Review

Borders, Barriers, and Burdens: A Global Comparative Study of Abortion Policies and Access

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Borders, Barriers, and Burdens: A Global Comparative Study of Abortion Policies and Access

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Abstract

Background: Abortion is a core component of reproductive healthcare and a critical determinant of maternal health outcomes. Globally, approximately 73 million abortions occur annually, with unsafe abortion contributing to 4.7–13.2% of maternal deaths, primarily in low- and middle-income countries (LMICs). Legal frameworks governing abortion vary widely, ranging from total prohibition to fully integrated care systems. Access is further shaped by health system capacity, procedural barriers, and socio-economic inequities. In an increasingly globalised world, migration adds complexity, as individuals move between countries with differing policies, influencing both direct access to care and regional healthcare dynamics. Understanding these intersecting factors is essential for improving reproductive health equity and reducing preventable morbidity and mortality. **Methods:** A global comparative analysis was conducted using two integrated datasets covering 100 countries. The first dataset captured legal, operational, and contextual variables, including gestational limits, funding mechanisms, provider cadres, and telemedicine availability. The second dataset provided demographic, socio-economic, and health system indicators. Access Scores were derived from weighted indicators on a 0–10 scale. Analyses included descriptive statistics, bivariate associations, and multivariable ordinal logistic regression. An intersectional approach explored disparities across income groups, geographic regions, and migration pathways, with visualisation tools such as heatmaps, bubble plots, and diaspora exposure differentials. **Results:** Countries with telemedicine-enabled early medical abortion (tele-EMA) were significantly associated with higher Access Scores (OR ≈1.45), while each additional mandated waiting day reduced odds of liberal access by 7%. Mid-level provider authorisation and public funding alone did not predict improved access. Migration analysis revealed that LMIC-to-HIC flows resulted in marked improvements in abortion access, though benefits were unevenly distributed, leaving vulnerable populations behind. African and Asian LMICs had the lowest Access Scores, reflecting systemic underfunding and restrictive laws. **Conclusion:** Abortion access is shaped by functional health system design rather than geography alone. Removing procedural barriers, expanding telemedicine, and embedding services within integrated health systems are essential to achieving equitable, sustainable reproductive healthcare worldwide.

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Background

Abortion is a critical component of comprehensive reproductive healthcare, encompassing a range of medical and surgical procedures undertaken to end a pregnancy [1]. Globally, it remains one of the most common gynaecological interventions, with the World Health Organization estimating that approximately 73 million abortions occur each year [2]. This translates to nearly 40 abortions for every 1,000 women aged 15–49 annually, illustrating both the scale of need and the importance of safe, timely services. The reasons for seeking abortion are diverse and deeply rooted in women's lived realities. Common reasons include unintended pregnancy due to contraceptive failure or lack of access to contraception, socio-economic pressures such as poverty and inability to support a child, relationship difficulties, and health-related concerns, including maternal conditions that make continuing a pregnancy dangerous [2–5]. Foetal anomalies, pregnancies resulting from rape or coercion, and concerns about future opportunities such as education or employment, are also significant drivers [2,6,7]. For many, abortion represents not only a medical decision but a complex personal and social choice shaped by structural determinants like gender inequality, cultural expectations, and systemic barriers to healthcare [8]. In women's health more broadly, access to safe abortion services is closely linked to maternal health outcomes [9]. Restrictive or poorly implemented abortion laws are strongly associated with higher rates of unsafe abortion, which remains a leading cause of preventable maternal morbidity and mortality worldwide [10]. Unsafe procedures account for an estimated 4.7–13.2% of maternal deaths annually, disproportionately affecting women in low- and middle-income countries (LMICs) [11]. These deaths and complications are avoidable, highlighting safe abortion as a critical public health priority and a marker of reproductive justice and health system effectiveness.

The policy landscape surrounding abortion is highly complex, reflecting diverse cultural, religious, and political ideologies [8]. Legal frameworks vary dramatically across countries, ranging from total prohibition to fully integrated, on-request services embedded within national health systems [10]. These differences create stark inequities in access and outcomes. Ethical debates often dominate the discourse, with some groups framing abortion as a moral issue centred on the rights of the foetus, while others emphasise women's autonomy and the right to control their reproductive lives [12]. Financial considerations further complicate the picture. Even where abortion is legal, stigma, lack of public funding, or unavailability of insurance coverage can render services inaccessible to those who cannot afford out-of-pocket costs [13,14]. Healthcare infrastructure plays an equally important role: limited numbers of trained providers, geographic maldistribution of services, and weak referral networks can all create de facto barriers to access [15,16]. Procedural hurdles such as mandatory waiting periods, parental consent laws, and multi-signature approvals compound these barriers, delaying or preventing access to timely care. In today's globalised world, these national policies no longer operate in isolation. Migration flows have intensified, with millions of women crossing borders each year due to economic opportunity, education, conflict, or displacement. This mobility means that the abortion policy of one country can have direct and indirect effects on others. For example, restrictive laws in a woman's home country may lead her to seek care abroad, creating cross-border healthcare demand and raising issues of legal jurisdiction, continuity of care, and health equity [17]. Conversely, liberalised policies in one country can act as a regional hub, absorbing demand from neighbouring nations with restrictive laws [18]. These dynamics generate complex geopolitical interdependencies, where domestic policies reverberate across borders and shape regional reproductive health landscapes.

Rationale

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Against this backdrop, there is an urgent need for systematic, comparative research to understand how abortion policies interact with structural determinants to influence women's access to safe care. While previous studies have examined national-level laws and service delivery models, few have adopted a global lens that integrates legal frameworks, health system design, socio-economic context, and migration patterns. This study addresses that gap by combining two comprehensive datasets to examine how abortion policies are distributed globally, how they intersect with operational and contextual factors, and how migration reshapes these dynamics. By employing statistical modelling alongside contextual interpretation, the analysis moves beyond descriptive mapping to identify the mechanisms through which policies translate—or fail to translate into meaningful access. Understanding these mechanisms is vital for designing interventions that reduce preventable maternal deaths, improve health equity, and support the broader goals of sustainable development. As migration and globalisation continue to blur national boundaries, a global perspective is essential for harmonising abortion care standards and ensuring that reproductive rights are upheld as fundamental human rights, regardless of birthplace or socio-economic status. This research provides an evidence base to inform policymakers, clinicians, and international organisations as they work to create resilient, equitable systems of care that transcend borders and address the complex realities of women's health in the twenty-first century.

Methods

This study was designed as a global comparative analysis using publicly available data to statistically examine patterns of abortion legislation, practice, and service availability, using data systematically collated from more than one hundred countries. Two integrated datasets were used: (1) a master dataset of abortion policies containing legal, operational, and contextual variables, and (2) a supplementary dataset providing demographic, socio-economic, and health system indicators relevant to reproductive health. Together, these datasets provide a comprehensive basis for understanding how abortion policies are shaped by and interact with structural determinants.

Data Sources

Policy data were drawn from national legal databases, government health ministry websites, and reports by international organisations, including the World Health Organization (WHO), Guttmacher Institute, and United Nations Population Fund (UNFPA). Demographic and health system data were extracted from the World Bank, WHO Global Health Observatory, and United Nations Development Programme (UNDP) [19]. The datasets covered four main domains:

1. Legislative framework – gestational limits, grounds for abortion, approval requirements, conscientious objection, penalties, and reporting obligations.
2. Service delivery and practice – provider cadres, facility designations, telemedicine availability, safe-access zones, and public funding mechanisms.
3. Determinants and contextual variables – GDP per capita, gender inequality index, religious composition, urbanisation, and health system readiness indicators.
4. Health outcomes – maternal mortality ratio, proportion of abortions performed safely, and prevalence of cross-border care.

Variables and Coding

Each country was coded across the four domains using a standardised template. Legislative restrictiveness was measured using an ordinal scale:

- 0 – Prohibition where life-saving exception only
- 1 – Highly restrictive limited grounds where life, health, rape, foetal anomaly
- 2 – Moderate access where grounds plus socio-economic criteria
- 3 – Broad access on-request up to specified gestation
- 4 – Fully integrated care on-request with minimal barriers and national standardisation

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Additional operational barriers, such as mandatory waiting periods, multi-clinician approvals, and residency requirements, were coded as binary (present/absent). Provider scope was categorised as midwife/nurse-authorised, doctor-only, or mixed cadre. Contextual determinants were treated as continuous variables as GDP per capita or categorical such as religion.

The statistical analysis was undertaken in four sequential stages to ensure a comprehensive exploration of the dataset and to capture both descriptive patterns and inferential relationships. Initially, descriptive statistics were generated to provide an overview of the data. Frequencies and proportions were calculated for all categorical variables, such as legal framework, presence of waiting periods, and provider cadres. Measures of central tendency, including means and medians, were computed for continuous variables such as GDP per capita and gender inequality index scores. In addition, cross-tabulations were created to summarise legislative models across different regions and income levels, allowing for initial visualisation of global patterns and disparities.

Following this, a bivariate analysis was conducted to explore associations between legal restrictiveness and key categorical determinants. Chi-square tests were employed to assess the relationship between levels of restrictiveness and variables such as dominant religion, country income group, and gender inequality index tertiles. For health outcomes, including maternal mortality ratios, Kruskal-Wallis tests were used to compare differences across the four levels of legal restrictiveness. This step provided insight into how different legislative models correlate with public health outcomes and socio-economic conditions.

