RIAH
RESEARCHING THE IMPACT OF ATTACKS ON HEALTHCARE

Berkeley
UNIVERSITY OF CALIFORNIA

Case Study: Exploratory Analysis of Publicly Available Data on Attacks on Health in Colombia

RIAH Project Methods Memo (22 April 2021)

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WHAT IS THE RIAH CONSORTIUM?

RIAH (Researching the Impacts of Attacks on Health) is a cross-country, multi-institution, and interdisciplinary research project investigating the impacts of attacks against healthcare during times of armed conflict. Recent research and advocacy have taken steps to better document these attacks, revealing a wide range of tactics, such as interference with health workers, blockade of roads, confiscation of supplies, and aerial bombardments of hospitals. However, there is still a need to better understand how these attacks impact on intermediate and long-term access to healthcare, and health outcomes within the population. It is also crucial to determine the consequences of such attacks on the health care system more broadly and in other fields such as the law, ethics, and economics.

The RIAH Consortium is conducting a series of research projects in specific contexts and countries to understand the range and level of impacts. Case study countries were selected to investigate a range of regions, types of conflicts and attacks, and responses. Countries including Afghanistan, Central African Republic, Colombia, and Nepal have active projects. The specific research questions, methods and conclusions are different in each case study country but key objectives across the case studies include:

- An improved understanding of the impact of attacks on the healthcare system with a context specific lens.
- An identification of robust and feasible methods to measure the impact of attacks in such challenging contexts.
- Generate new evidence and awareness on this issue and subsequently initiate more robust discussion and control measures regarding the attacks

WHY COLOMBIA?

Colombia was chosen as a RIAH case study country due to several important factors:

- Advance understanding of efforts to prevent attacks: The efforts of the Colombian people, Ministry of Health and Colombian Red Cross and ICRC in developing the *Misión Médica* program illustrates their dedication to this issue and potential for future collaboration.
- Insight into various impact on health services: The characteristics of attacks on health in Colombia are complex, with myriad perpetrators, stakeholders, and types of health services targeted (facilities, transports, personnel, patients).
- Insight from analyzing secondary data: The Colombian government maintains detailed statistics on attacks and aggressions against the *Misión Médica*; however, it is unclear to what extent these data are publicly available.

Restrictions on travel and research—due both to the COVID-19 pandemic and the rapidly changing internal security situation within Colombia—have made traditional in-person field research challenging. In this memo, we review the specific research questions and aims, methods, findings and conclusions in an exploratory project looking to employ publicly available health surveillance data in Colombia to understand the impacts of violence against healthcare on public health services and outcomes. This project was a first step to document, identify, and evaluate what can be done remotely using publicly available data as well as to provide next steps for in-person research.

WHAT WERE WE LOOKING FOR?

The aim of this investigation is to contextualize the impacts of attacks on healthcare (including on patients, health workers, hospitals, facilities, clinics, and healthcare service delivery) in Colombia by analyzing publicly available data on (1) attacks on health (the independent variable) and (2) health outcomes (the dependent variable). Such data may characterize the impacts of attacks against health on the public health system, health personnel, patients, families, or communities. We wanted to gain insight into how these attacks affect disease morbidity and mortality, impact on healthcare service delivery in terms of access and utilization and influence the lives of people in the community.

Research Questions

1. What are the different types of attacks on health facilities, transports and personnel in Colombia? Where are these data available?
2. What are the disease morbidity and mortality rates in the region? At what level of detail are these data available?
3. Are there any correlations between the attacks and health outcomes, specifically regarding attacks on health and changes in health statistics (such as disease incidence rates)?
4. What are the practical methods and metrics for characterizing attacks and their impacts in different contexts?

WHAT DID WE DO?

Open-source data collection of health statistics:

We conducted a preliminary search for a suitable repository of Colombian public health metrics. After an extensive search for relevant websites and databases such as geoportals DANE, Scielo, IHME, and other humanitarian health data, we found the data compiled by *Sistema Nacional de Vigilancia en Salud Pública: Sivigila* (National Public Health Surveillance System) to be the most detailed and extensive. The Ministry of Health maintains this public

repository of health surveillance data, published in a series of spreadsheets, detailing health indicators for every year from 2007 through 2019. The data provide weekly case numbers for a range of diseases at the department and municipal level for a range of diseases at the first- and second-level administrative divisions. Sivigila was the most effective option because the weekly timescale allowed us to observe trends and the geographical breakdown was conducive for more precise analysis. We used selected health indicator variables (such as outbreaks of infectious disease) to analyze the potential impacts of attacks on health. Our preliminary literature review led us to propose that attacks on healthcare facilities may increase disease incidence rates, specifically for dengue, malaria, chikungunya, and varicella.

Open-source data collection for reports of attacks on health:

The Colombian government tracks cases of violence against health care workers and facilities as "incidents" and "infractions," where incidents include cases of civilian violence by individuals in peacetime contexts and infractions occur in the context of armed conflict and potentially constitute violations of IHL, such as violence against healthcare by organized groups in conflicted areas of the country. Specific details of the Colombian Ministry of Health tracking of either of these types of events are not readily available to the public. For this reason, we turned to extensive internet searches in English and Spanish--principally using the Google engine--to locate news reports. For our purposes, attacks on health encompass any type of violence or interference with health perpetrated by state or non-state actors (FARC, ELN), gangs, and other armed groups against healthcare facilities, transport, patients or personnel (we did not include peacetime violence or civilian perpetrated violence in our definition). The data pertaining to the number and description of the attacks from 1990-2019 were compiled from news, journal, and website articles, since no public repositories about attacks on health were available to use at the time.

Data analysis:

The health data gathered from Sivigila and the attack reports were analyzed together to identify impacts on health indicators and trends. Many of the attacks occurred in rural areas, about which the Sivigila database provided limited statistics. For this reason, and to conduct an in-depth investigation of one specific attack, we focused our report on one attack on a hospital ship in the Putumayo Department. We conducted statistical analyses in RStudio to examine if disease incidence rates were significantly higher (or lower) after a specific attack.

We chose one documented attack on a healthcare facility on April 20, 2015 in the Putumayo Department as an example to illustrate pre- and post-attack variability in public health metrics, based on department-wide statistics from Sivigila. We examined the weekly case number of all tracked diseases for the 8 weeks prior to and following the date of the attack. Additionally, we tracked the total case count in Putumayo for all weeks from 2009-2019 to roughly evaluate the presence or absence of long-term effects on health care services in the department.

Limitations:

This project explored the potential for using publicly available surveillance and conflict data for in-depth analysis of attacks on health. There are significant limitations to the available data, methods and analysis. We attempted to search for data available across Colombia, a country with comparatively moderate resources and excellent public health surveillance. We identified one resource with good surveillance (Sivigila) but the aggregated presentation, over geography, hospitals and time, posed limitations to doing detailed analysis of health indicators. Specifically, the data available from Sivigila had low case counts for rural municipalities, which often were the areas in which attacks occurred, therefore making detailed analysis difficult. Some municipalities were not included at all in certain years and thus we were unable to examine the impacts of several attacks due to lack of health data.

Methods for impact analysis are uncharted and therefore, we developed our methods ad-hoc for this analysis; we present key takeaways from the methods attempted in a subsequent section. While our study does not lend itself to causal analysis, our preliminary findings identify the need for additional data to further pursue correlations between attacks and health.

ANALYSIS AND FINDINGS

Publicly Available Attacks and their Impact on Health

The public data available on attacks were organized into a spreadsheet (see Annex I) which cataloged **18** separate attacks on health that occurred in many different areas of Colombia in the past 10 years. As noted below, we focused our impact analysis on one of these attacks—the attack on the ship in the Putumayo Department.

