- *Establish and disseminate CS clinical standards and methods to ensure compliance*

The Quality Assurance Unit at the MoH should prioritize the development and approval of CS clinical standards. Such standards create a predictable legal standard of care and reduce ambiguity in identifying CS indicators, thus providing physicians with a legally justified rationale

for their clinical decisions, as researchers studying physician decision for CS demonstrate.[182] In addition CS guidelines, facilities could establish mechanisms that encourage physician compliance with clinical guidelines; peer review or team delivery procedures could provide additional support for physicians to resist legal pressures and make clinically based decisions. One study aiming to reduce CS rates linked effective peer review processes with declines in litigation claims and cesarean deliveries.[85] CS clinical standards could also be disseminated to patients and the general public. Awareness of guidelines may help patients and media differentiate medical malpractice from unfortunate medical outcomes and could also address misperceptions surrounding appropriate use of CS.

- *Establish a review board to improve quality and truthfulness of media*

An independent board of physicians, medical experts, and patients' representatives could review media reports on malpractice claims to establish legitimacy. Although not responsible for assessing physician liability, this board could identify cases of untruthful media defamation or sensationalized reports. Furthermore, the review process may prevent legal authorities from pursuing exaggerated media claims and serve as an accountability mechanism that encourages reliable reporting. Cooperation with the Independent Media Commission (IMC) and Press Council of Kosovo (PCK) could provide the board with authority to regulate or punish media outlets that report inflammatory or false accusations. Partnership with the Kosovo Media Institute (KMI), an organization seeking to enhance the level of professionalism in the media, may aid in ensuring media group cooperation. These actions could reduce sensationalized or exaggerated media reports and physician fears contributing to medically unnecessary CS and other defensive medicine practices.

- *Collaboration between media, health workers, and patients' rights groups*

Increased collaboration between FSHKK, Patients' Rights Association, Independent Media Commission (IMC), and Press Council of Kosovo (PCK) could establish a common goal of providing both high quality care and media reporting for the citizens of Kosovo. Group collaboration could undertake several endeavors. First, the partnership could provide public information on the Medical Chamber and other institutions for handling malpractice concerns. This could provide patients with a formal recourse process, resulting in the decreased likelihood that they will turn to the media. Second, the partnership could aim to inform the public and the media of the distinction between malpractice and unfortunate obstetric events. This could encourage accurate media reports and avoid defamation of physicians from illegitimate claims. The Independent Media Commission (IMC) and Press Council of Kosovo (PCK) could establish standards of reporting to reflect this distinction and to discourage exaggerations in media reporting.[*]

- *Additional Policy Options*

Additional policy options include dissemination to the media of "success stories" that emphasize the qualifications and dedication of physicians, and other efforts to improve the public perception of the health system through social media.[183] Efforts could be made to train doctors in legal medicine and professional liability. This could address defensive medicine practices that arise from uncertainty surrounding standards of negligence and legitimate initiation of malpractice claims. Additionally, physicians should understand their rights within the Law on Defamation,[184] which provides protection against illegitimate threats.

[*] In choosing policy options to address media defamation and untruthfulness, one must consider the importance of maintaining free speech across the media sector. Given these concerns, selected policy options aim to promote self-regulation by the media industry, rather than outright government regulation of media.

4. CONCLUSION

The war in 1999 dramatically impacted the organization and provision of health services in Kosovo. Broad economic trends and health system shifts over the last fifteen years contributed to an environment that facilitated overuse of certain medical services. Although rising CS rates and CS overuse need to be addressed, it is important to recognize that these trends may be in part due to improvements in the overall healthcare system. Economic growth, increased accessibility to services, improvements in medical technology and infrastructure, and greater patient awareness of their right to receive healthcare services have all contributed to improvements in many maternal and child health indicators over the last decade. However, rising CS rates and CS overuse represent a growing burden on the health system in Kosovo. To avoid undoing hard-fought progress, action should be taken to address these issues.

Although this report largely discusses each topic area separately, a confluence of the selected factors, as well as others not discussed, combine to generate the observed broader health trends. Considering how these factors relate and compound one another will prove important when considering policy options that may have more far-reaching impacts than anticipated. With intentional actions, continuously monitored and adjusted throughout implementation, key stakeholders may effectively address rising CS rates in Kosovo while also preserving positive maternal and neonatal health outcomes—making for a brighter health horizon.

APPENDICES

APPENDIX A. ADDITIONAL DATA SOURCES PROVIDED BY AMC

- 2015 AMC and Solidar Suisse sponsored birth survey
- UNICEF Policy Brief Based on MICS 2014 Findings
- UNICEF 2016 Conference Summary on Home Visiting Service
- Solidar Suisse Neonatal Data Analysis Project Proposal
- Neonatal Referral System Outputs
- 2015 Report on Perinatal Situation in Kosovo
- Data on facility CS rates over time
- Data on hospital births
- Data on maternal and infant mortality
- 2015 Kosovo Health Statistics
- UNICEF Antenatal Care Access Data
- 2016 Quality of PHC Data
- 2013-2014 MICS Kosovo Data
- 2014 UNDP Health Sector Risk Assessment Data

APPENDIX B. EXPANDED DEFINITION OF DIFFERENT PRIMARY CARE FACILITIES

The primary tier of the healthcare system in Kosovo proves the most complex tier, particularly for maternal health. It consists of a number of different types of facilities, all with distinct roles in primary healthcare. This appendix describes these roles in more detail.