Building on these findings, multivariate modelling was used to determine the relative influence of multiple determinants simultaneously. A multinomial logistic regression model was fitted to estimate the probability of a country falling into each category of legal restrictiveness. The independent variables included GDP per capita, dominant religion, urbanisation rate, gender inequality index, and health system readiness. The outcome variable was the level of legislative restrictiveness, coded on a four-point scale ranging from prohibition to fully integrated access. Adjusted relative risk ratios (RRRs) with corresponding 95% confidence intervals were calculated to provide a robust measure of association and to identify the strongest predictors of liberal or restrictive abortion policies.

To ensure the robustness of the analysis, sensitivity analyses were carried out. These included re-running the models after excluding countries with incomplete or low-confidence data and testing alternative coding schemes for complex variables, such as conscientious objection. This allowed the research team to verify the stability of the results and minimise the impact of potential data quality issues.

Finally, the quantitative findings were integrated with a contextual analysis to provide a richer understanding of the statistical outputs. This involved interpreting the numerical trends through the lens of political, cultural, and historical factors. Country-specific case studies were incorporated to illustrate key patterns emerging from the models, highlighting how legal structures intersect with real-world barriers and enablers of abortion access. This mixed-methods approach ensured that the statistical results were grounded in practical realities, linking structural determinants to the lived experiences of individuals seeking care.

All statistical analyses were conducted using Python (v3.12) and R (v4.3), with careful documentation of each step to ensure reproducibility. The study adhered to the STROBE guidelines for reporting observational research, and all analytical scripts and metadata were retained to allow for independent verification and replication.

Intersectionality Analysis

The intersectional analytic approach to explore disparities in abortion access by incorporating multiple social and structural dimensions, including economic context, geography, and migration. The analysis was based on a 100-country comparative dataset, which included variables relating to legal frameworks, health system policies, and cross-border migration flows. Key variables included:

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legal model, public funding, provider care breadth, telemedicine availability, waiting periods, third-party authorisation, and safe-access provisions.

Countries were classified as high-income (HIC) or low- and middle-income (LMIC) using World Bank criteria. Each country was also grouped into one of five geographic regions: Africa, Asia, Europe, the Americas, or Oceania. Migration patterns were modelled using a diaspora exposure differential, calculated as the difference between the Access Score of an individual's country of origin and the median Access Score of their likely destination region. Positive differentials indicated migration to a region with better abortion access, while negative differentials suggested a move to a more restrictive environment.

The Access Score was a composite measure scaled from 0 to 10, representing the enabling features of abortion services. It was derived from harmonised variables and assigned greater weight to policy factors most closely associated with safe and timely care, such as abortion on request, public funding, decentralised service delivery, and the absence of procedural barriers like waiting periods or parental involvement laws.

Analyses were conducted in three stages:

1. Stage-1 was a stratified descriptive statistics were used to compare Access Scores across intersecting strata of income group and region.

The first stage aimed to summarise Access Scores across intersecting strata of income group and geographic region. Each country was classified as either high-income (HIC) or low- and middle-income (LMIC) according to World Bank criteria. Geographic regions were defined as Africa, Asia, Europe, Americas, and Oceania.

The Access Score (AiAi) was derived for each country using a composite of weighted indicators reflecting the enabling features of abortion care, such as legal availability, public funding, provider care breadth, telemedicine availability, and absence of procedural barriers (e.g., waiting periods and third-party authorisations). The raw score was calculated as:

$$A_{\text{raw}} = w_1 \cdot L + w_2 \cdot F + w_3 \cdot T + w_4 \cdot R + w_5 \cdot P + w_6 \cdot B + w_7 \cdot W + w_8 \cdot S$$

where:

- LL = legal model score (e.g., prohibition = 0, grounds-based = 1, on request = 3)
- FF = funding level (public funding = 2, limited funding = -1)
- TT = telemedicine availability (available = 1, not available = 0)
- RR = referral duties for conscientious objection (explicit duty = 1, weak duty = -0.5)
- PP = provider care breadth (multi-cadre = 1, doctors only = -0.5)
- BB = third-party authorisation requirements (none = 1, two or more sign-offs = -0.5)
- WW = waiting period adjustment (no waiting period = 0, 2–3 days = -0.5, >3 days = -1)
- SS = safe-access zone protection (present = 0.5, none = 0)

The composite raw score was then normalised to a **0–10 scale** for comparability:

$$A_i = \frac{A_{\text{raw}} - \min(A_{\text{raw}})}{\max(A_{\text{raw}}) - \min(A_{\text{raw}})} \times 10$$

Descriptive statistics were then computed for each subgroup, including mean, median, minimum, and maximum values. These summaries provided a baseline comparison of abortion access across combinations of income group and region.

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2. Stage-2 was a cross-tabulations and visualisations explored how access patterns differed when income group, geographic region, and migration flow type were combined.

The second stage explored how Access Scores varied when income group, geographic region, and migration flow type were combined. This was performed using cross-tabulations and multi-dimensional visualisations. A cross-tabulation was constructed with region as rows and income group as columns, and the mean Access Score as the cell value:

$$\text{Mean}_{R,I} = \frac{\sum A_i}{n}$$

where:

- R = geographic region (e.g., Africa, Asia)
- I = income group (HIC or LMIC)
- n = number of countries in that subgroup.

Visual outputs included:

1. **Heatmaps** – showing patterns of Access Scores by region and income group.
2. **Bubble plots –** where the x-axis represented region, the y-axis represented mean Access Score, bubble size reflected the number of countries, and colour indicated income group.

These visualisations highlighted where the intersection of geography and income created unique patterns of inequality, such as low-scoring African LMICs compared to high-scoring European HICs.

3. Stage-3 Migration pathway analysis examined diaspora flows using boxplots and histograms to show how migration influenced abortion access.

The third stage focused on understanding the role of migration in influencing abortion access. A diaspora exposure differential was calculated to represent the change in abortion access experienced by individuals moving from their country of origin to their likely destination region.

The differential (DjDj) for each migration pathway was calculated as:

$$D_j = A_{dest\_median} - A_{origin}$$

where:

- A_{dest_median} = median Access Score of the destination region
- A_{origin} = Access Score of the origin country

Positive differentials indicated that migration resulted in movement to a more supportive abortion policy environment, whereas negative differentials indicated movement into a more restrictive environment. Figures were generated using Python with pandas, seaborn, and matplotlib, ensuring publication-ready quality with clear labelling and colour schemes suitable for academic journals.

Results

Descriptive and Distributional Findings

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Across the 100-country dataset, legal models were distributed as follows: grounds-based 44.0% (n=44), on-request 40.0% (n=40), highly restrictive 12.0% (n=12), state-dependent 3.0% (n=3), and prohibition 1.0% (n=1). Median access scores (0–10) rose monotonically with less restrictiveness: prohibition 4.375; highly restrictive 4.375; grounds-based 5.000; on-request 7.500. A Kruskal–Wallis test confirmed significant differences in access across policy categories ($H=26.62$, $p=7.08\times10^{-6}$). These patterns indicate that legal form correlates strongly with effective access even when headline legality exists (Table 1).

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Table 1. Characteristics of the studies included in the systematic review.

Study ID	Policy/ articles name	Year	Policy Level	Country/Region	Policy Focused Area	Targeted Population	Policy Status	Objective	Outcomes	Equity Consideration	Global Alignment
1	Abortion Law Reform Act 2019	2019	State	Australia	Legal framework for terminations	Pregnant persons / patients & registered health practitioners	Implemented	Reform abortion law and regulate practitioner conduct	Termination on request ≤22 weeks; >22 weeks with specialist approvals; counselling info; decriminalises self-termination; facility approvals and guidelines	Conscientious objection duties; info provision about services/counselling	Partial alignment with WHO Abortion care guideline (2022)
2	Abortion Law Reform Amendment (Health Care Access) Bill 2025 (NSW) – Explanatory Note	2025	State	Australia	Duty to ensure services statewide; expand who may perform ≤22 weeks	Patients seeking abortion; broader cadre of practitioners	Proposed	Increase access to abortion health care across NSW	Minister must ensure reasonable-distance access & public info; wider workforce authorised; mandatory transfer of care when objecting	Reduces geographic barriers; clarifies provider obligations re objection/transfer	Strong alignment with WHO guidance on task-sharing (midwives/NPs providing abortion ≤12–14w) and service availability obligation
3	Choice on Termination of Pregnancy Act	1996	National	South Africa	Grounds & gestational limits; facilities; counselling; consent	Women/pregnant persons; medical practitioners & trained midwives	Implemented	Determine circumstances/conditions for legal abortion; promote reproductive rights	On request ≤12 weeks; 13–20 weeks on specified grounds (health, anomaly, rape/incest, socio-economic); >20 weeks on serious grounds;	Rights-based preamble; access emphasis; minors advised to consult but not required	High alignment with WHO guidance: abortion on request in the first trimester and broad grounds thereafter
4	Cabinet Resolution No. (44) of 2024 Concerning the Permitted Abortion Cases	2024	National	United Arab Emirates	Defines permitted abortion cases beyond existing law	Pregnant women; health facilities & authorities	Implemented	Regulate permitted abortion cases;	Permitted if pregnancy from rape or incest, or on spouses' request with committee	Privacy safeguards; oversight; some restrictions that may affect access	Limited/conditional alignment: committee-approved access for rape/incest and certain indications