Attacks varied in terms of motive, location, method, and stated impact. The majority of the attacks were committed by non-state actors, predominantly by the FARC-EP (the Revolutionary Armed Forces of Colombia-Popular Army), a Marxist guerrilla warfare organization that was formed in Colombia in 1964, and the Ejército de Liberación Nacional (National Liberation Army). Other attacks occurred in the context of civilian violence or criminal activity and had no apparent links to non-state actors. Civilians are defined as any private individual(s) who are not associated with any known gang, state or non-state actor. The apparent motives of all civilians were nonpolitical and were tied to personal and intrafamilial issues.

Attacks perpetrated by non-state actors occurred in the context of the internal armed conflict in Colombia. These news reports did not disclose any valuable information on the legal investigations of these attacks. The attacks committed by FARC-EP included guerrillas stealing an ambulance and turning it into a car bomb, firing upon ambulances, launching explosive devices against indigenous health centers, attacking hospital ships, shooting at medical personnel, along with various other attacks. On the other hand, civilian attacks

consisted entirely of simple and/or verbal assault or vandalism.

The direct, reported consequences of the attacks differed for each incident, regardless of whether they were committed by non-state actors or civilian associates. Some of the attacks led to restricted access to medical care during or immediately following the attack via road blockades, stolen medical supplies, and physical damage to hospitals and medically equipped vehicles. Other attacks directly resulted in medical personnel (such as doctors, nurses, psychologists, and other medical employees) being shot, beaten, or run over. Longer-term consequences of these attacks included delays in medical service delivery, a lack of access to healthcare, higher burdens on healthcare facilities, community insecurity and unrest, and a community-wide shortage of medical supplies and medical personnel.

Publicly available data reveals 18 unique incidents, though we recognize that the actual number of incidents of attacks on health across Colombia may be considerably higher. Despite extensive online searching, no data about other incidents were found, and the online search yielded no other unique incidents.

Open- Source Health Surveillance Data

Sivigila provides data at the department and municipality level, collecting the number of recorded instances of various health indicators such as Dengue, Hepatitis A, pesticide poisoning, malaria, Tuberculosis, Syphilis, Varicella, Tetanus, Leishmaniasis, infant and mortality. The data, which enumerated disease cases, is chronologically broken down by week, recorded from 2007 to 2019, and organized into Excel spreadsheets that are arranged by year. Importantly, all of these data were publicly available via download. The advantage of a short time scale is that we could observe changes that occurred week-to-week, as well as compare the exact date of an attack with the surrounding weeks to view potential correlations. We performed our analysis of Sivigila data on one specific incident because the attack was committed directly on a healthcare facility and we were able to obtain higher quality health outcomes data prior to and post this attack compared to others. Despite these advantages, we were still limited by our data and the analyses we could perform.

To illustrate the methods of using routine surveillance data to understand health impacts of an attack on health, we chose a specific incident: a 2015 FARC-EP attack on the Misión

Médica[1] in the Putumayo Department. According to the report[2], personnel from the 48th Front of FARC-EP attacked a National Army hospital ship that was conducting humanitarian work in the nearby communities. The hospital ship, as well as three other vessels, were ambushed while moving along the Putumayo River near the Piñuña Banco sector in the municipality of Leguízamo. This was the second assault against the unit in 24 hours--earlier, snipers fired at Marine Infantry Brigade 3 in Peñas Coloradas sector in Leguízamo. This medical mission was a joint effort by the Colombian and the Ecuadorian navy. The national troops were working in conjunction to provide medical care to the 40,000 people that live on the border of the two countries. The exact contents and facilities onboard the hospital ships were not publicly disclosed.

The results of an in-depth analysis of the events were compiled in the annex (Annex II). We created graphs utilizing Excel and Grapher to observe the trends in disease incidence and other health indicators in the Putumayo Department eight weeks before and eight weeks after the FARC attack on Misión Médica on **April 20, 2015 (Week 17**). Figures 1-4 illustrate various health outcome trends in the weeks before and after the attack on the facility. Eight weeks was chosen for exploratory analysis to include a time frame long enough to potentially witness impacts on contagious disease incidence based on disease physiology.

We utilized **13** different health indicators in this analysis (see table on next page) because routine surveillance data on these indicators were publicly available through the *Sistema Nacional de Vigilancia en Salud Pública: Sivigila* (National Public Health Surveillance System) website. The figures below show trends of 3 of these health indicators (Chikungunya, Varicella, and injuries from explosives) over a period of 17 weeks.

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[1] "Medical Mission includes the set of goods, facilities, institutions, land, air, river and maritime transport, equipment and materials necessary to carry out the activities of the provision of health services, such as health care, preventive health, education in health, administration and support in the provision of health services, pre-hospital and extramural care, made up in turn, by professional health personnel and other disciplines, with labor or civil ties, who perform health functions, in the framework of the humanitarian mission in situations or zones of armed conflict or other situations of violence that affect public safety, natural disasters and other calamities." (Translated from https://www.minsalud.gov.co/salud/PServicios/Paginas/mision-medica.aspx)

[2] (Translated from https://www.noticiasrcn.com/nacional-pais/confirman-las-farc-atacaron-una-mision-medica-el-putumayo)

Traumas	Chronic Issues	Infections	Other
Injuries from explosives	Exposure to fluoride	Dengue	Pesticide poisoning
Ophidian accident	Low birthweight	Chikungunya	Drug poisoning
Animal attacks with Rabies	Extreme maternal morbidity	Cutaneous Leishmaniasis	
		Pulmonary Tuberculosis	
		Varicella	

We were not able to find publicly available data on weekly case counts of other health indicators of interest, so we limited our analysis to these 13. We hypothesized that the attack would either directly or indirectly impact these specific health indicators, either by increasing case counts due to knock-on effects from interruptions in health services, or by decreasing case counts due to these interruptions.

The statistics we saw before and after the attack increased for some indicators, such as Chikungunya (Figure 1) and injuries due to explosives (Figure 3). Chikungunya weekly case numbers underwent a nearly tenfold increase in the weeks after the attack, specifically week 20-22. Chikungunya has become established in Putumayo since its introduction in 2014; however, the sustained increase following the attack may suggest that the attack could have hindered preventative measures associated with services such as mosquito repellent and other supplies. Alternatively, the increase could have been due to non-related variability in the incidence of Chikungunya, particularly at the onset of the rainy season in Colombia. The injuries due to explosives, as seen in Figure 3 also experienced an abrupt increase in week 23. Although this is not a direct indicator of disease incidence increasing, it could indicate a secondary effect of the lack of medical services on incidents involving injury. It should be noted, however, that the number of explosives in the area is still very low. Given that the increase was six weeks after the reported attack, attribution of impact from the attack is limited.

Varicella rates experienced a slight overall increase from the week of the attack (Figure 2), which could be due to lack of hygiene products from the interruption in the delivery of medical services due to the attack on the ship. It should be noted that case counts prior to the attack were higher than before, which could either indicate surveillance variability not related to the attack, or a decline in reporting potentially due to the attack. The general low number of cases could also be a result of vaccinations efforts in the area.

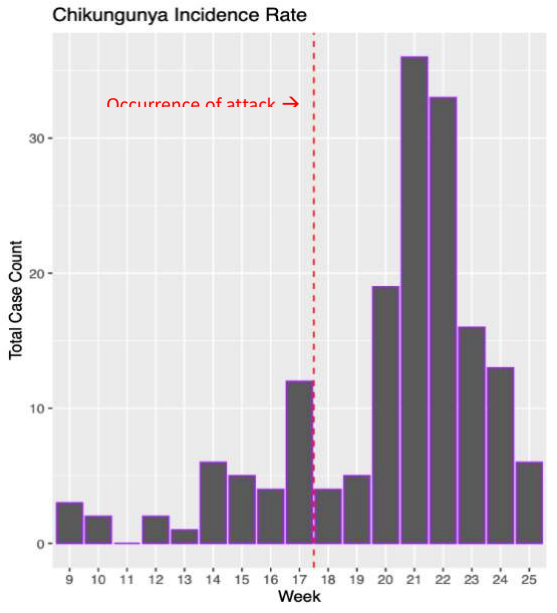


Figure 1: Figure indicating the progression of Chikungunya infections from week 9 - week 25.

