



Latin America
and the
Caribbean

AUGUST 2020

IMPACT OF COVID-19 ON ACCESS TO CONTRACEPTIVES IN THE LAC REGION

Technical Report



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This document is partially based on data provided by ForoLAC that was collected and processed through SEPREMI, and also using the tool MICRO developed by the Reproductive Health Supplies Coalition. USPA recognizes those relevant contribution to this research.

INTRODUCTION

The coronavirus disease pandemic (COVID-19) could critically undermine progress to end unmet family planning needs by 2030 in the Latin American and the Caribbean (LAC) region. In this paper, we examine how access to contraceptives in the region could deteriorate as an immediate effect of service disruption as well as the indirect result of declines of personal and household income.

Initial analysis of the potential impacts of COVID-19 on access to contraceptives had emphasized the immediate effect of the pandemic, including measures adopted to contain the spread of the coronavirus, on the disruption of sexual and reproductive health services, particularly those provided by the public sector. This disruption is the combined result of halts in the contraceptive supply chain (e.g., interruption of manufacture of key pharmaceutical components and transportation delays of contraceptive commodities), straining of health services systems (e.g., suspension of certain services and diversion of equipment and staff to the response to the pandemic), and a drop in demand for sexual and reproductive health services due to either reluctance to attend healthcare facilities and/or restrictions of mobility. The importance of these factors was documented in previous outbreaks. [1,2] Initial UNFPA estimates of the magnitude of the impact of these factors in low- and middle-income countries suggested that between 13 to 51 million women would be unable to use modern contraceptives depending on the duration of lockdowns (3, 6, 9 or 12 months) and the severity of the disruption (low, medium or high).[3] Estimates from Guttmacher were in the upper limit of this range. [4]

In addition to immediate effects of the lockdown on service disruptions, COVID-19 can affect access to contraceptives indirectly, through its effect on reductions in household incomes. Indeed, COVID-19 is forecasted to have devastating economic consequences for the LAC region. As of July 15th, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) estimates for 2020 a 9.1% drop in GDP, a 5.4 percentage points rise in unemployment and a consequent rise in poverty of 7.1 percentage points [5–8]. This estimation is convergent with what international economic organizations have estimated to this date [9–11]. The region's heavy reliance on out-of-pocket spending to fund contraceptives use, coupled with widespread use of short acting reversible contraceptives (mostly the pill), offer wide avenues for the economic crisis to impact access to contraceptives through the private

sector as well.[12–14]

In this study, we obtained estimates of drop in contraceptives use as a result of the COVID-19 assuming no remedial measures are adopted through both the public sector (due to supply disruption) and the private sector (due to income loss). For the public sector, shortage estimates were obtained from a survey of conducted among Ministries of Health's staff from 12 LAC countries participating in SEPREMI, an online platform that tracks public procurement conditions of reproductive health supplies in the region. The contraction in the private sector was estimated using recent results of the sensitivity of sales to macroeconomic fluctuations based on a panel of sales in 12 countries in the LAC region during a five year period that includes the latest global economic crisis.[15] Besides the drop in couple-years of protection (CYP), we derived implications in terms of other relevant health outcomes based on extant evidence.

METHODS

The contraction of access through private sector was estimated using recent results from Godoy Garraza et al.[15] This study used panel data on 12 LA countries during a 5 year period that includes the most recent global crisis to examine the sensitivity of private consumption to macroeconomic fluctuations. The study revealed that variations in poverty and unemployment rates were important predictors of variations in contraceptive sales. Particularly, a one percentage point increase in the poverty or unemployment rate predicted about a two percentage point decrease in contraceptive retail sales growth rate (measured in couple-years of protection [CYP] per capita). The forecasted increase in poverty for 17 LAC countries was obtained from ECLAC [7,8]. Baseline contraceptives consumption (i.e., during 2019) was estimated using “random forest”, [16] a flexible nonparametric procedure, based on the original information on sales used in Godoy Garraza et al., [15] together with information on modern contraceptive prevalence,[17] short acting reversible contraceptive prevalence,[13] GDP, poverty [18] and population of females 15 to 49 years old [19] over the last 20 years.

