



RESEARCH ARTICLE

REVISED Perception of effective access to health services in Territorial Spaces for Training and Reincorporation, one year after the peace accords in Colombia: a cross-sectional study [version 2; peer review: 2 approved]

Previously titled: Perception of effective access to health services in Territorial Spaces for Training and Reintegration, one year after the peace accords in Colombia: a cross-sectional study

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Abstract

Backgrounds: The signing of the peace accords in Colombia created challenges that are inherent to post-conflict transitions. One of those is the process of reintegrating ex-combatants into society, in which ensuring their rights to health is a particularly significant challenge in rural areas affected by armed conflict. These areas, known as Territorial Spaces for Training and Reintegration/Reincorporation (ETCR, in Spanish), are geographically dispersed throughout 24 municipalities and 13 departments in Colombia. This study aimed to describe how ex-combatants in ETCR regions perceived access to health services one year after the signing of the peace accords.

Methods: A descriptive, cross-sectional study was performed between September and October 2018. It included 591 adults and their families, from 23 ETCRs. The study was designed, culturally validated, and piloted. Interviewers were trained and a structured survey was administered containing five dimensions that characterized the perception of effective access to health services.

Results: The majority of interviewees were women, heads of household, young adults, ex-combatants, and residents in an ETCR. In total of 96.4% were enrolled in Colombia's subsidized health system, and 20.8% indicated that a member of their household required emergency health services. The regional health center provided the majority of the services. Most of those

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surveyed (96.0%) reported that they did not have to pay for the services, and that they received respectful (91.6%) and good quality (66.6%) care. There were few referrals to disease prevention and health promotion activities, and only 19.0% of households reported having been visited by extramural health care teams, whose activities were highly valued (80%). Lastly, there was little knowledge about community health activities.

Conclusions: While residents of ETCR regions have a favorable perception of their access to health services, they need to be made aware of extramural and public health activities.

Keywords

Health Services Accessibility, Armed Conflicts, Colombia

Any reports and responses or comments on the article can be found at the end of the article.

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REVISED Amendments from Version 1

In this version, we present a detail of the context of the Health for Peace project, we made the concepts more precise, and we recognize the limitations of our results.

Any further responses from the reviewers can be found at the end of the article

Introduction

As a human right, health is crucial to human and social development. Societies that reach an optimal level of health are able to ensure that their populations attain higher individual and collective levels of human development^{1,2}. For a society that is going through a period of post-conflict, guaranteeing health as a right demonstrates the State's interest in taking steps towards renewing the social bonds among the parties that were broken by the conflict. Effective access to health services expresses the recognition of the right to health, making it possible to prevent illness and to address the population's health needs³.

Historically, the concept of *access to* health services has had multiple definitions that correspond to the structural values of each health system. Most of the models and definitions of access are based on the logic of markets and the satisfaction of needs, with very few taking the perspective of health as a right⁴. United Nations General Observation 14 defines the effective exercise of the right to health as availability, accessibility, acceptability, and quality —elements or dimensions that are essential to enjoying effective access to health services².

Providing access to health services for the entire population is an enormous challenge for a society that finds itself in the midst of armed conflict or in a period of post-conflict. This is the case of Colombia after the signing of the Final Accord (November 2016) between the federal government and FARC-EP (Fuerzas Armadas Revolucionarias de Colombia—Ejército del Pueblo; Revolutionary Armed Forces of Colombia—People's Army) revolutionary forces to End the Armed Conflict and Build a Stable and Lasting Peace⁵ (https://www.cancilleria.gov.co/sites/default/files/Fotos2016/12.11_1.2016nuevoacuerdofinal.pdf 5). As a result, Colombia finds itself navigating through a critical process that has great social, economic, and political impact. A key factor that ensures the end of the conflict and a stable and lasting peace is preparing for the reincorporation of ex-combatants into all areas of civilian life —economic, political, and social. To this end, Territorial Spaces for Training and Reincorporation (ETCR, in Spanish) were established to relocate former FARC-EP members and establish the means and inputs needed to fulfill the promises and responsibilities that were set out in the accord, including supplying this population with comprehensive humanitarian aid through national and international organizations⁶.

One promise that is aimed at ensuring the reincorporation of ex-combatants is promoting and guaranteeing their right to

health in rural areas and small towns that lack the institutional and budgetary capacities to provide social and health services, and that historically have not received State investments. The Colombian government established eight dimensions for the path of reincorporation, one of which is access to the General Social Security Health System (SGSSS, in Spanish). It also established health services as a fundamental right to be guaranteed along with returning these people and their families to legality. Colombia is a good example of the comprehensive-ness that these programs need when it comes to ex-combatants who are on the path to reincorporation, in the short-term. Meanwhile, long-term and sustainable reincorporation into civilian life will be ensured by including crucial elements such as effective health care and ongoing access to health services through enrollment in the health system. This will contribute to individual well-being, continued legality, and a solid ground on which to build stable and lasting peace.

Some of the projects were developed with the above challenges in mind and in accordance with the reference framework on which the path was laid out, such as Health for Peace, led by the Ministry of Health and implemented by three United Nations agencies (UNFPA, PAHO/WHO, and IOM). This project was created in order to strengthen institutional and community capacities to address health needs in the rural areas where the ETCRs are located, through already-established regional health centers as well as local primary hospitals. Health services were also complemented by the development of extramural strategies and community surveillance, led by regional health professionals with the support of local public health leaders who were trained by SENA as part of the project.

In this way, the “Health for Peace” contributes to the implementation of Point 1 in the Implementation Framework Plan (IFP) of the Final Accord, which relates to comprehensive rural reform and is associated with the implementation of Territorial Health Plans in the priority municipalities. It also complemented the emergency response by the Colombian government during the first year after the accord, which consisted of a physician, a nursing professional, and an ambulance for each ETCR. These health workers held positions that at first lacked the conditions needed to guarantee the quality of health care, given that the infrastructure and human skills for providing health services in the regions where the ETCRs are located has historically been insufficient, and non-existent in some cases. This emergency measure was gradually phased out as the Health for Peace project was being implemented. In this sense, the main objective of the Project was to strengthen the local capacity for improving access to comprehensive Primary Health Care services —with an emphasis on sexual and reproductive rights, mental health, preventing consumption of psychoactive substances, and children's health and malnutrition— thereby addressing the needs that had previously been identified by the United Nations Verification Mission in the ETCR. Furthermore, in order to promote access to comprehensive health services, support was provided to implement an extramural strategy as part of Primary

Health Care, as well as to develop a strategy for community participation and surveillance. This proposal can be considered to be the specific development of strengthening health services in the rural area through recent technical developments by the Ministry of Health, such as the National Public Health Plan, but adapted to the context of ex-combatants, their families, and the residents of these regions, with the advantage of receiving technical and financial support from agencies in the United Nations system.

Health care interventions by governments and international agencies are challenged by budgetary limitations due to the economic crisis, as well as by operational limitations in light of the large number of ETCRs and their geographic dispersion throughout Colombia. Added to this is the increased demand for health services, especially by pregnant women and young children, as well as signs of a lack of confidence in the quality of health care and its capacity to respond to needs, all of which could affect the perception of access to health services in the ETCRs.

Based on this approach, perception serves as a differentiating construct. It is defined as *“a mental process that enables forming judgments or categories that define reality, of interest to health because it enables identifying the population’s impressions of health status, the resolving of needs, and the interventions performed.”*⁷ Perception more accurately shows *“the appreciation of reality by obtaining a set of concepts and attitudes that are associated with the health care provided and received.”*⁸ This is an alternative to representing access to health services based solely on the indicators that are generated by health care providers and authorities, which explore comprehensive access management in a simpler manner. Some examples of this can be found in most of the current surveys that have been developed in Colombia, including the Evaluation of Services by Health Promoter Entities (EPS in Spanish)⁹, as well as the National Health and Nutrition Survey in Mexico (ENSANUT, in Spanish)¹⁰. The objective of the study herein was to describe how ex-combatants living in the ETCRs perceived access to health services one year after the signing of the peace accords. This study captured the specific impressions of effective access to health services by taking into account the health needs of the intervention community, which can be accomplished by measuring two dimensions that make up part of the perception of a community: contact coverage and satisfaction¹¹. From the perspective of the right to health as an analytical framework, these two dimensions come closest to actual access to services, and can best represent that.

To this end, a survey was developed and administered to the population residing in the ETCRs in order to explore the perception of access to services from the perspective of guaranteeing the right to health.

Methods

Study design and population

A cross-sectional, descriptive study was performed. The target population was ex-combatants and their families who were

living in 23 Territorial Spaces for Training and Reincorporation (ETCR, in Spanish) in September 2018. In each ETCR, a characterization from July 2018 of ex-combatants and their families was used as a sampling framework, which was developed by the IOM (International Organization for Migration) field team. The family was the study unit, although the informants were the heads of the households or family members who had the most information about the state of health of the family members, which in most cases were women. According to inclusion criteria, at least one of the family members was a FARC-EP ex-combatant, demobilized after the signing of the Final Accord, residents of an ETCR, who consented to participate. There were not any exclusion criteria.

Sample

A stratified sampling was calculated with a finite population, taking each ETCR as a non-proportional stratum, and based on the following parameters: total census population of 3,792 people, grouped into 848 families as of the date of this study; 2) expected prevalence of poor perception of effective access of 40%; 3) 95% confidence interval; 4) 23 strata; and 5) design effect of 2. This resulted in a minimum sample size of 529 people, with 23 participants needed from each ETCR. With this sample, estimators for the total population can be calculated by taking into account the source of variance by cluster of total residents in each ETCR, but it does not permit calculating separate estimates for each ETCR.

The expected value of 40% for effective access is a conservative estimate given that in the few studies conducted in population without payment capacity in Colombia, the perception of low effective access found is greater than 50%¹². However, the sample size needed to be adjusted slightly in order to include parameters having more extreme expected values, such as use of emergency services (20%) and health insurance (80%). The first value derives from the same reports where the emergency services have usually the worst evaluation. On the other hand, given that the commitment of the Peace process was to guarantee universal coverage for all ex-combatants, we considered that a value of 80% for health insurance is conservative considering that it had been a year after the signing of the agreement.

In this way, the sample would enable obtaining a precise estimation of the majority of the parameters of interest. Given the small number of people living in some of the ETCRs, it was decided that all the families would be included when clusters (ETCR) had less than 25 people, and a minimum of 30 people would be included when clusters had over 25 people. This projection, which was slightly larger than the sample needed, was made in order to compensate for losses in the ETCRs that had less than the required number of families, and to anticipate non-differential losses in information.

The use of a simple random sampling had been planned for selecting the subjects within each ETCR. However, the ex-combatants considered this to be inconvenient, and therefore, a house-to-house interview (convenience sampling) was conducted

in order to identify the sample for this investigation. All the houses located in the ETCR were inhabited by ex-combatants of the FARC-EP and their families. The interviewers applied the survey in all the homes where the head of the household was present and met the inclusion criteria simply following the order of the first houses they found in each ETCR until they completed the required sample size. Results did not present a clear bias, given the high degree of homogeneity in the expected living conditions of the subjects, the high coverage of the sample (which in five cases included the entire population), and the fact that the interviewers did not apply any arbitrary criteria for choosing the interviewees, nor was there any self-selection. This was the best possible approach given the conditions of the population that was required for the sample. The representatives of each ETRC did not accept the possibility of random sampling.

Additionally, it is important to note that little information exists about the health status of this population, and the construction of a sampling framework was not very feasible because of protection considerations.

Data collection instruments and procedures

A survey was designed in order to identify *perception of effective access to health services* in the ETCRs.

No structured instruments exist for measuring effective access to health services for ex-combatants in a context such as Colombia. Therefore, a measuring instrument was designed based on a literature review of perception and effective access to health services from the perspective of the right to health. A review was also conducted of the instruments that are currently available on this topic, particularly those used in rural areas. Based on the findings, *perception of effective access to health services* was defined as the instrument's main construct, which was structured according to the domains or dimensions needed for reflecting that construct from the perspective of health as a right, that is: *availability, accessibility, acceptability, quality, contact coverage, and satisfaction*.

For the sociodemographic, emergency services, and promotion and prevention modules, some of the items in the instruments related to access to health services for Colombian households were adapted. This included questions from the Survey of Access to Health Services for Colombian Households (EASS) developed by Arrivillaga, Aristizábal, Pérez & Estrada¹³ and the instrument that is used to evaluate the services provided by the EPS⁹. These were adapted in order to ensure traceability with the majority of the indicators that are available for the rest of the Colombian population. The questions that were aimed at determining perception, extramural activities, and community monitoring were designed based on the literature review and the objectives and developments of the Health for Peace project, which served as references. (see glossary of terms in the supplementary material).

The final instrument contained 65 questions that were divided into three modules: 1) sociodemographics of the household

(7 questions); 2) perception of effective access to primary health care services (54 questions), which was divided into insurance (2 questions), emergency services (19 questions), health promotion and disease prevention programs (23 questions), and extramural services (10 questions); and 3) community health monitoring (4 questions). All the questions were posed to the head of the family or a member of the household. The head of the family was the person that the family members recognized as most able to provide information about the participants. The study instrument and an English translation are available as extended data^{14,15}.

The survey was revised and validated using a technique that was applied by professionals from the IOM and MSPS. Face and content validation was performed; the experts evaluated relevance and comprehensiveness of the items in two focal groups reviewing each item of the instrument. Besides, the interviewers used a socio-cultural method to adapt the terms and definitions in the survey for better comprehension on the part of the population of interviewees. The interviewers were nursing professionals located in each municipality and were highly experienced in community work and in collecting information for public health. The team's researchers trained the interviewers in administering the surveys during a one-day session, which ended with a qualitative evaluation.

A pilot test was conducted, which consisted of administering the survey in six ETCRs, with a total of 43 interviews. Based on this, the first socio-cultural validation of the survey was performed, in which the interviewers had the opportunity to provide feedback based on their experience administering the survey. A second socio-cultural validation was conducted during an in-person training session with the interviewers from each municipality. This involved reviewing each dimension, its acceptability, and the interviewees' understanding. In this session, role-playing and simulation workshops were conducted and the entire instrument and its application were reviewed.

For the final administration of the survey, an interviewer was assigned to each one of the 23 ETCRs. These ETRCs were located in the following municipalities: Anorí, Dabeiba, Ituango, Remedios and Vigía del Fuerte (Department of Antioquia); Arauquita (Arauca); La Montañita and San Vicente (Caquetá); Buenos Aires, Miranda, and Caldon (Cauca); "Region between La Paz and Manaure" (Cesar); "Region between Carmen de Darien y Riosucio" (Chocó); Fonseca (La Guajira); San José del Guaviare (department of Guaviare); Vista, Mesetas and La Macarena (Meta), Tumaco (Nariño), Tibú (Norte de Santander), Puerto Asis (Putumayo), Icononzo and Planadas (Tolima).

