Maternity Underutilization in Kosovo: Addressing Drivers and Identifying Policy Options for Change in the Maternal Health System

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Glossary of Terms

AMC- Action for Mothers and Children

ANC- Antenatal Care

B-EmOC- Basic Emergency Obstetric Care

C-EmOC- Comprehensive Obstetric Care

HCP- Health Care Provider

FANC- Focused Antenatal Care

FMC- Family Medicine Center

KCCGP- Kosovo Council for Clinical Guidelines and Protocols

MOH- Ministry of Health

MFMC- Main Family Medicine Center

UCCK- University Clinical Center of Kosovo

UNFPA- United Nations Population Fund

WHO- World Health Organization

WHRC- Women's Health Resource Center

WWC- Women's Wellness Center

EXECUTIVE SUMMARY

Maternities in Kosovo are not being effectively utilized for deliveries or many other aspects of maternal care. Because finite resources are being invested in these facilities without proportional service delivery, the Ministry of Health (MOH) has identified this issue as a priority. In partnership with Action for Mothers and Children (AMC), the Dartmouth Global Health Policy Lab team conducted a mixed methods study to investigate the underutilization of maternities and develop policy approaches to strengthen the maternal health care system. Specifically, the team sought to understand the:

- most commonly utilized care pathways for maternal health care
- main drivers of maternity underutilization
- gaps in services offered in the maternal health care system
- perceptions of care from patients and providers
- implications of different options for restructuring maternities

These findings informed policy options for restructuring maternities. These options are intended to improve the quality of maternal health care and increase overall access to services by restructuring maternities. The Ministry of Health (MOH) may consider:

  - Option 1: Close maternities
  - Option 2: Repurpose maternities into Women's Wellness Centers
  - Option 3: Functionalize maternities for delivery

From June 15 to August 20, 2019, the team conducted more than 30 interviews with health workers, MOH officials, administrators, patients, and other health care experts. The team visited facilities across all levels of the public health sector to understand the current conditions of maternal health care access and the potential implications of options for restructuring maternities.

Current Conditions

The team observed a range in the capacity and utilization patterns in its visits to 7 maternities across the country. Drawing from findings regarding capabilities, equipment, and quality of infrastructure, the team classified maternities as full, moderate, or low capacity. Full capacity maternities perform routine uncomplicated deliveries in addition to the women's health services-- antenatal care (ANC), postnatal care, and general gynecological visits-- offered at a moderate capacity facility. Low capacity maternities have no gynecologist on staff and provide very few services, if not effectively closed.

Utilization Patterns

The team found that public pathways for maternal care are not often used effectively for pregnancy monitoring. The most common pathways for maternal care access are as follows:

- For ANC, most women consult gynecologists in the private sector and do not seek out educational support outside of conversations with their gynecologist. Women shoulder financial burdens for these services and associated travel.
- For antenatal education, focus groups with women revealed that advising is varied. Women who received ANC in the private sector did not often consult with trained providers for advising. Further, if their private gynecologist did not advise them sufficiently, women did not often utilize public ANC education separately from an ANC checkup.
- For deliveries, the public sector was found to be the most common location. However, as many maternities have limited capacities due to staffing or resource constraints, most women choose to deliver in higher levels of care.
- For postnatal care, site visits to maternities and Women's Health Resource Centers (WHRCs) revealed that many of the visits these facilities receive are for postnatal care. While some women visit specifically for postnatal concerns, others become interested in counseling services related to postnatal care during vaccination visits for their newborn.

Drivers of Utilization Patterns

The team identified several drivers of these utilization patterns:

- *Many women and providers have a strong perception that gynecologists need to be present for all ANC and delivery services.*
- *Many women perceive that private facilities are of higher quality for ANC and lead to a better delivery experience.*
- *Many women and providers perceive that deliveries need to happen in a comprehensive emergency obstetric care (C-EmOC) facility, with the capacity to perform C-sections and blood transfusions.*
- *There is a lack of incentive structures for family medicine doctors (FMDs) to provide maternal health services.*
- *There is a lack of clearly defined care pathways for maternal and women's health services in the public sector.*
- *There is a lack of clearly defined health care provider (HCP) roles for administering maternal and women's health services.*

Global Policy Recommendations

With these findings in mind, the team explored three different approaches to restructuring the organization of maternal healthcare: (1) closing maternities completely, (2) repurposing them to provide women's health services, or (3) refunctionalizing them for deliveries. Regardless of the specific option chosen for restructuring maternities, the team makes the following recommendations for restructuring the delivery of maternal care:

- *Task shift provision of select maternal health services*

Reliance on gynecologists to provide almost all services related to women's health can result in inefficiencies in the provision of care. Efforts to task shift the provision of ANC and other maternal health services to broader cadres of HCPs may reduce the reliance on gynecologists and create more flexibility within the health care system.

- *Standardize and communicate norms around maternal health*

Once a care pathway for maternal health is clearly defined, communicating how to navigate that pathway to both women and providers is important. Otherwise, women's perceptions and providers' individual incentives will continue to influence decision making.

- *Link Main Family Medicine Center (MFMC) funding to services provided*

Payments to primary health care (PHC) facilities are based on line item budgets and do not offer strong incentives to expand preventive services or improve quality of care. Given the ease with which ANC and delivery services can be outsourced to private facilities and regional hospitals, municipalities do not have financial incentives to provide maternal care at the PHC level. Allocating funding to MFMCs specifically for maternal care and linking this funding to the provision of these services could diminish the current financial incentive to refer women to higher levels of care.

- *Address long term workforce planning*

The current draft of the administrative instruction on primary health specifies that MFMCs in municipalities without a regional hospital will be equipped with gynecologists, but recruiting these specialists in rural areas will require increased incentives. Additionally, educational opportunities are necessary to equip gynecologists and midwives with necessary skills.

- *Tailor policy interventions to the specific needs of each municipality*

Not all maternities need to be repurposed or fully functionalized. It is important to reassess where resources can be best allocated given current geographic infrastructure and population needs.

Policy Options

Options for restructuring maternities are not mutually exclusive. The best course of action for each maternity will depend on its resource constraints and the specific needs of the community. Each policy option for restructuring maternities is accompanied by policy recommendations that address option-specific barriers around communication, resourcing, staffing, accessibility of service, and acceptability of care.

The first option is to close some maternities completely. Benefits of this option include funding and facilities from maternities that can be diverted to other services in MFMCs. In addition, all remaining functioning delivery centers will be at C-EmOC facilities, which are equipped for all emergencies. Disadvantages of implementing this option include decreased access to care for women, increased caseloads for hospitals, and possible increases in C-section rates. Policy considerations for this option include:

- Defining and communicating new public sector pathways of care after closure
- Increasing gynecologist and midwife staffing in hospitals

- Planning for relocation of maternity staff
- Limiting geographic barriers to accessing care

The second option consists of converting maternities into Women's Wellness Centers (WWCs), or outpatient centers which provide women's health services. Benefits include increased access to services locally that can work to offset caseloads at regional hospitals. Potential drawbacks include decreased continuity of care, as women will receive ANC in PHC facilities and deliver with different providers in hospitals. Women may also experience dissatisfaction with the gatekeeping role played by FMDs, as they will need a referral to visit a gynecologist in the WWC. Policy considerations for this option include:

- Improving communication between PHC centers and hospitals to limit interruptions to continuity of care
- Considering part-time employment of gynecologists while staffing remains a challenge
- Supplying maternities with appropriate equipment to provide a full spectrum of gynecological services

The third option is to refunctionalize maternities to provide delivery services. Benefits include increased continuity of care for women and reduced caseloads for hospitals. Disadvantages of implementing this option include its resource-intensive nature, as this option will require significant investment in appropriate and functional equipment. In addition, it may be challenging for specialists staffed in refunctionalized maternities near regional hospitals to retain their skills in providing delivery services due to low demand. Policy considerations for this option include:

- Changing the perception that B-EmOC maternities are not equipped for emergencies
- Equipping maternities to function as C-EmOCs

Conclusion

The goal of this analysis is to understand the pathology of maternity underutilization and explore policy options for restructuring the maternal health system to better serve the health care needs of women in Kosovo. In its current state, the maternal health care system does not represent an optimal distribution of finite funds. In the absence of significant change, the system has adapted in ways that are not always beneficial for women. As Kosovo continues to develop and the needs of the population evolve, the maternal health care system-- and the role of maternities-- must also adapt.

BACKGROUND

The Ministry of Health (MOH) established maternities at Main Family Medicine Centers (MFMCs) to ensure access to care for Kosovar women at all stages of pregnancy and delivery. In their current state, many maternities are not being utilized effectively for deliveries or other aspects of maternal care. The vast majority of deliveries occur at regional hospitals or University Clinical Center of Kosovo (UCCK). Since 2014, maternities have consistently accounted for less than 4 percent of public deliveries and the proportion of deliveries has continued to decline.[1] There were 731 deliveries in maternities in 2016, comprising only 2.5% of public deliveries that year.[2] In 2016, 11 out of 14 reporting maternities had fewer than 100 births.[3] Increasing numbers of maternities have transitioned to providing no delivery services. As deliveries have decreased, visits for other maternal care services have also declined. Given maternities' decreased utilization, certain stakeholders have advocated for their closure.

Kosovo's birth rate peaked in 2013 at 16 per 1000 population and the current birth rate has declined to 12.8 per 1000 population.[4] Fertility rates in Kosovo have also declined over the past decade. In 2017 Kosovo averaged 2.02 live births per 1000 child bearing population (fertility rate).[5] More generally, the population of Kosovo has declined. From 2005 to 2013, the number of inhabitants decreased by 13.2%.[6] Demographic trends do not fully account for reduced use of maternities. While the total number of births is decreasing, some regional hospitals and UCCK have seen increases in the number of annual deliveries.[7] This demonstrates that a reduced demand for delivery services does not fully explain the underutilization of maternities.