Shortage on the public sector was estimated based on a survey of Ministries of Health (MoH) staff from 12 out of the 14 LAC countries participating in SEPREMI, an online platform sponsored by ForoLAC, the regional chapter of the Reproductive Health Supplies Coalition, to track reproductive health supplies procurement conditions by the public sector.[20] The information collected included both current stocks and ongoing purchases (including estimated arrival dates) which were contrasted with the estimated monthly use through the end of 2020. The estimated monthly use did not incorporate the potential increase in demand from displaced private sector users. Finally, we incorporated estimates of the impact of other source of service disruption on public sector users such as reluctance to attend healthcare facilities for fear of contagion or restrictions of mobility due to stay home orders. We obtained such estimates from Reproductive Health Supplies Coalition’s (RHSC) MICRO tool[21] for low and middle income countries, in turn aligned with the estimation from by UNFPA [3] for scenario involving different length and levels of service disruption. In both cases, an estimate for all LAC

countries was obtained by simple linear extrapolation based on the number of modern contraceptive users in countries included in the sample, which represent between 80% and 85% of the region's total.

Once the impact of COVID-19 on access to modern contraceptives was quantified in terms of CYP loss, we derived estimates of the impact in terms of other relevant reproductive health outcomes using extant evidence. Specifically, we assumed an unintended pregnancy, abortion, maternal death, and neonatal death for each 3.5; 7.5; 1,980; and 150 CYP lost, respectively, based on Weinberger's work. [22] The number of CYP not used would equal to the number of women losing consistent access to contraceptives only under the assumption that any impacted woman is affected during an entire year. To explore the sensitivity of the result to alternative assumptions, we hypothesized that the CYP not used reflected the behaviour of three groups of women of approximately equal size, each affected, respectively, during a month, three months and the entire year. Under this hypothesis, 2.2 women would lose consistent access to modern contraceptives per CYP not used. abortion, maternal death, and neonatal death for each 3.5; 7.5; 1,980; and 150 CYP lost, respectively, based on Darroch's work. The number of CYP not used would equal to the number of women losing consistent access to contraceptives only under the assumption that any impacted woman is affected during an entire year. To explore the sensitivity of the result to alternative assumptions, we hypothesized that the CYP not used reflected the behaviour of three groups of women of approximately equal size, each affected, respectively, during a month, three months and the entire year. Under this hypothesis, 2.2 women would lose consistent access to modern contraceptives per CYP not used.

Table 1: CYP not acquired through private sector

Country	Poverty*		CYP not acquired (000) through private sector [95% Credible Intervals]
	2019	2020	
Argentina	26.7	37.5	321.3 [167.8-476.4]
Bolivia (Plurinational State of)	32.3	36.1	11.5 [6.0-17.1]
Brazil	19.4	25.9	1,024.8 [535.1-1,519.6]
Chile	9.8	15.5	77.8 [40.6-115.4]
Colombia	29.0	34.1	135.0 [70.5-200.1]
Costa Rica	16.0	20.5	14.2 [7.4-21.1]
Ecuador	25.7	32.7	63.7 [33.3-94.5]
El Salvador	23.7	40.2	16.1 [8.4-23.9]
Mexico	41.9	49.5	518.3 [270.6-768.5]
Guatemala	49.6	51.6	5.9 [3.1-8.7]
Honduras	54.8	59.0	13.1 [6.8-19.4]
Nicaragua	47.1	52.7	13.6 [7.1-20.2]
Panama	14.2	17.5	7.5 [3.9-11.2]
Peru	19.4	25.8	86.3 [45.1-128.0]
Paraguay	16.5	20.9	5.2 [2.7-7.7]
Uruguay	2.9	5.3	6.4 [3.4-9.5]
Dominican Republic	20.3	24.7	22.4 [11.7-33.2]
Venezuela	33.5	50.0	242.9 [126.8-360.2]
LAC**	30.3	37.3	2,621.7 [1,369.0-3,887.3]

* Based on ECLAC 7

** Include estimate for all 33 LAC countries

The estimated shortage in the public sector measured in CYP is presented in Table 2. Overall, a loss of close to 6 million CYP was estimated. Brazil concentrates more than two thirds of the shortage.