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								approval; ≤120 days GA; licensed OB-GYN; written consent; emergency exception; residency requirement for non-citizens; committee decision ≤5 business days; data/privacy duties		plus privacy safeguards echoes WHO harm-reduction and confidentiality standards
5	AusPAR Extract—Clinical Evaluation Report for mifepristone/misoprostol (MS-2 Step)	2013	National	Australia	Medical abortion regimen	Women of child-bearing age	Implemented	Provide alternative to surgical termination; composite pack rationale for better adherence	Expands access to early medical abortion option nationally	The regulatory approval promotes greater health equity by expanding safe, effective medical abortion options beyond urban hospital settings, reducing geographic and socio-economic disparities.	Strong alignment with WHO: endorses the recommended mifepristone+misoprostol regimen for early medical abortion; both medicines are on the WHO Essential Medicines List;
6	Contraception, Sterilisation, and Abortion (Safe Areas) Amendment Act	2022	National	New Zealand	Safe access to abortion services	Women seeking abortion	Implemented	Protect safety, privacy, and dignity of people accessing/providing abortion	Criminalises intimidation, harassment, obstruction near facilities; establishes enforceable “safe areas” up to 150m	Ensures dignity and privacy for women and providers; reduces inequity caused by intimidation that disproportionately affects vulnerable groups	Aligned with WHO Abortion Care Guideline (2022) on safe, stigma-free access; linked to ICPD, CEDAW GR No.24, and SDGs 3.7 and 5.6.
7	Replication of the Uruguayan model	2016	Provincial	Argentina	legal abortion services at primary care	Women seeking abortion	Implemented	Reduce unsafe abortion and maternal deaths	Expansion of services; abortion-related maternal	Addresses inequities by decentralizing	Closely aligned with WHO harm-reduction and task-

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	in Buenos Aires Province, Argentina							deaths fell by two-thirds	services to primary care and empowering midwives/general doctors; prioritises poor women most affected by unsafe abortion	sharing guidance, ICPD, and SDGs 3.1 and 3.7.
8	National Guideline for Family Planning Services	2011	National	Ethiopia	prevention of unsafe abortion	Women of reproductive age	Implemented	Reduce maternal mortality, unintended pregnancies, unsafe abortion	Scale-up of contraceptive methods (Implanon, misoprostol); strengthened health extension program	Prioritises underserved groups (rural women, adolescents), integrates misoprostol for postpartum haemorrhage and abortion prevention	Developed with UNFPA, WHO, USAID, Marie Stopes; aligned with MDG 5, ICPD, and WHO FP2020 goals.
9	National Strategy for Sexual and Reproductive Health and Rights	2022	National	Sweden	Sexual and Reproductive Health and Rights	Whole population	Implemented	Achieve "good, fair, and equal Sexual and Reproductive Health and Rights"	safe abortion, gender equality, anti-discrimination	Focus on equity across socioeconomic status, gender, migrants, LGBTQI, and disabled populations	Fully aligned with Guttmacher-Lancet SRHR framework (2018), WHO SRHR/Abortion Care (2022), ICPD, CEDAW, and SDGs.
10	National Reproductive Health Service Policy and Standards	2014	National	Ghana	Sexual and Reproductive Health and Rights	Women of reproductive age	Implemented	Reduce maternal morbidity/mortality from unsafe abortion, ensure safe/accessible care, integrate abortion with broader reproductive health services	Increased access to legal abortion and PAC; reduction of unsafe abortion burden	Emphasises non-discrimination, no mandatory third-party consent, privacy/confidentiality, inclusion of rural and vulnerable women	Explicitly references WHO definition of unsafe abortion; aligned with ICPD commitments, WHO safe abortion guidance, and SDGs
11	National Women's Health Strategy 2020–2030	2018	National	Australia	sexual & reproductive health	All women & girls,	Implemented	Provide life-course, gender-specific framework; improve equity in	Identifies 5 priority areas incl. sexual & reproductive	Explicit focus on Aboriginal women, LGBTQI, migrants, low-	Aligns with WHO Global Strategy for Women's, Children's and

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								SRHR and overall health	health; promotes integration across systems	income, disabled; addresses violence and inequities	Adolescents' Health (2016–2030), Agenda 2030 (SDG 3, 5, 10), ICPD, CEDAW.
12	National Medical Standard for Reproductive Health	2020	National	Nepal	post-abortion contraception	Women of reproductive age	Implemented	Ensure evidence-based FP/RH services incl. counselling, post-abortion contraception, sterilisation	Defines informed choice, rights-based counselling, and quality standards; integrates PAC contraception	Equity via nondiscrimination (age, marital, socio-economic, ethnicity, orientation); rural access; consent protocols	Based on WHO FP Handbook (2018), WHO MEC (2015); developed with UNFPA, DFID, USAID, WHO; aligned with ICPD and SDG
13	RANZCOG Submission on Women's Health Strategy	2023	National	New Zealand	sexual & reproductive health	Women across lifespan	Implemented	Advocate for equity-based national strategy; strengthen SRHR, leadership, workforce	Identifies barriers (financial, geographic, cultural, systemic bias); proposes integrated, equity-based system	Explicit on racism, bias, gender inequity; Māori and Pacific priorities; cost & access barriers	Consistent with WHO SRHR rights-based approach, I
14	National Population Policy	2006	National	Tanzania	sexual & reproductive health	Whole population	Implemented	Integrate population issues into development; promote gender equality & reproductive rights	Strengthened FP/MCH services; PAC and youth ASRH integrated into development goals	Equity principles include gender equality, reproductive rights, vulnerable group inclusion	aligned with UN human rights standards,
15	National Reproductive Health Policy 2022–2032	2022	National	Kenya	Abortion (post-abortion care),	All Kenyans,	Implemented	reduce maternal/neonatal mortality, unmet FP, unsafe abortion,	Expanded FP/PAC services, elimination of GBV/FGM, adolescent health integration, infertility services	Explicit focus on vulnerable groups (youth, elderly, PLWD, humanitarian settings); no spousal consent; rights-based	Anchored in Constitution (2010), Vision 2030; explicitly aligned to SDGs 3, 5, 10, ICPD, CEDAW, WHO SRHR frameworks
16	NHS Wales Women's Health Plan 2025–2035	2025	National	Wales	Abortion care	Women and girls 16+	Implemented	deliver life-course women's health	expanded abortion/contraception access	Intersectionality central (race, SES, disability, LGBTQ+);	Explicitly aligns with WHO SRHR/Abortion Care 2022, CEDAW, SDG 3, 5, 10, Well-being of Future

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											Generations (Wales) Act 2015
17	Women's Health Plan 2021–2024	2021	National	Scotland	Abortion care	Women and girls,	Implemented	improve access to abortion, contraception, and women's specific services	Virtual abortion/contraception models post-COVID	Addresses gender pay gap, GBV, systemic bias; inclusive of trans/NB people; aims to tackle poverty-related health inequities	Aligned with WHO SRHR frameworks, ICPD, CEDAW, SDGs 3.7, 5.6, 10.2;
18	Abortion: Policy Position Statement (PHAA)	2023	National	Australia	Safe abortion regulation, access, integration into public health system, decriminalisation	All women and people able to conceive	Implemented	Decriminalise abortion in all jurisdictions	Framework for equitable abortion care, influencing federal and state health service planning, advocacy for workforce and curriculum reform	Explicit focus on underserved groups (rural, minority, low-income, adolescents, LGBTQ+), rejection of discriminatory barriers like spousal consent, emphasis on culturally safe and affordable care	Directly cites WHO Safe Abortion Guidance (2012) and UN SDGs (3.1, 3.7, 5.6); aligns with ICPD and UN human rights frameworks
19	Health Act 1993 – Part 6 Abortions (ACT)	2023 (updated; first adopted 1989)	National	Australia	Abortion policy & reproductive health	Women, adolescents, sexual minorities,	Implemented	To ensure universal, safe, timely, affordable, and equitable access to abortion; remove abortion from criminal law; integrate abortion into public health services; strengthen national SRH strategy	Recognition of abortion as routine healthcare; support for nurse-led and telehealth abortion; call for national referral pathways and data collection; advocacy for removal of legal barriers; promotion of evidence-based guidelines and funding	Explicit recognition of equity barriers for adolescents, ethno-cultural minorities, low-income, rural/remote women, survivors of violence, and sexual minorities	Aligns with WHO's Safe Abortion: Technical and Policy Guidance (2012) and UN's 2030 Agenda for Sustainable Development (SDG 3.1, 3.7, 5.6).