The survey was conducted in the homes of ex-combatants, and each interviewer interviewed approximately 25 to 30 families between September 2018 and October 2018, thereby obtaining the sample that had been calculated previously. When the interviewers administered the survey to the informants, they were asked if they had gone to receive care from one of the services evaluated within 4 weeks prior to the survey, to

avoid memory bias and to ensure that the project’s ongoing activities would be evaluated. One of the team’s researchers continually supervised the collection of information in order to ensure the quality of the data.

Statistical analysis

A basic descriptive analysis was performed, in which the qualitative variables were described with proportions and the quantitative variables were described with measures of central tendency and dispersion. In all cases we worked with the valid percentage. All of the analyses were performed with SPSS © version 23.

Ethical considerations

This research was approved by the Ethics Committee of the Health Division of the Universidad del Norte (*Committee Minutes # 198*).

The objectives of the study were explained to all the interviewees and oral informed consent was obtained before the survey was administered. The informed consent was oral because we wanted to protect the identity of the ex-combatants and it was preferable not to have any document signed by them with personal information for security reasons as well as to make

feel them confident. In order to obtain the oral informed consent, after explaining the objectives of the study, and guaranteeing confidentiality, each person was asked if he/she understood the explanation, if not, the explanation was repeated, and if he/she said yes, it was recorded in the questionnaire whether or not the person agreed to participate in the survey. The answer to this question is recorded in each questionnaire. All these procedures were approved by the Ethics Committee.

We guarantee that all respondents were informed of the objectives and freely invited to participate. They were also told that no benefit or detriment would result from their decision about whether or not to participate.

Results

A total of 591 people were interviewed, with a 100% response rate. They were asked about their sociodemographic characteristics, enrollment in the health system, and health services used by themselves or by a family member. The majority of the interviewees were women, heads of household, young adults, did not identify with a cultural group or ethnicity, and were ex-combatants residing in the 23 Territorial Spaces for Training and Reincorporation (ETCR) (*Table 1*).

Table 1. Social and demographic characteristics of the participants in the perception of effective access to health services survey, in the Territorial Spaces for Training and Reincorporation (ETCR, in Spanish), according to sex.

	Men	Women	Total
Age			
Mean (SD)	35.6 (10.4)	31.3 (8.4)	33.0 (9.5)
Median (Rq)	36.0 (15,0)	30.0 (11.0)	32 (12.3)
Min – Max	18 – 71	16 – 62	16 – 71
Coefficient of variation (CV%)	29.2%	26.8%	28.8%
Total	236	345	582
Place of residence			
Cabecera municipal (urban) % (n)	4.9 (11)	1.3 (4)	2.7 (15)
Other (rural settlements) % (n)	62.7 (141)	74.1 (237)	69.4 (379)
Other (dispersed rural) % (n)	32.4 (73)	24.7 (79)	27.8 (152)
Total (n)	225	320	546
Number of people in household			
Mean (SD)	2.3 (1.4)	2.9 (1.3)	2.7 (1.4)
Median (Rq)	2.0 (2.0)	3.0 (1.0)	2.0 (1.0)
Min – Max	1 – 8	1 – 10	1 – 10
CV%	60.9%	44.8%	51.9%
Total	235	340	576
Ethnicity			
Indigenous % (n)	16.4 (39)	16.7 (57)	16.6 (96)
Raizal of the archipelago % (n)	0.4 (1)	0.6 (2)	0.5 (3)

	Men	Women	Total
Black, Multiracial, Afro-Colombian, African Descent % (n)	16.4 (39)	4.7 (16)	9.5 (55)
Romani (ROM) % (n)	0.0 (0)	0.0 (0)	0.0 (0)
Palenquero de San Basilio % (n)	0.0 (0)	0.0 (0)	0.0 (0)
None (multiracial) % (n)	58 (138)	62.5 (213)	60.7 (352)
White % (n)	7.6 (18)	13.8 (47)	11.2 (65)
Other % (n)	1.3 (3)	1.8 (6)	1.6 (9)
Total (n)	238	341	580
Group*			
Victims % (n)	10.5 (25)	10.5 (36)	10.4 (61)
Disabled % (n)	7.5 (18)	3.2 (11)	5.0 (29)
Ex-combatants % (n)	75.3 (180)	69.2 (238)	71.7 (419)
Displaced % (n)	1.7 (4)	9.6 (33)	6.3 (37)
None % (n)	4.6 (11)	5.5 (19)	5.1 (30)
Other % (n)	0.4 (1)	2 (7)	1.4 (8)
Total (n)	239	344	584
Type of housing			
Housing % (n)	36.8 (84)	41.3 (140)	39.6 (225)
Rented room % (n)	58.4 (133)	54.91 (186)	56.2 (319)
Other type of housing (carp, tent, car, boat, natural shelter, etc) % (n)	4.8 (11)	3.8 (13)	4.2 (24)
Total (n)	228	339	568
Role in the family			
Head of household % (n)	87.8 (209)	49 (169)	64.7 (378)
Husband/Wife / Partner % (n)	8.8 (21)	48.4 (167)	32.4 (189)
Son/daughter % (n)	2.5 (6)	0.9 (3)	1.5 (9)
Other % (n)	0.8 (2)	1.7 (6)	1.4 (8)
Total (n)	238	345	584
Highest education level			
None % (n)	3 (7)	2.9 (10)	2.9 (17)
Incomplete elementary % (n)	25.7 (61)	21.4 (74)	23.2 (135)
Complete elementary % (n)	17.3 (41)	20.3 (70)	19.2 (112)
Secondary (until 9th grade) % (n)	9.3 (22)	13.3 (46)	11.7 (68)
Complete high school (until 11 th grade) % (n)	19 (45)	15.1 (52)	16.6 (97)
Incomplete high school % (n)	25.7 (61)	27 (93)	26.4 (154)
Total (n)	237	345	583

*Groups defined as mutually exclusive categories, based on self-identification.

The majority said that they were enrolled in the subsidized General Social Security Health System. Only 3.6% (21 people) said they were not enrolled in the health system, either because they did not apply, or they applied but were not registered by the system.

With regard to emergency services, 20.8% said that they or a member of their household needed those services for some type of health condition or illness the month prior to the survey. Of those, 16.4% did not seek medical care. The majority of those who did seek care went to the health centers or hospitals in

their local area, primarily because they were close to their homes. Obstetric care and illnesses that are prevalent in children were the most reported reasons why people sought medical attention (Table 2).

More than 50% reported that the waiting time to receive care was short, the majority said they did not have to pay for the services (96.0%), that they had been treated respectfully (91.6%), that the quality of care was good (66.6%), and that they had received all the medications that they needed (75.0%) (Table 2).

In contrast, 25% said that the waiting time was long or very long (over 2 hours for 13.0% of cases), 21.6% did not receive a diagnosis from the professional who provided the service, and 23.9% could not obtain some or any of the medications that were indicated. The reasons mentioned for not being able to obtain the medications were: they were not available at the IPS (service provider institutions) pharmacy or the pharmacy

was not open at night or on the weekend, the place where they are obtained is far from where they received the health services, and the medications were not covered by their benefits plan (Table 2).

The low number of referrals to prevention and health promotion activities was notable, especially in the case of children under 1 year of age (11.9%) (69) and pregnant women (8.1%) (48) (Figure 1–Figure 3). Nonetheless, this may be due to the time at which the report was requested, which in this case was four weeks before the survey was administered. Of those who indicated that they used promotion and prevention services, the majority (53.4%) said that the appointment was made quickly (the next day) and the majority (68%) perceived the quality of the service to be good, including recommendations, care, and exams that were always appropriate for their age. Most of those surveyed (86.8%) also said that they would definitely return to use the services that these types of programs offered (Figure 4 and Figure 5).

Table 2. Access to emergency services by participants in the perception of effective access to health survey in the Territorial Spaces for Training and Reincorporation (ETCR, in Spanish). IPS (in Spanish) - Service provider institutions, EPS (in Spanish) - Health promoter entities.

	Region					Total
	Andina	Amazonía	Caribe	Orinoquía	Pacífico	
During the four weeks before taking this survey, did you or a member of your household require emergency services for a condition or illness?						
Yes % (n)	20.9 (39)	9.6 (11)	19.7 (12)	16.1 (14)	19.1 (26)	17.4 (102)
Yes, but did not get medical attention % (n)	4.8 (9)	1.7 (2)	0.0 (0)	1.1 (1)	5.9 (8)	3.4 (20)
No % (n)	73.3 (137)	88.7 (102)	80.3 (49)	82.8 (72)	75 (102)	78.8 (462)
Don't know % (n)	1.1 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.3 (2)
Total (n)	187	115	61	87	136	586
If you received medical attention, where did you or the member of your household go for your condition or illness?						
IPS (local health center or hospital) % (n)	86.8 (33)	72.7 (8)	83.3 (10)	64.3 (9)	61.5 (16)	75.2 (76)
IPS (health center or hospital at the closest town or city) % (n)	7.9 (3)	27.3 (3)	16.7 (2)	28.6 (4)	26.9 (7)	18.8 (19)
Pharmacy % (n)	2.6 (1)	0.0 (0)	0.0 (0)	0.0 (0)	3.8 (1)	2.0 (2)
Other % (n)	2.6 (1)	0.0 (0)	0.0 (0)	7.1 (1)	7.7 (2)	4.0 (4)
Total (n)	38	11	12	14	26	101
What is the main reason why you or your family member decided to go there?						
Like how they treat patients % (n)	2.8 (1)	0.0 (0)	8.3 (1)	14.3 (2)	3.8 (1)	5.1 (5)
It was covered by health plan % (n)	16.7 (6)	36.4 (4)	58.3 (7)	7.1 (1)	30.8 (8)	26.3 (26)
Know and trust the physician/healer there % (n)	27.8 (10)	0.0 (0)	0.0 (0)	14.3 (2)	0.0 (0)	12.1 (12)

	Region					Total
	Andina	Amazonía	Caribe	Orinoquía	Pacífico	
They have better service (staff, supplies and medications) % (n)	2.8 (1)	9.1 (1)	0.0 (0)	0.0 (0)	3.8 (1)	3.0 (3)
The service is quicker than at the local IPS (health center or hospital) % (n)	11.1 (4)	0.0 (0)	16.7 (2)	7.1 (1)	7.7 (2)	9.1 (9)
It is closer to home % (n)	33.3 (12)	45.5 (5)	16.7 (2)	57.1 (8)	23.1 (6)	33.3 (33)
It is inexpensive/ does not cost anything % (n)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	7.7 (2)	2.0 (2)
Not affiliated with any health system % (n)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	3.8 (1)	1.0 (1)
Other % (n)	5.6 (2)	9.1 (1)	0.0 (0)	0.0 (0)	19.2 (5)	8.1 (8)
Total (n)	36	11	12	14	26	99
What was the main reason why you or a member of your household sought emergency care?						
Obstetrics care % (n)	30.6 (11)	18.2 (2)	16.7 (2)	14.3 (2)	15.4 (4)	21.2 (21)
Common childhood illness % (n)	22.2 (8)	0.0 (0)	41.7 (5)	14.3 (2)	11.5 (3)	18.2 (18)
Malnutrition and/or nutritional deficiency % (n)	0.0 (0)	0.0 (0)	0.0 (0)	7.1 (1)	0.0 (0)	1.0 (1)
Infectious disease % (n)	2.8 (1)	9.1 (1)	16.7 (2)	14.3 (2)	19.2 (5)	11.1 (11)
Chronic illness (diabetes, high blood pressure, gastritis, obesity, headache, migraine) % (n)	2.8 (1)	27.3 (3)	0.0 (0)	21.4 (3)	11.5 (3)	10.1 (10)
Musculoskeletal disease % (n)	8.3 (3)	9.1 (1)	16.7 (2)	0.0 (0)	3.8 (1)	7.1 (7)
Skin problems % (n)	0.0 (0)	18.2 (2)	0.0 (0)	0.0 (0)	0.0 (0)	2.0 (2)
Other % (n)	33.3 (12)	18.2 (2)	8.3 (1)	28.6 (4)	38.5 (10)	29.3 (29)
Total (n)	36	26	26	14	26	99
How much time past between the moment you arrived at the emergency room and when you were seen by a physician?						
I was seen immediately % (n)	31.6 (12)	27.3 (3)	41.7 (5)	78.6 (11)	20.0 (5)	36.0 (36)
In 30 minutes % (n)	39.5 (15)	9.1 (1)	25 (3)	7.1 (1)	36.0 (9)	29.0 (29)
Between 31 minutes and 1 hour % (n)	13.2 (5)	18.2 (2)	8.3 (1)	0.0 (0)	16.0 (4)	12.0 (12)
Between 1 and 2 hours % (n)	7.9 (3)	9.1 (1)	0.0 (0)	7.1 (1)	16.0 (4)	9.0 (9)
Over 2 hours % (n)	7.9 (3)	36.4 (4)	25 (3)	7.1 (1)	8.0 (2)	13.0 (13)
Don't know % (n)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	4.0 (1)	1.0 (1)
Total (n)	38	11	12	14	25	100
Do you feel the time you or the member of your household waited to be seen was:						
Very long % (n)	10.5 (4)	45.5 (5)	8.3 (1)	14.3 (2)	30.8 (8)	19.8 (20)
Long % (n)	5.3 (2)	9.1 (1)	8.3 (1)	0.0 (0)	7.7 (2)	5.9 (6)
Average % (n)	23.7 (9)	18.2 (2)	41.7 (5)	7.1 (1)	15.4 (4)	20.8 (21)
Short % (n)	60.5 (23)	27.3 (3)	41.7 (5)	78.6 (11)	42.3 (11)	52.5 (53)
Don't know % (n)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	3.8 (1)	1.0 (1)
Total (n)	38	11	12	14	26	101
Did the emergency room physician clearly say what health condition you or your household member had?						
Yes % (n)	83.8 (31)	70 (7)	75 (9)	78.6 (11)	64 (16)	76.3 (74)
No % (n)	13.5 (5)	30 (3)	25 (3)	21.4 (3)	28 (7)	21.6 (21)