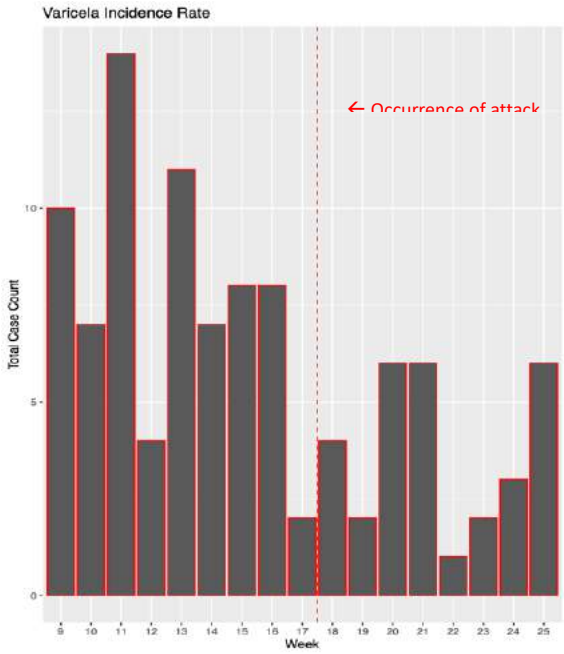


Figure 2: Figure indicating the progression of Varicella infections from week 9 - week 25

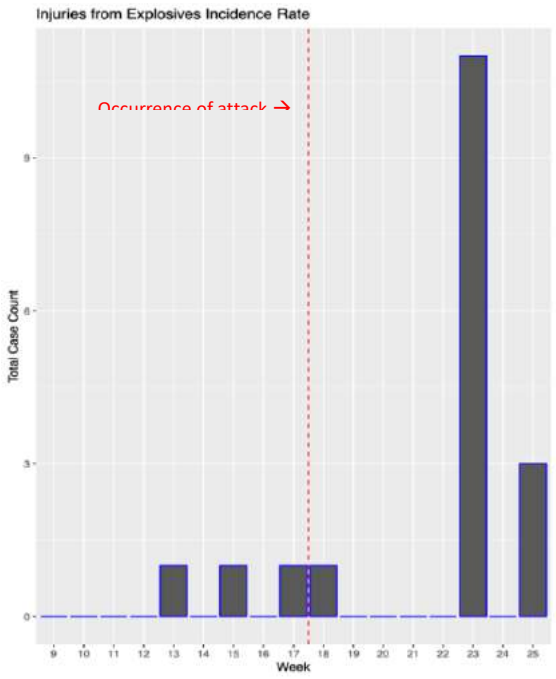


Figure 3: Figure indicating the number of injuries from explosive devices: gunpowder and anti-personnel mines from week 9 - week 25.

Hypothesizing that the attack of April 2015 may have long-term consequences on department-wide health, we conducted a time series analysis of weekly total case counts recorded in Putumayo Department from 2009-2019 (Figure 5). A seasonal trend characterized by spikes in total case count from January-June is apparent in some years, most notably 2010, 2014, 2016, and 2019. These spikes are largely driven by increased cases of dengue fever and highlights the importance of interannual variability in endemic disease in interpreting potential effects of attacks on health. We cannot conclude that the attack alone directly increased these spikes in total disease case counts, as we must also consider extraneous variables (i.e., secular trends) and their impact on disease incidence rates. Further analyses should aim to gather high quality data on these extraneous variables and assess their impact on disease incidence rates.

Although post-attack case counts are broadly elevated relative to pre-attack values, the case counts follow a pronounced upward trend in total cases over the past decade (Figure 6). Elevated post-attack case reporting may therefore represent an independent tendency towards increased all-cause case admissions rather than a long-term effect of the attacks. Furthermore, interpretation of this trend is complicated by inconsistent reporting, with several additional event categories being added year to year. While some categories are due to the appearance of novel diseases (e.g., Chikungunya), other categories were added due to increased monitoring (for example, hospital admissions for suicide attempts were not counted prior to 2016). The pre-attack correlation coefficient between week number and total case count is 0.46, whereas the post-attack correlation coefficient between week number and total case count is 0.27 (Figure 6). The correlation coefficient value describes the strength of the relationship between both variables (week number and total case count). As the number of weeks increases, the total number of case counts similarly increase, therefore indicating a positive but weak linear relationship between the two variables.

Despite the weaker association between week number and total case count post-attack, there was a higher total case count compared with the pre-attack total case count.

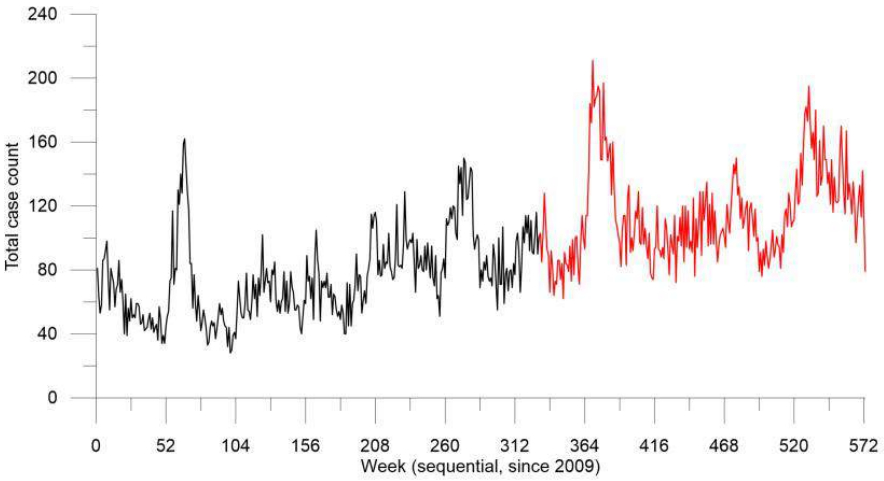


Figure 5: Total all-cause case count Putumayo Department, 2009-2019. Black=pre-attack, red=post-attack. See below for further analysis.