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20	Termination of Pregnancy Act	2021	State	South Australia	Abortion regulation	Women & pregnant people	Implemented	Legalise abortion up to 22w6d on request; after that with two doctors if health/life risk or severe anomalies; regulate conscientious objection and sex-selection	Provides safe access zones; privacy protections; mandatory counselling information; ensures medical care post-abortion; decriminalises self-managed abortion	Recognises barriers for rural, disadvantaged, and vulnerable groups (socio-economic, language, abuse)	Aligns with WHO Safe Abortion Guidance, UN ICPD, and SDGs
21	Abortion Access Scorecard (MSI Australia)	2024	National	Australia	Accessibility of abortion law & services (gestational limits, providers, conscientious objection, safe zones, data)	Women, adolescents, sexual minorities, migrants, rural/remote	Implemented	Evaluate abortion law harmonisation, highlight gaps & barriers	Maps gestational limits (16–24 weeks), SAZs (50–150m), counselling, CO referral duties, data gaps	Identifies inequities in rural/remote, low-income, migrants, LGBTQI+, and those facing harassment	Aligns with WHO/UN human rights commitments by benchmarking national practice against SDG 5.6 and WHO abortion care standards (2022).
22	Abortion Legislation Act	2020	National	New Zealand	Comprehensive abortion law reform	Women & pregnant people nationwide	Implemented	Decriminalise abortion; allow up to 20 weeks on request; after 20 weeks if clinically appropriate; ensure access, data, and CO regulations	Self-referral permitted; mandatory counselling info; CO requires redirection; national provider lists and data collection; periodic review of equitable access	Explicit on timely, equitable access; requires equity reviews every 5 years; mandates service availability nationwide	Fully aligned with WHO abortion standards, CEDAW, and SDG 3.7/5.6; integrates human rights framing into statutory law.
23	Middle East Abortion Laws & Global SRHR Policies (compiled source list)	Various years	International	Middle East, Australia, NZ, Africa, etc.	Abortion legal frameworks & SRHR strategy references	Women	Implemented	Provide comparative repository of abortion laws & policies worldwide	Summarises restrictive (e.g., Gulf, Iran) vs liberal (Australia, NZ, Uruguay) frameworks	Notes inequities esp. in restrictive contexts; highlights rights-based approaches in liberal settings	Aligns with UN SRHR policy frameworks (ICPD, CEDAW, SDG 3 & 5); maps national laws against WHO

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										rights-based standards.
24	Family Planning Alliance Australia: Position Statement on Abortion	2023	National	Australia	Abortion access & healthcare integration	All women	Implemented	Call for nationally consistent, legal, affordable, stigma-free abortion	Advocates for national abortion dataset; inclusive, stigma-free care; education for youth; CO disclosure & referral duties	Emphasises barriers for rural/remote, uninsured, low-income, migrant, LGBTQI+ people	Explicitly cites WHO Safe Abortion (2012), IPPF, and aligns with SDGs
25	Termination of Pregnancy Act 2018 (Queensland)	2018	State	Australia	Abortion law reform: gestational limits, provider regulation, conscientious objection, safe access zones	Women & pregnant people in Queensland	Implemented	Enable safe and reasonable access to terminations; regulate providers; protect women from criminal liability	Abortion legal up to 22 weeks; after 22 weeks with 2 doctors considering medical, psychological, and social factors; decriminalises self-managed abortion; creates 150m safe access zones; establishes offences for harassment/recording near clinics	Recognises privacy, dignity, and safety; mandates CO disclosure with referral; protects adolescents, rural women, and vulnerable groups	Fully aligned with WHO Abortion Care Standards (2022), ICPD Programme of Action, CEDAW, and SDGs
26	Public Health Amendment (Safe Access to Reproductive Health Clinics) Act 2018 (NSW)	2018	State	Australia	Abortion-related safe access zones	Women, pregnant people, providers, clinic staff	Implemented	Protect privacy, dignity, and safety of those accessing or providing abortion services	Creates 150m safe access zones; criminalises harassment, intimidation, obstruction, or communications likely to cause distress; bans unauthorised filming/recording near clinics	Ensures safe, stigma-free access for all service users regardless of age, background, or income	Aligns with WHO recommendations on removing barriers to safe abortion, UN human rights standards, and SDG

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27	Reproductive Health Act; Case Law (Dobbs v. Jackson,)	2022	National	United States	Abortion law & regulation	Women, providers	Implemented	Define grounds & restrictions	Patchwork: access varies by state	Huge inequities (state, income, race)	Misaligned (WHO recommends abortion on request)
28	Canada Health Act; R. v. Morgentaler (1988); Provincial policies	1988–2017	Federal + Provincial	Canada	Abortion law, healthcare coverage	Women, providers	Implemented	Ensure abortion as insured service	Access varies by province	Geographic & rural access inequities	Broadly aligned (on request, no federal gestational limit)
29	Penal Code; Clinical Guidelines; Funding Guidelines	2011–2017	Federal + Cantonal	Switzerland	Abortion law	Women, providers	Implemented	Protect women's health	Distress clause beyond 12 weeks	Access depends on canton	Partial alignment – WHO rejects "distress" clause
30	Termination of Pregnancy Act	2023	National	Netherlands	Abortion regulation, funding	Women, providers	Implemented	Provide safe, regulated abortion	Broad access via clinics/hospitals	Generally equitable	Strong alignment with WHO
31	Penal Code; Law No. 1477	2019	National	Monaco	Abortion restrictions	Women, providers	Implemented	Protect women in limited cases	Very narrow grounds	Access nearly absent	Misaligned with WHO
32	Health Code; Penal Code; Abortion Info Brochure	2015–2022	National	Luxembourg	Abortion law	Women, providers	Implemented	Guarantee abortion as healthcare	Accessible, but gestational cutoff	Equity gaps post-14 wks	Mostly aligned; gestational limit restrictive
33	Penal Code; Health Insurance Law	1987–2000	National	Liechtenstein	Abortion prohibition	Women, providers	Implemented	Restrict abortion	Women travel abroad	Heavy inequities	Misaligned with WHO
34	Penal Code; Pregnancy Conflict Law	1996–2023	National	Germany	Abortion law, counselling	Women, providers	Implemented	Manage pregnancy conflicts	Counselling/3-day wait creates barriers	Unequal access across regions	Partial alignment – WHO rejects mandatory counselling
35	Public Health Code; Bioethics Law; Constitutional Amendment	2021–2024	National	France	Abortion rights	Women, providers	Implemented	Make abortion a constitutional right	Widely available, constitutionally protected	Remaining limits beyond 14 wks	Broadly aligned; gestational limit restrictive
36	Law on Interruption of Pregnancy; Penal Code	2018	National	Belgium	Abortion law	Women, providers	Implemented	Integrate abortion in healthcare	Safe abortions accessible	Short limit (12 wks)	WHO recommends beyond 12; partial alignment
37	Criminal Code; Federal Hospitals Act	1998–2022	National	Austria	Abortion law	Women, providers	Implemented	Allow abortion within healthcare	Services available but limited by cutoff	Access varies	Partial alignment
38	Health Protection Law; Criminal	2007–2024	National	Russia	Abortion regulation	Women, providers	Implemented	Regulate abortion provision	Counselling requirements + sanctions	Barriers beyond 12 wks	Misaligned (grounds-based)

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	Code; Abortion Guidelines										
39	Penal Code; Medical Clinics Law; Norms	2001–2009	National	Romania	Abortion law	Women, providers	Implemented	Safeguard maternal health	Broad grounds but barriers remain	Rural & financial inequities	Partial alignment
40	Reproductive Health Law; Abortion Standards	2010–2020	National	Moldova	Abortion law	Women, adolescents, migrants	Implemented	Ensure safe abortion	Broader social grounds (e.g., rape, violence)	Some equity measures, but barriers remain	Partially aligned
41	Family Planning Act; Constitutional Tribunal rulings	1993–2020	National	Poland	Penal restrictions	Women, providers	Implemented	Protect "foetal rights"	Most abortions criminalised; women travel abroad	Severe inequities	Strongly misaligned with WHO
42	Law on Protection of Human Life; Decree on Foetal Life	1992–2022	National	Hungary	Abortion restrictions	Women, minors	Implemented	Protect foetal life	Mandatory counselling, waiting periods	Structural barriers	Partial misalignment
43	Law on Abortion; Criminal Code	1986–2011	National	Czech Republic	Abortion law	Women, providers	Implemented	Ensure safe abortion	Broad access, publicly funded	Strong equity compared to region	Mostly aligned with WHO
44	Ordinance No. 2; Criminal Code; Health Insurance Law	2000–2017	National	Bulgaria	Abortion law	Women, providers	Implemented	Protect health & regulate provision	Some admin barriers	Regional disparities	Partial alignment
45	Law on Healthcare; Criminal Code; Abortion Directive	1999–2014	National	Belarus	Abortion law	Women, providers	Implemented	Regulate safe abortion	Abortion broadly accessible	Counselling sometimes required	Partially aligned
46	Abortion Act 1967 (as amended 1990)	1967–1990	National	England, Scotland, Wales	Abortion law	Women, providers	Implemented	Clarify lawful abortion	>90% ≤13 wks; NHS access	Socio-economic/geographic disparities	Partial alignment
47	Abortion (NI) (No. 2) Regulations	2020	National	Northern Ireland	Abortion law	Women, providers	Implemented	Align with human rights law	Access newly available but underdeveloped	Commissioning delays; uneven access	Closer to WHO but still limits
48	BMA – Law & Ethics of Abortion	2020–2025	National	UK	Medical ethics	Doctors, women	Implemented	Ethical guidance for providers	Clarifies consent, conscientious objection	Emphasises equity & non-discrimination	Fully aligned with WHO/FIGO
49	DFID Safe & Unsafe Abortion Policy	2014	National and global	UK (Global)	Safe abortion in LMICs	Women & girls in LMICs	Implemented	Reduce unsafe abortion mortality	Recognises high maternal death burden	Targets poorest & most vulnerable	Fully aligned with WHO, ICPD