	Region					Total
	Andina	Amazonía	Caribe	Orinoquía	Pacífico	
Don't know % (n)	2.7 (1)	0.0 (0)	0.0 (0)	0.0 (0)	4 (1)	2.1 (2)
Total (n)	37	10	12	14	25	97
With regard to the recommendations or care for your health condition, besides medication, did you receive any from the emergency room physician?						
The physician explained them and I understood % (n)	56.8 (21)	72.7 (8)	75 (9)	76.9 (10)	50 (12)	61.9 (60)
The physician explained them and I understood only some % (n)	35.1 (13)	9.1 (1)	0.0 (0)	15.4 (2)	29.2 (7)	23.7 (23)
The physician explained them and I did not understand any % (n)	0.0 (0)	9.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	1 (1)
The physician did not give explanations % (n)	8.1 (3)	9.1 (1)	25 (3)	7.7 (1)	20.8 (5)	13.4 (13)
Total (n)	37	11	12	13	24	97
With regard to the medications that were prescribed, did the person who gave you the prescription:						
Give explanations and did you understand all of them % (n)	76.5 (26)	62.5 (5)	72.7 (8)	92.9 (13)	48 (12)	69.6 (64)
Give explanations and did you understand only some of them% (n)	23.5 (8)	0.0 (0)	18.2 (2)	0.0 (0)	24 (6)	17.4 (16)
Give explanations and did you not understand any of them% (n)	0.0 (0)	12.5 (1)	0.0 (0)	0.0 (0)	0.0 (0)	1.1 (1)
Did not give explanations % (n)	0.0 (0)	12.5 (1)	9.1 (1)	7.1 (1)	24 (6)	9.8 (9)
Don't know % (n)	0.0 (0)	12.5 (1)	0.0 (0)	0.0 (0)	4 (1)	2.2 (2)
Total (n)	34	8	11	14	25	92
Were you able to get all of the medications?						
Yes. all of them % (n)	88.2 (30)	55.6 (5)	100 (10)	64.3 (9)	60 (15)	75.0 (69)
No % (n)	5.9 (2)	22.2 (2)	0.0 (0)	35.7 (5)	20 (5)	15.2 (14)
Only some % (n)	5.9 (2)	22.2 (2)	0.0 (0)	0.0 (0)	16 (4)	8.7 (8)
Don't know % (n)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	4 (1)	1.1 (1)
Total (n)	34	9	2	14	25	92
Where did you get the medications?						
In the pharmacy at the local IPS (health center or hospital) where we went for emergency care % (n)	62.1 (18)	14.3 (1)	9.1 (1)	41.7 (5)	20.8 (5)	36.1 (30)
At a place that was run by the EPS, outside the IPS % (n)	13.8 (4)	14.3 (1)	45.5 (5)	0.0 (0)	33.3 (8)	21.7 (18)
A private pharmacy % (n)	24.1 (7)	42.9 (3)	36.4 (4)	58.3 (7)	45.8 (11)	38.6 (32)
Other % (n)	0.0 (0)	28.6 (2)	9.1 (1)	0.0 (0)	0.0 (0)	3.6 (3)
Total (n)	29	7	11	12	24	83
What was the main reason why you could not get the medications?						
The EPS where I am enrolled did not cover the medication and I did not have money to buy it % (n)	10 (1)	0.0 (0)	0.0 (0)	11.1 (1)	18.2 (2)	9.5 (4)
The IPS did not have the medication % (n)	40 (4)	25 (2)	25 (1)	33.3 (3)	18.2 (2)	28.6 (12)
The place where I had to go to get the medication was far from the IPS where I was treated % (n)	0.0 (0)	0.0 (0)	25 (1)	0.0 (0)	18.2 (2)	7.1 (3)

	Region					Total
	Andina	Amazonía	Caribe	Orinoquía	Pacífico	
They did not explain how to get them % (n)	0.0 (0)	25 (2)	0.0 (0)	11.1 (1)	0.0 (0)	7.1 (3)
Other % (n)	50 (5)	37.5 (3)	50 (2)	44.4 (4)	27.3 (3)	40.5 (17)
Don't know % (n)	0.0 (0)	12.5 (1)	0.0 (0)	0.0 (0)	18.2 (2)	7.1 (3)
Total (n)	10	8	4	9	11	42
Was the care that you or your household member were given respectful and in accordance with your culture and gender, and was your opinion as a user of the service taken into account?						
Yes % (n)	94.4 (34)	90.9 (10)	91.7 (11)	100 (14)	81.8 (18)	91.6 (87)
No % (n)	5.6 (2)	9.1 (1)	8.3 (1)	0.0 (0)	13.6 (3)	7.4 (7)
Don't know % (n)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	4.5 (1)	1.1 (1)
Total (n)	36	11	12	14	22	95
If you had an opportunity to choose, would you return to the local IPS emergency room (health center or hospital) to be treated again?						
Yes % (n)	91.2 (31)	63.6 (7)	91.7 (11)	92.9 (13)	52.4 (11)	79.3 (73)
No % (n)	5.9 (2)	36.4 (4)	8.3 (1)	7.1 (1)	47.6 (10)	19.6 (18)
Don't know % (n)	2.9 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	1.1 (1)
Total (n)	34	11	12	14	21	92
In general, do you consider the quality of the emergency services to have been						
Very good % (n)	20 (6)	0.0 (0)	0.0 (0)	9.1 (1)	4.3 (1)	9.5 (8)
Good % (n)	53.3 (16)	33.3 (3)	81.8 (9)	81.8 (9)	47.8 (11)	57.1 (48)
Average % (n)	16.7 (5)	44.4 (4)	9.1 (1)	9.1 (1)	30.4 (7)	21.4 (18)
Poor % (n)	3.3 (1)	11.1 (1)	0.0 (0)	0.0 (0)	13 (3)	6 (5)
Very poor % (n)	3.3 (1)	11.1 (1)	0.0 (0)	0.0 (0)	4.3 (1)	3.6 (3)
Don't know % (n)	3.3 (1)	0.0 (0)	9.1 (1)	0.0 (0)	0.0 (0)	2.4 (2)
Total (n)	30	9	11	11	23	84

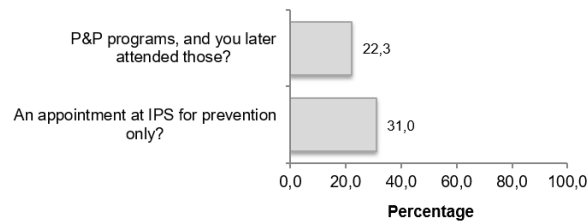


Figure 1. Over the four weeks before taking this survey, were you or someone in your household offered:

A total of 17.3% of households received visits from extramural health teams. Over 80.0% of participants positively evaluated those activities in terms of the relevance of the health education they received, how they were treated, the opportunity to receive new services, and the quality of the services (Figure 6 and Figure 7).

Lastly, participation in community health activities and knowledge about them were low. In all, 13.7% knew about the development of a community health monitoring system, and 27.7% considered the development of those types of spaces to be important, where different community organizations get involved (Figure 8).

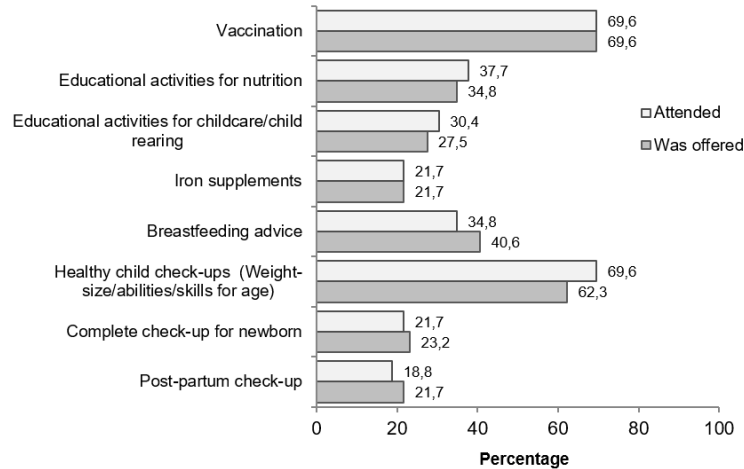


Figure 2. A total of 11.7% (69) of households had at least one child under 1 year of age. They were asked about whether they were offered and attended health promotion and disease prevention activities and programs over the four weeks before the survey was taken.

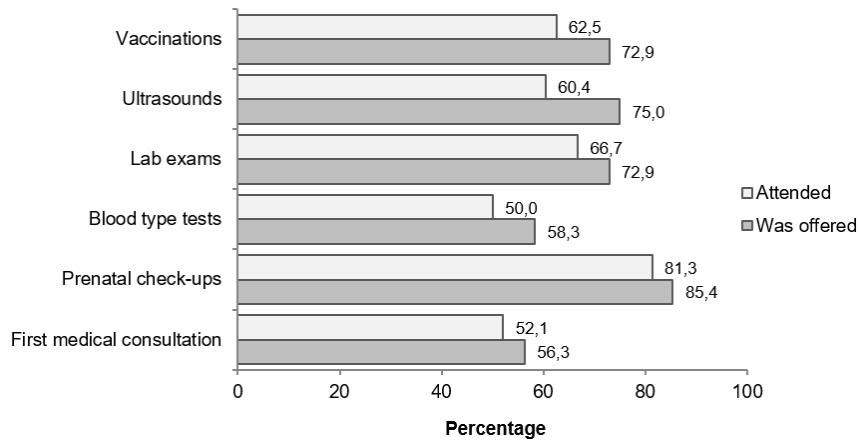


Figure 3. A total of 8.1% (48) of the households reported at least one pregnant woman. They were asked about whether they were offered and attended health promotion and disease prevention activities and programs over the four weeks before the survey was taken.

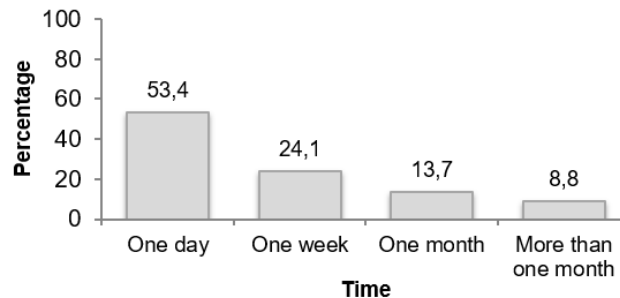


Figure 4. Opportunity to get an appointment with promotion and prevention programs (n= 249).

Discussion

Fride (cited by Márquez, 2013 and Molano, 2015) defined post-conflict as “ the period in which past hostilities have decreased to the level that is needed for beginning reincorporation

and rehabilitation activities”^{16,17}. The signing of the accord not only involved the political will of institutions but also a commitment by all sectors in the society to building a stable and lasting peace^{5,17}.

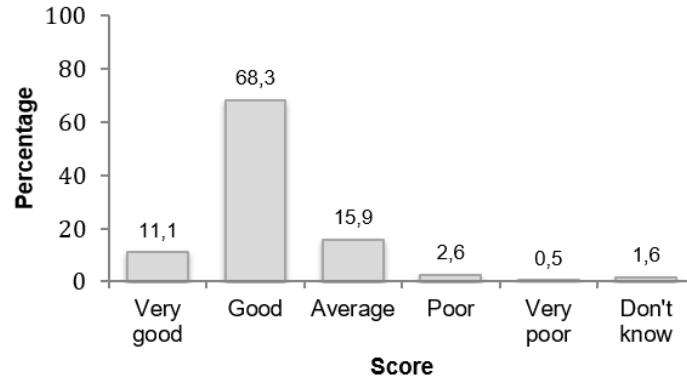


Figure 5. Perception of the quality of the service provided by promotion and prevention programs (n=189).

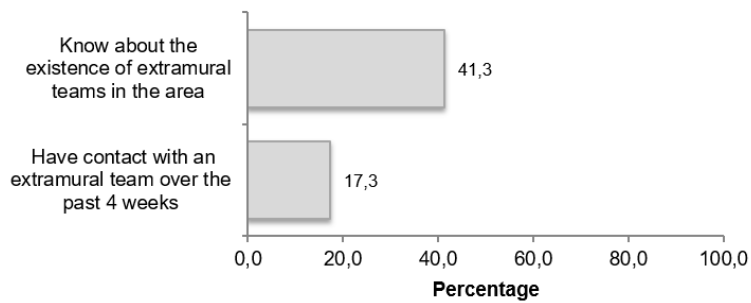


Figure 6. Did you or someone in your household: (n=591).

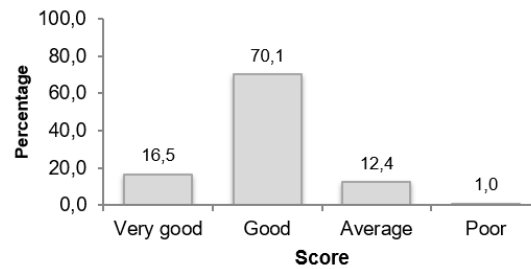


Figure 7. Perception of the quality of the extramural care in the area (n=97).

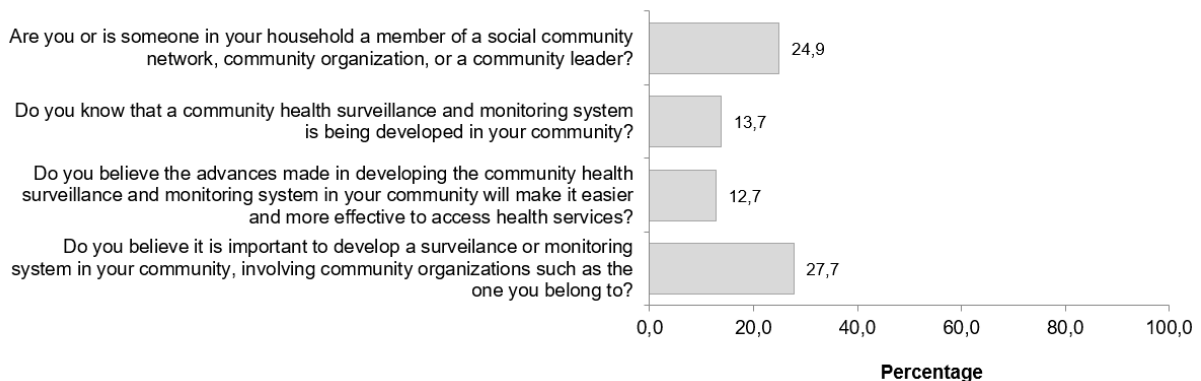


Figure 8. Community surveillance (n=591).

Processes to disarm, demobilize, and reintegrate (DDR) ex-combatants into civilian life, and their return to legality, are crucial challenges for ensuring a lasting peace in the post-conflict period. Negative repercussions have resulted from inadequately planning these processes or from their absence, such as in the case of Namibia¹⁸. These consequences not only affect the quality of life of former combatants, including stigmatization and unemployment, but they also put at risk the strengthening of democratic institutions and the social and economic stability of countries, triggering a reactivation of violence¹⁸. The inclusion of these dimensions in Colombia's peace process is noteworthy, when compared to other successful national policies aimed at the social and economic reincorporation of illegally armed people and groups. For example, while reincorporation policies in Indonesia and the Congo have been successful and innovative, and reconciliation mechanisms have been comprehensive and involved the community, health care was mentioned only as a condition that needed to be met, or it was limited to health days or the delivery of medical kits¹⁸.

DDR processes are indispensable to building peace. Not only do they contribute to ensuring security after conflict by reducing the number of people who return to armed conflict, but more importantly, these programs can make a significant impact and are socially important in terms of capacity-building, local governance, economic projects, economic development conditions, and the reconstruction and reconciliation needed in countries that have undergone these types of internal conflicts¹⁹.