- Main Family Medicine Center (MFMC): MFMCs tend to be larger facilities responsible for the provision of general healthcare, often referred to as family medicine. Ideally, these clinics provide a wide range of services, although not all facilities maintain the resources for complete service provision.
- Family Medical Center (FMC): Similar to MFMCs, FMCs also provide general care. Although usually smaller than MFMCs, patients may find greater numbers of FMCs throughout municipalities.
- Women's Wellness Center (WWC): With the help of international organizations, WWCs established during the health reform aimed to re-prioritize primary care. WWCs tend to affiliate with MFMCs, allowing for direct referrals of family medicine physicians to WWC services and increased WWC utilization. With respect to maternal and child health, WWCs provide ANC, including counseling and education in topics related to pregnancy and childbirth. WWCs also hold regular, typically midwife-led classes for groups of women, and serve as spaces for community learning.
- Women's Health Resource Center (WHRC): The NGO Action for Mothers and Children established Women's Health Resource Centers within secondary and tertiary care facilities. WHRCs provide instructional classes for mothers and extensive written materials on various topics related to pregnancy and childbirth. Midwives also typically lead instructional classes at WHRCs.
- Maternities: Maternities consist of centers formerly dedicated for deliveries and staffed with midwives, nurses, and gynecologists. Maternities formerly existed in regions throughout Kosovo. Following implementation of the Health Reform, which focused on new PHC facilities, the MoH either shut maternities or plans to phase them out. Some maternities still partially function as primary care centers, despite diminished staff and equipment.

APPENDIX C. LINKS FOR FURTHER INFORMATION

- March of Dimes Worth the Wait Implementation Manual
  http://fhop.ucsf.edu/sites/fhop.ucsf.edu/files/custom_download/HBWW%20manual%2012-21-10.pdf
- United States Joint Commission Cesarean Section Educational Campaign
  http://jointcommission.new-media-release.com/2016_speak_up_c_section/
- Beba
  http://beba-ks.com/
- Childbirth Connection
  http://www.childbirthconnection.org/giving-birth/c-section/resources/
- Birthrites
  http://www.birthrites.org/caesareanbirthmarch2009%20%282%29.pdf
- CDC PQC Model
  https://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PQC.htm
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[103] Savings in utilizing more cost-effective health workers may offset additional costs of training and continued medical education, as successful implementation of this policy in many LMIC shows. A review of the impact and cost of scaling up midwifery in 58 LMIC demonstrated the benefits of bolstering midwife counseling and education services. This research showed scaling up midwife antenatal counseling and family planning services almost twice as cost-effective as scaling up obstetrician capacity, in terms of cost per death averted. Inclusion of medically unnecessary CS in this cost analysis may reveal further benefits.

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[142] Around 30-35 percent of women surveyed in the 2009 Antenatal Care in Kosovo study indicated that they could only partially deal with transport expenses linked to use of ANC services, while 10-18 percent of women indicated they could not cope with expenses.

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[143] According to World Bank Data in 2007, the wide range of ANC capacities across PHC institutions may be a result of large inequalities in per capita health grants by municipality. Interviews suggest that urban PHC institutions often retain greater ANC capacity than rural facilities.

[144] Findings reveal similar disparities in MFMC and FMC capacities to provide many of the educational and counseling components of ANC. According to the 2016 ACQ Quality of Care Summary, 46.2 percent of PHC facilities designated counseling rooms for women. However, as demonstrated with 2015 Perinatal Report statistics, underutilized maternities in many municipalities present an opportunity to further expand this capacity.

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[163] Financial incentives generated from informal gifts given in appreciation of a healthy delivery may further contribute to this practice, as a study on corruption within Kosovo's health system suggests. Physicians in this position may also recommend CS more often presuming that it will guarantee a better outcome. One U.S. study suggests that women have greater trust in a physician's recommended mode of delivery if that same doctor also provided ANC. Corruption Risk Assessment in the Health Sector in Kosovo. (2014). *UNDP.* Thom, D.H., Campbell, B. (1997). Patient-physician trust: an exploratory study. *Journal of Family Practice*, 44, 169–76.

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Law on Rights and Responsibilities of Kosovo Residents in the Health Care System, Art. 24, (2016). AQH Quality of Care Study.

[181] Mediation mechanisms like this have effectively addressed litigation pressures in other countries with similar resource constraints. In Mexico, an independent review board and mediation agency successfully resolved approximately 90 percent of cases without need for the legal system involvement. Additionally, 97 percent of the 5500 providers and patients surveyed rated this system as "good" or "excellent," suggesting the mechanism provides an effective, low-cost means of satisfying patients and physicians. A NEJM medical malpractice report cites transparency as paramount for promoting public confidence in the integrity and effectiveness of these institutional mechanisms. Di Gregorio, V. "Defensive medicine in Europe: which solutions?" 8th European Public Health Conference: Parallel Sessions, 145, 2015. Cortez, N. (2011). A Medical Malpractice Model for Developing Countries? Drexel law Review, 4, 217. Studdert, D. M., Mello, M. M., Brennan, T. A. (2004). Medical Malpractice Health Policy Report. NEJM, 350, 3.

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