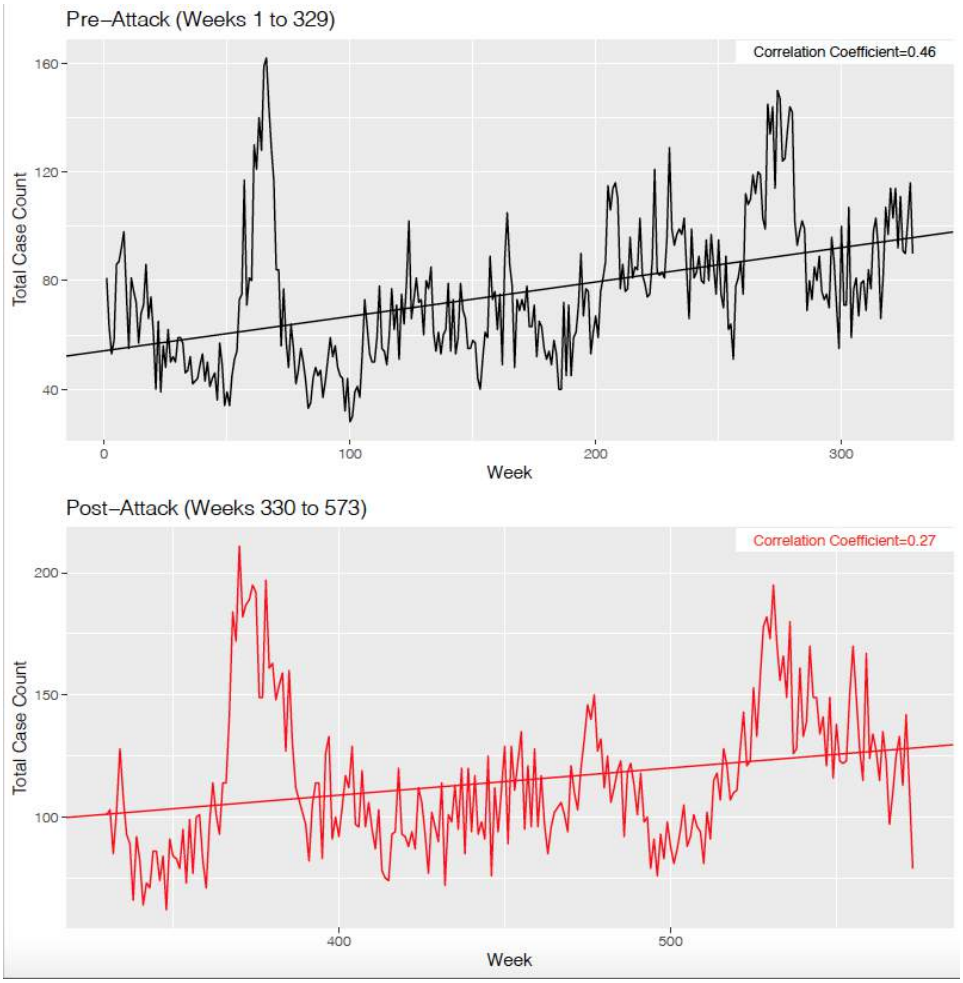


Figure 6: Total all-cause case count Putumayo Department, 2009-2019.

IMPLICATIONS

Our exploratory analysis of the attack on the hospital ship in the Putumayo Department and its corresponding health surveillance data identified both challenges and opportunities for future research. This preliminary analysis provided an opportunity to investigate potential causal associations between attacks and increased disease incidence rates. However, our analysis also highlighted that further analyses investigating these associations require qualitative and more robust surveillance data.

We were primarily limited by the dearth of data pertaining to incidents of attacks on health; very few of the reported attacks to which we had access included detailed information. Most of the news reports describing the attacks included only basic identifying information, such as: time of occurrence, location, perpetrator, and victim of the attack. We did not find any information as to why some of the attacks were publicly reported and some were not, thus adding a potential bias to our results if the attacks that were publicized were systematically different from the attacks that were not publicized. In addition, many of the attack reports did not include the names of the medical centers that were affected. The limited list of attacks we have identified likely severely underestimates the true incidence of violence against health care in Colombia. Having access to disaggregated and detailed data on attacks would strengthen our analyses.

The Sivigila data on health indicators was also limited in respect to statistics gathered in more rural municipalities. For instance, data are not available on the facility-level, so analysis is not possible of the specific effects of attacks on individual installations targeted. Furthermore, all of our data were retrospective secondary data, so we were unable to make any causal inferences from the analyses that we performed since we were unsure about the temporality of events and which confounding variables influenced our results.

The Putumayo case study also highlights the difficulties of matching reporting to the available health statistics. The attack was launched against a hospital ship that was traveling on the Putumayo River. The fact that this was not a traditional medical center which supplied year-round care made chronological and geographical comparisons difficult. Furthermore, certain health indicators, such as Chikungunya, are seasonal, mosquito-borne diseases which also occur with higher frequency in areas near water. We used this inflection point as an example, but a more discrete facility attack may be more appropriate for further analysis.

Extensive investigation into this attack and others, as well as literature review, highlighted that there is no general formula for analyzing correlations between attacks on health and instances of disease. Each attack needs to be examined carefully, taking into account the specific outstanding factors that could influence the trends in health indicators in that area. Every attack is unique and complex, and while understanding the motives and context of attacks is useful for appreciating the scope of the attacks themselves, the impacts of attacks on the health system-- individual health care workers, health care infrastructure, and persons

seeking care--are more limited and harder to elucidate using district/subdistrict level surveillance data.

Nonetheless, collating open-source information and analyzing epidemiologic surveillance data provided us with a good start for investigating the association between attacks on health and disease incidence rates. While our results suggest some rather loose associations between attacks and incidence rates, we would require further disaggregated data and information (such as in the form of qualitative interviews with key informants, testimonials, and physical evidence) to support and triangulate our results.

Given that the Putumayo Department has a high maternal mortality rate of 80.1, further research should closely investigate the impact of the attacks on healthcare facilities on maternal and infant mortality.[3] Sources such as Siviglia may be able to help future research target key health indicators for more in-depth analysis. We hope to further investigate the channel through which attacks on health care facilities impact access to maternal and infant health care in our future research.

LESSONS

Our research analysis used publicly available secondary health data to understand how attacks on health in Colombia may impact health service availability, utilization of health care, and health outcomes. While we were able to detect some significant associations between timing of the attack and disease incidence rates, further mixed-methods research is needed in order to establish causality.

Since our analyses were limited by both the quantity and quality of data, future research should utilize higher quality and more informative *health facility level* routine surveillance data, attack data, and health indicators/outcomes data rather than at the district or sub district level. This may require in-person travel and networking at the local or hospital administration level to secure access.

Access to higher quality and more detailed reports of attacks on health would be extremely beneficial for comparing health outcomes pre- and post-attack. Having a verified list of attacks, over time, with detailed characteristics (date, location, type of incident, immediate results, etc.) would be critical to further in-depth analyses.

With stronger attack and impact data, analysis may also focus on evaluating data over several years to account for the seasonality of many infectious diseases, a potential confounding factor in analyzing impact. While disease incidence changes may not be correlated with attacks on health, the outcomes of the diseases (mortality or morbidity rates) may be related. For instance, the rate of contracting malaria may not change based on an attack on health as the disease is related to environmental factors, but the outcomes are far more dependent on the availability of medicines and health services. This is further complicated by the fact that

[3] https://knoema.com/atlas/Colombia/Putumayo

health systems frequently provide both preventative and therapeutic services. Without bed nets and mosquito repellent, and treatment of chronic malnutrition and anemia, incidence of malaria itself might be higher. In the event of an attack on health, malaria incidence may change either because of the lack of availability of preventative services or because the number of people with severe or untreated illness might be much higher.

ANNEX

I. ATTACKS ON HEALTH SPREADSHEET

RIAH-Colombia Incide	Attack Date	Attack Month	Attack Day	Location	Municipality	Department	Leg
13	2004-05	May	24	Valparaíso	Valparaíso Municipality	Caquetá Department	Infr
12	2004-08	August	13	Putumayo River	Unkown	Putumayo Department	Infr
14	2008-12	December	7	San Vicente del Caguán	San Vicente del Caguán Municipal	Caquetá Department	Infr
15	2009-09	September	21	La Mejía site on km. 16 of the roa	Mutatá/ Chigorodó Municipality	Antioquia Department	Infr
17	2011-05	May	7	Sucre	Sucre Municipality	Cauca Department	Infr
11	2011-08	August	5	Southern jungles of Guaviare	San Jose del Guaviare Municipalit	Guaviare Department	Infr
16	2012-07	July	9	Centro de Salud de Chaguala	Toribío Municipality	Cauca Department	Infr
1	2015-04	April	20	Piñuña Banco Sector	Leguízamo Municipality	Putumayo Department	Infr
6	2017-3	March	6	Centro de Salud de La Esperanza	Cartagena de Indias Municipality	Bolívar Department	Inci
7	2017-11	November	7	Hospital Universitario del Caribe	Cartagena de Indias Municipality	Bolívar Department	Inci
8	2017-11	November	7	Clínica General del Caribe	Cartagena de Indias Municipality	Bolívar Department	Inci
5	2018-8	August	5	Nuevo Bosque	Cartagena de Indias Municipality	Bolívar Department	Inci
3	2018-11	November	5	Pasacaballos	Cartagena de Indias Municipality	Bolívar Department	Inci
9	2019-02	February	17	Clínica San José de Torices	Cartagena de Indias Municipality	Bolívar Department	Inci
2	2019-04	April	26	Unkown	Clemencia Municipality	Bolívar Department	Inci
4	2019-12	December	26	Troncal de Occidente (Road)	Arjona Municipality	Bolívar Department	Gre
10	2020-02	February	4	Catatumbo Region	Tibú Municipality	Norte de Santander Department	Infr
18	2020-02	December	2	Hospital Local Nuestra Señora del	Sincé Municipality	Sucre Department	Inci

II. PUTUMAYO 2015 ATTACK ANALYSIS

BACKGROUND

Graphs showing the trends in instances of disease and other medical conditions in the Putumayo Department eight weeks before and eight weeks after the FARC attack on Misión Médica. The attack occurred on Week 17.