While prioritizing the right to health for ex-combatants represents important progress in public policy, Colombia's health system faces challenges that need to be studied in depth along with academic efforts^{20,21}. This issue is important in two ways. First, because of the dispersion of the locations where these populations reside. This concerns point number 1 in the accord (comprehensive rural reform and the development of the National Rural Health Plan), which for some experts means that the health system needs to expand primary health care and change its tendency towards institutionalization and medicalization, since that tendency has led to the intramural provision of services, with little or no access in rural areas to health services, medications, diagnostic services, and/or treatment^{22,23}. And second, because health is indispensable to the path of reincorporation. Ensuring it provides the conditions needed for the reincorporation process and guarantees its success.

In this study, after conducting the literature review on access to health services, we decided to administer a survey in order to estimate the perception of effective access to health services among ex-combatants located in ETCRs in rural areas of Colombia. Obtaining an estimation based on perception provides a clearer picture of how these populations have experienced health care services when seeking those services or being treated, and whether that experience of contact with health services has resulted in actually realizing that they can access the services, be treated, and resolve their health needs. This is what resoundingly represents actual access to health services and the actual quality of those services.

With regard to the instrument, the survey was designed with this interpretative framework of perception so as to directly evaluate access to health services for ex-combatants within the framework of legality. Given that this type of information is not available from other countries that have implemented post-conflict reincorporation processes, the results from the present work provide a new methodology and information that can be used to identify the health status of populations that became invisible because of their situation as active actors in armed conflict. The present work also offers an objective evaluation of progress on one of the dimensions of the reincorporation program. This has previously been studied only in terms of percentage of people enrolled in the health system, which does not reflect access to health services for ex-combatants in the rural areas where they are located.

In terms of the sociodemographic composition and enrollment in the health system, the results very closely reflect the global population that was in the process of reincorporation in the ETCRs as of the date the survey was administered. Proportional similarities were found when comparing our data with official 2018 data from the Agency for and Normalization (ARN)²⁴, with the same trends continuing until the last report by the agency in March 2019²⁵. This suggests that the estimations obtained in the study herein adequately represent the characteristics and perceptions of access to health services in the general population of ex-combatants residing in these spaces. With regard to the composition of the population, the majority (56.43%) in the ARN report were 26 to 40 years of age, and the majority (nearly 80%) of those surveyed by the study herein fell within this same age range. With regard to the highest education level, ARN reported that incomplete or complete elementary school was most frequently (32.29%) reported by the population of ex-combatants, while our results found that the largest percentage of this population reported attending high school, when considering elementary, incomplete high school, and complete high school. For sex, the percentage distributions also differed, which could be explained by who responded to the survey. The unit of observation in the study herein was the household and the majority of the respondents were women, whereas the ARN study surveyed individuals in the process of reintegration, the majority of which were men.

With regard to enrollment in the health system, ARN reported that 80% of the ex-combatants in the process of reintegration were enrolled in the system in September 2018, the majority of whom belonged to the subsidized system. And the work herein shows that over 90% belonged to this system. It is interesting to note that the 10% that was not enrolled in the system had not applied, suggesting that health services had high administrative capacities for this population, and that the full orientation and consulting process provided by the path to reincorporation was functioning for the ex-combatants in the program. This was also seen in the 2014 survey of perceptions by ARN, in which 82% of those who said they received support to access the health system reported that this strategy helped them to gain access²⁶. However, it is important to note these are not precise comparisons since these data, which come from ARN's programs, include ex-combatants who demobilized before

the peace agreement, the majority of which moved to urban areas. These results are similar to the findings from the 2015 National Demographics and Health Survey (ENDS, in Spanish) of the rural population, which reported 94% enrollment, the majority in the subsidized system²⁷.

It is difficult to compare the results from our survey because of a lack of historical data on the health status of populations belonging to armed groups and their access to health services. This fact also makes these results highly valuable as a baseline for planning the provision of health services for this new population that is joining the system.

For the purpose of comparing the results from our survey on the health status of the ex-combatant population, we compared our findings with access to health services by the general rural population, which currently may be the best control population given the rural location of the ETCRs. The sociodemographic composition can be compared with the general rural population by using the results from the 2015 ENDS survey²⁸, which contains very precise measurements of the population by location. Similarities with our estimates can be seen, in which the overall characteristics of these populations do not differ and appear to be quite comparable. For example, the age of 80% of the general rural population ranged from 20 to 40 years old, a young population in their productive years, which was similar to our findings. On the other hand, in terms of sex, the composition of the general rural population was mostly male, unlike our results in which the majority was female. This can be explained by the fact that our survey studied the distribution of sex of the informants only and not the composition of sex within each household.

In terms of types of housing, our results differed from the ENDS survey, where ENDS reported that the majority of the general rural population lived in houses, while the majority of our population reported living in other types of structures. This difference is explained by the fact that the population of ex-combatants were located in the ETCRs, which have characteristics that are different than the rest of the rural population. Lastly, the two surveys also differed with regard to highest educational level, with the highest grade being incomplete elementary school for the general rural area and incomplete high school for our population. These differences may be due to our study having characterized the educational level of the main informant only and not that of the entire family. With regard to emergency services over the previous four weeks, the present study reported 17.4% usage of these services, and 75.2% of those who sought emergency services went to the local hospital. This is in agreement with the general rural area report by the 2015 ENDS. For both surveys, the populations in these regions were healthy young adults, which is also supported by our findings that obstetric care was the main reason for seeking emergency services. With regard to people with a health problem who did not seek health care services, the percentage was lower in our study (3.4%) than in the ENDS survey (42%), which had a high proportion for the general rural area reportedly due to the health services themselves (32.1%). While our survey did not directly ask why people did not seek care, it did show that a very

small percentage did not seek care, and that the reasons were not related with the services offered in the area but rather with not being enrolled in the health system.

With regard to paying for the health services received, our findings are similar to the 2010 ENDS survey²⁹, which asked this question in relation to emergency services and found that a high percentage of the rural population reported not having incurred additional health care costs when using those services. This may be because most of the care provided was not complex and the costs were paid by the benefits plan, which is why Colombia has one of the lowest out-of-pocket health care costs in Latin America. Studies of other countries, such as Mexico's 2016 ESANUT survey, have also reported that those enrolled in state or public insurance systems tend to pay little for emergency and out-patient services¹⁰.

Nevertheless, the present study found that the EPS did not provide all the medications, which required people to make out-of-pocket purchases. The ENSANUT in Mexico had different results, where nearly 77% of those enrolled received their medications and did not have to pay out-of-pocket¹⁰. Therefore, our country continues to experience difficulties with the availability of medications and access to them in rural areas.

With regard to the perception of emergency health services, it is worth noting that the national and international sources that were consulted did not report specific comparable results as to whether the care received was respectful or culturally appropriate, or whether the same service providers would be used when needing health services again. In terms of access, both of those factors relate to acceptability and satisfaction, and in both cases our study found that high percentages of our population of ex-combatants and their families had favorable perceptions of the emergency care that they received.

In conclusion, in spite of the limitations in availability and access to medications, the population of ex-combatants who received emergency services generally considered the quality of care given at the local hospitals to be good (60% of the participants in the study). This is similar to that found for emergency services in Mexico, which also reported a good rating in the majority of cases (60.34% of those interviewed)¹⁰.

With regard to perception of access to prevention and promotion services and extramural activities for our study population, only 53% of the total number of households surveyed had some kind of contact with promotion and prevention services, which was because of spontaneous demand more than induced demand. Our study also found reports of little access to these activities by both specific high-risk groups, those under 1 year of age and pregnant women. It is also worth noting that other age groups also reported not having participated in these types of activities.

The findings were similar for extramural activities offered by the Health for Peace project, with a small percentage of families having received visits (17%), although a large per-

centage of households knew about the existence of these extramural teams.

Based on these findings, certain situations that are occurring with health services and the community in the territories can explain what has been found. One is related with the logistics and dynamics that are involved in providing health services, namely, induced demand as a strategy to promote not only activities required by law but also those that are voluntarily offered in order to strengthen primary health care (PHC), such as extramural activities. Induced demand is defined as all the actions that are aimed at informing and educating the enrolled population in order to deliver the activities, procedures, and interventions for specific protection and timely detection, as established by the technical guidelines. The Health Promoter Entities, Adapted Entities, and Administrators in the Subsidized System shall develop and implement strategies that ensure that their enrollees have access to procedural activities and to timely specific protection and detection interventions, as well as to health services for diseases that are of interest to public health, in accordance with age, sex, and health conditions^{27,30}. The other situation is that health services are not being widely offered to the population of ex-combatants, thereby affecting both their availability and access to them. These two dimensions can be understood as follows: if they are not offered, then the services will not be known, and thus, they will not be demanded or utilized.

In terms of comparing our results on the use of promotion and prevention services in Colombia, no studies of urban areas with findings similar to ours were found. And although the results from urban regions correspond to socioeconomic and cultural contexts that are different than the present study, we are presenting two studies for the purpose of comparing possible similarities and differences in effective access. One of those studies was performed in Manizales, which was a household study of users in the contributory and subsidized systems that was aimed at determining the factors that influenced the use of promotion and prevention programs. In general, it found the frequency of use of those programs to be low, with only 38% of the households surveyed knowing about them. For those who knew about the programs that were available in the subsidized system, vaccination was most well-known and activities for adults were least well-known³¹. Another study with a similar aim was performed in Medellin, which evaluated the barriers and strategies related to different actors having access to promotion and prevention services. It found that “the users’ lack of knowledge about their rights and responsibilities is a barrier to accessing health services, a lack of information results in users not requesting services about which they do not know they have a right, or in activities involving others that saturate the system,” such as overuse of emergency services³². That supports our findings on promotion and prevention services and extramural activities for the population of ex-combatants, with similar percentages of offerings and access for those under 1 year of age and pregnant women, in which knowledge about these programs promotes soliciting them and actual contact coverage.

Although our survey found that access to these services was low, it is important to mention that the people who received health

care indicated a high positive perception of availability, accessibility, contact coverage, quality, and satisfaction with both services (prevention and promotion, and extramural services). The evaluations by the ex-combatants mentioned that appointments were given within a maximum of 1 day, they received good treatment in accordance with their culture and beliefs and good care with relevant recommendations, and that they would use the services again. A study performed in Manizales described similar evaluations of the quality of service and relevance of promotion activities, where overall satisfaction was 56% in spite of low use and poor knowledge of the services³³, compared to 69% on the part of ex-combatants for promotion and prevention services and 70% for extramural activities. Thus, while these services are technically formulated to meet the health needs of the population, actions are needed in order to potentialize demand, outreach, and knowledge about these services, since that is the most effective way for the population of ex-combatants to exercise actual access to them.

Another less obvious situation indicated by our findings is that the population did not spontaneously access the services. This should be taken into account, especially since the survey’s data indicates that there was more knowledge about the presence of extramural teams in the territories than there was contact with them. Two reasons can explain this. One is a lack of information that would enable them to know that they could access these services, as explained previously. The other is a very weak or unrecognized capacity for self-agency in health. Similar findings have been reported by other studies of access to primary health services in rural areas, and are supported by the *health belief model*. Composed of six dimensions related to the person (perception of susceptibility, severity, benefits, barriers, self-efficacy, and cues to action), this model enables identifying the degree of importance or value that a person assigns to caring for their health. It reflects one’s own conception, independently of the health system³³. A study performed in Ethiopia used this model to evaluate the determinants involved in rural adolescents using sex and reproductive health services. It found that the characteristics or dimensions that most impacted interest in accessing those services were: the adolescents having at least a ninth grade education, discussing these topics among the family, having a high perception of the severity of the health problems related to this component, and a perception of great benefits and few barriers in terms of accessing these services³⁴. Two other studies determined barriers to health access, one in Uganda with adolescent mothers and another in Pakistan with rural pregnant women. The problem matrix in each of these studies showed that individual barriers were most important, including lack of knowledge about self-care practices and insufficient health education in school. With regard to social barriers, health services were not sought due to social stigmatization related to teenage pregnancy, including at school. Family barriers included the partner not permitting access to health services or family opposition to the health practices performed in hospitals and their preference for traditional health practices^{34,35}. These studies show that even when services are available and offerings are sufficient, something inherent to the person will always enable or prevent someone from accessing health services or seeking advice, which cannot be controlled by the sys-

tem, but rather, depends on the beliefs and perceptions of the individuals themselves.

With respect to the finding of a lack of knowledge about the project's community health monitoring component that was developed for the population of ex-combatants, the reasons for this again pertained to low induced demand, or poor outreach, thereby reaffirming that deficient outreach by the programs or strategies being developed is the main barrier to accessing them. A similar finding was reported by the Medellín study mentioned earlier³². This has a much greater impact in rural areas such as those in the present study, where a dispersed population makes health communication even more difficult. In fact, when asking the population of ex-combatants if community health monitoring strategies were important to accessing health services, the response was resoundingly positive, supporting what some social leaders have expressed in other studies conducted in the country, that "the best way to bring people into health services is to include them in an organized way so that they actively participate in improving the health system"³². Along these same lines about the important role of community health monitoring in the perception of access to services, it is worth mentioning what is known in public health as community-oriented primary care, as presented by Gofin, which highlights the importance of this type of strategy because both health services and the population assume responsibility for the health of the community, which the community also identified as important. By establishing these networks, demographic and health monitoring can be ongoing and both parties can participate in evaluating local action programs, screening the population, and assessing interventions at the individual, family, and community levels. In this way, clinical health care for individuals and families can be integrated into public health³⁶.

Paraguay and Spain have demonstrated success with implementing these types of strategies in rural communities, one through surveillance and immediate health care for fever cases and the other through improvements in the quality of health promotion by facilitating the community's involvement in the process, not only as reporters of the events of interest but also as community health agents. Through this strategy, the community has also been able to play a crucial role in identifying needs and formulating health promotion strategies, as well as detecting people with health risks and referring them to health services. This has improved morbimortality indicators for both case studies, in Asunción (Paraguay) and in Aragón (Spain)^{37,38}, and supports the high interest that stood out in the results from the present study. Informed of these types of initiatives and involved in them, the community of ex-combatants would first consider the health benefits that would be gained from their implementation, and second, actively participate.

The perception of access to health services on the part of the population of ex-combatants who were surveyed may have been affected by various factors related with the logic by which the demand and supply of health services in the country are organized. One important and indicative factor in the dynamic of these communities may often go unnoticed—the *rural areas* themselves, where they are located. This is the case not only

for ex-combatants in the process of reincorporation but also for a large part of the country. When health services planning does not take into account the rural context of the territories and the great importance of guaranteeing effective access, it could be said that the dispersion of the population ends up acting as an intermediary in creating barriers that make it difficult to provide services to the population. This produces problems in the perception of availability and accessibility, and results in a percentage of the rural population's demand for health services not being effectively addressing, subsequently worsening their health conditions³⁹.

This type of geographic isolation can spiral into all types of marginalization—economic, political and social—which operate as indirect determinants of the lack of access to basic community services, or the exclusion from the right to enjoy them. Even though physical-natural adverse conditions of place are considered to be the causes of isolation, intrinsic conditions should not result in a failure to take public policy actions to alleviate a situation that is caused by segregated spaces, where social goods such as health are not easily accessible⁴⁰.