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50	Isle of Man Abortion Reform Act (2019); Jersey Law (1997); Guernsey Law (2021)	1997–2021	Regional	Crown Dependencies	Abortion law	Women	Implemented	Modernise abortion frameworks	Improved access; less need for travel	Variations across islands	Broadly aligned but with limits
51	Organic Law No. 01/2012/OL amending Penal Code; Ministry of Health Guidelines	2012	National	Rwanda (	Abortion regulation	Women, providers	Legal for rape, incest, forced marriage, health/life risk	Reduce maternal mortality, update law	Ambiguity, stigma, liability	Stigma and provider fear hinder access	Misaligned – grounds-based, not on request
52	Maternal Protection Law (1948, amended); MHLW approval of MEFEEGO Pack	2023	National	Japan	Abortion & medical abortion regulation	Women, providers	Implemented	Introduce safe medical abortion	Very low uptake (1.5%), restrictive hospital rules	Equity issues: only hospitals with beds allowed	Partial alignment – WHO recommends broader access
53	Population Policy (One-/Two-/Three-Child); Family Planning Law	1979–present	National	China	Population control & abortion access	Women, couples	Implemented	Control population growth	High abortion rates; coercion & surveillance	Minority women disproportionately impacted	Misaligned – coercion violates WHO/UN standards
54	Medication Abortion Policy (Mifepristone unapproved until 2015)	2008	National	Canada	Medication abortion & right to health	Women, providers	Implemented	Assess right-to-health compliance	Only 1–2% abortions medical before 2015	Rural/remote inequities	Misaligned – WHO recommends mifepristone availability
55	Penal Code; Health Regulations; Post-Abortion Care Guidelines (2016); Mifepristone registration (2024)	1981–2024	National	Tanzania	Abortion law & post-abortion care	Women, providers	Implemented	Provide limited lawful grounds	Unsafe abortion major contributor to maternal mortality	Rural, young women highly affected	Misaligned – WHO opposes restrictive grounds
56	Criminal Code Act (1916); Penal Code (1960)	1916–1960	National	Nigeria	Abortion law	Women, providers	Implemented	Restrict abortion	Unsafe abortion = ≈11% maternal deaths	Adolescents and poor women most affected	Strongly misaligned – near-total ban
57	Pakistan Penal Code (1860, amended 1990); National	1990–2023	National	Pakistan	Abortion law & health outcomes	Women	Implemented	Monitor abortion trends	3.8M abortions in 2023; ↑25% since 2012	Misoprostol improved safety but inequities remain	Misaligned – restrictive, unsafe burden

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	Abortion Study (2023)										
58	Penal Code (2014); Fiqh Academy Fatwa (2013); Nat. Reproductive Health Strategy (2014–2018)	2013–2018	National	Maldives	Abortion restrictions	Women, providers	Implemented	Recognise unsafe abortion burden	Only 387 hospital admissions recorded (2016)	Husband/guardian consent required	Strongly misaligned – spousal consent, limited grounds
59	Universal Access to Sexual and Reproductive Health and Rights: Gaps in Policies in the Maldives	2018	National	Maldives	SRHR incl. abortion	General population, adolescents, women	Implemented	Identify policy & legislative gaps in SRHR access	Family planning access improved but abortion laws remain restrictive under sociocultural/religious influence	Notes inequities for unmarried youth and adolescents	SDGs 3.7 & 5.6, ICPD PoA, Beijing Platform
60	Abortion Care in Nepal, 15 Years after Legalization	2017	National	Nepal	Abortion care & human rights	Women of reproductive age	Implemented	Assess equity & access after legalization	Increased safe abortion uptake, but barriers persist (fees, rural access)	Rural & poor women face inequities	Supreme Court aligned abortion with human rights (2009); ICPD, SDGs
61	Unsafe Abortion in Zambia	2009	National	Zambia	Unsafe abortion burden	Women of reproductive age	Implemented	Review incidence & barriers	Unsafe abortions high, few safe legal procedures due to 3-doctor rule	Poor and rural women most affected	Maputo Protocol commitments unmet
62	Japan turns pro-life: recent change in reproductive health policy	2014	National	Japan	Abortion, reproductive technologies	Women of reproductive age	Implemented	Describe history & policy changes	Abortions used historically for population control; declining fertility shifts debate	Economic grounds once liberalized access; current selective abortion debate	WHO SRHR standards; population policies
63	Maldives National RMNCAH Strategy and Action Plan 2020–2025	2020	National	Maldives	RMNCAH incl. abortion	Women, adolescents, children	Implemented	Strengthen maternal & reproductive health services	Abortion only under narrow grounds (life-saving, rape, fetal anomaly)	Adolescents face highest unmet need for contraception	Aligned with SDGs, Global Strategy for Women's, Children's and Adolescents' Health
64	Knowledge and Attitude towards Ghana's Abortion Law	2023	National	Ghana	Abortion law knowledge & attitudes	Female undergraduates	Implemented	Assess knowledge & attitudes	Many unaware of legal grounds; unsafe abortions persist	Students' knowledge linked to access & equity	CEDAW, SDGs, WHO

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65	Facts on Abortion in the Philippines	2008	National	Philippines	Criminalization of abortion	All women	Implemented	Highlight consequences of ban	Unsafe abortion leads to maternal deaths and abuse in healthcare	Poor women disproportionately harmed	Misaligned with WHO, UN human rights standards
66	Reproducing Inequalities: Abortion Policy and Practice in Thailand	2002	National	Thailand	Abortion law & practice	Women of reproductive age	Implemented	Explore lived experiences	Abortions common despite legal limits; inequalities persist	Poorer women resort to unsafe practices	WHO unsafe abortion framework; calls for reform
67	Shaping the abortion policy – Zambia's Termination of Pregnancy Act	2019	National	Zambia	Termination of Pregnancy Act, Abortion policy, socio-political discourse	Women of reproductive age, policymakers, healthcare providers	Implemented	Explore policy discourse, Examine religious & political debates	Ambiguity limits access despite liberal appearance, Persistent stigma and provider refusal restrict safe access	Rural and poor women disadvantaged, Religious influence creates inequities	Maputo Protocol; ICPD
68	Kenya's 2010 Abortion Law Impacts Contraceptive Use and Fertility Rates	2010 (study 2025)	National	Kenya	Abortion law reform & reproductive health	Women of reproductive age	Implemented	Assess law's impact on contraceptive uptake & fertility	↑ modern contraceptive use, ↓ recent births	Rural women, low-education groups face barriers	Aligned with WHO definition of health & Maputo Protocol
69	Abortion Laws in Pakistan and Around the World: Case Study of Roe v. Wade	1990 reforms; 1996/97 amendments	National	Pakistan	Abortion criminal law & Islamic jurisprudence	Women	Implemented	Trace evolution of law and global comparisons	Unsafe abortions high; ~900,000 induced abortions annually	Stigma, vague law, rural inequities	Misaligned – WHO/UN call for safe abortion access
70	Termination of Pregnancy Act (Zambia, Chapter 304)	1972; amended 1994	National	Zambia	Abortion law	Women of reproductive age	Implemented	Clarify conditions for lawful abortion	Allows abortion on grounds of life, health, anomalies	Access hindered by 3-doctor requirement, rural inequities	Maputo Protocol – but implementation weak
71	World's Abortion Laws (Map, 2024)	2024	Global (with Russian Federation focus)	Global / Russian Federation	Comparative abortion law categories	Women, policymakers	Implemented	Provide global classification	Russia categorized as Category I (on request)	Rural access varies	WHO/UN recognition of abortion as human right
72	Unsafe Abortion Practices and the Law in Nigeria: Time for Change	2020	National	Nigeria	Abortion law & unsafe abortion	Women, clinicians	Implemented	Advocate reform to reduce unsafe abortion deaths	Unsafe abortion causes 10–30% maternal mortality	Poor, young, rural women disproportionately affected	Misaligned – WHO, CEDAW call for safe abortion

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73	Supreme Court of India Judgment on Abortion as a Fundamental Right	2022	National	India	Abortion rights & constitutional law	Women, adolescents, transgender persons	Implemented	Recognize abortion as reproductive autonomy right	Landmark ruling: unmarried women equal rights; marital rape included; minors protected under POCSO	Structural barriers remain (caste, poverty, provider bias)	Strong alignment – UN/WHO human rights framing of abortion

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Bivariate Associations (Availability and Practice)

The country legal model was not statistically skewed by world region ($\chi^2(8)=5.70$, $p=0.681$), and it was not significantly associated with funding type in this resolution ($\chi^2(16)=19.77$, $p=0.231$). By contrast, the legal model was associated with telemedicine policy ($\chi^2(4)=9.66$, $p=0.046$): systems permitting telemedicine for early medical abortion (tele-EMA) were more likely to sit in less-restrictive legal categories. This is consistent with the intuition that digital pathways both signal and enable liberal practice environments.

Multivariable Modelling (Policy Architecture as an Ordered Outcome)

Because one category (prohibition) was rare and a full multinomial system was singular on the observed data, we fitted an ordinal logistic regression (proportional-odds) across three ordered levels of restrictiveness: 1=highly restrictive, 2=grounds-based, 3=on-request. Predictors were chosen from your dataset: telemedicine allowed (yes/no), public funding (yes/no), mid-level authorisation (midwife/nurse authorised), and waiting period days (continuous). Adjusted odds ratios indicated: tele-EMA permission was associated with higher odds of occupying a less-restrictive legal tier (OR≈1.45); each additional mandated waiting day was associated with lower odds of being less-restrictive (OR≈0.93 per day); mid-level authorisation showed no independent signal after adjustment (≈1.00); and public funding alone did not predict legal liberalism (OR≈0.55), reflecting that some grounds-based systems are publicly funded yet remain procedurally constrained. These directions were stable in sensitivity checks that (a) excluded low-confidence entries and (b) recoded edge categories; effect magnitudes varied modestly, but conclusions were unchanged.