Attack details- (https://www.eltiempo.com/archivo/documento/CMS-15600322)

Location: Piñuña Banco sector in the municipality of Leguízamo, Putumayo Department

Time: April 20, 2015

The data in these graphs was retrieved from Portal Sivigila "Estadísticas de Vigilancia Rutinaria" (Statistics of Routine Surveillance) from 2015

(http://portalsivigila.ins.gov.co/Paginas/Vigilancia-Rutinaria.aspx?GroupString=%3B%23Departamental%5FMunicipal%5Fpor%5FEvento%5F2020p%3B%23&IsGroupRender=TRUE)

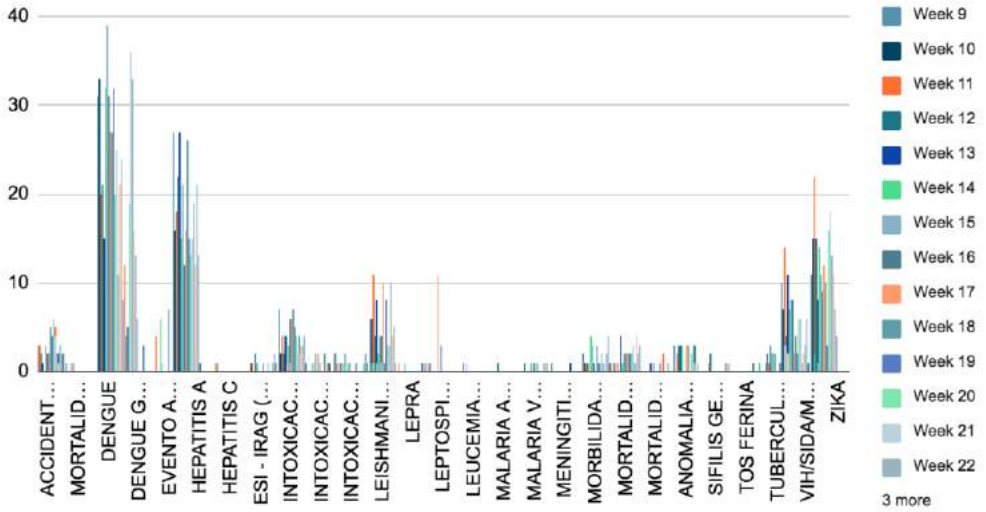
Notes from Sivigila about their data collection:

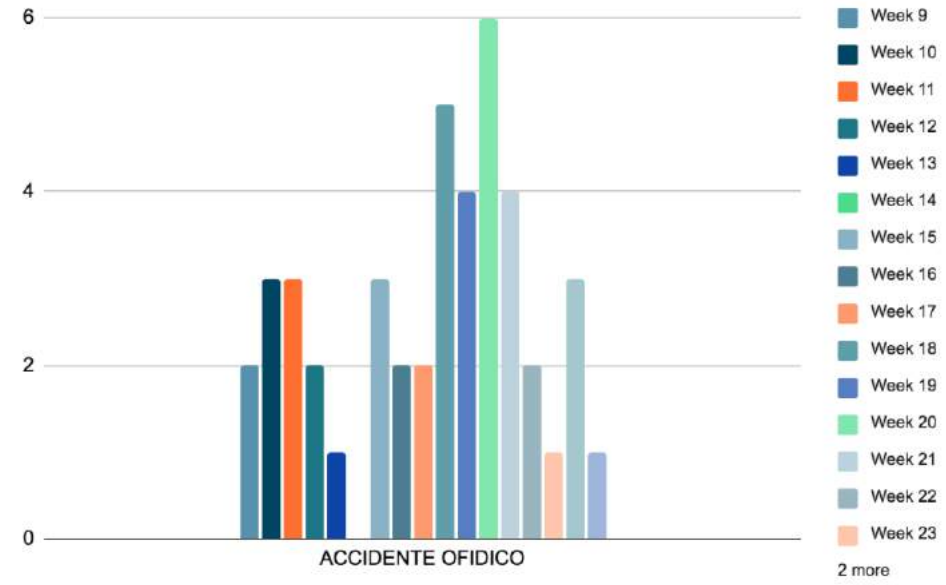
"The published data corresponds to cases notified by the territorial entities as 'confirmed'" (with several exceptions concerning Zika and Dengue). For the analysis and the interpretation of this data it must be taken into account that

- The notification must be analyzed according to the fulfillment in the weekly notification of the Primary Data Generating Units (UPGD), Municipal Notifying Units (UNM) and Departmental or District Notifying Units (UND). For this reason, we invite you to consult the Weekly Epidemiological Bulletin (BES), where the system indicators for each of the events and operation of the levels mentioned above are updated every week.
- The cases presented correspond to the departments and municipalities of occurrence or origin of the event.
- The deaths reported correspond only to those directly entered into the public health surveillance system; however, the entity responsible for generating the final results of deaths in Colombia is the National Administrative Department of Statistics (DANE).
- The National Institute of Health is not, nor will it be responsible for the inadequate interpretation that may be made of this information by third parties, as it is dynamic information of the surveillance system in Colombia that is subject to analysis and subsequent adjustment.
- The basic data series for the notification of events of interest in public health from 2007 to 2017, is integrated in the SISPRO Data Warehouse (SGD). In order to

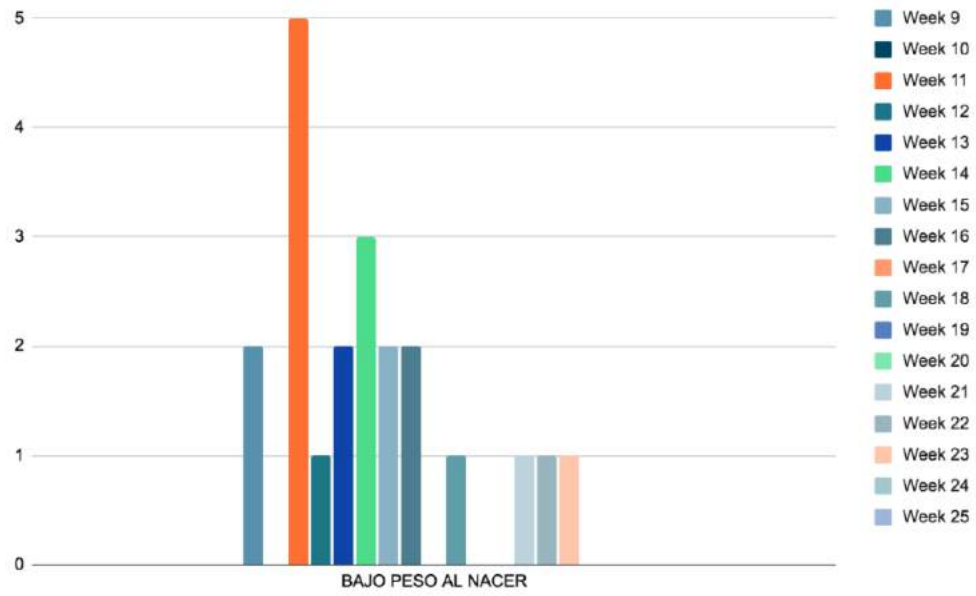
facilitate its use and consultation by different users, we invite you to register and request training and information on the use of the cube through which this information is available, by contacting the help desk: sispro_bodega @ minsalud .gov.co