In the last 5 years, there have not been significant increases in urbanization. The trend shows that from 2011 to 2015, the percentage of rural (61%) and urban (39%) populations remain relatively constant.[8] The lack of urbanization and increase in utilization of urban facilities further indicates that Kosovar women are bypassing primary care provided in rural areas of the country.

The disease burden among women in Kosovo is shifting. Data from 2011 show that Kosovo's infant mortality rate (17.1 per 1,000 live births) and maternal mortality rate (7.2123 per 100,000 live births) are still high relative to the EU averages[9], but significant improvements have been made due to strong national and international prioritization of this issue.[10] At the same time, breast and cervical cancer incidence is increasing.[11] As the population ages, this trend is expected to continue.[12] More broadly, stakeholders report an increased general demand for gynecological services. In light of the shifting disease burden, there is an opportunity to use maternities to improve outcomes for women and children.

The 2008 World Bank Kosovo Health Master Plan outlines that maternities were established to provide routine deliveries to combat low antenatal care (ANC) utilization and a high instance of home births. Now, many women are compensating for maternities' decreased capacity by relying on the private sector or opting for higher levels of care. Continuing to invest in facilities that are not operating as originally designed results in an inefficient use of resources and staffing. This

reality, combined with the shifting disease burden, warrants an inquiry into how best to restructure the maternal health care system in Kosovo. The MOH may consider investing in a range of options for restructuring maternities. For a given maternity, the Ministry may consider (1) closing it altogether, (2) restructuring it to provide women's health services, or (3) better equipping it for deliveries. The best course of action for each maternity will depend on its resource constraints and the specific needs of the community.

Maternity	Regional Hospital	Distance to Regional Hospital	Gynecologist	2019 Status	Pregnancy Services Currently Provided in Maternity
Malishevė	Prizren	40 min (45.8 km)	Yes (3)	Open for Routine Deliveries[1]	• ANC checkups • ANC education • Deliveries • Perinatal care
Dragash	Prizren	44 min (33.8 km)	No	Closed for Deliveries since 2017	• ANC education • Perinatal care
Suva Reka	Prizren	27 min (26.7 km)	Yes (2)	Open for Routine Deliveries	• ANC checkups • ANC education • Deliveries • Perinatal care
Klina	Peje	37 min (29.7 km)	Yes (2)	Closed for Deliveries since 2017	• ANC checkups • ANC education • Perinatal care
Istog	Peje	35 min (25.0 km)	Yes (1)	Open for Routine Deliveries	• ANC checkups • ANC education • Deliveries • Perinatal care
Rahovec	Gjakova	28 min (22.5 km)	Yes (1)	Open for Routine Deliveries	• ANC checkups • ANC education • Deliveries • Perinatal care
Deqan	Gjakova	27 min (21.1 km)	Yes (2)	Open for Routine Deliveries	• ANC checkups • ANC education • Deliveries • Perinatal care
Kaqanik	Ferizaj	27 min (19.4 km)	No	Closed since 2016	None
Kamenica	Gjilan	38 min (27.0 km)	No	Closed since 2017	None
Viti	Gjilan	26 min (19.8 km)	No	Closed since 2017	None
Skenderaj	Mitrovica	32 min (22.4 km)	Yes (1) (part-time role)	Open for Emergency Deliveries	• ANC checkups • ANC education • Deliveries • Perinatal care
Drenas	Prishtina	42 min (33.9 km)	Yes (1)	Open for Routine Deliveries	• ANC checkups • ANC education • Deliveries • Perinatal care
Lipljan	Prishtina	30 min (17.0 km)	Yes (2)	Open for Routine Deliveries	• ANC checkups • ANC education • Deliveries • Perinatal care
Podujevo	Prishtina	50 min (31.0 km)	Yes (2)	Open for Routine Deliveries	• ANC checkups • ANC education • Deliveries • Perinatal care

Table 1. Maternity status in 2019.

INTERNATIONAL GUIDELINES

International Guidelines for ANC

The WHO recently modified its guidelines for antenatal care from the four-visit Focused Antenatal Care (FANC) guidelines to recommend eight contacts with healthcare providers throughout the course of pregnancy.[13] Contacts are defined as active connections between a pregnant women and health care providers.[14] Contacts do not always require a visit to a health facility and can include community outreach services. The WHO recommends just one ultrasound scan before 24 weeks of gestation. It explicitly notes that routine ultrasounds are not recommended because they do not improve maternal or fetal outcomes.[15] WHO recommendations for a positive pregnancy do not emphasize clinical intervention, but rather focus on behavioral interventions, preventive measures, and relief for common physiological symptoms.[16] In countries with health workforce shortages, the WHO recommends task shifting the provision of certain elements of ANC to broad cadres of health care providers.[17] Task shifting is defined as the process of delegating the provision of services to less specialized health workers. It is meant to allow for flexibility in health care settings.[18]

International Guidelines for Delivery

The WHO and United Nations Population Fund (UNFPA) have established standards for obstetric emergency care.

- **Basic emergency obstetric care (B-EmOC) facilities**: provide 7 key signal functions to effectively manage deliveries
- **Comprehensive emergency obstetric care (C-EmOC) facilities**: provide 7 key signal functions, plus C-section and blood transfusion capacity

Maternities are intended to be equipped as B-EmOC facilities with the ability to effectively manage deliveries and unexpected complications (See Table 2). If surgery or blood transfusion is required, women are transferred via ambulance to the closest comprehensive facility. Regional hospitals and UCCK are equipped as C-EmOC facilities.

[1] Routine deliveries are still quantitatively very few per year. In 2016, 11 out of 14 maternities had less than 100 births a year.

Basic Services	Comprehensive Services
(1) Administer parenteral antibiotics	Perform signal functions (1)-(7), plus:
(2) Administer uterotonic drugs (i.e, parenteral oxytocin)	(8) Perform surgery (e.g., caesarean section)
(3) Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (i.e., magnesium sulfate)	(9) Perform blood transfusion
(4) Manually remove the placenta	
(5) Remove retained products (e.g. manual vacuum extraction, dilation and curettage)	
(6) Perform assisted vaginal delivery (vacuum extraction, forceps delivery)	
(7) Perform basic neonatal resuscitation (e.g. with bag and mask)	

Table 2. Signal functions used to identify basic and comprehensive emergency obstetric care services. Adapted from the WHO *Monitoring Obstetric Emergency Care Handbook*.

Many maternities are under-equipped to perform the signal functions required to qualify as a B-EmOC facility. A 2008 UNFPA assessment on emergency obstetric care in Kosovo found that while there is relatively good availability of C-EmOC facilities, there is a deficiency of B-EmOC facilities.[19] This assessment continues to be representative. Some maternities, such as those in Lipjan and Skenderaj, have recently invested in their facilities. However, site visits by the research team aligned with the concerns outlined in the UNFPA assessment surrounding inconsistent resources and staff preventing full functionality. For a national population of 1,845,300[20], the WHO recommends that there should be 19 facilities that deliver emergency obstetric care distributed to benefit women in rural, isolated regions. While Kosovo has 8 fully functional comprehensive centers (7 regional hospitals and UCCK), the lack of maternities operational for delivery (only 8 function at full capacity) supports the need for more facilities, basic or comprehensive, that can provide delivery services. For delivery, the WHO and UNFPA have established standards for 6 emergency obstetric care indicators (See Table 3).

Indicator	Acceptable level	Kosovo
Availability of emergency obstetric care: basic and comprehensive care facilities	There are at least 5 emergency obstetric care facilities (including at least 1 comprehensive facility) for every 500,000 population	8 C-EmOC facilities, 14 B-EmOC facilities; 22 total EmOC facilities[2]
Geographical distribution of emergency obstetric care facilities	All subnational areas have at least 5 emergency obstetric care facilities (including at least 1 comprehensive facility) for every 500,000 population	8 comprehensive facilities (7 regional hospitals and UCCK)
Proportion of all births in emergency obstetric care facilities	Minimum acceptable level to be set locally	2018: 98 percent of deliveries in Kosovo occur in public sector EmOC[21]
Meeting the need for emergency obstetric care: proportion of women with major direct obstetric complications who are treated in such facilities	100 percent of women estimated to have major direct obstetric complications are treated in emergency obstetric care facilities	Number not available
Caesarean sections as a proportion of all births	The estimated proportion of births by cesarean section in the population is not less that 5 percent or more than 15 percent	2015: the C-section rate 27.3 percent[22]
Direct obstetric case fatality rate	The case fatality rate among women with direct obstetric complications in emergency obstetric care facilities is less than 1 percent	2006: 0 percent[233]

Table 3. Emergency obstetric care indications. Adapted from the WHO *Monitoring Obstetric Emergency Care Handbook*.