Other studies in Colombia have described similar differences in access to health services among regions, such as one by the Bank of the Republic in 2014 that compared the 2007 and 2012 quality of life surveys⁴¹. The main difference found by that study was that the percentage of people with the least access to health care were located in Orinoquia and Amazonia, which are the most remote regions in the country. These disparities are primarily associated with the unequal distribution of hospital services, which are primarily located in the largest cities where the largest number of providers per 100,000 residents are found. Some of the main barriers to services were low perception of the risks caused by health problems, a lack of financial resources for traveling, and a perception of poor service. Paradoxically, enrollment increased during those years, particularly in the subsidized system, while the guarantee of access to services declined. Lastly, regression models to determine the probability of accessing services by region found that the probability of accessing services was lower in the Pacific coast and Orinoquia-Amazonia than in the other regions, primarily because few health providers are located in those regions⁴¹. These regional disparities within the same country are of great concern when evaluating perception of access. Rural coverage under these conditions ends up in "no man's land," as Borgia said in his study of rural health care in Paraguay, who noted that the government's recent health reform lacked definitive mechanisms for providing health to the rural population and made the role of rural community clinics invisible⁴².

In our country, concerns over differentiation in access to services in these types of regions suggest some urgency to develop and establish a rural health model⁵, planned in accordance with the perspective of each region so as to not only solve health problems in a timely way and with quality care but also to contribute to improving the living conditions of those located in these areas of the country (as described in point 1 of the peace accords). The Health Project for Peace is an important step in access to services for the population of ex-combatants.

This study has some limitations. First, it is a measurement of perception, we assume that the responses are loaded with subjectivity and may differ from objective measurements, for example when measuring waiting times. However, we are convinced that this measurement produces a result closer to the experience lived by the subjects when they need and seek medical attention. Second, we could not carry out a simple random sampling. However, and as indicated in the methods, the results are free of bias to the extent that 95.8% of the ETCRs of Colombia were surveyed (23 of 24), in some cases all the households of the ETCR were included, and mainly, due to the high homogeneity in the living conditions of the subjects.

The sampling design used by the present study does not permit making inferences at the ETCR or regional level, or comparisons among them. The regional stratification presented in the tables is only exploratory. It is to be expected that differences in the sociocultural characteristics of the population can affect the perception of effective access, as can differing degrees of success with implementation across the country and satisfaction with the services at the territorial level. Nonetheless, this is not something that can be evaluated or concluded based on the results of the present study. Valid information about the status of the implementation of the Health for Peace project in each ETCR or region did not exist at that time, nor does it exist now. In order to identify territorial differences, a different type of analysis needs to be performed using different methods and sources of information. While an overall analysis of the status of the implementation of the Project is undoubtedly research that needs to be conducted, it goes beyond the scope of this study.

Finally, there is the lack of generalization. The results of this study cannot be generalized to the total population of Colombia, nor to all those demobilized at the different moments of reincorporation processes during the internal armed conflict of the country, insofar as it is a population in special conditions, in transition to the legality and in the process of change in multiple dimensions; In this regard, we recognize that the perception of former FARC-EP combatants about the national health system is developed in comparison with the conditions of medical care during their militancy period before the signing of the Final Accord.

As a practical and experiential experience, it has played a positive role in the majority of the population having positive perceptions, as found by our study. These actions have indirectly strengthened the health dimension component of the path to reincorporation, which guarantees this fundamental right and recognizes this population as citizens who are transitioning to civilian life, thereby ensuring the conditions that are needed for a stable and lasting peace. It is important that these types of strategies and actions be sustainable and be extended to the entire rural population through a national plan and state policies aimed at making actual access to health services possible. In practical terms, this is the only mechanism that will

subsequently transform the current perception of access to health services.

Conclusions

The actions that have been implemented through the Health for Peace framework, which inspired this study, have taken into account WHO recommendations for health equity and universal health coverage for highly vulnerable populations⁴³, such as ex-combatants in the process of reincorporation. These two conditions are operationalized by effective access to services through strategies and actions that involve primary care in rural areas. In this way, it is possible to strengthen actual access to services for this population and go beyond the legally-required intra-institutional actions, towards extramural actions and community participation, which as documented herein, have a stronger impact on the highly positive perceptions of the majority of our study population. More of these actions are needed since they reduce the gap between rural areas and cities, and enable ex-combatants to put down roots in civilian life, thereby helping to maintain an extended post-conflict period that can lead to lasting and stable peace.

Data availability

Underlying data

The database is stored by the International Organization for Migration's (IOM) Migration and Health program. Since it contains data about people who are ex-combatants and residents, this database cannot be publicly provided without prior authorization from the administrators, who will evaluate the request. A reviewer or reader interested in acquiring the data should write a request to the Migration and Health Program of the International Organization for Migration in Colombia, specifying: objectives, justification, expected results and dissemination plan of the analysis. Please send your requests to the director or the Program David Rodríguez : darodriguez@iom.int

Extended data

Figshare: Instrument in Spanish of the Study "Perception of effective access to health services in Territorial Spaces for Training and Reincorporation, one year after the peace accords in Colombia: a cross-sectional study". <https://doi.org/10.6084/m9.figshare.11336468>¹⁴

This project contains the following extended data:

- InstrumentinSpanishPerception of Effective Access to Health Services in Territorial Spaces for Training and Reincorporation.xlsx (Study instrument in Spanish)

Figshare: Instrument in English of the Study "Perception of effective access to health services in Territorial Spaces for Training and Reincorporation, one year after the peace accords in Colombia: a cross-sectional study". <https://doi.org/10.6084/m9.figshare.11328344>¹⁵

This project contains the following extended data:

- InstrumentinEnglish.xlsx (study instrument in English)

Data are available under the terms of the [Creative Commons Zero “No rights reserved” data waiver](#) (CC0 1.0 Public domain dedication).

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We appreciate the authors' responses to our questions and suggestions.

1. The conclusion in the abstract does not match the conclusion in the article.
2. The health belief model is inappropriate to explain why people do not spontaneously look for healthcare services. The results do not provide any data that allows to suggest a "weak or unrecognized capacity for self-agency in health" and do not evaluate any of the six dimensions of this model (perception of susceptibility, severity, benefits, barriers, self-efficacy, and cues to action) to understand the degree of importance that ex-combatants assign to their own health. In addition, the cited works about the health belief model are not related to the topic or the findings of this research. A more plausible explanation could be related to the transitional moment in which ex-combatants are starting to interact with a healthcare system different from the one they had as an armed group.
3. The new references about rural health provide interesting insights to understand the results
4. The article would benefit from a final proofreading

Competing Interests: Vanesa Giraldo has previously published with Julián Fernández-Niño

Reviewer Expertise: Medical Anthropology, Human Rights, Colombia

We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Reviewer Report 26 June 2020

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**Diego Lucumí**

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In my opinion, this is a well-written paper. Although the study is descriptive in nature, it provides relevant evidence about a recent public health topic in the Colombian literature. In this regard, I recommend the authors provide some potential areas of research that need to be addressed to extend evidence on this relevant area. For instance, based on the descriptive findings, some hypothesis could be proposed.

In addition, I suggest to review some minor aspects:

- Check the order of the education category in table 1 (completed high school has to be the last category).
- It is clear there are few comparable studies on this topic. However, it could be relevant to see if, for example, for out of pocket payments it is possible to compare with reports from rural areas in Colombia.
- Undoubtedly, perceptions play a key role in explaining and influencing how people relate to health providers. I am wondering, why in this study authors recognize the role of theory and models as the Health Belief Model, but they decided to use a more general model to guide the conceptualization of the study. It does not invalidate the study but could be interesting to see if models that address specifically perception can lead to similar to different results.
- Finally, I suggest trying to reduce the extension of some paragraphs and the discussion section itself.

Is the work clearly and accurately presented and does it cite the current literature?

Yes

Is the study design appropriate and is the work technically sound?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Yes

If applicable, is the statistical analysis and its interpretation appropriate?

Yes

Are all the source data underlying the results available to ensure full reproducibility?

Yes

Are the conclusions drawn adequately supported by the results?

Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Social determinants of health and health equity, Cardiovascular disease prevention, Public health management.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Version 1

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This study addresses one of the most challenging dimensions of the implementation of the peace agreement in Colombia: access to health care services of former combatants. Using a human rights framework, the article aimed to describe how ex-combatants of the Revolutionary Armed Forces of Colombia-People's Army (FARC-EP), now a political party, perceive access to emergency services, and health promotion and illness prevention programs during their reincorporation process to civil society. All participants inhabited one of the Territorial Spaces for Training and Reintegration (ETCR) which are places established to relocate former fighters. Developing instruments to monitor the socioeconomic dimensions of Disarmament, Demobilization, and Reintegration (DDR) operations, in particular, access to health care services, is not only an important contribution for Colombia, but for all countries that are transitioning from war and conflict to peace. This study also suggests an important contrast between access to healthcare in ETCRs and historical challenges for health provisions in rural areas. While the study is clearly of utmost importance, we identified several areas that warrant significant revisions.

Introduction:

The introduction provides limited context about the reincorporation program, ETCRs, and Health for Peace project. Although Colombia has had multiple experiences of reintegration programs with different armed groups, including the FARC, the process that followed the signing of the 2016 peace agreement is a unique experience that represented a national and international precedent for peace negotiations. The article should mention the main characteristics of the reincorporation program, including the different challenges and developments in the establishment, transformation, and infrastructural conditions of ETCRs in order to understand the living conditions of the participants. There is an important history here that should be mentioned, even in abbreviated form. Regional differences and successful and less successful ETCRs should be briefly mentioned as a way to convey the potential heterogeneity of

experiences of ex-combatants. The authors refer to this program as reintegration; however, the distinction between reintegration and collective reincorporation is necessary in the Colombian context since it refers to different programs that determine ex-combatant lives in different ways.

Also, the authors do not provide a description of the Health for Peace project. Therefore, it is difficult to know how the intervention of United Nation agencies, the International Committee of the Red Cross, and other medical humanitarian agencies created special conditions in ETCRs. For the context of the present study, it would be important to clarify what were the actions implemented by this project? Did they offer healthcare services or programs? Did they help ex-combatants with the administrative processes of the Colombian healthcare system? Was there a transition or potential overlap between international agencies and the Colombian health care system? Were there services from the Health for Peace project, including ambulances, physicians and nurses, still present at the time of the study? If there was overlap and the agencies were still present in the ETCRs, is the study instrument able to differentiate between the actions implemented by these agencies and the professionals and networks of the Colombian healthcare system? A more extensive description of this historical context of the relationship between the ETCRs, the international humanitarianism that supported the reincorporation process, and the health care networks is very relevant for the comparison with other rural communities and other peace processes.

For an international audience, the concepts of “prevention and promotion” and “extramural activities” should be briefly explained.

Methods:

- The methods are appropriate to answer the question of the study.
- The high coverage of the sample and the number of ETCRs included are remarkable given the characteristics of these population.
- The study unit seems to be the household not the family.
- It seems that the authors overlooked the name of the survey developed by Arrivillaga, Aristizabal, and Estrada and wrote instead East Asian Social Survey.
- The instrument has an important merit for this kind of study; however, one of its limitations is that it does not include questions about conflict-related health issues, focuses primarily on emergency services and only assesses the four weeks prior to the survey. This should be taken into account in the analysis and discussion.

Results:

The core of the results of the study is presented in tables and figures. There are problems in the way the data are reported and we question whether the authors need to present all these data and whether some data deserve further analysis.

For both tables:

- It is customary to present results as n (%). Since totals are numbers, it would be preferable to have the tables presented as n (%).

Table 1:

- State that CV is coefficient of variation.

- Place of Residence. It seems that this category was transferred from other studies. However, it is not clear how the category 'urban' applies to the context of ETCRs. Furthermore, the differences between rural settlements and dispersed rural areas are not intuitive and deserve an explanation.
- Number of people in household. There seems to be a problem in the reporting of the total column. The total for mean and median doesn't match the addition of men and women.
- Cultural identity or physical trait. Please change heading to Cultural identity and/or race/ethnicity.
- We recommend a table that shows the distribution of identity/race/ethnicity among the regions so we can have a better sense of the relationship between these two variables (Region and cultural identity/race/ethnicity).
- Group. The definition of the categories should be explained. For instance, what is the difference between victims and displaced? The authors should also mention that respondents could mark several responses.
- Housing. ETCRs, as part of the settlement project of the peace accord, have very similar characteristics. These categories, however, do not seem to reflect the housing conditions of ex-combatants in the collective reincorporation program. We suggest explaining the general characteristics of these types of housing. It seems that some questions were also adapted from other survey studies and it is unclear how they were transferred to the context of the ETCRs. For example, it is hard to think how "rented room" (inquilinato in the original instrument) is even a possibility within the context of ETCR. Equally, it is unclear what "room in another type of structure" refers to.
- Role in the family. In this question, if all the interviewees were the heads of the household as it is reported on page 3, it is unclear what relationship categories represent.

Table 2:

This table presents the most interesting results of the study. Nonetheless, the variations between regions deserve further analysis and discussion. Importantly, the Pacific and the Amazonian region show important differences from other regions. Depending on the final results and final presentation of the table, relevant discussions about regional variability could take place. In particular, the reader wonders why these two regions rank poorer in people's perception of effective access. There can be interesting discussions with other Colombian studies around health inequalities and regional variation and this study opens up the possibility to discuss what is specific of the peace accord and what resembles larger problems of the population of these areas.

Given the time the data were collected (September and October 2018), we know that some ambulances and health care personnel were still present in some of the ETCRs. Then, it is not entirely clear if the services people received were part of the Health for Peace project that had significant funds from international cooperation or if people were, in fact, using the services of the healthcare system. If ambulances were available, did that facilitate access to services and in a way skewed the data? Further information of the historical moment and specific conditions of the ETCRs at the time of the interview, as mentioned for the introduction, could help with the analysis of these results.

Figure 1, 2, and 3 offer interesting information but it is very hard to assess the responses. Are there national and international guidelines that allow us to assess whether those percentages are adequate? Furthermore, Figures 2 and 3 require information about the clinical specificities of the children under 1 or

pregnant women to assess whether the services offered were adequate or not, perhaps according to whether their regular or schedule check-ups are in agreement with known guidelines. We are left wondering how important this information is. The fact that the questions ask for the last four weeks further complicates the analysis given that the person could be in a moment in which there is no need to use these services and appointments might have already happened before the four weeks period or are scheduled for after the interview.

Figures 4 and 5 would benefit from an explanation of these programs and the guidelines or parameters established in the country regarding their offering. Are health promotion and illness prevention services replacing regular care? Why would someone have to schedule such an appointment rather than already having an appointment or being contacted to schedule the appointment? How do referrals and enrollments in these programs work? Also, questions arise about the coordination between programs and whether the presented data is adequate or follows any established guidelines.