GRAPHS

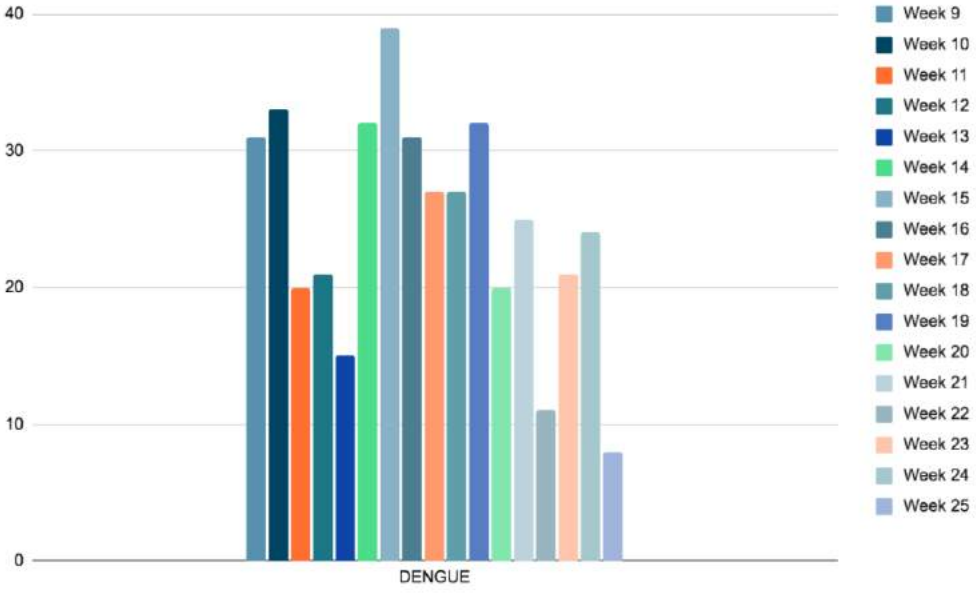


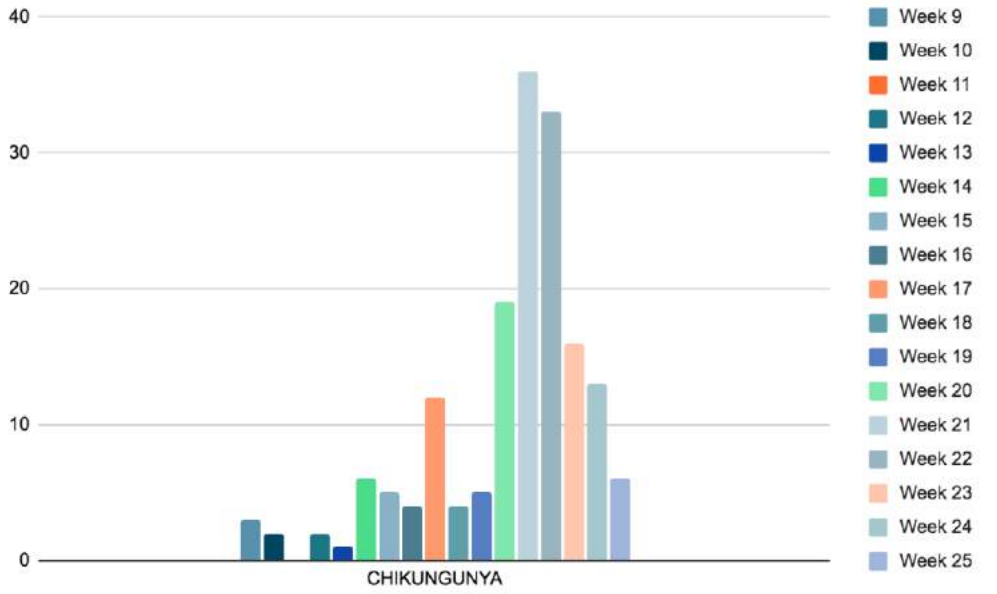


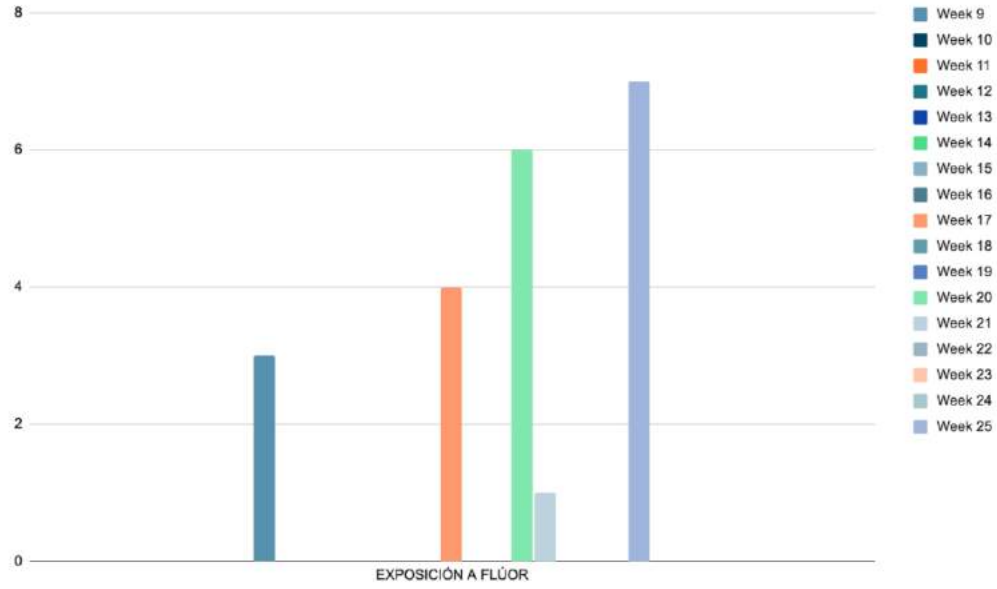
(Ophidian accident--accident caused by snake)



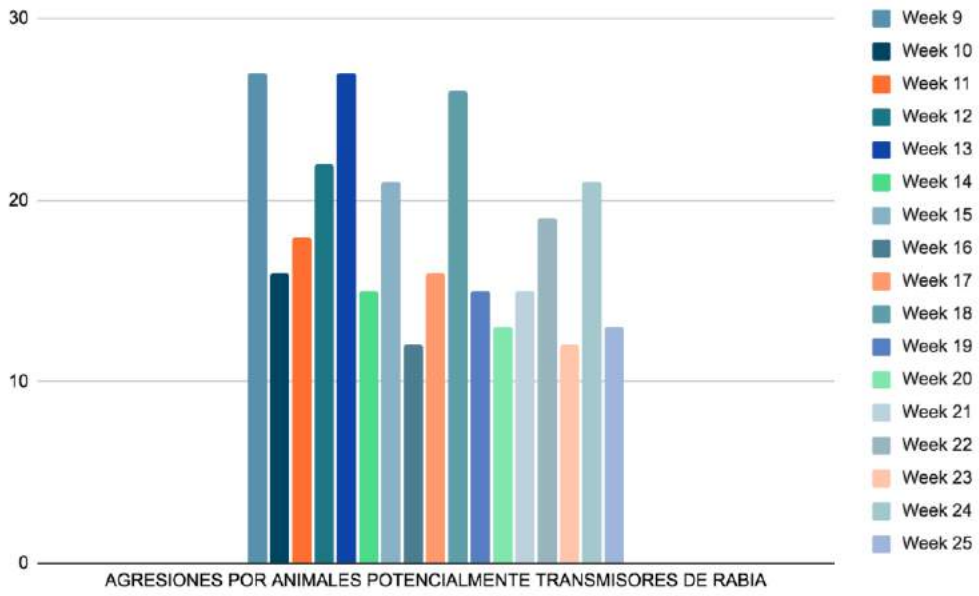
(Low birth weight)