[2] *In 2019, many of Kosovo's B-EmOC facilities (maternities) do not report being functional for deliveries because of resourcing or staffing constraints. The total number of operational EmOC facilities for deliveries is 16 (8 C-EmOC and 8 B-EmOC) in 2019.*

[3] *In Kosovo, maternal mortality has also been 0 since 2013. This can likely be attributed to underreporting rather than actual incidence.*

Postnatal Care

The 2013 WHO recommendations for postnatal care emphasize the provision of postnatal care within the first 24 hours for every birth by delaying facility discharge for that time. It recommends that after delivery every mother and baby has a total of 4 postnatal contacts during the first day, between days 2–3, between days 7–14, and after 6 weeks. Home visits by midwives and other skilled providers can help extend access to care. Quality postnatal contacts include counseling, identification of issues, and referrals.[24]

METHODS

The Dartmouth Global Health Policy Lab team, in partnership with Action for Mothers and Children (AMC), conducted a mixed methods study to investigate policy approaches to strengthen the maternal health care system by repurposing maternities. Specifically, the team sought to understand the:

- most commonly utilized care pathways for maternal health care
- main drivers of maternity underutilization
- gaps in services offered in the maternal health care system
- perceptions of care from patients and providers
- implications of different options for repurposing maternities

The team used research findings to develop policy recommendations to improve the quality of maternal health care and increase overall access to maternal health services. The study consisted of semi-structured interviews with numerous health care stakeholders and analysis of existing literature and data.

From June 15 to August 20, 2019, the team conducted more than 30 interviews with health workers, MOH officials, administrators, patients, and other health care experts. The team visited facilities across all levels of the public health sector to understand the current conditions of maternal health care access. The team visited 7 maternities and spoke with directors, gynecologists, midwives, and nurses as they were available. The team toured facilities and, if the maternity had provided delivery services in the past 6 months, the team conducted an assessment to determine whether the available resources qualified the unit as a B-EmOC. The team also spoke to primary care stakeholders in family medicine centers (FMCs) in Ferizaj and MFMCs in Gjakova, Prishtina, and Prizren. At the secondary care level, the team visited regional hospitals in Gjakova and Prizren to understand how the obstetrics and gynecology departments were affected by

underutilized maternities in their catchment area. The team also visited the UCCK hospital and interviewed key stakeholders.

In addition, the team conducted meetings with MOH department heads of the Division of Mother, Child and Reproductive Health and Division of Primary Health, the Secretary General, and two other MOH representatives involved with primary care initiatives. The team interviewed representatives from the Kosovo Association of Midwives, Kosovo Obstetrics and Gynecology Association, Ideas Partnership, Kosovo-Dartmouth Alliance for Healthy Newborns, and AMC to understand feasibility and consequences of options for repurposing maternities.

Focus groups and individual interviews with approximately 15 women in Women's Health Resource Centers (WHRCs) in Dragash, Ferizaj, and Drajkovc were conducted to understand factors that influence how mothers decide where they receive antenatal care and choose to deliver. The women provided feedback on potential options for restructuring maternal health care pathways and delivery of services in the public sector.

Maternities Visited	Methods
Drenas	Stakeholder interview with gynecologist
Viti	Stakeholder interview with director of MFMC[4]
Kamenica	Stakeholder interviews with director MFMC, the head midwife, FMD
Skenderaj	Stakeholder interviews with the director of MFMC (gynecologist), head midwife, facilities assessment
Lipjan	Stakeholder interviews with director of MFMC, midwife, facilities assessment
Dragash	Stakeholder interview with midwife, focus group with women
Kline	Stakeholder interviews with gynecologist, midwife, interviews with women

Table 4. Maternities visited and methods.

CURRENT CONDITIONS

There are 15 maternities in Kosovo, with 14 out of the 15 currently reporting data. The research team observed a range of functionality in its visits to 7 maternities across the country. In all, 7 maternities currently do routine deliveries and 1 does emergency deliveries.

[4] As director of the MFMC, they are also the director of the maternity.

Spectrum of Maternity Capacity

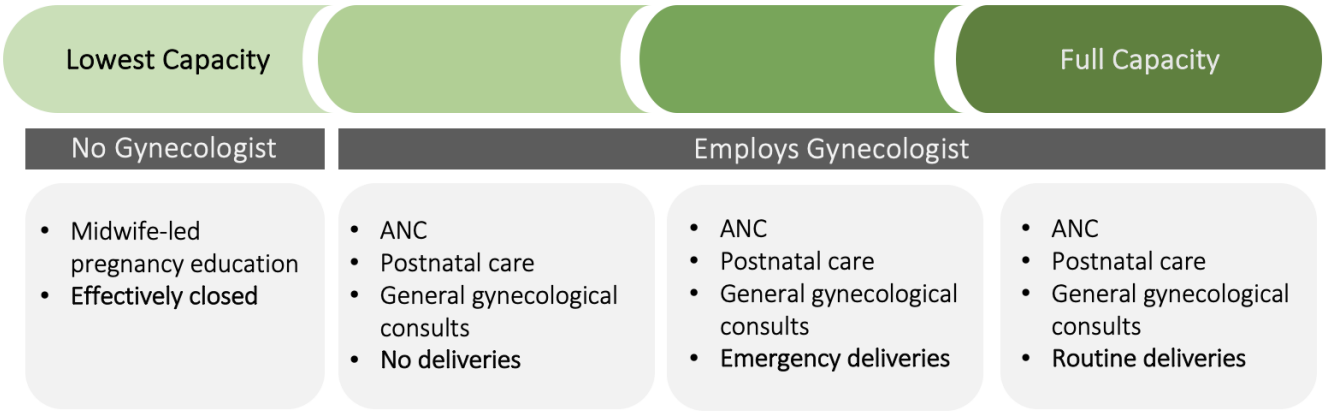

Figure 1. Spectrum of maternity capacity in Kosovo.

Full Capacity: (8 out of 14 maternities)

The most capable maternities provide a full spectrum of women's health services, including delivery services for uncomplicated pregnancies, ANC, postnatal care, and general gynecological visits. These maternities employ at least one gynecologist. One such maternity is in Drenas, located in the Prishtina district in central Kosovo. In Drenas, the presence of an experienced gynecologist, reliable resources, and community trust has contributed to a maternity that is utilized for deliveries. The gynecologist is supported by midwives who help him provide care. The gynecologist provides general gynecological consults as well. However, even this maternity has seen a decline in deliveries over the past few years.

Moderate Capacity: (1 out of 14 maternities)

Other maternities have limited their services to stop providing routine deliveries. This includes ANC, general gynecological visits, emergency deliveries, and postnatal care. These maternities employ a gynecologist. While some of these maternities possess the ability to do deliveries, they only perform them in the case of emergencies due to a perceived lack of equipment or safety. Instead, gynecologists primarily provide ANC checkups and general gynecological consults. This is the case in Kline maternity, which employs two gynecologists but has not done deliveries since 2017. The Skenderaj maternity is also moderately functioning. It provides delivery services only in the case of emergencies, but routinely provides ANC.

Low Capacity: (5 out of 14 maternities)

Maternities that do not employ gynecologists deliver the most limited range of services. They generally provide very few women's health services, though some women visit for postnatal care. The extent of services in some maternities is the presence of a WHRC or an effective WHRC function, where midwives and nurses provide counseling to pregnant women and new mothers. However, because other services are not offered, utilization of WHRCs is limited in certain maternities. This was the case in Dragash, which has not had a gynecologist for two years, but continues to employ midwives. Midwives serve as a resource for women and offer classes in WHRCs, but some women who know they cannot visit a gynecologist to get an obstetrics checkup are hesitant to seek out advising alone.

Infrastructure of Maternities

Maternities are designed to function as B-EmOC facilities with the capacity to handle all uncomplicated deliveries, but many do not have this capacity. No maternity possesses the ability to perform blood transfusions or C-sections (the services necessary to constitute a C-EmOC facility). Site visits and interviews indicate that many maternities are located in MFMCs with only one ambulance, which has raised concerns for physicians and women worried about complications during delivery. A 2015 assessment of equipment and infrastructure for obstetric and gynecological care found that the same basic supplies and equipment are generally older and more likely to be out of service in maternities than in regional hospitals.[25]

The quality of general infrastructure of maternities varies. For example, the maternity in Kamenica would need new equipment and a renovated space if it were to reopen for deliveries. In Kline, the gynecologist reported that it was difficult to provide ANC or gynecological check-ups because he lacked the equipment needed for examinations such as transvaginal ultrasounds. In Lipjan, efforts are being made at the municipal level to renovate the maternity and incentivize mothers to use the space.

Utilization Patterns

Women most commonly receive ANC from a gynecologist in a private clinic (71.3 percent)[26] and deliver at the closest regional hospital or at UCCK (95.3 percent).[27] However, a woman's utilization of specific pathways of care before, during, and after pregnancy depends on the state of PHC facilities in her municipality and her financial constraints.

	According to the Organization of the System				In Practice
	Municipality with Operational Maternity	Municipality with Regional Hospital	Municipality with WWC or Gynecologist at MFMC	Municipality without Maternity, Regional Hospital, or Gynecologist at MFMC	Most Utilized Pathway
ANC Checkup	Maternity	Regional Hospital	WWC, MFMC	Ambiguous	Private Gynecologist
ANC Education	Maternity	Regional Hospital	WWC, MFMC	Ambiguous	Private Gynecologist
Delivery	Maternity	Regional Hospital	Regional Hospital	Regional Hospital	Regional Hospital
Postnatal Care	Maternity	MFMC	WWC, MFMC	MFMC	MFMC

Figure 1. Current public pathways of care.

ANC

Providers of ANC in Kosovo include FMCs, Women's Wellness Centers (WWCs), maternities, regional hospitals, and private clinics. According to MOH norms, all MFMCs should provide ANC services.[28] However, site visits demonstrate that some MFMCs, particularly those without gynecologists, do not provide ANC. A 2013 American International Health Alliance (AIHA) report found that 93.5 percent of ANC services are provided by gynecologists. The same report found that 71.3 percent of women received ANC in the private sector.