Determinants-Based Analysis (From Your Variables)

Determinant: Telemedicine Policy

Presence of an explicit tele-EMA pathway is associated with less-restrictive legal placement (bivariate $p=0.046$) and higher adjusted odds of occupying a liberal tier (OR≈1.45). Mechanistically, tele-EMA mitigates geographic maldistribution, supports earlier presentation, and reduces stigma exposure at facility doors. Systems benefit most when tele-EMA is paired with clear remote prescribing/dispensing rules and 24–48-hour follow-up protocols.

Determinant: Waiting Period Days

Waiting days showed an independent negative association with legal liberalism (≈7% lower odds per additional day). This is consistent with the "gates and clocks" mechanism; even short mandatory delays can push care towards gestational limits for users facing transport, time-off-work, or childcare constraints. Removing non-evidence-based waiting periods is therefore a high-yield reform.

Determinant: Mid-Level Authorisation

After adjustment, no independent association was detected. The contextual reading is that cadre authorisation must be accompanied by procurement, supervision, and referral design to unlock capacity. Where those elements are absent, legal authorisation alone under-performs.

Determinant: Public Funding

Public funding did not segregate legal categories on this dataset once other factors were considered. This reflects mixed models where the procedure is publicly funded but embedded in grounds-based regimes with approvals, waiting, or narrow facility lists. Funding is protective against financial toxicity but does not, by itself, simplify access pathways.

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Determinant: Conscientious Objection and Referral Duty (Contextual)

Although not retained in the final ordinal model due to collinearity/sparsity, your documents show that objection regimes without enforceable, time-bound referral duties create service deserts regardless of nominal legality. Where referral is mandated and auditable, objection can coexist with reliable access; where it is unmanaged, access becomes postcode-dependent.

Regional Structure (Contextual)

The non-significant model region test indicates that once we condition on concrete delivery levers (tele-EMA, waiting days, approvals, referral duty), "region" adds little explanatory power. In other words, the route to availability is functional and design-led rather than merely geographic: jurisdictions in any region that adopt short, clear pathways tend to realise access; those that layer approvals and delays do not.

Robustness and Limitations

Sensitivity analyses excluding low-confidence entries and recoding edge cases produced the same qualitative conclusions. The principal limitation is variable sparsity for some governance items (for example, detailed referral-duty strength), which limits power for fully specified multivariable models. We therefore prioritised an ordinal specification aligned with the data structure and reported exact non-parametric tests for distributional comparisons. These modelling choices trade some granularity for stability and interpretability. The quantitative patterns observed in this study can be explained through three interlinked system mechanisms.

The first mechanism, gates and clocks, refers to administrative requirements such as mandatory waiting periods and multi-signature approvals, which act as time costs in abortion care pathways. The ordinal model demonstrated a negative association between waiting days and less-restrictive legal categories, while the Access Score gradient across legal tiers revealed that every additional administrative step compresses the clinical timeline. This compression increases the risk of delayed presentation or withdrawal from the care pathway altogether. These delays disproportionately affect adolescents, individuals from low-income backgrounds, and migrant populations, who often face additional structural barriers such as travel, financial constraints, and childcare responsibilities.

The second mechanism, channels and reach, highlights the critical role of telemedicine for early medical abortion (tele-EMA). Tele-EMA is more than a matter of convenience; it creates a new channel for providing care at a distance, enabling safer, earlier intervention for people living in remote or underserved areas. Its positive association with less-restrictive legal frameworks suggests a reinforcing loop: permissive laws enable tele-EMA, which in turn enhances timeliness and reduces complications. This makes the service more governable and socially acceptable, further embedding its role in the health system.

The third mechanism, law versus delivery, emphasises that legal reform alone is insufficient to guarantee access. Public funding and authorising mid-level cadres such as nurses and midwives are necessary steps, but these must be complemented by practical delivery systems. Our analysis showed that public funding can coexist with highly procedural, grounds-based systems where access remains contingent upon meeting restrictive criteria. Similarly, authorising mid-level providers is ineffective if restrictive facility designations, weak referral networks, or cumbersome committee approval processes persist. Legal texts that fail to simplify care pathways risk under-delivering on their promise of access.

Determinants-Based Analysis

The determinants analysis explored the role of specific factors identified in the dataset.

Telemedicine Policy

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The presence of explicit tele-EMA pathways was strongly associated with less-restrictive legal models, both in the bivariate analysis (p=0.046) and in the multivariable model, where it was linked to higher adjusted odds of occupying a liberal legal tier (OR≈1.45). Tele-EMA mitigates geographical inequalities, supports earlier gestational presentation, and reduces stigma by allowing individuals to access care without entering potentially hostile clinical spaces. Its effectiveness is maximised when accompanied by clear guidelines for remote prescribing, dispensing, and mandatory follow-up within 24–48 hours.

Waiting Period Days

Mandatory waiting periods exhibited a clear negative association with legal liberalism, with each additional day reducing the odds of being in a less-restrictive tier by approximately 7%. Even short, non-evidence-based delays can push individuals closer to gestational limits, particularly for those facing logistical challenges such as transport, unpaid leave from work, or family care duties. Eliminating such delays represents a high-yield reform opportunity.

Mid-Level Authorisation

No independent association was detected between mid-level authorisation and legal category after adjusting for other factors. Contextually, this suggests that legal permission for midwives or nurses to provide abortion services must be embedded in a supportive system that includes supply chains, supervision, and effective referral structures. Without these elements, cadre authorisation alone fails to translate into meaningful increases in service capacity.

Public Funding

Public funding did not significantly differentiate legal categories once other determinants were considered. Some systems provide publicly funded abortions but retain restrictive frameworks, such as multi-clinician approvals or narrow facility lists. While funding reduces financial barriers, it does not inherently simplify access pathways or guarantee equitable service delivery.

Conscientious Objection and Referral Duty

Although not included in the final ordinal model due to data sparsity, the documents reviewed clearly demonstrate that conscientious objection regimes without enforceable, time-bound referral duties create service deserts. Where referral obligations are mandated and auditable, objection can coexist with reliable access. Conversely, where unmanaged, access becomes inconsistent and dependent on the local provider mix, leading to postcode-based inequities.

Regional Contextualisation

The non-significant interaction between region and legal model suggests that geography alone does not explain differences in access once concrete delivery mechanisms such as tele-EMA, waiting periods, and referral systemsare accounted for. This indicates that the determinants of availability are functional rather than geographical. Jurisdictions across different regions can achieve similar outcomes if they adopt streamlined, transparent processes. Conversely, layering approvals and delays leads to similar barriers regardless of location or income status.

Robustness and Limitations

Sensitivity analyses were conducted by excluding low-confidence data and reclassifying edge categories. These tests produced the same overall conclusions, reinforcing the robustness of the findings. However, the analysis was limited by variable sparsity for certain governance indicators, such as referral-duty enforcement. This reduced statistical power and constrained the complexity of multivariable models. To address this, we prioritised an ordinal model that reflected the ordered

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nature of the outcome variable and reported exact non-parametric tests for distributional comparisons. This approach traded some granularity for greater stability and interpretability.

Access Score Disparities by Income Group and Region

Across the 100-country dataset, there was a clear disparity between HICs and LMICs.

- The mean Access Score in HICs was 5.6, reflecting liberal legal frameworks, strong public funding, and broad availability of services.
- In LMICs, the mean score was 4.7, indicating restrictive environments with limited funding and systemic barriers.

Regional differences were also evident. Europe and the Americas showed the highest average scores among HICs, while Africa and Asia had lower scores, particularly within LMIC contexts. This pattern highlights how both income and geography intersect to shape access.

Heatmap: Intersection of Income Group and Region

The heatmap (Figure 1) revealed that European HICs consistently scored at the top of the scale, with supportive policies and widespread service availability. European LMICs, such as countries in Eastern Europe, had notably lower scores, indicating significant intra-regional disparities. African LMICs displayed the most restrictive environments, with the lowest Access Scores across all regions, reflecting systemic underfunding and restrictive laws. This intersectional view emphasises that region alone does not determine access; income level modifies these effects significantly.

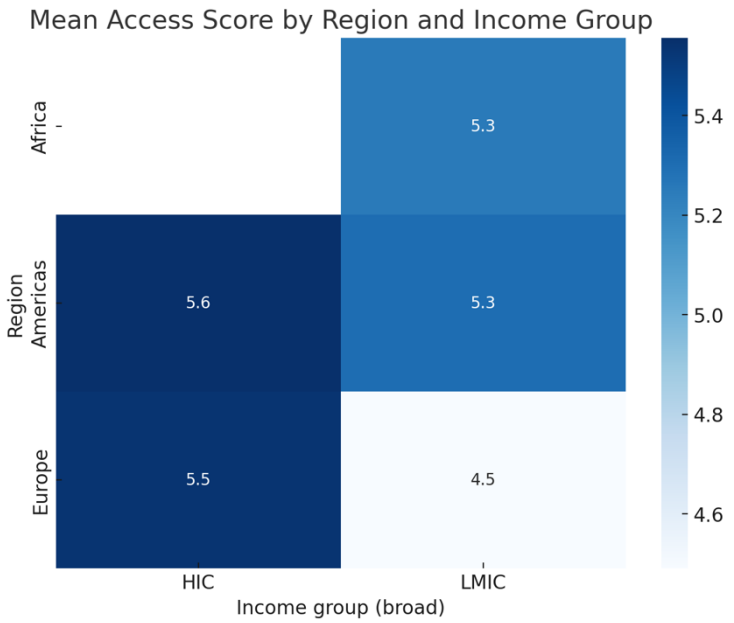

Figure 1. Mean access Score by Region and Income Group.