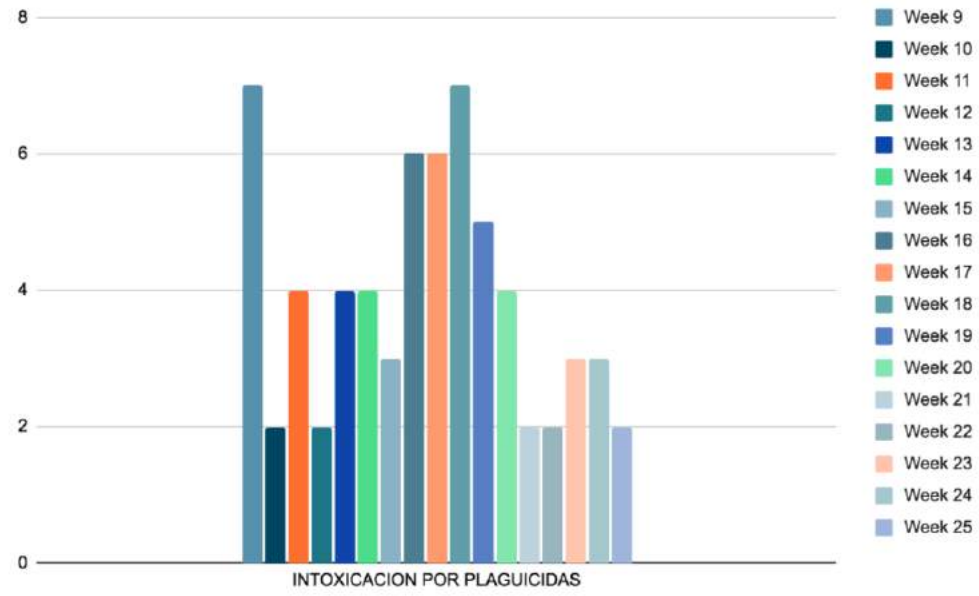




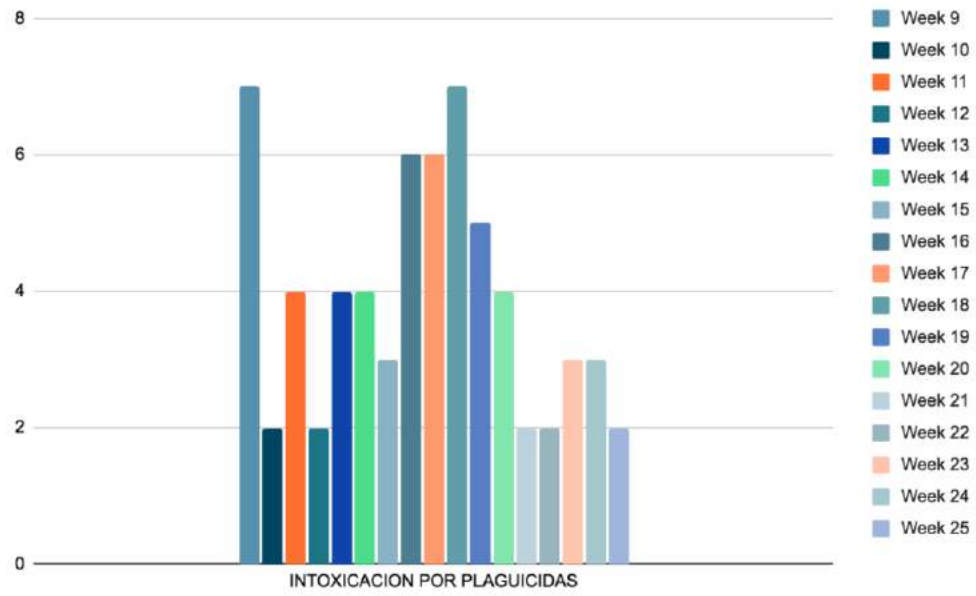
(Exposure to fluoride)



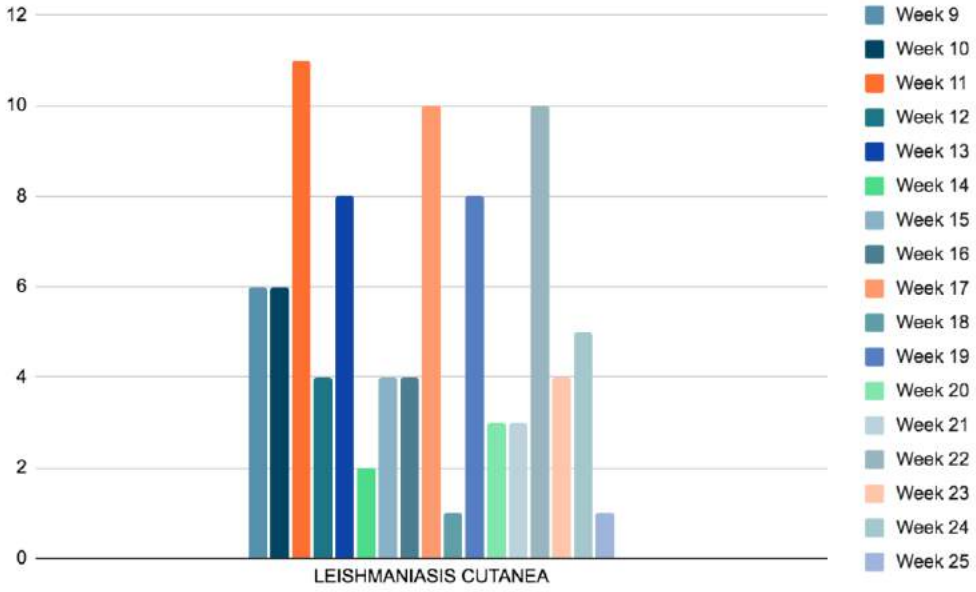
(Attacks by animals potentially transmitting rabies)



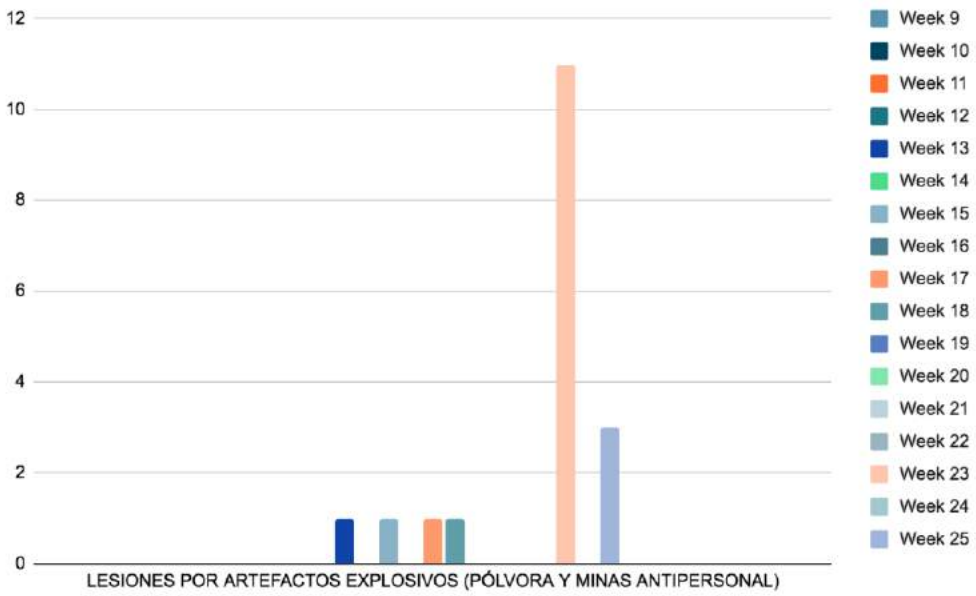
(Pesticide poisoning)