The private sector is largely unregulated in its provision of care. In focus groups, women receiving private care reported that they were encouraged to visit the gynecologist as frequently as every 3 to 5 weeks during their pregnancy. Many women reported receiving ultrasounds every time they visited the gynecologist. This pattern of private care places financial burdens on pregnant women. In 2013, private medical visits averaged approximately 11 euro per visit.[29] In addition, focus groups with women provided evidence of extended travel times to visit private gynecologists. For example, in Drajkovc, women travel to a private gynecologist in Ferizaj (a distance of approximately 24 km). If women cannot afford private ANC or spend the time to travel out of town, providers have reported that they may choose to delay receiving ANC or avoid receiving it altogether.

Antenatal Education

Potential sources of antenatal education in Kosovo include WHRCs, regional hospitals, maternities, private clinics, and FMCs. Previous research suggests that many women do not receive sufficient antenatal education. According to a 2015 study, 70 percent of women in Kosovo do not receive advising on reproductive health from a trained provider during pregnancy.[30] Focus groups with women revealed that education in the private sector is varied. For some women who utilized the private sector for ANC, their primary source of education during their pregnancy was their mother. If their private gynecologist did not advise them sufficiently, public ANC education was not often utilized separately from an ANC checkup. According to stakeholders familiar with WHRCs, most women seek out education only when they are visiting an MFMC for other services, such as for antenatal checkups or vaccinations. According to representatives of WHRCs, the most utilized facilities (such as those in Prishtina) average approximately 40 visits per month. While midwives have been a source of ANC education in the past, some women reported that they only sought out this counseling when it was offered in conjunction with a visit to a gynecologist. In an effort to increase access to ANC, some midwives report that they engage in informal community outreach, calling pregnant women to remind them of the resources available at the WHRCs.

Certain formal community initiatives for group-based antenatal education provided by midwives have been successful. In Fushe Kosove and Janjevo, The Ideas Partnership provides weekly midwife-led antenatal education classes. Pregnant women have individual check-ins where a midwife reviews their medical notes, takes their blood pressure, gives advice, and asks women about their ANC visits to the gynecologist. After individual check-ins, the midwife lectures on a pregnancy related topic, ranging from newborn vaccinations to breastfeeding. Stakeholders report consistent utilization of these services by women in the community. These forums allow women to talk to each other and receive advice about pregnancy.

Deliveries

The public sector is the most common location for deliveries. In 2018, 98 percent of deliveries occurred in the public sector.[31] Women currently have the option to deliver in one of the 15 maternities, 7 regional hospitals, or UCCK. With the limited capacity of many maternities due to staffing or resource constraints, many women choose to deliver in higher levels of care. In 2018, 53.2 percent of births occurred in regional hospitals, 42.1 percent births occurred in UCCK, and only 2.7 percent occurred in maternities.[32] The number of births in maternities has decreased from 4 percent in 2014 to 2.7 percent in 2018. From 2016 to 2018, the percent of births that occur in UCCK have increased from 38 percent[33] to 42.1 percent.[34]

In 2012, there were 178 total gynecologists in Kosovo. 21 percent were located in primary care facilities, 44 percent in secondary care facilities, and 35 percent at UCCK. While not all gynecologists at the primary care level are located in maternities, those in maternities are currently responsible for only 2.7 percent of deliveries.[35] Caseloads in regional hospitals are much greater. In Prizren, Gjakova, and Mitrovica births per gynecologist per year were 178, 201, 179 respectively on average.[36]

Some women who delivered in hospitals report poor conditions of care. For example, in a focus group conducted in Dragash, women shared universally poor experiences delivering in the Prizren regional hospital. Women felt they did not receive adequate attention from health care providers and in some cases were rushed through their delivery. In 2019, stakeholders in UCCK, Gjakova, and Prizren report that a lack of gynecologists was a primary barrier for providing better care. As many of their gynecologists are expected to retire in the next few years, they anticipate being significantly understaffed.

Postnatal Care

Women can access postnatal care at all three levels of the health care system. UCCK and regional hospitals offer services in the tertiary and secondary sector. In the primary level, FMCs, WWCs, WHRCs, and maternities all offer postnatal counseling and monitoring.

During site visits to maternities and WHRCs, staff noted that many of the visits they receive are for postnatal care. While some women visit specifically for postnatal concerns, others become interested in counseling services related to postnatal care during vaccination visits for their newborn. WHRCs provide postnatal counseling on a range of topics, especially for breastfeeding, postpartum depression, and family planning. A 2018 UNICEF report found that 97 percent of women who gave birth in a health facility stayed in the facility for 12 hours or more after delivering and were able to receive immediate pregnancy monitoring. However, 8 percent of all newborns did not receive a postnatal care visit following discharge from a health facility and 68 percent of those from the poorest households did not receive postnatal care upon discharge.[37]

Observed Drivers of Utilization Patterns

- *Perception that gynecologists need to be present for all ANC services*

There is a strong perception among both patients and health care providers (HCPs) that ANC and delivery services have to be provided by gynecologists. In 2015, 19 gynecologists were staffed in maternities.[38] Site visits revealed that many of the gynecologists providing ANC and delivery services have since retired, and their positions have not been filled. Many women do not seek care at the PHC centers that do not employ gynecologists and instead opt for the private sector. Other times, women visit the MFMC and are informally referred to a private clinic where they can see a gynecologist. Today, there are 95 private gynecology clinics in Kosovo.[39] Unlike MFMCs, many of which have trouble recruiting and retaining gynecologists, private clinics offer guaranteed access to a gynecologist for pregnant women.

Of women who participated in focus groups and interviews, the majority received their ANC from a gynecologist. They perceive gynecologists to be better qualified to provide ANC due to increased training and specialization. This perception was also present with midwives, family medicine doctors (FMDs), and gynecologists, many of whom voiced that FMDs lacked adequate training for the provision of ANC. While all FMDs are reported to receive a training module on ANC, this has been insufficient to instill confidence for ANC delivery in many FMDs.

- *Perception that private facilities are of higher quality and lead to a better delivery experience*

Women perceive care in the private sector to be of higher quality. Research indicates that important indicators of quality include comfort and privacy during visits and the ability to contact the doctor at any time.[40] Focus groups revealed that most women decided to visit a private clinic based on word of mouth recommendations from other women. Some women articulated that private facilities were nicer because they possessed more updated equipment. Other women, whose public option for ANC was a regional hospital, expressed that they opted for the private sector because hospitals were crowded and they could receive more attention from their doctor in the private facility. Aside from available equipment and technology, providers report there is little distinction in the quality of care provided at public versus private facilities. Dual practice is common among gynecologists, so women could potentially see the same physicians for free in the public sector that they pay to see in the private sector. However, patients believe that their gynecologist can provide better care if they have better equipment.

In addition, some women believe that receiving care in the private sector will result in increased continuity of care. If a woman receives public ANC at the PHC level and delivers at a hospital, there is very little communication between the woman's ANC provider and her delivery team. The notebook for pregnant women initiative was implemented by the MOH to address this issue by allowing women to bring a book of their medical history from pregnancy to delivery. However, its implementation has been limited.[41]

Many women believe that paying a doctor for private ANC will result in a better delivery experience.[42] Some women are able to deliver with the same doctor they visited in private clinics. Others are able to deliver with a different doctor, but their private gynecologist will communicate with gynecologists on call in the hospital and request that they prioritize the treatment of their

patient. Ultimately, women may try to compensate for deficient communication between levels of care by increasing their out of pocket expenditures to visit private gynecologists for ANC.

- *Perception that delivery needs to happen in a comprehensive EmOC*

Stakeholder interviews with gynecologists, FMDs, midwives, and maternity directors reveal a prominent perception that deliveries should happen in facilities that have the ability to address complicated deliveries. In particular, several HCPs staffed at maternities have claimed that they would feel more comfortable if all delivery services offered at their facility were discontinued so that women would deliver exclusively at hospitals. Some maternities have reported referring women to higher levels of care for delivery in order to avoid perceived liability associated with deliveries in B-EmOC facilities. Stakeholders at UCCK report that while regional hospitals may have the capacity to treat patients, they also refer patients to UCCK directly because of unwillingness to take on liability.

Most women in focus groups also shared this perception. Women did not cite specific equipment or capabilities that a birthing center needed to have, but articulated that hospitals were better equipped to handle complications. This may contribute to UCCK's disproportionate volume of deliveries. A 2016 assessment of referral patterns revealed that the vast majority (64 percent) of referrals to UCCK were self-referrals triggered by women upon beginning of labor.[43]

- *Lack of incentive structures for family medicine doctors (FMDs)*

Beyond a voiced lack of training, there is currently little incentive for FMDs to provide ANC. Interviews with stakeholders revealed that many FMDs are reluctant to provide ANC because they view it as additional work without increased compensation. Since payments for employees in public facilities are salaried-- as opposed to being based on performance or quality measures for patients-- there is no way for FMDs to reap the benefits of this additional work done in providing ANC. Without an incentive or enforced mandate to provide the care, most FMDs formally refer women to regional hospitals or informally refer them to private gynecologists. Stakeholders report that gynecologists with private practices are eager to provide this care as ANC visits are typically quick and uncomplicated ways to earn money.

- *Lack of clearly defined care pathways for women*

In areas with effectively closed maternities, women in focus groups were not able to name a public facility other than the regional hospital where they could receive ANC. Recent assessments have found that there is confusion among women about the women's health services provided at the primary care level.[44] Misinformation and uncertainty about appropriate facilities and providers for care may deter health-seeking behaviors. A 2016 survey found that 65.5 percent of people who articulated they did not have adequate access to reproductive health services claimed that they did not know where to access these services.[45]

- *Lack of clearly defined HCP roles*

Stakeholder interviews indicate disagreement among gynecologists, midwives, and FMDs in identifying the appropriate professional for the provision of various elements of obstetric and gynecological care. For example, stakeholders at the PHC level report resistance from

gynecologists to previous initiatives aiming to give FMDs a greater role in providing ANC and pap tests.