Table 2 Contraceptive shortage in the public sector, measured in CYP

Country	CYP Shortage (000)
Argentina	170.4
Bolivia	6.8
Brazil	1,582.5
Chile	70.7
Costa Rica	3.5
Dominican Republic	13.4
Guatemala	10.2
Haiti	0.7
Honduras	92.7
Mexico	18.8
Nicaragua	0.0
Peru	28.2
LAC*	2,532.1

Based on survey of MoH staff from 12 countries participating in SEPREMI.

* Extrapolate linearly to 33 LAC countries (17)

The estimation of shortage, does not incorporate other drivers of disruption in services in the public sector such as the drop in demand due to either reluctance to attend healthcare facilities and/or restrictions of mobility. We present an estimation of the drop in the number of modern contraceptive user from the public sector in Table 3 based on RHSC MICRO[21] for different length and levels of service disruption.

Table 3 Potential decline in modern contraceptive users in public sector by severity and duration of disruption

Country	Public sector users unable to use modern contraceptives		
	Moderate disruption for six months	Low disruption for three months	High disruption for twelve months
Belize	1,415	708	2,831
Bolivia	37,558	18,779	75,115
Brazil	195,658	97,829	391,316
Colombia	112,944	56,472	225,888
Costa Rica	23,019	11,510	46,038
Cuba	18,890	9,445	37,779
Dominica	257	128	513
Dominican Republic	29,115	14,558	58,231
Ecuador	42,890	21,445	85,779
El Salvador	31,170	15,585	62,339
Guatemala	86,017	43,008	172,033
Guyana	3,027	1,514	6,055
Grenada	410	205	819
Haiti	58,707	29,354	117,415
Honduras	53,620	26,810	107,239
Jamaica	14,803	7,402	29,606
Mexico	142,029	71,014	284,088
Nicaragua	56,419	28,210	112,838

Public sector users unable to use modern contraceptives

Country	Moderate disruption for six months	Low disruption for three months	High disruption for twelve months
Paraguay	5,740	2,870	11,481
Peru	247,760	123,880	495,520
St. Lucia	116	358	1,432
St. Vincent & Gren.	414	207	828
Suriname	1,941	970	3,881
LAC*	1,364.9	682.4	2,729.8

* Extrapolated linearly to 33 LAC countries number of modern contraceptive users (17)

* Source: RHSC (21)

Taken together and assuming no remedial measures are adopted, the estimated drop in CYP would result in 1.7 million unintended pregnancies, close to 800 thousand abortions, 2.9 thousand maternal deaths and close to 39 thousand infant deaths. Assuming the drop in CYP resulted from the behaviour of three different segments of approximately equal sizes of women affected for a month, three months and the entire year, the loss of between 4 and 9 million CYP could potentially affect between 9 and 20 million women.

According to UN Population Division data, at the beginning of 2020 LAC registered 19.72 Million of women with unmet need for Family Planning (Modern methods)¹⁶. So, adding those women that will discontinue the use of modern contraceptives because the impact of COVID-19 (9 Million in an optimistic scenario and 20 Million in a pessimistic scenario), it is expected that at the end of the year the percentage of all women in reproductive health registering unmet need for modern contraceptives will increase from 11.4% to 14,5% (optimistic scenario) or 17,7% (pessimistic scenario).