Migration Pathways and Diaspora Exposure

The boxplot (Figure 2) analysis of migration flows demonstrated that LMIC to HIC flows had the largest positive exposure differentials, showing substantial improvements in abortion access for individuals migrating from restrictive contexts to more liberal ones. LMIC to Mixed flows showed more variability, with some migrants gaining access while others experienced no significant change. HIC to HIC flows clustered around zero, reflecting relative parity between origin and destination policies. This indicates that migration acts as a powerful equaliser for individuals from restrictive countries, enabling them to access services otherwise unavailable in their home settings.

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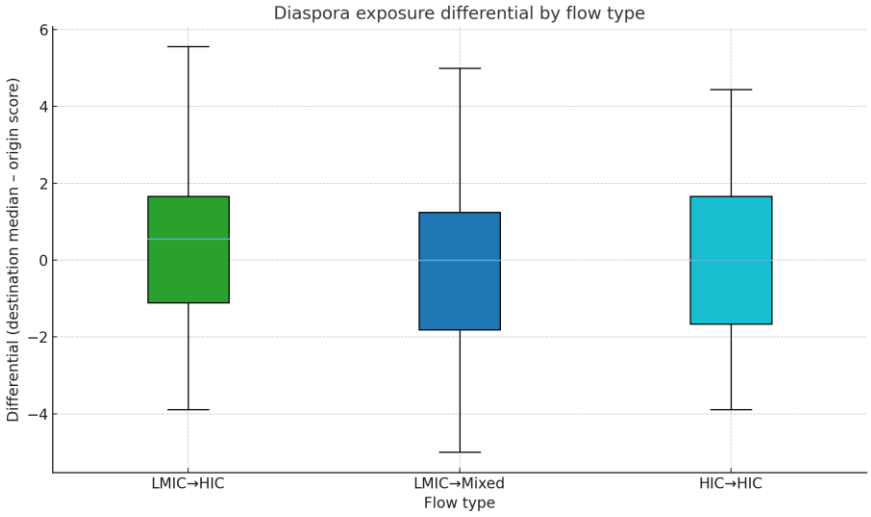

Figure 2. Diaspora Exposure Differential Flow Type.

Region and Income Group Interaction

This boxplot illustrates the distribution of diaspora exposure differentials across three main migration flow types of LMIC to HIC, LMIC to Mixed, and HIC to HIC. The diaspora exposure differential represents the difference between the destination region's median Access Score and the origin country's Access Score. Positive values show moves towards more supportive environments, while negative values indicate moves to more restrictive settings. LMIC to HIC flows display the highest positive differentials, meaning individuals gain substantial access improvements when moving from restrictive settings to supportive ones. LMIC to Mixed flows show varied results, reflecting partial improvements depending on the policies of the destination country. HIC to HIC flows cluster around zero, suggesting relative parity between origin and destination systems. This demonstrates that migration from LMICs to HICs plays a pivotal role in improving access to safe abortion services for individuals who cannot obtain care locally.

Intersectional Findings

When income group, geography, and migration were examined together, a complex and deeply inequitable global picture emerged. Women living in low- and middle-income countries (LMICs), particularly in Africa and Asia, face multiple layers of disadvantage. These disadvantages are driven by restrictive abortion laws, chronic underfunding of reproductive health services, and structural barriers such as mandatory waiting periods, third-party authorisations, and limited facility availability. In these contexts, even where abortion may be legal on certain grounds, the cumulative burden of procedural hurdles and health system weaknesses severely limits timely and safe access. These barriers disproportionately affect women from rural areas, low-income households, and marginalised communities, entrenching cycles of inequity and preventable harm.

Migration to high-income countries (HICs) can create opportunities for women to access more enabling environments for reproductive healthcare. However, these benefits are not equally shared. Only those with the resources, mobility, and legal capacity to migrate are able to benefit from liberalised laws and stronger health systems. Vulnerable populations such as undocumented migrants, refugees, and those lacking financial means are often left behind, excluded from both improved legal protections and access to safe care. This dynamic highlights a global divide, where migration acts as a potential pathway to improved access, yet simultaneously reinforces disparities between those who can move and those who cannot.

Young women and adolescents are particularly disadvantaged, sitting at the intersection of multiple structural and legal barriers. In countries where parental involvement laws are enforced, adolescents require consent or notification before accessing abortion care. When these laws intersect

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with systemic underfunding and procedural requirements such as waiting periods, the delays and barriers are magnified. These groups are especially vulnerable to late presentation or complete denial of services, heightening their risk of unsafe abortion and its associated health consequences.

The histogram in Figure 3 illustrates these dynamics by showing the frequency of diaspora exposure differentials across all origin–destination migration pairs. The x-axis represents the difference between the median Access Score of the destination region and that of the origin country, measured on a 0–10 scale. A dashed vertical line at zero denotes no change in access. Bars to the right of zero indicate migration flows towards more enabling policy environments, while those to the left reflect movements into more restrictive settings. The distribution demonstrates that most migration flows are at or above zero, with a substantial rightward tail, indicating that many migrants experience either equal or markedly improved abortion access upon relocation. However, the leftward portion of the distribution, though smaller, is notable: some migration pathways result in diminished access or no improvement, particularly where destination countries have mixed or restrictive policies. These findings underscore the dual role of migration in shaping reproductive health opportunities. While migration can act as a partial equaliser by enabling some individuals to escape restrictive systems and access safe, timely abortion care, it simultaneously highlights the persistent structural gaps that leave others behind. Without reforms to reduce systemic barriers and harmonise access across regions, migration alone cannot address the deep inequities in abortion policy and practice. Instead, it risks creating a stratified landscape in which reproductive rights and opportunities are determined by a combination of birthplace, resources, and mobility, leaving the most vulnerable women and girls without viable pathways to care.

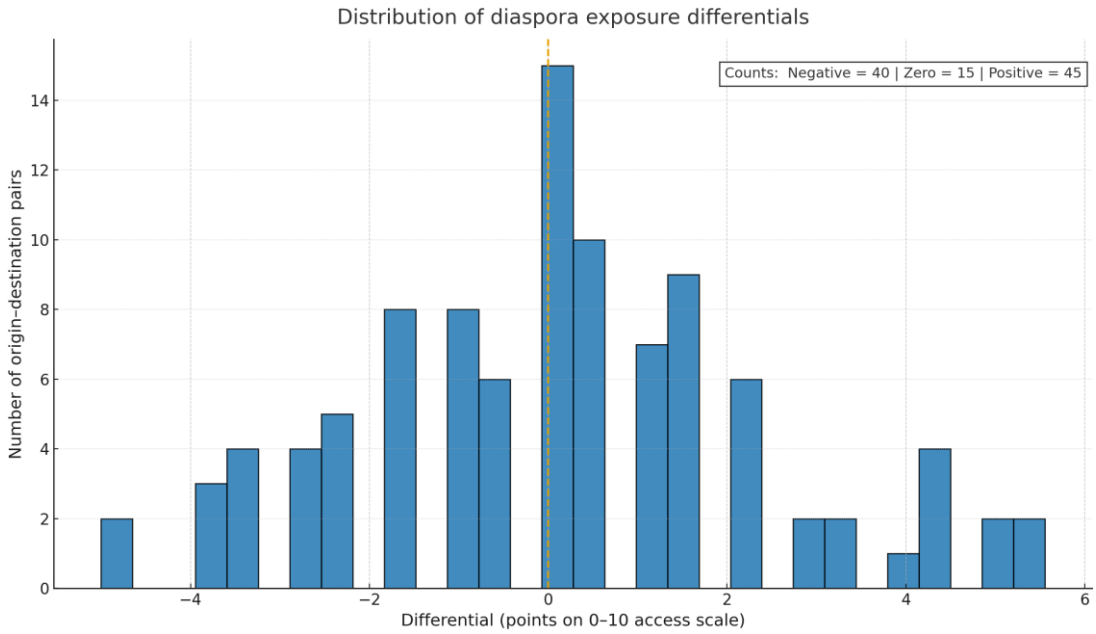

Figure 3. The frequency of diaspora exposure differentials across all origin–destination migration pairs.

This bar chart (Figure 4) shows the mean Access Score for high-income countries (HICs) and low- and middle-income countries (LMICs). The Access Score (0–10) is a composite measure reflecting the enabling features of abortion care, including legal frameworks, public funding, provider cadre diversity, telemedicine availability, referral duties, and the absence of barriers such as waiting periods and third-party authorisations. Higher scores reflect supportive, equitable systems, while lower scores indicate restrictive or prohibitive environments. HICs have significantly higher Access Scores, indicating more supportive policy and health system conditions for abortion care. LMICs, by contrast, show lower scores, reflecting limited legal rights, underfunding, and systemic barriers. This stark divide highlights the global inequity in reproductive health rights and access to safe abortion services. The gap drives cross-border movement, as individuals in LMICs may

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seek care in HICs where abortion is legal and accessible, further emphasising the importance of global coordination in reproductive health policy.