Similarly, midwives report that they do not have a clearly defined role. For example, in the Prizren regional hospital, midwives report significant amounts of responsibility in administering care. In the case of uncomplicated deliveries, they report performing uncomplicated deliveries with supervision from a gynecologist. In other cases, midwives report that gynecologists will not delegate ANC education. The scope of practice for midwives has also changed over time. More experienced midwives reported routinely performing deliveries on their own immediately following the war. Today, there is a general hesitancy among midwives to perform deliveries without the presence of a gynecologist. Even if midwives feel qualified to provide this care, facilities require the supervision of a gynecologist. The lack of clearly defined roles for HCPs makes it challenging for providers to coordinate the provision of care and clearly communicate care pathways to women.

GLOBAL POLICY RECOMMENDATIONS

Regardless of the specific option chosen for restructuring maternities, the team has identified the following global policy recommendations for the maternal health care system:

- Task shift provision of select maternal health services
- Change and communicate norms around maternal health
- Link MFMC funding to services provided
- Address long term workforce planning
- Tailor policy interventions to the specific needs of each municipality

Task shift provision of select maternal health services

Reliance on gynecologists to provide almost all services related to women's health can result in inefficiencies in the provision of care. Efforts to task shift the provision of ANC and other maternal health services to broader cadres of HCPs may reduce the reliance on gynecologists and create more flexibility within the health care system. There is a strong body of literature that supports task shifting maternal and reproductive health services to generalists and/or midwives who have been given the proper training to increase access to care without compromising outcomes.[46,47] To successfully implement task shifting, the WHO emphasizes that these efforts should be accompanied by efforts to improve referral systems. Changes in salaries and incentives to reflect changes in the scope of practice for lower levels of HCPs should also be considered.[48]

- *Increase training opportunities and incentives for FMDs to provide care*

There is evidence that well trained FMDs can provide quality ANC services to women.[49,50,51] However, many FMDs in Kosovo do not feel equipped with the proper training to provide ANC despite receiving a training module on ANC during their rotations. In some areas of Kosovo, previous initiatives by the Kosovo-Dartmouth Alliance to task shift ANC provision to FMDs through additional training were effective. Due to a lack of political support and commitment to long-term program implementation, this effort was not sustained.

Requiring ANC training as part of mandatory continuing medical education seminars for FMDs could equip them with necessary skills. Other stakeholders have suggested mandatory periods of service in WWCs for FMDs to develop their skills with women's health services. Many stakeholders reported that task shifting would be difficult without significant political support and follow up from the MOH. Monitoring or oversight in primary care facilities can accompany task shifting efforts to ensure that FMDs provide care in accordance with their training. Additionally, financial incentives such as performance-based payments may encourage FMDs to provide maternal care.

- *Support midwife-led care throughout pregnancy*

Effectively utilized midwives have been associated with improvements in quality of care and decreased maternal and newborn mortality.[52] Midwife-led continuity models, in which the same midwife acts as the lead professional from the beginning of a woman's pregnancy to the first few days of parenting, have also been associated with improved outcomes, including lower risk of preterm birth.[53] In the context of ANC, the WHO recommends shifting the promotion of health related behaviors and the distribution of nutritional supplements to midwives. In settings with well-functioning midwifery programs, the WHO also recommends midwife-led continuity of care models.[54]

Interviews with midwives at the primary and secondary care level reveal variation in their roles across facilities. In closed maternities, midwives were incorporated into general staff and performed administrative duties or acted as nurses in other departments. Midwives in these facilities reported not being utilized effectively, given their experience with and knowledge about pregnancy. Even for less complicated services like ANC advising, some midwives report resistance from gynecologists to allocate responsibility for this care. The creation of clear standard operating procedures in PHC centers can reduce conflict over which type of provider should provide maternal care services.

Focus group evidence indicates that women receiving ANC in the private sector often do not receive antenatal education. Midwives have the potential to fill this gap in care, as women who received antenatal advice from midwives found this resource helpful for navigating their pregnancy experience. Gender dynamics also continue to influence women's access to care. In Kosovo, 23.8 percent of women considered that having a health provider of the opposite gender a problem and a limiting factor to their access to healthcare.[55] In interviews, midwives reported that they believe women feel more comfortable asking them all their questions about pregnancy in part because the midwives were also women.

Standardize and communicate norms around maternal health

Once a care pathway for maternal health is clearly defined, communicating how to navigate that pathway to both women and providers is important. Otherwise, women's perceptions and providers' individual incentives will continue to influence decision making.

Communicating guidelines regarding which HCP women should consult for various maternal health services can improve the acceptability of receiving care from FMDs, nurses, and midwives rather than gynecologists. Women in focus groups were receptive to the idea of receiving care from non-specialists if their provider had received proper training. Women in all municipalities stand to benefit from knowing their primary point of contact for women's health care in the primary care system. To address entrenched beliefs about specialists and the private sector among women, trusted HCPs can engage in community outreach efforts that target women in order to generate demand for women's health services at the PHC level.

Disseminating clear guidelines on the duties of each practitioner and generating buy-in for established care pathways from all health care workers will aid in changing norms surrounding maternal health care. In Kosovo, effective implementation of maternal health care guidelines requires communication across levels of care and the MOH in the creation of guidelines that are realistic given the resource constraints HCPs face. Communication across clinical groups that provide obstetric care could also be strengthened. Strengthening internal referral systems and the gatekeeping role of PHC centers will decrease ambiguity about which HCPs women should consult.

Link MFMC funding to services provided

PHC centers receive funding from the primary health care grant allocated to each municipality. This grant is determined based on population, the number of visits to PHC centers, and the number of services provided. Research did not reveal evidence that funds are specifically allocated to maternities. Further, it does not seem that the formula for determining the grant takes into account the costly nature of deliveries. While the formula multiplies visits by the average cost per visit, this is a static number across all municipalities that does not consider the specific services provided in a municipality.[56] The formula indicates that municipalities with functioning maternities do not seem to acquire significantly greater funding than those without functioning maternities.

Municipalities have discretion over the allocation of resources provided by the primary health care grant.[57] Payments to PHC facilities are based on line item budgets and do not offer strong incentives to expand preventive services or improve quality of care. Given the ease with which ANC and delivery services can be outsourced to private facilities and regional hospitals, municipalities do not have financial incentives to provide maternal care at the PHC level. Staffing schemes also demonstrate that resources are not linked to the needs of PHC facilities. In 2008, primary health funds were managed by the municipal health directorate, which was responsible for all hiring and firing of PHC staff.[58] This meant that PHC staff were treated as civil servants, and

facility directors were not able to change staffing according to the facility's needs. Stakeholders report that the situation remains the same today. Better linking staffing and funding mechanisms for MFMCs to the services they provide could effectively ensure that resources are allocated efficiently. Allocating funding to MFMCs specifically for maternal care and linking this funding to the provision of these services could diminish the current financial incentive to refer women to higher levels of care.

Address long term workforce planning

- Gynecologists

Many PHC facilities report having difficulty recruiting and retaining gynecologists. The current draft of the administrative instruction on PHC specifies that MFMCs in municipalities without a regional hospital will be equipped with gynecologists.[59] To achieve this goal, incentives can be linked to gynecologists serving in high need areas. By linking funding for the gynecologist's residency with working at the maternity after completion, the Kline maternity was able to retain a gynecologist.

Additionally, stakeholders report that residency positions have not been opened by the Ministry for some time, limiting the availability of a new gynecologist workforce. Consistently opening residency positions could also help MFMCs avoid being left without a gynecologist when others retire.

- *Midwives*

It is important to have a sustainable workforce if midwives are empowered to play a larger defined role in the provision of maternal and general women's healthcare. There is currently no public institution in Kosovo that administers degrees in midwifery. UCCK had a midwifery department, but it recently lost its accreditation due to a lack of faculty members with a PhD in midwifery.

Tailor policy interventions to the specific needs of each municipality

Not all maternities need to be repurposed or fully functionalized. In some cases, proximity to regional hospitals or UCCK may diminish the necessity to invest in substantial PHC capacity to provide maternal health services. It is important to reassess where resources can be best allocated given current geographic infrastructure and population needs. A 2008 evaluation of the geographical distribution of EmOC resources showed that centers were distributed well according to population. However, many maternities in rural areas did not have the capacity to provide safe delivery services. Since then, the government has invested significant resources in the construction of roads. These infrastructural improvements have decreased travel times to regional hospitals and reduced geographic isolation for rural communities. Although the country has become more connected, there remain pockets without service. In the winter, areas such as Dragash have limited connection to Prizren, the regional hospital where women in the area deliver.

POLICY OPTIONS AND OPTION-SPECIFIC RECOMMENDATIONS

The research team explored three different approaches to restructuring the organization of maternal healthcare: (1) closing maternities completely, (2) repurposing them to provide women's health services, or (3) refunctionalizing them for deliveries. Stakeholders were asked to provide feedback on each option for restructuring maternities. Results below incorporate responses from stakeholders on the potential implications of selecting each option and findings from relevant literature. Each option is accompanied by option-specific policy recommendations that can be implemented to support the success of the structural change. The potential restructuring of maternities aims to address the most acute needs for women's health in a way that is sustainable and realistic given current resource constraints and larger system-wide realities. The options explored are not mutually exclusive. A combination of all three may be necessary to best fit the needs of women in Kosovo.