All in all, an explanation of the ways in which prevention and promotion, extramural services, surveillance and monitoring systems, and regular health care work in coordination is needed to make sense of figures 1 through 8. Then, the authors should conduct the analyses of these data based on that description of the multiple pieces of the health care system and the parameters used to assess how adequate or inadequate are. Just to mention one example, what does it mean that 17,3% of the sample said that they had contact with an extramural team over the past 4 weeks? Is this adequate, inadequate, desirable, worrisome? We encourage the authors to rethink the presentation of the results.

Discussion:

The discussion requires major changes. The authors discuss some of the results in relation to existing literature but it is unclear what are the central ideas of the discussion and what results the authors found particularly interesting and relevant.

- Page 13. 2nd paragraph. "While prioritizing the right to health for ex-combatants represents important progress in public policy, Colombia's health system faces numerous challenges that need to be studied". What challenges is this sentence referring to?
- Page 13. 3rd paragraph. The ARN survey of 2014 describes a different reintegration program. This program includes ex-combatants who demobilized before the peace agreement and the majority of them moved to urban areas. As mentioned, the article should specify from the beginning that the population assessed in the study are part of the collective reincorporation program and describe their main characteristics. Is it possible to discuss some differences between access to health care depending on whether the ex-combatants participated in the reintegration or the reincorporation programs?
- Page 13. 1st paragraph. "(...) the results from the present work provide a new methodology and information that can be used to identify the health status of populations that became invisible because of their situation as active actors in armed conflict." This phrase is unclear. The present study centers on ex-combatants once they became "visible" and legally recognized after the peace accord. It also has the limitations of asking about the four weeks prior to the interview.
- The contrast with healthcare provision in other rural areas is an interesting and important discussion. However, the main points of this contrast are not clear.
- Page 14 3rd paragraph. We suggest avoiding adjectives such as "high", "low" and "small" without providing specific data.

- The discussion of the results about health promotion and illness prevention services in relation to studies conducted in Manizales and Medellin does not seem appropriate, unless the difference between these services in rural and urban areas is stated.
- What do the authors mean by good treatment in accordance with their culture and beliefs? Are the notions of culture and beliefs related to their identity as ex-combatant, a regional identity, a rural identity, or an ethnic/racial identity?
- The results do not indicate that people's behavior to seek health care services can be explained through the health belief model.
- We suggest that the center of the discussion should be around how the current data compare to the challenges described for other rural populations. The authors hint in this direction but could make significant contributions by signaling how ex-combatants' perception of their access to health care compares to other studies in rural areas. Are they getting better or worse access to health care than other rural communities? What does this say about the reincorporation process and about the health care system? If the analysis is broken down by region, what does it tell us about different regions in Colombia and, perhaps, different "reincorporation processes"?

Is the work clearly and accurately presented and does it cite the current literature?

Partly

Is the study design appropriate and is the work technically sound?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Partly

If applicable, is the statistical analysis and its interpretation appropriate?

Not applicable

Are all the source data underlying the results available to ensure full reproducibility?

Partly

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Medical Anthropology, Human Rights, Colombia

We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however we have significant reservations, as outlined above.

Author Response 13 May 2020

Julián Alfredo Fernández-Niño, Universidad del Norte, Barranquilla, Colombia

Answers Observations, Questions and Requests

1. **Introduction:**The introduction provides limited context about the reincorporation program, ETCRs, and Health for Peace project. Although Colombia has had multiple experiences of reintegration programs with different armed groups, including the FARC, the process that followed the signing of the 2016 peace agreement is a unique experience that represented a national and international precedent for peace negotiations. The article should mention the main characteristics of the reincorporation program, including the different challenges and developments in the establishment, transformation, and infrastructural conditions of ETCRs in order to understand the living conditions of the participants. There is an important history here that should be mentioned, even in abbreviated form.

RTA:

In the discussion, we had described the general characteristics of the elements of the reincorporation program that are related with access to the health system, and the relevant components, including a summary of the components of the process, along with some of the challenges for organizing social services, and particularly the right to health and the provision of health services for ex-combatants given the conditions of rurality itself in Colombia. This was aimed at providing the reader with greater context for interpreting the findings. To address the reviewer's observations, we adapted two paragraphs in the discussion and moved them to the introduction in order to provide the reader with this context at the beginning of the manuscript (new paragraphs 4 and 5 in the introduction):

"The Colombian government established eight dimensions for the path of reincorporation, one of which is access to the General Social Security Health System (SGSSS, in Spanish). It also established health services as a fundamental right to be guaranteed along with returning these people and their families to legality. Colombia is a good example of the comprehensiveness that these programs need when it comes to ex-combatants who are on the path to reincorporation, in the short-term. Meanwhile, long-term and sustainable reincorporation into civilian life will be ensured by including crucial elements such as effective health care and ongoing access to health services through enrollment in the health system. This will contribute to individual well-being, continued legality, and a solid ground on which to build stable and lasting peace.

Some of the projects were developed with the above challenges in mind and in accordance with the reference framework on which the path was laid out, such as Health for Peace, led by the Ministry of Health and implemented by three United Nations agencies (UNFPA, PAHO/WHO, and IOM). This project was created in order to strengthen institutional and community capacities to address health needs in the rural areas where the ETCRs are located, through already-established regional health centers as well as local primary hospitals. Health services were also complemented by the development of extramural strategies and community surveillance, led by regional health professionals with the support of local public health leaders who were trained by SENA as part of the project".

SENA is the National Learning Service (Servicio Nacional de Aprendizaje), which is the main public institution in Colombia responsible for technical training at the national level.

In addition, to addressing the reviewers' suggestions, a new paragraph was included in the introduction (new paragraph 6 in the introduction). We believe this provides the relevant context from which the survey used in this study arose, more specifically, in the framework for the implementation of the final accord. We briefly mention the Health for Peace project, its coordination with the health system, and the historical change that this represented for the organization of health services in the ETCR:

"In this way, the "Health for Peace" contributes to the implementation of Point 1 in the Implementation Framework Plan (IFP) of the Final Accord, which relates to comprehensive rural

reform and is associated with the implementation of Territorial Health Plans in the priority municipalities. It also complemented the emergency response by the Colombian government during the first year after the accord, which consisted of a physician, a nursing professional, and an ambulance for each ETCR. These health workers held positions that at first lacked the conditions needed to guarantee the quality of health care, given that the infrastructure and human skills for providing health services in the regions where the ETCRs are located has historically been insufficient, and non-existent in some cases. This emergency measure was gradually phased out as the Health for Peace project was being implemented. In this sense, the main objective of the Project was to strengthen the local capacity for improving access to comprehensive Primary Health Care services—with an emphasis on sexual and reproductive rights, mental health, preventing consumption of psychoactive substances, and children's health and malnutrition—thereby addressing the needs that had previously been identified by the United Nations Verification Mission in the ETCR. Furthermore, in order to promote access to comprehensive health services, support was provided to implement an extramural strategy as part of Primary Health Care, as well as to develop a strategy for community participation and surveillance. This proposal can be considered to be the specific development of strengthening health services in the rural area through recent technical developments by the Ministry of Health, such as the National Public Health Plan, but adapted to the context of ex-combatants, their families, and the residents of these regions, with the advantage of receiving technical and financial support from agencies in the United Nations system.”

With regard to the other points mentioned by the evaluators, we believe that a more detailed description of reincorporation, the “history,” including ongoing challenges, cannot be summarized in only a few paragraphs without risking falling into debatable inaccuracies. This also clearly goes beyond the scope of the aim of our study, which involves a specific objective and moment in time, namely, to describe how ex-combatants perceived effective access one year after the signing of the accord. It is important to consider that, for a merely descriptive quantitative study, the article is already exceedingly long, and the analysis suggested falls outside the authors' expertise. In addition, an extensive and more detailed discussion of the context is already included in the current version of the article, as well as potential contrasts with other reincorporation processes for ex-combatants in other countries.

Given our approach and disciplinary style, the objective of the introduction is to present the specific context that relates with the study. We believe that the most pertinent of what was suggested would be to add more information about the Health for Peace project, how that was implemented in the ETCRs, and where this project was inserted into the reincorporation process. We have added all of this to the introduction (paragraphs 3-5). More detailed information and analyses can be found in the references that are cited, especially in the discussion.

1. Regional differences and successful and less successful ETCRs should be briefly mentioned as a way to convey the potential heterogeneity of experiences of ex-combatants

RTA:

Agreed. Nevertheless, we believe the sample sizes in the ETCRs do not enable us to make inferences or draw conclusions about differences among regions or among ETCRs. The sampling was proportionally stratified by the size of the population of each ETCR for the purpose of making an overall inference only.

We included the regionally stratified analysis in the tables for exploratory purposes, as well as for reflection on the part of the readers and potentially for the formulation of a hypothesis.

Nevertheless, we prefer not to speculate about whether the differences found are explained by differences in the program's success, since they could also be due to randomness, which is why the discussion and conclusion about the results are presented using totals. We would certainly

expect that there could be differences in the sociocultural characteristics of the population that could affect the perception of effective access, and that there could be differing degrees of success in implementation across the country. Nevertheless, this is not something that can be evaluated or concluded based on our results. We also do not have valid information from any other source about the status of the implementation of the Health for Peace project in each ETCR or region at that point in time.

In order to address the suggestion by the evaluators, we have added a paragraph that describes this aspect, but we prefer that it be presented in the discussion as a limitation, as follows:

“The sampling design used by the present study does not permit making inferences at the ETCR or regional level, or comparisons among them. The regional stratification presented in the tables is only exploratory. It is to be expected that differences in the sociocultural characteristics of the population can affect the perception of effective access, as can differing degrees of success with implementation across the country and satisfaction with the services at the territorial level. Nonetheless, this is not something that can be evaluated or concluded based on the results of the present study. Valid information about the status of the implementation of the Health for Peace project in each ETCR or region did not exist at that time, nor does it exist now. In order to identify territorial differences, a different type of analysis needs to be performed using different methods and sources of information. While an overall analysis of the status of the implementation of the Project is undoubtedly research that needs to be conducted, it goes beyond the scope of this study.

1. The authors refer to this program as reintegration; however, the distinction between reintegration and collective reincorporation is necessary in the Colombian context since it refers to different programs that determine ex-combatant lives in different ways. Also, the authors do not provide a description of the Health for Peace project.

RTA:

These concepts are used in accordance with the terminology in the documents that are cited. The International Organization for Migration (IOM) and the Ministry of Health, as co-authors, have asked us to use the same terminology in order to avoid ambiguity. We understand the debate underlying the distinction mentioned by the evaluators, and we suggest that the reviewers could present this in a public comment about the article, where it could be debated.

The Peace Accord is described in the brief introduction to paragraph 3, and a link has been added to the text where it can be consulted in full. The paragraph mentioned above (new paragraph 6 in the introduction) was also added, which describes the Health for Peace project and briefly explains the main components.

1. Therefore, it is difficult to know how the intervention of United Nation agencies, the International Committee of the Red Cross, and other medical humanitarian agencies created special conditions in ETCRs. For the context of the present study, it would be important to clarify what were the actions implemented by this project? Did they offer healthcare services or programs? Did they help ex-combatants with the administrative processes of the Colombian healthcare system? Was there a transition or potential overlap between international agencies and the Colombian health care system? Were there services from the Health for Peace project, including ambulances, physicians and nurses, still present at the time of the study? If there was overlap and the agencies were still present in the ETCRs a more extensive description of this historical context of the relationship

between the ETCRs, the international humanitarianism that supported the reincorporation process, and the health care networks is very relevant for the comparison with other rural communities and other peace processes.

RTA:

An “extensive” description of the historical context of the relationships between the ETCRs and international humanitarian organizations is relevant to this area of study, nonetheless, we believe that it considerably exceeds the scope and objectives of our study. This is not an objective of this report of descriptive information, nor is it of interest to the current research project. A different type of investigation would be warranted in order to respond to this aspect. The current manuscript is over 10,000 words, and we believe that elements that do not enter into dialogue with our specific results would not be relevant. Given our objective, we are unable to identify how it would enter into dialogue with the manuscript in general, or specifically with the results. While the context is undoubtedly relevant, this report has a modest objective, and its intention is not aimed at a historical analyses of the peace process. If the reviewers consider it to be helpful to suggest a reference that discusses this aspect, we can include that.

As we mentioned previously, our objective is limited to describing the perception of effective access to health services on the part of ex-combatants in the ETCRs, in the framework of the Health for Peace project. The elements that we consider to be relevant pertain to this context, and are presented in the manuscript, in the introduction and the discussion, and have been expanded. Adding broader elements would warrant a more detailed analysis using other methodologies and sources (sociological, historical, analysis of public policies) that go beyond the objectives of this report, and fall outside our disciplinary background. We believe that this is a task for experts on those types of analyses, who can use our results, among others, as a basis for their studies.

1. For an international audience, the concepts of “prevention and promotion” and “extramural activities” should be briefly explained

RTA:

We agree. And we would like to add that this article may also be read by people who have a background other than Public Health. Therefore, we want to take this opportunity to suggest incorporating a Glossary of Terms. We suggest including this as a separate linked file, or supplementary material, or as a table in the main article. We include it here in our response and we will defer to the editors with regard to where to place it.

This table is referred to in the methodology, specifically in the section “Data collection instruments and procedures”

Glossary of terms

Health promotion: This is a global political and social process that encompasses not only actions aimed directly at strengthening the abilities and capacities of individuals, but also at modifying social, environmental, and economic conditions in order to mitigate their impact on public and individual health.

Main Strategies: To establish a healthy public policy, create environments that support health, strengthen community action for health, develop personal skills, and redirect health services (WHO, 1986)

Primary health care: This refers to essential health care that is affordable for the country and the

community, and it is conducted using practical, scientifically-founded, and socially-acceptable methods.

The primary health care approach includes the following components: equity, community involvement/participation, intersectorality, adequate technology, and affordability.

Main activities: Education on individual and community health, including the magnitude and nature of health problems, and indications for how to prevent and control these problems; supply of drinking water and basic sanitation; maternal and child health care, including family planning; immunization, proper treatment of common diseases and injuries; and the supply of essential drugs. (WHO, 1978)

Disease prevention: Measures aimed not only at preventing the onset of disease, such as reducing risk factors, but also at stopping its progression and mitigating its consequences once it occurs.

Primary prevention is aimed at preventing the initial appearance of a disease or illness.

Secondary prevention and tertiary prevention are aimed at stopping or delaying a disease that is already present, as well as its effects, through early detection and appropriate treatment or by reducing recurrence and chronicity, for example through effective rehabilitation. (WHO, 1984)

Community action for health: Refers to collective efforts by communities to increase their control over the determinants of health, and consequently, to improve health. (Ottawa Letter, 1984)

Extramural Activities: This refers to services that are offered to the population in spaces not intended for health, or health spaces in regions that are difficult to access and where health services are not available. These spaces are temporarily setup for the development of specific activities and procedures. (Resolution 1441/2013 Ministry of Health Colombia)

Methods:

1. The methods are appropriate to answer the question of the study.

The high coverage of the sample and the number of ETCRs included are remarkable given the characteristics of these population.