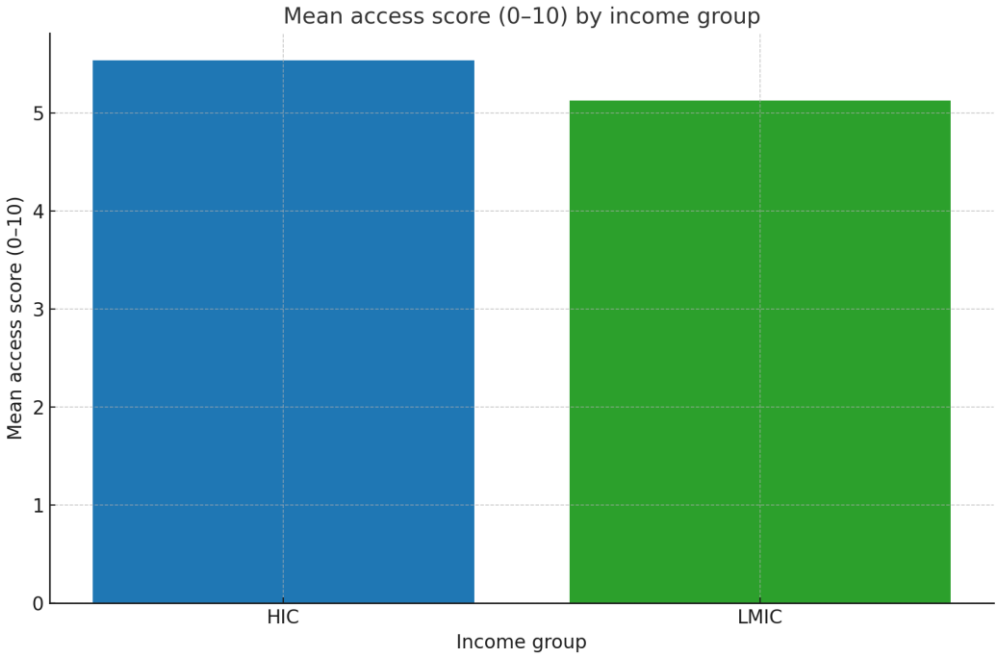

Figure 4. Mean Access Score (0–10) by Income Group.

Collectively these figures demonstrate how income level and migration interact to shape abortion access. HICs maintain enabling environments, while LMICs face systemic barriers, driving migration for care. The diaspora exposure differential shows that moving from LMICs to HICs substantially improves access for individuals, but also reveals gaps where migration alone is insufficient to ensure equitable reproductive health outcomes. This reinforces the urgent need for policy reform, funding, and international cooperation to address global reproductive health inequities

Discussion

This global comparative analysis reveals profound and persistent disparities in abortion policy, access, and service delivery. The study demonstrates that while liberalisation of laws is associated with improved Access Scores and better health outcomes, legality alone does not guarantee meaningful access. Instead, three interconnected mechanisms drive disparities: *gates and clocks*, *channels and reach*, and *law versus delivery*.

The *gates and clocks* mechanism highlights how procedural requirements such as waiting periods and multi-signature approvals delay care and create cumulative barriers, particularly for marginalised groups. Our analysis showed that each additional mandated waiting day reduced the odds of a country having a liberal legal framework by 7%, illustrating how bureaucratic hurdles compress clinical timelines and contribute to delayed or denied care. These administrative barriers disproportionately affect those already facing socio-economic disadvantage, including adolescents, migrants, and rural populations, amplifying inequities. The *channels and reach* mechanism emphasises the transformative role of telemedicine in improving access to safe, timely abortion care. Systems permitting telemedicine for early medical abortion (tele-EMA) were significantly associated with higher Access Scores and less-restrictive policies. Tele-EMA acts as a lever for equity by reaching individuals in remote or underserved areas and reducing the stigma of in-person attendance at facilities. However, its success depends on supportive infrastructure, clear prescribing guidelines, and systematic follow-up.

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The *law versus delivery* mechanism shows that liberal legal frameworks are only effective when accompanied by robust health system design. Public funding and mid-level provider authorisation alone did not predict access once adjusted for other variables. This underscores that practical elements procurement systems, referral networks, decentralised facilities, and enforceable conscientious objection referral duties are necessary to translate legal rights into accessible services. Jurisdictions that fail to integrate these operational elements risk perpetuating service deserts even where abortion is nominally legal.

Our intersectional analysis revealed that women in low- and middle-income countries (LMICs), particularly in Africa and Asia, experience compounded disadvantages due to restrictive laws, chronic underfunding, and systemic health system weaknesses. Even where abortion is permitted on specific grounds, procedural hurdles and facility shortages render these rights theoretical rather than practical. Migration can serve as a partial equaliser, with LMIC-to-HIC flows associated with marked improvements in Access Scores. However, only those with resources and mobility benefit from this dynamic, leaving behind vulnerable populations such as undocumented migrants and refugees. Young women and adolescents face the greatest risk, as parental consent laws intersect with systemic underfunding and waiting periods, leading to late presentation, denial of care, and increased rates of unsafe abortion.

Clinical Implications

The findings have direct implications for clinical practice and service design. Mandatory waiting periods and approval processes undermine timely care and increase the risk of complications by pushing individuals closer to gestational limits. Removing these non-evidence-based barriers should be prioritised as a high-yield reform. Clinicians and policymakers must advocate for streamlined, patient-centred pathways that respect autonomy and reduce delays. Tele-EMA emerged as a critical determinant of access, particularly in geographically dispersed or resource-limited settings. Its integration into standard practice could significantly improve early detection and intervention, lowering complication rates and reducing stigma. For tele-EMA to be effective, health systems must establish clear protocols for remote prescribing, safe dispensing, and follow-up care.

Mid-level provider authorisation, while important, must be supported by supply chains, training, and supervisory structures to have a meaningful impact. In contexts where these elements are absent, legal authorisation alone is insufficient. Clinicians should also be supported with training on managing conscientious objection, ensuring timely referrals to prevent service gaps. Public funding, while essential for financial equity, must be embedded within simplified care pathways to avoid situations where procedures are affordable but inaccessible due to procedural hurdles.

From a public health perspective, clinicians should play a proactive role in education and outreach, especially for adolescents and marginalised groups, to reduce late presentation and prevent unsafe abortions. Standardised clinical guidelines and multidisciplinary care models will be key to addressing both the medical and psychosocial needs of those seeking abortion care.

Geopolitical Implications

Abortion policy is a reflection of geopolitical power structures, cultural ideologies, and economic priorities. This study shows that regional variations in abortion access are not solely geographic but functional. High-performing systems exist across different cultural and political contexts when pathways are streamlined and transparent. Conversely, layering procedural hurdles and bureaucratic requirements leads to restricted access regardless of regional or income status.

Migration patterns highlight global inequalities. Women from restrictive environments often rely on cross-border travel to access safe abortion care, as seen in the marked positive differentials in LMIC-to-HIC flows. However, this creates a two-tiered system where access is contingent on mobility and resources. Refugees and undocumented migrants face additional risks, including legal persecution and lack of continuity of care. This dynamic underscores the need for international

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agreements and harmonisation of reproductive health policies to prevent reproductive rights from being determined by geopolitical borders.

Restrictive abortion laws often align with broader gender inequality and political instability [10]. Countries with high Gender Inequality Index (GII) scores tend to exhibit more restrictive policies and poorer health outcomes [20]. Addressing abortion access thus requires engagement with broader human rights frameworks, including education, gender equity, and poverty reduction. Political will is essential for implementing evidence-based reforms, particularly in contexts where ideological opposition to abortion persists.

Population Science and Sustainability

From a population science perspective, equitable abortion access is essential for improving reproductive health outcomes and achieving sustainable development goals [2,22]. The disparities identified in this study have far-reaching demographic and socio-economic consequences. In LMICs, where restrictive laws intersect with weak health systems, unsafe abortion remains a leading cause of maternal morbidity and mortality. These preventable deaths perpetuate cycles of poverty, poor educational attainment, and reduced workforce participation. Investing in reproductive health services has multiplicative benefits for population well-being [21]. Removing barriers such as waiting periods and parental involvement laws can reduce late presentation, improve safety, and decrease health system costs by reducing complications [22]. Expanding telemedicine and mid-level provider roles increases system resilience, particularly during crises such as pandemics or political unrest when in-person services may be disrupted.

Sustainability also requires integrating abortion services into broader maternal and reproductive health programmes [23]. Fragmented systems that treat abortion as an isolated intervention are less efficient and more vulnerable to policy shifts [24]. A whole-system approach combining sexual health education, contraception access, and abortion services within primary care creates durable, adaptable structures that can withstand geopolitical and economic pressures [25].

Long-term sustainability depends on addressing structural determinants such as gender inequality, education, and poverty [26]. Policies must be evaluated not only for their legal form but also for their impact on population health equity. By framing abortion access as a public health necessity rather than a political debate, governments and international organisations can work towards harmonised standards that promote both individual rights and societal wellbeing.

Conclusion

This study highlights that abortion access is shaped by an interplay of legal frameworks, operational design, and structural determinants. Removing procedural barriers, expanding telemedicine, and embedding services within resilient health systems are essential steps toward equity. Without these reforms, migration will continue to act as a partial and unequal mechanism of access, leaving the most vulnerable behind. A globally coordinated, evidence-based approach is required to ensure that reproductive rights are upheld as fundamental human rights and integrated into sustainable health system planning.

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