	Model 1: Maternities close	Model 2: Maternities adapted as WWC	Model 3.1: Maternities functionalized as B-EmOC Facility	Model 3.2: Maternities functionalized as C-EmOC Facility
Women's Health Services Offered	▪ Antenatal Education ▪ Basic ANC ▪ Perinatal care	▪ Antenatal Education ▪ Comprehensive ANC ▪ Cancer screening ▪ Gynecological checkups ▪ Perinatal care	▪ Antenatal Education ▪ Comprehensive ANC ▪ Cancer Screening ▪ Gynecological checkups ▪ Uncomplicated deliveries ▪ Perinatal care	▪ Antenatal Education ▪ Comprehensive ANC ▪ Cancer Screening ▪ Gynecological checkups ▪ Uncomplicated deliveries ▪ Complicated deliveries (C-sections) ▪ Perinatal care
Staffing Requirements	▪ Normal MFMC staff	▪ Gynecologist (available during normal working hours or a few days per week)	▪ 24-hour gynecologist availability (3-4) ▪ Midwives	▪ 24-hour gynecologist availability (3-4) ▪ Midwives ▪ Anesthesiologist ▪ Neonatologist

Utilization Pattern	▪ Women visit FMDs and midwives for counseling, family planning, uncomplicated ANC. ▪ Delivery at closest regional hospital	▪ Women visit FMDs in local PHC institution, are referred to gynecologist at WWC for necessary services ▪ Delivery at closest regional hospital	▪ Women visit maternity for all obstetric and gynecological services. ▪ Delivery occurs at maternity unless complicated (referral or transfer to regional hospital)	▪ Women visit maternity for all obstetric and gynecological services, including delivery.

Table 5. Summary of potential options and associated services, staffing requirements, and utilization patterns.

Option 1: Close maternities

Currently, most maternities do not provide many services, and those services that are provided are underutilized. Some maternities are effectively closed. Many stakeholders support investing scarce funds and human resources in facilities where women are already going to seek care. This would mean closing maternities and diverting funds from the underutilized facilities to higher levels of care.

Option 1: Close Maternities		
Women's Health Services	**Employees**	**Utilization Pattern**
• MFMC provides customary services (basic ANC for uncomplicated cases, no delivery services)	• General MFMC staff	• Women visit an FMD in a PHC facility and are referred to see a gynecologist in the MFMC or regional hospital if further consultation is necessary.

Barriers

- *Political considerations*

Several stakeholders have cited the decision to keep maternities open in their current state as a political one. Some stakeholders are of the opinion that maternities, being neither cost effective nor safe, remain functional solely in order to keep the social peace. Stakeholders also report that political incentives prevent municipality officials, who control the funding of MFMCs, from establishing a more effective workforce (i.e., firing workers who are not needed).

Benefits

- *Funding and facilities can be diverted to other services*

Municipalities do not receive additional funding as part of the Primary Health Care grant for the management and maintenance of MFMC maternities. In 2016, budgets allocated to maternities for drugs and consumables ranged from 0 to 5000 euro.[60] Data on expenditures show that primary care facilities are spending increasing shares of their budgets on wages, salaries, and capital, and decreasing shares of their spending on goods and services, including medical supplies.[61] This supports assertions that maternities are spending more money on maintenance than actual provision of care. Some maternities currently function as independent facilities in a separate building from the MFMC. If maternities close, the funds that would be directed toward staffing and maintaining underutilized facilities could be used to expand health services that are utilized in the MFMC.

- *All remaining functioning delivery centers will be comprehensive EmOC facilities*

Interviews with physicians and focus groups with women reveal a prominent preference for delivering in a facility equipped to handle C-sections and blood transfusions on-site. Women already feel comfortable and safe delivering in these facilities. Many HCPs staffed at maternities stated that they were hesitant to carry out routine deliveries in a facility without C-EmOC services. The closure of maternities would mean that all remaining functioning delivery centers provide C-EmOC.

Drawbacks

- *Some women will have decreased access to care*

Closure of maternities in rural communities would mean that women, particularly those from rural populations, stand to experience decreased access to care. Site visits reveal that the women most likely to rely on maternity services are those living in rural areas. This population is also disproportionately poor. Two-thirds of Kosovo's rural population is below the poverty line.[62] Out of pocket expenditures for health services impoverish a number of households. In fact, a 2017 World Bank report found that counting health expenditures as essential would represent a 7 percent increase in the poverty headcount for 2011 in Kosovo.[63] Some stakeholders report that increased travel times and out of pocket expenditures required for accessing care may cause women to delay accessing care or avoid accessing it altogether.

Poor and rural populations are also more likely to deliver in maternities, as they have more children than higher income populations in Kosovo. Households with 3 or more children are more than twice as likely to be in extreme poverty as households with just 1 child.[64] Given that every woman is advised to deliver her first child in a hospital, higher income populations will have fewer children that they can potentially deliver in maternities.

ANC services are also a concern, as poor and minority populations already have trouble accessing this care. In 2013, 10 to 18 percent of interviewed women reported that they could not afford the costs of travel for ANC care.[65] The same year, only 74 percent of Roma, Ashkali, and Egyptian women had at least 4 ANC visits, while 92 percent of Albanians had at least 4 visits.[66] Among the poorest households, 5 percent of women did not receive any ANC.[67] If ANC services are not adequately task shifted to HCPs at the primary care level, women may experience particularly pronounced needs for these services. However, it should be noted that the WHO ANC visit model does not require that all 8 contacts are made in health institutions throughout pregnancy. Some of the contacts can be made closer to home and with lower cadres of health workers.

- *Caseloads for certain hospitals may increase*

Interviews indicate that regional hospitals and UCCK are overburdened with patients seeking ANC, gynecological consults, and delivery services. Many stakeholders at regional hospitals opposed the idea of closing maternities because they predicted that they would become even more overburdened for gynecological and obstetric visits. In Gjakova, stakeholders report that they are understaffed to handle their current caseload. UCCK reports that it is particularly overburdened with uncomplicated deliveries and that the closure of maternities will likely result in an influx of women delivering there. As shown in Table 6, recent data indicate that Prishtina and Gjakova hospitals may be most impacted by the closure of maternities in their catchment area. In 2016, maternities with UCCK as their closest hospital accounted for approximately 35 percent of the gynecological visits in the area.[68]

Recently approved plans to construct a regional hospital in Prishtina will likely limit the increased caseload at UCCK and other regional hospitals, but in the interim an increase in women coming for deliveries and ANC could be expected. While facilities such as Prizren report being overburdened, the formal closure of maternities in the area would likely not have a large impact on caseloads. Stakeholders report that maternities with Prizren as their closest regional hospital (Malisheve, Dragash, and Suva Reka) have all been effectively closed for the last few years.

- *Potential consequences of delivery in hospitals*

As of 2015, Kosovo's national C-section rate was 27.3 percent, which exceeds international guidelines. Previous research has found that time pressures in hospitals may be a driver of unnecessary C-sections in Kosovo.[69] Closure of maternities may result in an influx in deliveries and obstetric visits that increase time-pressures on already overburdened facilities. This could in turn contribute to higher C-section rates. Medically unnecessary C-sections have been associated with higher chances of maternal death and postpartum infection.[70]

Policy considerations

- *Define and communicate new public sector pathway of care after closure*

Immediately after maternities close, women who seek out ANC services in maternities may struggle to identify facilities where they can receive care. If Option 1 is adopted, appropriate measures should be taken in order to avoid this confusion. Clearly communicating new care pathways could serve to redirect women to where they should be accessing resources. Ensuring

that HCPs in all PHC facilities are trained and available to provide ANC and other women's health services may ease the transition of closing maternities.

Hospital	Total Births (2015)[5]	Deliveries per Physician (2015)[6]	Maternities Closest to Hospital	Potential Impact of Stopping Obstetric Visit Capacity (Option 1)	Potential Impact of Stopping all Deliveries (Option 1, 2)
Prizren	3,736	178	Malisheve Dragash Suva Reka	Little to none	Little to none
Peje	2,178	136	Kline Istog	• ~1,800 visits	Little to none
Gjakova	2,009	201	Rahovec Deqan	• ~2,900 visits	• ~150 deliveries
Ferizaj	1,600	800[7]	Kaqanik	Little to none	Little to none
Gjilan	1,760	135	Kamenica Viti	Little to none	Little to none
Mitrovica	1,613	179	Skenderaj	• ~150 visits	Little to none
Vushttri	267	89	None	Little to none	Little to none
Prishtina	9,641	172	Drenas Lipjan Podujevo	• ~6,600 visits	• ~200 deliveries

Table 6. Potential impact of limiting maternity capacity on hospitals.[8]

- *Increase gynecologist and midwife staffing in hospitals*

As a greater number of patients seeking ANC and delivery services come to hospitals, staffing hospitals with a greater number of gynecologists and midwives will help to reduce the burden on all hospital staff.

[5] Source: Health Statistics 2017

[6] Source: AMC Staffing Report

[7] Because this is a dramatic outlier, it likely results from inaccurate data regarding either staffing or deliveries in the Ferizaj regional hospital.

[8] Predictions were based on most recent data for each maternity. For some, this is 2016 data reported to MOH. For others, this is data from site visits in 2019. This table does not consider the possibility that maternity closures may direct more people to the private sector.

- *Plan for relocation of maternity staff*

The closure of maternities warrants consideration of where current staff would be employed after closure. Health workers employed at maternities would likely either be absorbed into general MFMC staff or go on to practice at other facilities in various levels of the health sector. After closing maternities, relocating staff to regional hospitals may be beneficial. In 2016, there were 19 gynecologists and 107 midwives staffed across maternities. While many of the gynecologists have since retired, there remains a substantial midwife workforce that will need to be redistributed if maternities close. Relocating staff to areas where their skills are most needed and relevant may allow for increased buy-in among HCPs.