The study unit seems to be the household not the family.

It seems that the authors overlooked the name of the survey developed by Arrivillaga, Aristizabal, and Estrada and wrote instead East Asian Social Survey.

RTA:

Thank you very much for the valuable comments by the reviewers. Indeed the advantage of the study is its ability to encompass, with high representativeness, a population that is difficult to identify with this type of analysis. This was possible because of the availability of a sample of nearly all of the ETCRs that were active in the country at the time the study was conducted, and its availability at a critical time in Colombia's peace process.

The unit of analysis is indeed the household, and not the family, which is why the description of the results refers to households rather than families.

In the second paragraph in "Data collection instruments and procedures," we changed the name of the survey that was used. Thank you very much for the correction.

1. The instrument has an important merit for this kind of study; however, one of its limitations is that it does not include questions about conflict-related health issues, focuses primarily on emergency services and only assesses the four weeks prior to the survey. This should be taken into account in the analysis and **discussion**.

RTA:

The main objective of the instrument that we constructed was to determine the perception of effective access to health services in a population of ex-combatants who were located in the ETCRs, and who had been given additional support through the provision of primary health and emergency services. The survey was not intended to establish an individual health diagnosis of ex-combatants in relation to their previous activity as combatants, but rather, to determine whether one of the strategies to guarantee the reincorporation of this population to civil society was met—that is, access to health services from the perspective of a right to health framework, which is a commitment made by Colombia's government.

Since we wanted to identify effective perception and not just access to services, an instrument was constructed to allow us to measure these dimensions in the population of ex-combatants who immediately received services. This was aimed at ensuring that the health services would have been provided primarily through the Health for Peace project. These specific actions were carried out within the framework set forth by Colombia's health legislation, in order to help ex-combatants and their families access services and have their needs addressed, as well as to promote health. Therefore, by using a window of 4 weeks prior to the interview, we ensured that their answers corresponded to the care they were receiving at that point in time.

The study was not aimed at evaluating topics related with the conflict or access to health services by ex-combatants in the past or before the reincorporation process. The health services that were evaluated primarily correspond to the lines of action taken by the Health for Peace project, but also to public health actions taken in rural areas across the entire country. These were not limited to emergencies (which in rural areas tend to be the main point of access to health services), but also involved extramural activities, including Public Health actions and even community surveillance. One month prior to the survey was chosen as the period since the information is cross-sectional and we wanted to use a reduced temporal framework that would be the same for all the study participants, such that we referred to a "snapshot" of what occurred for everyone during virtually the same period. A period of one month is usually standard for studies about health services. If we were to ask about health services over a longer period prior to the interview, the person would be reporting their perception of access at times other than the implementation of the project. A longer window could also result in recall bias.

This time frame is always indicated in the description of the results and the figures. And a brief explanation about the reason for using one month was added to the methods.

Results:

1. The core of the results of the study is presented in tables and figures. There are problems in the way the data are reported and we question whether the authors need to present all these data and whether some data deserve further analysis.

RTA:

We believe that one of the main strengths of our study is the fact that we present an analysis of all the dimensions of the health services available at that time in the ETCRs, and that not including all of them would be exclusive. The research group's efforts were directed at measuring all the dimensions of effective access, and the manuscript is aimed at a wide reporting of the results, which is common for a report of a multi-dimensional survey. This way, the readers can draw general conclusions and also extract detailed information on the dimensions that are most relevant

to them. This can serve as a key database for more specific analyses by researchers and decision-makers.

In our opinion, the results are easily readable. Other analyses can of course be performed with this information, for example, exploring associations among dimensions, but our purpose for this report is to provide a simple but exhaustive description that serves as a basis for researchers and decision-makers. There will be few opportunities to publish the complete findings, which is why we chose F1000research, so that the number of words would not be limited and to make this public quickly and openly.

Rapid and complete dissemination of the results would take full advantage of the resources used to collect the information, where knowledge management is very relevant.

Having said that, if the editor believes it is necessary, we could leave in the two tables, but perhaps dispense with some of the figures, although we think that the way they are structured would be helpful to decision-makers, who may want to extract the information for public presentations that would disseminate the findings.

1. For both tables:

It is customary to present results as n (%). Since totals are numbers, it would be preferable to have the tables presented as n (%).

RTA:

There are a variety of styles. We believe that % should be separate since it is the estimator of interest, as opposed to absolute frequencies, and it should be the first thing that the reader sees. We can change that if the editor believes it is necessary, but we prefer to keep it as is in order to stress that the results are interpreted based on these indicators (percentages), and especially when related to the conclusions.

1. Table 1:

State that CV is coefficient of variation.

RTA:

That's right. We replaced CV with coefficient of variation.

1. Place of Residence. It seems that this category was transferred from other studies.

However, it is not clear how the category 'urban' applies to the context of ETCRs.

Furthermore, the differences between rural settlements and dispersed rural areas are not intuitive and deserve an explanation.

RTA:

All of the questions and categories included in the responses to the instrument, and therefore in the report of findings, were specifically designed and adapted for this study. In addition, the contents of the response options were validated in two ways: by experts and by the community. The latter included a review by field nurses who lived in the territory, as well as a pilot in which all the questions were reviewed at the territorial level, in order to study the acceptance, efficiency, and cultural applicability of each response. After completing the review, the option of "urban" was left in because the review found that it was applicable in some cases.

We used the definition of "urban" by the National Administrative Department of Statistics (DANE in Spanish), namely: "It is defined as a concentration of a minimum of twenty (20) contiguous, neighboring, or semi-detached dwellings, located in a rural area of a municipality or a Departmental Township."

In accordance with technical criteria, this aspect was studied and verified with the members of the team. Although there are few, the classification is applicable.

1. Number of people in household. There seems to be a problem in the reporting of the total column. The total for mean and median doesn't match the addition of men and women.
RTA: No, the calculation that we present is correct. For the average of persons per household in the total sample, both averages (men and women) cannot be added (summed). It is important to take into account that we are stratifying by the sex of the informant (or head of household). Therefore, each column analyzes different households. That is, they cannot be added together, since what is presented is the average (and median) of persons in the household, for households with women as the head versus those with men as the head of household, as explained in the article. It's helpful to remember that the unit of analysis is the household, as explained in the article, except that, here, head of household (or informant) data are presented as well as household data. The mean of the total would actually be the result of an average weighted by the sample size of each group, as can be mathematically verified.

Cultural identity or physical trait. Please change heading to Cultural identity and/or race/ethnicity.

RTA: We changed it to "ethnicity".

1. We recommend a table that shows the distribution of identity/race/ethnicity among the regions so we can have a better sense of the relationship between these two variables (Region and cultural identity/race/ethnicity)

RTA: We created the table that was requested, and we are including it below for the reviewer's information. As can be seen, the ethnic distribution is as expected for the regions, although the ex-combatants are not necessarily in an ETCR that is in the same region as where they are from, which is an aspect that cannot be determined with the data that we have available.

Distribution of ethnicity of the participants by region

See the table in this link:

<https://www.dropbox.com/s/yozcvr3sidutvvg/Distribution%20of%20ethnicity%20of%20the%20particip>

*Presented as absolute frequencies and percentages per column

Nevertheless, we do not believe it would be pertinent or congruent to include this table in the article, since it does not correspond with the objectives of our research. As we explained earlier, the sample design does **not** permit making inferences or comparisons at the regional level, but rather only global. The results in Table 2 are presented by region in an exploratory manner, but are household level data, not individual level. Thus, since the inference in the conclusions is at the household level, and we do not know the ethnicity of the entire family, then we cannot indicate a relationship between ethnicity and the variables of interest in the study that relate with perception of effective access by the household.

To summarize, the global description includes the ethnicity of all the informants in the entire sample in an informative manner, but it is not our interest to discuss explanations for regional differences. As we mentioned, the sample design does not permit that analysis, and it is also not one of our objectives. In addition, the sample size does not enable us to explore differences among regions, and ethnicity also cannot be connected with the results since the level of analysis is different (ethnicity at the individual level and effective access at the household level).

The table could be consulted in the public reviews, but it seems to us that its inclusion in the article is not warranted.

1. Group. The definition of the categories should be explained. For instance, what is the difference between victims and displaced? The authors should also mention that respondents could mark several responses.

RTA:

The authors did not use a working definition (theoretical or legal) of the categories in the present article. This work was based on a self-identification and self-affiliation approach, in which each person indicated whether they considered themselves a “victim” or “displaced.” This approach is relevant to these types of quantitative questions, and is even used for complex categories such as ethnicity.

Using a working definition defined by the authors would not be useful since the study participants themselves decided how they are classified based on their own criteria, which does not always correspond to theoretical and legal definitions. Thus, for example, “victim” or “displaced” is how one defines oneself. In addition, the methodology does not allow for determining labels in a distinct manner or with “objective” criteria, given that they are based on each individual case and only one simple question. (How it is formulated can be consulted in the questionnaire in Spanish, and its translation into English.)

Unfortunately, with regard to the question of group affiliation, at the request of the program, this was defined operationally and in an exclusive manner, though in reality the groups are not mutually exclusive (the same person could be in two or more categories) since people had to choose only one category with which they identified most. These groups were defined because they were the ones considered to be of interest to the program, and we found that the majority of the participants (over 71%) identified as ex-combatants.

All of this clearly indicates a limitation with respect to this variable. Therefore, these categories are presented as part of the characterization of the study population, but are not considered to be categories for analysis, nor are they intended to be more deeply explored. We included a comment about the definition of the groups in a footnote in Table 1.

1. Housing. ETCRs, as part of the settlement project of the peace accord, have very similar characteristics. These categories, however, do not seem to reflect the housing conditions of ex-combatants in the collective reincorporation program. We suggest explaining the general characteristics of these types of housing. It seems that some questions were also adapted from other survey studies and it is unclear how they were transferred to the context of the ETCRs. For example, it is hard to think how “rented room” (inquilinato in the original instrument) is even a possibility within the context of ETCR. Equally, it is unclear what “room in another type of structure” refers to

RTA:

This imprecision clearly stems from our original efforts to create transferability with some of the surveys that have been performed in rural areas in Colombia. We agree that it is not possible to consider whether something like “rented room” (inquilinato) exists in this context. The interviewers were consulted again about this question, and it was decided that all the cases were a type of rented room, while not being able to distinguish which type.

Those who indicated “rented room” were probably referring to a room in houses that were not their own and where other families lived, and that is what they called it (very few responded in this way). “Rented room in another structure” refers to a rented room in a house belonging to someone else, but that is not considered to be a rooming house. Therefore, we decided to unify “rented room” into one single category given that it is not possible to distinguish between these. For transparency purposes, we kept the original question as it appears in the instrument.

We do not have more information about housing conditions.

1. Role in the family. In this question, if all the interviewees were the heads of the household as it is reported on page 3, it is unclear what relationship categories represent.

RTA:

The concern about the role of the family was clarified in the methods section (paragraph 1), where the main informant was the head of household or the person who had the most information about the health status of the household members. Therefore, in the results table, we can see that the main informant's role in the household was not only head of the family but could also be wife.

1. Given the time the data were collected (September and October 2018), we know that some ambulances and health care personnel were still present in some of the ETCRs. Then, it is not entirely clear if the services people received were part of the Health for Peace project that had significant funds from international cooperation or if people were, in fact, using the services of the healthcare system. If ambulances were available, did that facilitate access to services and in a way skewed the data? Further information of the historical moment and specific conditions of the ETCRs at the time of the interview, as mentioned for the introduction, could help with the analysis of these results

RTA:

We do not have this information and we would not be able to collect it in a valid manner. We do not have records available to us that would enable us to answer this question. Since we only have oral reports from key actors rather than systematic and reliable data, we prefer not to include this. As we mentioned, the objective of this study does not include distinguishing between whether the given services were provided through international cooperation or by the healthcare system. In fact, for us, this difference is not very clear because international cooperation was aimed at strengthening the institutional response in a sustainable manner. Of course this is debatable, but we do not have more information with which to discuss it.

Below is an additional response that from the administrator of the IOM's Migration and Health program, which could be published as part of the response, for readers who would like more discussion:

"Yes, there were ambulances in some of the ETCRs and health personnel who strengthened the hospitals of influence in the ETCRs. That was an intervention led and organized by national governmental agencies, as well as hundreds of interventions that were carried out to demobilize the ex-combatants. Comprehensive management of health care also existed by national agencies that played a role in complying with the peace accords. And there were calls for the presidency of the public insurance company to enroll ex-combatants, as well as many other interventions that affect perception. We do not believe there is bias precisely because what was measured was the perception of the multiple and specific social interventions in health that existed at the time. We are not saying that access to health by the rural population in Colombia was measured. We only have a snapshot of a single moment in the history of health in Colombia. It was not of interest to us to evaluate in a distinguishing manner which actions and institutions contributed to this perception." We do not believe that it is relevant to include more details about coordination between international cooperating agencies and the Health for Peace project.

1. Figure 1, 2, and 3 offer interesting information but it is very hard to assess the responses. Are there national and international guidelines that allow us to assess whether those percentages are adequate?

RTA:

No standards for these indicators exist, and they are not easily comparable since they depend on demographic and epidemiological profiles, objective morbidity, perceived morbidity, self-perception of health, and the profile of the utilization of services, which are different for different populations and social contexts. The indicators in these figures are primarily a reflection of the offer and use of services, rather than the need, although that does partly determine usage.

Nevertheless, their publication does provide a reference for future studies and for making comparisons with similar populations.

This comparison is presented in the discussion, as is standard for similar publications. The discussion and analysis portion of the article compares our results with national and international parameters for perception of access to the different dimensions that make up this construct in the survey of emergency services, promotion, prevention, and extramural activities. The discussion describes the literature search that was performed and discusses the results in a detailed manner. The 2015 Colombian Demographic and Health Survey (ENDS in Spanish) was used as one of the main sources for comparing our national-level results with other rural contexts. As we mentioned in the introduction, perception of effective access is not commonly evaluated, and therefore, there are results from other studies with which our parameters cannot be compared, including findings related to the general population. Lastly, the results section of the article was exclusively aimed at presenting and describing the findings of our research.

We defer to the editor as to whether it is necessary to include an additional explanatory document (such as a linked file) to clarify how promotion and prevention programs and extramural activities function in Colombia, and how to compare the results in the discussion given the available sources of information. For example:

Explanation of the Functioning of Promotion and Prevention Programs in Colombia

In Colombia, promotion and prevention programs are governed and organized based on Law 1751 of 2015, of the Statutory Law for the fundamental right to health. Article 5 stipulates that the State has the responsibility to respect, protect, and guarantee the effective enjoyment of this fundamental right. Therefore, it must "Formulate and adopt policies to promote and prevent health, and to treat disease through collective and individual actions." Thus, the Ministry of Health, through all the actors in the Colombian Social Security Health System (SGSSS, in Spanish) (Colombian Health System), must adopt and integrate approaches involving primary health care (PHC) and family and community health, and coordinate individual and collective actions according to a population focus. In order to comply with these levels of care, the Ministry issued Resolution 429 of 2019, which adopted the Comprehensive Health Care Policy (PAIS in Spanish) and the Comprehensive Health Care Model (MIAS in Spanish). One of the components of the MIAS includes comprehensive routes to health care (RIAS in Spanish), which the Colombian Health System is required to use so as to comply with mandatory health care activities.