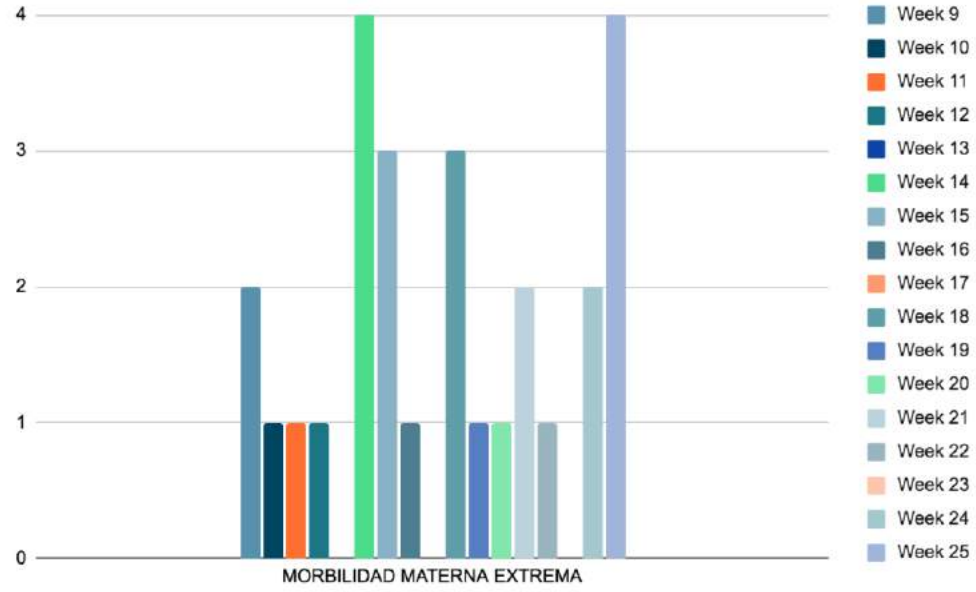
(Drug poisoning)



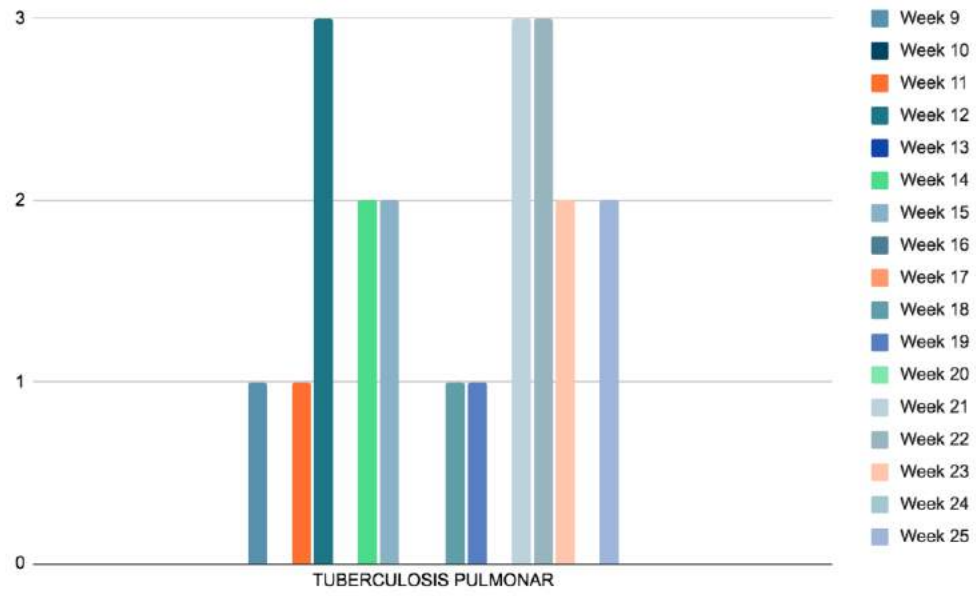
(Cutaneous Leishmaniasis)



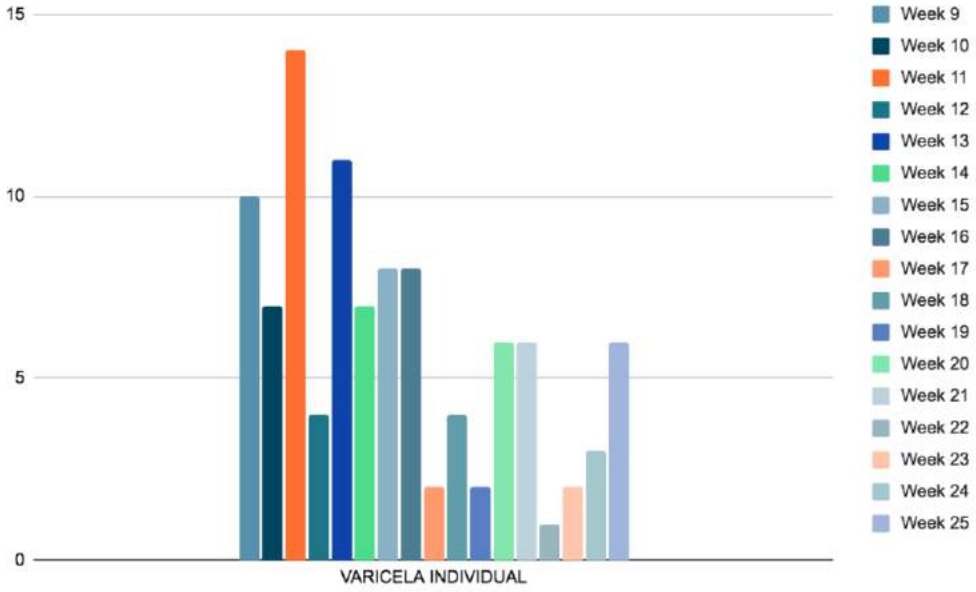
(Injuries from explosive devices: gunpowder and anti personnel mines)



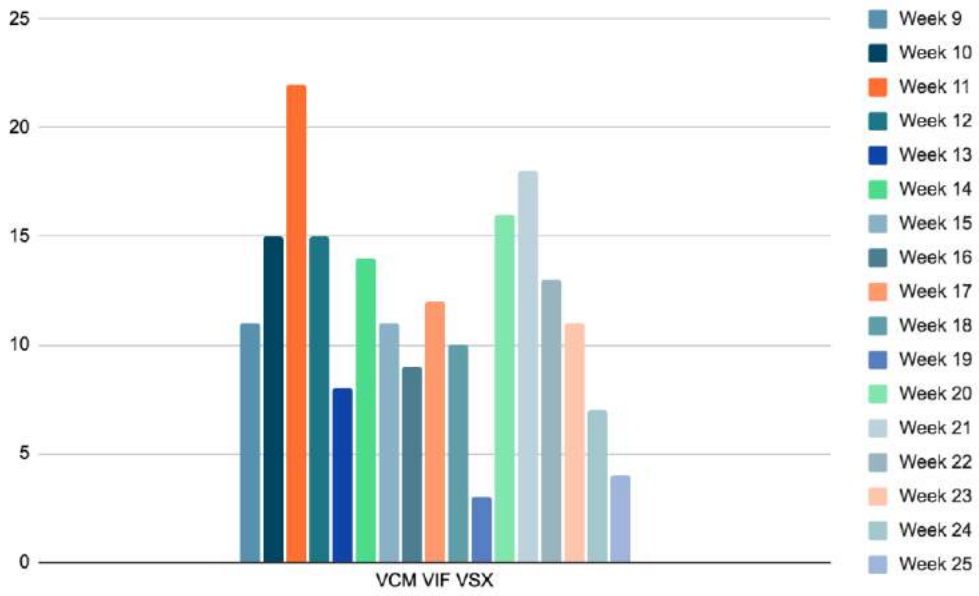
(Extreme maternal morbidity)



(Pulmonary Tuberculosis)



(Individual Chickenpox)


25
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VCM VIF VSX
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Week 18
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Week 23
Week 24
Week 25