- *Limit geographic barriers*

Without a delivery center close to the community, families may have trouble coping with the cost of travel. If providing services locally is more expensive than subsidizing travel to increase access, the latter can be considered. For example, the Roma, Ashkali, and Egyptian population in Fushe Kosove do not have a maternity in their municipality. Initiatives sponsored by the Ideas Partnership have begun to transport women to UCCK (their regional hospital) at the onset of delivery. On average it costs 10 euro round trip to travel to UCCK, which could be a prohibitive cost for many women. By providing transport, the Ideas Partnership has reduced the rate of home births in the community and have made a significant cultural shift in the traditions of giving birth in an environment with access to professional medical care.

To improve access for women in more rural settings, the WHO recommends implementing ANC home visits.[71] This will allow for services to be provided without the physical plant of the maternity remaining open. UNICEF and MOH-led pilot programs for home visits have been successful in increasing access to minority women and those living in rural areas.[72] Teams of nurses and midwives travel to women to reduce the burden on families to seek care. Since the introduction of home visiting services in 2014, 200 nurses across Kosovo have received basic training on home visiting and 64 nurses were directly involved in the implementation of home visiting services in the 5 municipalities (Ferizaj, Prizren, Gjakova, Dragash and Fushe Kosove), with around 6,000 home visits being conducted in 2015. Home visits have improved access to information on breastfeeding, nutrition and immunization. Maternities can function as a central hub for these services, and midwives could play a central role in providing this care.

<u>Option 2: Repurpose maternities into WWCs</u>

Evidence supports the creation of general women's health centers at the primary care level. In rural areas of the country (such as Drajkovc, Kamenica, and Dragash), women and providers reported a pronounced need in their communities for a gynecologist to serve as a resource for general gynecological check-ups and screening in addition to obstetric care. Shifts in the disease burden further support the need for women's health centers. Breast cancer incidence increased from 20.7 percent in 2016 to 24.09 percent in 2018.[73] As breast and cervical cancer incidence increases, identified facilities for screening could be beneficial. In 2016, only 28 percent of women had been screened for cervical cancer and only 14 percent of women in the recommended age group reported being screened for breast cancer in the past 5 years.[74] Stakeholders at higher levels

also report that performing these services at the primary level would reduce their extensive caseload. In conjunction with a strong gatekeeping role of FMDs, maternities repurposed into women's health centers in MFMCs have the potential to meet the needs of women in more remote areas. Women can receive the majority of care from FMDs and midwives in all PHC centers, and in the case of complications or other conditions that warrant the care of a specialist, they can be referred to the gynecologist at their local maternity functioning as a WWC.

WWCs are representative of this option. These outpatient centers serve as a resource for women to receive general gynecological checkups, ANC, cancer screening, postnatal care, and family planning services. There are currently three WWCs in Kosovo: one attached to the MFMC in Prishtina, one attached to the MFMC in Prizren, and one attached to the maternity unit in the Gjilan regional hospital. For example, in the WWC in Prishtina, women must receive a referral from an FMD in the MFMC before being seen by a gynecologist in the WWC. Women view access to a gynecologist as an important part of their pregnancy. If maternities become facilities that effectively refer patients to gynecologists when necessary, women may be more likely to visit them for ANC. While there is support for placing gynecologists in all MFMCs in municipalities without a regional hospital[75], investing in WWCs where maternities are located until this goal is accomplished could be beneficial. Maternities are well distributed throughout the country and many have at least some existing infrastructure to provide women's health services.

Option 2: Repurpose Maternities into Women's Wellness Centers (WWCs)		
Women's Health Services	**Employees[9]**	**Utilization Pattern**
• General obstetrics visits • Family Planning • Education • ANC • Cancer screening • Postnatal care	• Gynecologists • Midwives	• Women visit an FMD in a PHC facility and are referred to see a gynecologist in the MFMC if further consultation is necessary.

<u>Potential Barriers</u>

- *Popularity of private institutions*

The popularity of private gynecology clinics may serve as a barrier to the utilization of women's health centers in MFMCs. Since women perceive that private institutions result in a better experience during delivery[76], they may continue to avoid receiving ANC in the public sector.

[9] number based on population needs

Additionally, the perception that private clinics are able to provide better care due to more updated equipment may continue to impede demand for public services. Given the popularity of private care, it may be useful to prioritize equipping MFMCs with WWCs in areas where accessing private care would be cost-prohibitive.

- *Staffing constraints*

As noted in the global policy recommendations, many maternities struggle to recruit and retain gynecologists. Especially in rural areas, maternities have reported that they do not receive applications for open positions. Without access to a gynecologist, women may not access obstetric care at the primary care level. However, staffing a center that has no expectation to do deliveries, but provides general gynecological and obstetric care, requires fewer gynecologists, because they would not be required for 24-hour care. The new administrative instruction on primary health care centers in Kosovo indicates that all MFMCs in municipalities without a regional hospital will be staffed with a gynecologist.[77] Existing MOH support for placing gynecologists in more remote municipalities will be beneficial to overcoming this barrier.

- *Definition of HCP roles*

This option relies on a functional gatekeeping system in which complicated cases are first seen in the MFMC and are then referred to gynecologists in the WWC. Interviews with midwives revealed that some gynecologists inform women that they have to provide all care throughout the pregnancy. An unclear division of labor may further diminish the role of non-specialist HCPs, particularly because they work alongside specialists in the same facility.

Potential Drawbacks

- *Continuity of care*

In this option, women would deliver in a different facility than where they received ANC. Without robust communication networks with hospitals, women may experience disjointed care between ANC and delivery.

- *Dissatisfaction with gatekeeping role of FMDs and midwives*

Strong perceptions among women that all care must be provided by a gynecologist may lead to dissatisfaction with the gatekeeping role played by lower cadres of HCPs. Until norms surrounding the provision of maternal health services evolve, women may be reluctant to visit facilities that require an initial visit to an FMD.

Potential Benefits

- *Increased access to services in light of changing disease burden*

Providing ANC and other gynecological services within communities has the potential to improve access to care. For many women, costs to travel to a gynecologist are substantial. This option would improve access by providing a suite of women's health services at the local level. In light of a changing disease burden in the country (decreasing birth rates and increasing cancer incidence),

making women's health centers more geographically accessible has the potential to increase access to necessary services.

- *Less burdened hospitals*

If their local maternity is not open, some women travel to regional hospitals to receive care for general gynecological consults and uncomplicated ANC. Providing these services within communities may reduce the demand on regional hospitals for uncomplicated services. Representatives at both UCCK and Prizren regional hospital reported that a reduction in general obstetrics visits would alleviate overcrowding issues. While maternities close to UCCK are currently providing obstetric care, equipping more maternities to provide services found at WWCs would be helpful for hospitals like Gjilan, Ferizaj, and Prizren, where nearby maternities are reportedly not providing obstetric services (See Table 6).

- *Improve communication between PHC centers and hospitals*

Improved communication between public ANC providers and delivery teams in hospitals will diminish the perception that women must go to the private sector for ANC to ensure continuity of care. The WHO recommends that women carry case notes about their pregnancy to improve continuity of care. Interviews with stakeholders in Ferizaj indicate that the MOH has stopped printing pregnancy notebooks. Continuing to print and distribute pregnancy booklets to PHC facilities is an inexpensive way to increase the communication between levels of care while the Health Information System is being developed.

- *Consider part-time employment of gynecologists*

If maternities struggle to recruit gynecologists, another option is to have a gynecologist visit 1 to 2 days per week. For example, in Kamenica a gynecologist from Gjilan visited weekly to provide ANC and delivery services for approximately 2 years. On these days, women would come to the clinic to receive ANC and other services. The majority of care in this option would be provided by lower cadres of health care workers. A limited working schedule for a gynecologist may be feasible if there are strong gatekeeping mechanisms that allow them to see only the most complicated cases when they visit the MFMC.

- Supply maternities with necessary equipment

An important consideration for repurposing maternities as WWCs is the necessary equipment. Some maternities do not have equipment for gynecologists to provide a complete set of services. For example, a gynecologist practicing at the Kline maternity reported that, due to outdated ultrasound equipment, he was unable to adequately provide ANC for many cases. Further, most of the maternities visited do not have the capacity to do breast cancer screening. In 2015, there were only 6 mammography machines in Kosovo.[78] Previous research has indicated that outdated or poorly maintained equipment may contribute to decreased utilization of maternity services.[79] Maternities that are repurposed as WWCs will need an accompanying increase in funding, as the increased number of services provided will require a substantial portion of the budget.

Option 3: Functionalize maternities for delivery

This option considers the implications of revitalizing certain maternities for delivery services. This can be accomplished by refunctionalizing maternities to act as B-EmOC facilities or by enabling maternities to provide C-EmOC services. Not every maternity would need to be functionalized for deliveries given shifting demographic demands. Only those municipalities with the most acute need would need to be equipped with a delivery center.

About 15 percent of all pregnancies will include life-threatening obstetric complications.[80] HCPs can seldom conclusively predict which patients are likely to experience these complications, which makes it important for women and newborns in Kosovo to have access to emergency care. Without medical intervention, the length of time from onset to death for the most common major obstetric complications range from 2 hours (postpartum hemorrhage) to 6 days (infections) on average. The closest regional hospital to each maternity falls within the range for safe transfer (1 hour). For most pregnancy complications, the average time from onset to death is 12 hours or more. The sole exception is postpartum hemorrhage, which can cause the death of a woman in less than an hour. However, maternities doing routine deliveries report being equipped to handle this emergency for the duration of transfer by administering drugs for hemorrhaging.