With respect to intramural and extramural promotion and prevention activities, resolution 3280/2018 established a comprehensive route to health promotion and maintenance, a route through specific events, a route for risk groups, and a maternal-perinatal route.

These routes involve actions at the individual, collective, population, and public health management levels. They adopt technical and operational guidelines, including service providers' compliance with procedures and specific consultations by age group, with frequencies stipulated in the technical provisions of the Resolution, for each group served. The Ministry of Health establishes indicators for evaluating and monitoring the health system, nonetheless, their construction is finalized when they are implemented in the territories. Establishing compliance parameters for the indicators depends on the diagnosis of the health situation and the territorial health plan. Given that municipalities have different starting points, comparable standard measurements cannot be established. Therefore, due to the differences that exist among the territories, national standards cannot be established for each program. According to the provisions in the Colombian health system, these routes and programs must be present and operational in at least 80% of each area. (falta cita resolucion 3280/2018).

The discussion compared our results with the use of promotion and prevention programs presented in the figures, based on the available literature on population surveys in Colombia and

the findings on routes from official sources. Regarding the figures that present the evaluation of our main category of analysis —perception of access— the comparisons in the discussion were based on research studies and the available documented experience in the country and in other countries. Nevertheless, most of the available sources of information on access to health services is based on the perspective of providers rather than the users of the services. Therefore, a comparison with our results would be limited.

We do not believe that this text should or could be included in the article. It could be added as an addendum or footnote to the figures (as a linked file).

1. Furthermore, Figures 2 and 3 require information about the clinical specificities of the children under 1 or pregnant women to assess whether the services offered were adequate or not, perhaps according to whether their regular or schedule check-ups are in agreement with known guidelines. We are left wondering how important this information is

RTA:

This information cannot be recovered from our database. The data is at the household level and the question refers to someone in the household. Unfortunately, we cannot evaluate this indicator because, first, there would be very few pregnant women and children under 1 year of age. And second, we do not have a way to obtain the total children under 1 year or total pregnant women. We do know that there were few, according to the interviewers. Third, this was not the objective. Actually, the information reported does not allow for evaluating adherence to the standards in the guidelines, and that was not the study's interest.

1. The fact that the questions ask for the last four weeks further complicates the analysis given that the person could be in a moment in which there is no need to use these services and appointments might have already happened before the four weeks period or are scheduled for after the interview.

RTA :

See the complete response provided previously (comment 2, methods). An explanation about the period of 4 weeks is included. In brief, if we were to use a longer period then the time at which the program was evaluated would not be comparable for all the subjects, and would result in recall bias.

1. Figures 4 and 5 would benefit from an explanation of these programs and the guidelines or parameters established in the country regarding their offering. Are health promotion and illness prevention services replacing regular care? Why would someone have to schedule such an appointment rather than already having an appointment or being contacted to schedule the appointment? How do referrals and enrollments in these programs work? Also, questions arise about the coordination between programs and whether the presented data is adequate or follows any established guidelines.

RTA:

See the previous response (comment 11), where towards the end we proposed including a short text about the functioning of the programs. There are no standards for the parameters that we are measuring, which we explained in the first part of the response, and it depends on the context. We are not evaluating guidelines or adherence to protocols, but rather, perception of access, subject to indicators of offerings and use of services.

We do not believe that primary care or services to prevent illness replace “regular care,” as the evaluator seems to suggest. The strategies are consistent with national public health guidelines for rural areas. We want to stress that we do not conceive of a dichotomy between health services in the context of the project and health services defined by the Public Health Plan, but rather, it is about development and adaptation in the context of the ETCRs. Regarding the last questions, we do not have an answer, we cannot provide one based on the results, and they are not part of the

objective of the study. In addition, in order to answer the last three questions, information would have to be collected for that moment in time and for each ETCR, since in practice, this is different in each place and changes rapidly over time.

Discussion:

1. The discussion requires major changes. The authors discuss some of the results in relation to existing literature but it is unclear what are the central ideas of the discussion and what results the authors found particularly interesting and relevant.

RTA: This is a brief report of a multi-dimensional survey. That would likely occur because the objective of this first analysis is to present multi-dimensional findings in a general manner, as a basis and background for more specific analyses. It is complicated to reduce the magnitude of the different results to a few central ideas. Nevertheless, we believe the new pages, 27 and 28, contain central ideas for the discussion.

At the request of previous reviewers, the discussion is organized according to the following logic:

1. Overall context of the right to health for ex-combatants and during post-conflict, 2. Context of how this is inserted into the Colombian peace and reincorporation process, 3. Summary of the importance of this study, including strengths and weaknesses of the survey and the instrument, 4. Explanation of the main findings in the context of the ETCRs, 5. Most relevant findings, reference points, and comparison with other studies of ex-combatants, 6. Interpretation of results based on the rural context, and in contrast with other studies on effective access in rural areas, 7. Limitations of the study, and 8. Conclusions.

1. Page 13. 2nd paragraph. "While prioritizing the right to health for ex-combatants represents important progress in public policy, Colombia's health system faces numerous challenges that need to be studied". What challenges is this sentence referring to?

RTA:

The challenges are innumerable. Nevertheless, right after the phrase that we cited, we present the two main challenges for Colombia's health system in terms of guaranteeing the right to health for ex-combatants. One challenge is rural health, which is explained by the fact that ETCRs are located in rural areas and there is little guarantee of access to health services in those areas in Colombia. The second challenge that we expressed is that by not fulfilling the guarantee of access to health services for ex-combatants, which is one of the cornerstones of compliance with reintegration and reincorporation, the peace process itself could be at risk.

1. Page 13. 3rd paragraph. The ARN survey of 2014 describes a different reintegration program. This program includes ex-combatants who demobilized before the peace agreement and the majority of them moved to urban areas. As mentioned, the article should specify from the beginning that the population assessed in the study are part of the collective reincorporation program and describe their main characteristics. Is it possible to discuss some differences between access to health care depending on whether the ex-combatants participated in the reintegration or the reincorporation programs?

RTA:

Some of these points have already been addressed in the new version of the introduction, which provides greater context. It is now clear that we refer to reincorporation. Throughout the introduction we now refer to reincorporation and how it is inserted into the Health for Peace project. We corrected where the term "reintegration" was incorrectly used, where it was necessary to replace it with reincorporation. The terminology for discussing reincorporation was verified and is

now consistent with the program, IOM, and the institutions.

Nevertheless, we are not able to address the last question based on the results that are available to us, since we would not be able to make distinctions based on the information that was collected. Even if differences between access to health services by the different reintegration and reincorporation processes could be compared, it would not fall within the scope of this study since the objective proposed for this work was to determine the perception of effective access to health services according to the activities provided by the project. This is a cross-sectional measurement that is not comparable with other reintegration and reincorporation processes developed in the country, for two fundamental reasons. One reason is because it is organized by official entities that do not have public information about access to health services according to reintegration and reincorporation. Secondly, these programs measure access based only on enrollment in the health system. Furthermore, this research did not differentiate between whether they belonged to one program or the other.

1. The contrast with healthcare provision in other rural areas is an interesting and important discussion. However, the main points of this contrast are not clear.

RTA Oficial :

In paragraphs 14, 15, and 16 in the discussion, we contrasted the provision of services with other rural areas based on the available literature, which indicated that their availability is very limited. The only source for comparing access to services in rural areas in Colombia is the 2015 National Demographics and Health Survey, which contains some sections that distinguish between type of enrollment and type of services for the rural population. Nevertheless, as can be seen, that survey does not involve perception of access, which is the category analyzed in our study. This greatly limits our ability to compare our results on access in rural areas with those of ENSUT, since the ENSUT results were oriented more towards service providers than users.

In general, evaluations of access to services in Colombia are more focused on urban areas, such as the Avillarraga et al survey, and there is still a large gap in knowledge about what occurs in rural areas. Therefore, our results provide an initial basis for this line of study, and contribute to reducing the knowledge gap.

Furthermore, in order to discuss our findings in greater depth, we used other international sources, such as the studies obtained from Paraguay and some areas of Africa, where the study of access to services in rural areas is a little more common. But we reiterate that there is a limitation given the type of construct that is used to evaluate access.

Therefore, we accept your comments that perhaps our analysis of the subject does not have clear points of contrast. Nonetheless, this is related more to the existing literature and knowledge on the subject, thereby demonstrating the importance of continuing to more deeply explore this subject and generate more knowledge about it.

1. Page 14 3rd paragraph. We suggest avoiding adjectives such as “high”, “low” and “small” without providing specific data.

RTA: These changes were made. The adjectives were replaced with specific data from the surveys.

1. The discussion of the results about health promotion and illness prevention services in relation to studies conducted in Manizales and Medellin does not seem appropriate, unless the difference between these services in rural and urban areas is stated.

RTA: This is true, but since the most relevant points of reference do not exist, we prefer to keep this in the text. Although the reviewer is clearly correct and a clarification for the reader is needed.

We clarified this in the paragraph before the discussion about the studies. Studies of urban areas were used because we did not find any studies of promotion and prevention services in rural areas in Colombia that presented findings similar to ours, although their correspondence to different socioeconomic and cultural contexts should certainly be taken into account.

1. What do the authors mean by good treatment in accordance with their culture and beliefs? Are the notions of culture and beliefs related to their identity as ex-combatant, a regional identity, a rural identity, or an ethnic/racial identity?

RTA:

The dimension of treatment according to culture and beliefs was included in the instrument for two reasons: providing culturally appropriate health care for the ex-combatant population is one of the cornerstones of the Health for Peace project, as reflected in the explanation of the components of the project. And, as mentioned in the introduction to the article, one of the dimensions underlying the perception of effective access to health services is that the care provided by health personnel is acceptable to the users. This category does not reflect a specific belief system or culture, but rather, it ensures that when health personnel provide health care to the ex-combatant population and their family, they take into account the user's opinion, acceptance, and wishes regarding activities and treatments for managing and treating their illnesses and caring for their health.

1. The results do not indicate that people's behavior to seek health care services can be explained through the health belief model.

RTA :

This is relevant given how it is presented in the article, and should be kept in the discussion. One of the dimensions of effect access to health services is self-agency, which does not depend on the health system but rather on people's attitudes and beliefs about seeking health services in a timely fashion. Our results found that 41% of the population knew about the extramural services offered by the project but only 17% used them. It is clear that this was not due to a lack of knowledge about the existence of the service, but rather, to the individual's own interest in using the services.

This belief system is of course a construct that goes beyond the dimension of self-agency in access to health services, and is complemented by bio-psycho-social models that more thoroughly explore the components of a person's belief system, such as the health beliefs model, which can give a more explanatory framework for specific findings related with extramural services. In regard to these services, in addition to knowing about their existence, people need to be motivated to use them, and is determined by the priority that each individual places on health, on each one of its dimensions, as well as by self-agency and self-care.

In the discussion, the authors would like to offer possible explanations for our results without establishing a definitive position, but rather, by offering possible explanations that are supported by a rigorous literature search on the subject.

1. . We suggest that the center of the discussion should be around how the current data compare to the challenges described for other rural populations. The authors hint in this direction but could make significant contributions by signaling how ex-combatants' perception of their access to health care compares to other studies in rural areas. Are they getting better or worse access to health care than other rural communities? What does this say about the reincorporation process and about the health care system? If the analysis is broken down by region, what does it tell us about different regions in Colombia and, perhaps, different "reincorporation processes"?

RTA: The questions by the reviewers go well beyond the scope of our results. Our interest is to merely describe a snapshot in time of the process in the ETCRs. We provide context and reference points, but in order to answer the questions that are posed, specifically if it has improved or worsened over time, would require other types of data (probably longitudinal), different sources of primary and secondary information, and different and more complex methodologies, all of which goes beyond the scope of our results.

We do not agree with discussing aspects that can not directly enter into dialogue with the results of our study, given that this is a report of a descriptive study. This analysis would warrant another investigation, and we prefer to be cautious since we do not have elements with which to even suggest a response.

As we explained, we presented the data by region for informative purposes, and given our sample size and design, regions cannot be compared. Therefore, it would not be possible to explore any comparisons among regions with our results.

We limit ourselves to highlighting and comparing only the results from other studies that can enter into dialogue with our results and that pertain to our objective.

The main objective of the research presented in this article was to determine the perception of effective access to health services by a population of ex-combatants who were in the process of reincorporation and reintegration in the ETCRs.

In this case, the Health for Peace project sought to strengthen the Colombian health system through joint actions, thereby facilitating and enhancing access to health services for this population and their families, in the area of primary health care, since the ETCRs are located in rural environments where access to these types of services presents difficulties, and there are significant gaps for the rural population in general.

An instrument was designed to determine effective access to health services in order to identify whether these types of actions were strengthening the services and thereby impacting the health of the ex-combatant population while the project's actions were underway. The instrument was designed for this population from the perspective of the user. That is, it was based on the construct of perception, which more adequately indicates whether the project strengthened the health system such that ex-combatants and their families had the impression or appreciation that they were effectively accessing the services that they needed —whether faced with an emergency or when seeking health promotion and prevention services through intramural and extramural activities.

With regard to the regional comparability of the results, as explained in the discussion, one of the few available sources for making a comparison is a study by the World Bank, which is the only source that was found that evaluates these dimensions by region in Colombia. That is, the regions with the least access are Orinoquia and Amazonia, which is due to the little availability of health centers, whereas central Colombia is characterized by a greater presence of this type of health institution.

With regard to comparing different reincorporation processes, the contrast at the global level was included at the beginning of the discussion, in paragraphs 2 to 4. Here, Colombia was described as representing a high standard, as the health component is one of its priorities, whereas other countries, such as Namibia, did not take this component into account or it only involved the supply of health kits for ex-combatants.

With regard to the experience with reincorporation processes in other countries, the health dimension has not been prioritized or mentioned in the available sources. Thus, it is important to document Colombia's experience with the reincorporation route, which we attempted to point out in the beginning of the discussion, in paragraphs 4 and 5.

In addition, the data on reincorporation processes and routes that are available from official

sources measure access to services based only on enrollment in the Colombian health system and frequency of use of services. Considering the scope of our results, that is not comparable. Based on our findings, we can conclude that the population had a favorable perception of the actions that were taken to strengthen the Colombian health system in rural areas, such as those by the project. We also conclude that compliance with reincorporation processes and their successful completion require actions that ensure that the health dimensions continue to be priorities, but this must be based on the rural context, which is a great challenge for the health system.

Competing Interests: We declare no conflict of interests

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