Violence, Mortality and Access to Health Care in Cité Soleil, Port-au-Prince, Haiti

Results of an epidemiological survey
March 2008
This document was produced by Médecins Sans Frontières. It summarises the main results of the epidemiological survey carried out in Cité Soleil - Port-au-Prince, Haiti - in 2007. The complete results of the survey are also available.

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Médecins Sans Frontières (MSF)

MSF is a private humanitarian organisation with an international vocation. It provides emergency medical aid to populations in distress in more than 60 countries throughout the world.

MSF in Haiti

MSF has been present in Haiti since 1991, running several programmes offering support to state-run health facilities and responding to emergencies (cyclones, floods). MSF’s activities are currently concentrated in the capital, Port-au-Prince, providing a response to emergencies mainly linked to the violence affecting the city over the last few years. MSF offers specialised health care for trauma victims (at La Trinité hospital and in the rehabilitation centre for trauma victims (Pacot)) and for women victims of sexual violence. MSF also answers to obstetric emergencies in the Jude Anne hospital, in the Delmas district. In the poorer district of Martissant, MSF offers basic and emergency health care for a population exposed to violence. All health care in MSF facilities is offered free of charge to patients.

MSF in Cité Soleil

MSF worked in Choscal hospital and Chapi health centre, two state-run health facilities located in the slum of Cité Soleil, between August 2005 and December 2007. The prevailing insecurity at the time had forced these two facilities to close for several months, leaving 200,000 inhabitants without health care. MSF provided emergency assistance by re-instating health care services for the populations who were victims of this violence.
Haiti, with its 8.5 million inhabitants, is one of the poorest countries in the Northern hemisphere. More than half its population lives below the extreme poverty threshold, with less than 1$ per day per inhabitant. The violence perpetrated in the capital and throughout the country, already “initiated” some years ago, increased considerably in 2004 following the departure of President Aristide. French and American forces, mandated by the United Nations, arrived in the capital to maintain security. These forces were replaced in June 2004 by UN peace-keeping forces (the Minustah\(^2\)). From October 2004, clashes between the police and partisans of President Aristide erupted in several poorer districts of the capital. The year 2005 was marked by violence and insecurity, which affected several neighbourhoods in Port-au-Prince and spread to other towns in the country. The armed groups based in the poorer districts of Port-au-Prince were accused of involvement in the rising rate of crime, particularly a notable number of kidnappings.

**Cité Soleil, a slum at the heart of the violence**

Cité Soleil is one of the poorer districts of Port-au-Prince and is home to more than 200,000 inhabitants. This district, considered as the stronghold of the “Chimères” (a poor people’s armed militia loyal to President Aristide) has been deeply affected by the violence these last few years. Following President Aristide’ departure, the slum succumbed to urban warfare between partisan groups of the Lavalas movement\(^3\) and anti-Lavalas groups. In June 2004, the Minustah took up a presence in the Cité. The slum’s inhabitants were trapped between the sea and the Minustah’s numerous “check points”. The population was completely cut off from the rest of the town, ensnared by the fighting.

In July 2005, following the death of one of the prominent “Chimères” leader, the different armed groups joined forces against the Minustah. Intense fighting broke out between the armed groups and the UN forces, leading, in 2005 and 2006, to numerous civilian wounded and deaths. In early 2006, having observed that many of the wounded received in Choscal hospital were women and children, MSF called on all the armed factions, including the Minustah, to respect humanitarian space and bring a halt to the use of civilians as targets in the fighting.

The elections held in February 2006 led to a period of truce. Nonetheless, the violence continued and clashes between armed factions flared up on several occasions in 2006, increasing the number of dead and wounded amongst civilians. From the end of 2006 to

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\(^1\)The data presented in the description of the context is taken from the Haiti Country Profile 2006 and Country Report 2007, published by The Economist Intelligence Unit.

\(^2\)The Minustah is the United Nations mission for stabilising Haiti. Please refer to the website [www.minustah.org](http://www.minustah.org)

\(^3\)Political movement founded by Jean-Bertrand Aristide.
February 2007, the Minustah intensified its operations in Cité Soleil, carrying out several raids in the districts harbouring the armed groups’ strongholds. Several group leaders were killed or arrested. The groups’ activities diminished, along with the criminal violence and thus the population’s isolation, at least for the area of Cité Soleil.