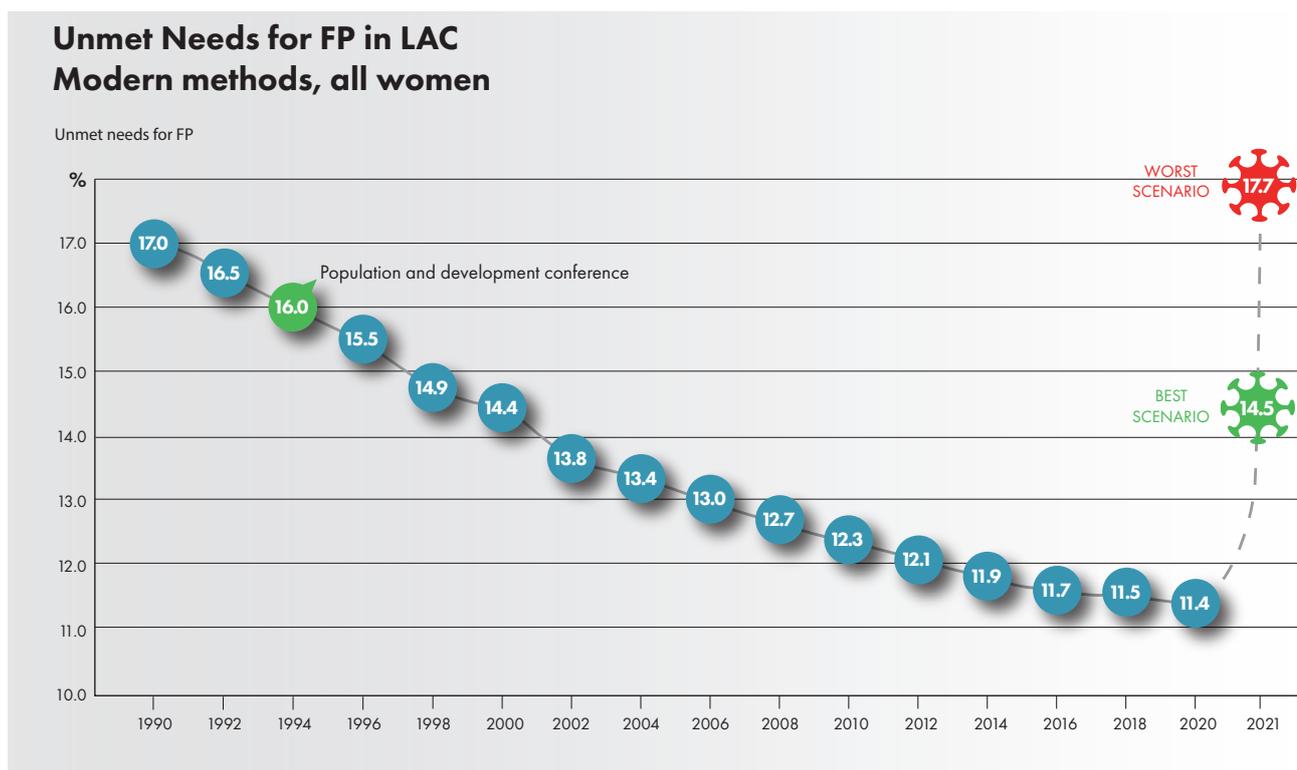


Table 4 Implications

Outcome	Number (000) [95% Credible Intervals]
Total CYP shortage	5,836.2 [4,071.7-9,149.2]
Women potentially affected*	12,969.4 [9,048.1-20,331.6]
Unintended pregnancies*	1,667.5 [1,163.3-2,614.1]
Abortions*	778.2 [542.9-1,219.9]
Maternal Death*	2.9 [2.1-4.6]
Child death*	38.9 [27.1-61.0]

Assuming the drop in CYP reflects the behaviour of 3 segments of about equal size, i.e. women affected during a month, 3 months and the entire year.

* Using ratio of health outcome to CYP from Weinberger et al. ²²

DISCUSSION

The COVID-19 pandemic is impacting access to modern contraceptive through several channels. We obtained estimates of potential CYP lost through the public sector due to supply shortages and through the private sector due to drops in household incomes. Based on the number of CYP not accessed and that were forecasted, we derived the implication in terms of other relevant reproductive health outcomes. Our analysis complements other recent estimations that focus primarily on immediate services disruptions due to lockdown measures.

These results should be interpreted in the context of the limitations of the study. First, private sector estimations are based on relatively outdated sales information, which further excludes some important markets. The period considered is particularly pertinent to study the sensitivity of sales to macroeconomic fluctuations, encompassing the most recent global financial crisis. However, to estimate CYP acquired in 2019 and CYP acquired in countries not included in the original sample, requires a rather serious extrapolation exercise. This rich set of auxiliary information coupled state of the art estimation techniques to at least partially ameliorate these issues. Second, public sector estimations rely on the accuracy of key informant input. Generally, these are knowledgeable staff in key leading roles in the sexual and reproductive health programs in their respective countries. Nevertheless, the reliability of measures obtained in this way has not been formally assessed. Finally, as in other analyses of this type, the forecast ignores remedial measures that governments across the region started to put in place, particularly to ameliorate lost income.

The COVID-19 pandemic could critically undermine progress to end unmet need for family planning by 2030 in the region. LAC governments and their partners, including donors and international and nongovernmental organizations, should take decisive actions to avert this potential sexual and reproductive health crisis.

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