Option 3: Functionalize Maternities for Delivery		
Women's Health Services	**Employees[10]**	**Utilization Pattern**
• General gynecological and obstetrics visits • Family Planning • Education • ANC • Cancer screening • Postnatal care • Uncomplicated delivery services	• Gynecologists • Midwives	• Women visit a maternity for all ANC and deliver at this facility for uncomplicated pregnancies. Pregnancy follow up is also available at the facility.

Barriers to Implementation

- **Acceptability of Care**

If maternities are equipped to function as B-EmOC facilities, it is important to change the widespread perception-- which is present among both providers and patients-- that deliveries cannot safely occur in facilities unable to provide C-sections and blood transfusions, which are C-EmOC signal functions. Some gynecologists in maternities reported that, without the capacity to perform C-EmOC signal functions, they directly referred patients to deliver in the regional hospital.

[10] number based on population needs

Focus groups with women also revealed a prominent preference for delivery in C-EmOC facilities. However, this perception was less rigid in rural areas of the country. Women in remote communities, such as Dragash, reported that they prefer to deliver closer to home. They reported feeling comfortable delivering in a B-EmOC as long as there was a HCP trained specifically to handle deliveries. Site visits also revealed that in the maternity in Dragash, some women chose to receive care from experienced midwives who provided delivery services. However, there were less than 5 midwife-led deliveries in this facility in the past year.

- *Resourcing & Infrastructure*

B-EmOC facilities must be open 24/7 to provide delivery services.[81] Resources to provide the defined 7 signal functions of B-EmOCs and reliable emergency transport must be consistently available. Site visits revealed that maternities that were functional for deliveries were able to meet the necessary signal functions in the last 6 months. However, emergency deliveries are occurring in facilities that lack equipment. For example, the Skenderaj maternity provided emergency deliveries without a vacuum extractor, incubator, or cardiotocography. All B-EmOC facilities must have pregnancy kits, manual vacuum aspiration sets, and vacuum extractors.[82] Since these facilities are expected to transfer patients in case of emergency, respective equipment, such as incubators, must be available in ambulances.

It is well established that the general infrastructure of maternities is declining. A 2015 facilities assessment found that the oldest equipment across levels of health care was found in primary care maternities.[83] In interviews, Lipjan maternity staff revealed that a lack of equipment limited the quality of care they could provide. For example, the maternity lacked the portable neonatal incubator needed to during transfers to UCCK. A lack of trust in emergency transfer services may also contribute to the unwillingness to deliver in a B-EmOC facility. For example, many maternities have only 1 ambulance, so if there are simultaneous emergencies, transfer is not guaranteed. The 2017-2021 Health System Strategy supports the need for improvements in emergency services to reduce public distrust in the system.[84]

- *Staffing*

Of the low capacity maternities visited, most reported that they stopped doing deliveries once their gynecologist retired. No maternity provides delivery services without a gynecologist present. While previous evaluations have cited the lack of supplies and facilities as the cause of maternities' low performance, site visits indicated that maternities continue to do deliveries with older equipment.[85] Instead, the presence of a gynecologist was the largest driver of whether a maternity continued to do deliveries. To provide 24-hour delivery service, maternities would need to employ 3 or 4 gynecologists. Given that most maternities have difficulty staffing even 1 gynecologist, the likelihood of increasing staffing to this level in the immediate future is low.

- *Communication with Regional Hospitals and UCCK*

Stakeholder interviews emphasized a lack of communication between maternities and their closest hospital. The current extent of communication between ANC providers in the public sector

and hospitals consists of women carrying case notes about previous ANC visits when they arrive to deliver. For women to feel comfortable delivering at maternities, it is important that methods of communication across levels of care are improved. Collaborative relationships between maternities and hospitals in their region will allow for the personnel and resources needed to care for unexpected maternal emergencies that require transfer. Availability of 24-hour consult with staff at the hospital and guaranteed acceptance of transfers sent to regional hospitals in a timely fashion are necessary supports for performing deliveries in PHC centers.

Benefits

- *Increased continuity of care*

Maternities have the potential to improve continuity of care because a woman's entire pregnancy can be followed at the same public facility. This is in line with expressed desires of women in focus groups. Studies have shown that especially for uncomplicated pregnancies, continuity of care can be an important contributor to quality of care. There are links between increased continuity of care and reduced need for intervention and pain relief. Discontinuity of care can lead to unsafe situations especially when key medical information cannot be communicated effectively.[86] Instituting continuity of care provider models in maternities is particularly feasible, as PHC centers are less crowded than facilities in higher levels of care.

- *Reduced caseloads for hospitals*

Currently, excessive demand on C-EmOC facilities may contribute to women reporting that they do not receive enough attention from doctors during delivery. This option may reduce the caseloads of overburdened hospitals by offering additional centers for delivery and creating a more even geographical distribution of facilities. Refunctionalizing maternities closest to Prizren may be most beneficial, as they currently provide no delivery services and the Prizren regional hospital has one of the highest rates of deliveries per physician annually (see Table 6).

Drawbacks

- *Resource intensive*

This option will require significant investment in appropriate and functional equipment.[87,88] Resource supply will need to be reliable for women to change their perceptions of what constitutes a safe delivery facility. It is also important to ensure that B-EmOC facilities have access to equipment necessary for safe and rapid transfers to regional hospitals. Staff will need to be well trained and equipped with the skills to perform their defined responsibilities.

- *Need to have enough demand to retain skills*

Stakeholders have reported that physicians in underutilized maternities are not able to maintain their skills due to low numbers of delivery cases. If a refunctionalized maternity is located in a municipality too close to a regional hospital or another functional delivery facility, it may continue to be underutilized. The consistent decline in births nationwide may also contribute to

underutilization. This could mean that staffed specialists might not have the opportunity to provide deliveries often enough to retain skills.

Policy Considerations

- *Change perception that B-EmOC maternities are not equipped for emergencies*

B-EmOC facilities can enhance the ability of women to give birth safely in their communities and provide support for cases that require higher levels of care.[89] Informing women that comprehensive emergency services are not needed for all deliveries may change the prevalent perception that maternities are not equipped for deliveries. All maternities are in the range of transfer to regional facilities equipped to perform C-sections. Emphasizing benefits of delivering in a maternity, such as increased continuity of care may help change women's perceptions of where uncomplicated deliveries should occur.

- *Equip maternities to function as C-EmOCs*

Fully equipping some maternities to serve as comprehensive delivery centers in high-need areas could be beneficial. Greater investment will be necessary to create capacity for C-sections and blood transfusions. This includes building physical facilities (e.g. operating rooms and lab capacity) and equipping them with necessary supplies. Choosing to equip maternities as comprehensive centers will also affect how they are staffed. Comprehensively equipped maternities will require gynecologists, neonatologists, and anesthesiologists to make up the necessary team of providers in case a surgical intervention must be provided. The majority of providers and patients perceive comprehensive facilities to be the safest environments for delivery. This option aligns with that perception.

RECOMMENDATIONS FOR FURTHER RESEARCH

Policy options should be selected based on current and accurate data. Additional research is necessary to decide which policy options are best suited for a given maternity. The following assessments may aid decision making for stakeholders.

- *Updated facilities assessment and cost analysis*

In order to better understand the resources associated with repurposing maternities for a given service, an updated facilities assessment of each maternity would be beneficial. Information on current maintenance and staffing is needed to determine the costs and benefits associated with keeping maternities open. In addition, an updated assessment of supplies and equipment is necessary to determine the costs of equipping maternities for the provision of certain services.

- *Caseload numbers in maternities and hospitals*

Obtaining recent data on caseloads in maternities and hospitals is necessary for calculating the projected impact of their closure or repurposing. While this report attempts to make this

projection, outdated and vague data makes the analysis incomplete. In order to improve the accuracy of these estimations, data on the number of visits to maternities and hospitals for gynecological and obstetric services is needed. Information about staffing at hospitals will also be helpful in calculating projected capacity. In addition, information on the specific services provided during these visits (e.g. counseling, screening, etc.) would be most helpful for assessing which services can be shifted to primary care.

- *Information on the populations served by maternities*

It is important to understand which populations are served by maternities. While this population can be generally identified, a more detailed analysis of demographic data is warranted. This includes the income, geographic distribution, and ethnic makeup of the women who utilize maternities. This information will help predict the consequences of closing maternities and clarify the areas where refunctionalizing maternities for deliveries may be most helpful.

CONCLUSION

The goal of this analysis is to understand the pathology of maternity underutilization and explore policy options for restructuring the maternal health system to better serve the health care needs of women in Kosovo. In its current state, the maternal health care system does not represent an optimal distribution of finite funds. Resources are being directed to facilities that do not deliver care at an expected rate. When maternities do not perform as originally designed and policy measures are not taken to address this change, the system adapts in ways that are not always beneficial for women. In the absence of significant change, more women will have to navigate a maternal health care system that lacks clear care pathways.

As Kosovo continues to develop and the needs of the population evolve, the maternal health care system, and the role of maternities, must also change. Updating the maternal health care system does not require a singular solution. The needs of every municipality will need to be individually and continually assessed. Regardless of the options chosen for maternities, coordinated efforts between administrative leaders and HCPs at all levels of the health system are necessary to effectively establish care pathways for women. With a strong commitment from key stakeholders to creating and implementing policies based on the needs of women in Kosovo, quality and access to care for women can swiftly improve.

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