For months on end, the insecurity was such than no one dared to travel on the main road bordering the slum. Before the arrival of MSF in August 2005, no international aid organisation was operational and capable of responding to the urgent needs of Cité Soleil’s population. In 2005 and 2006, MSF was one of the rare international aid organisations active in the Cité. Before this date, the population had to cope with months of guerrilla activity and oppressive insecurity without any external assistance. Very little information is therefore available on what the population really went through during this period.

The MSF teams wanted to carry out an epidemiological survey in Cité Soleil in order to better understand the impact of violence on the population’s health. It was only after 2 years of presence in the Cité that the situation was sufficiently stable for the teams to circulate freely in the different districts and collect information from families. The epidemiological survey was therefore carried out in July 2007 in nearly 1000 households in Cité Soleil.
Survey and method

An epidemiological survey on mortality, violence and access to health care was carried out between 31st July and 7th August 2007.

The general objective was to assess the impact of violence on the population’s health in the different districts of Cité Soleil.

MSF trained 12 interviewers and 2 supervisors on data collection.

The specific objectives were as follows:

Mortality:

• Measuring the mortality in Cité Soleil from 1st January 2006 up until the date of the survey (average retrospective period: 579 days).
• Measuring the proportion of mortality linked to violence.

Violence:

• Measuring the level of violence within the population from 1st January 2006 up until the date of the survey (average retrospective period: 579 days).
• Describing the types of violence perpetrated on the population.
• Describing the impact of the violence on the population’s health.

Access to health care:

• Assessing the situation in terms of access to health care for Cité Soleil’s population by referring to the last episode of illness occurring in the families since 1st May 2007 (average retrospective period: 94 days).

In total, 945 families were questioned using the simple random sampling method. Referring to a satellite map of Cité Soleil pinpointing all the buildings of the Cité by district, the sample was divided up into districts in proportion to the number of buildings in each. The geographic selection of the number of houses required in each district was then carried out at random, having assigned a number to all the houses on the map.

4 Exact demarcations chosen for the survey: the historic district of Cité Soleil, situated between the sea to the west, the main road to the south and east and the sea channel and Terre Noire district to the north.
5 In the scope of this survey, violent acts against people were considered to be all acts of physical aggression and threats and intimidations carried out against a third party or a group. Aggressive acts targeting people’s belongings were also noted.
The study covers the period between 1st January 2006 to the survey date for questions on violence and mortality. For questions on access to health care, only the families in which a member fell ill after 1st May 2007 were questioned. The data was analysed using the software programme EPI INFO. The results are presented with a confidence interval (CI) of 95%.
Main results of the survey

945 families were visited, corresponding to a total of 4,763 persons.

✓ Violence: the first cause of mortality in Cité Soleil

Of the 945 families questioned, 120 cases of death were noted for the period studied. These figures correspond to a crude mortality rate of 0.4 deaths per 10,000 people per day - CI [0.4 - 0.5]. For children under 5, the mortality rate corresponds to 0.5 deaths per 10,000 people per day - IC [0.3 - 0.7].

If we compare these results with the threshold references usually used for developing countries\(^7\), the mortality rates observed in Cité Soleil seems to have remained under control despite the extreme difficulties experienced by the population. Nonetheless, if we compare them to the “Sphere” reference thresholds for Latin American contexts, the rates observed in Cité Soleil reveal an emergency situation\(^8\).

The mortality rates observed in Cité Soleil are also comparable with the results obtained in rural areas in Haiti in 2005\(^9\). On the other hand, the causes of mortality vary considerably between the different contexts. **In Cité Soleil, violence is the first cause of mortality: it accounts for as large a part of the mortality figures as infectious diseases.**

<table>
<thead>
<tr>
<th>Reported causes of mortality</th>
<th>Number of deaths (%)</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence</td>
<td>35 (29.2%)</td>
<td>[21.6-37.8]</td>
</tr>
<tr>
<td>Fever</td>
<td>16 (13.3%)</td>
<td>[8.1-20.3]</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>9 (7.5%)</td>
<td>[3.7-13.3]</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>8 (6.7%)</td>
<td>[3.1-12.3]</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>4 (3.3%)</td>
<td>[1.1-7.8]</td>
</tr>
<tr>
<td>Cardiac/blood pressure problems</td>
<td>17 (14.2%)</td>
<td>[8.8-21.3]</td>
</tr>
<tr>
<td>Witchcraft/poisoning</td>
<td>8 (6.7%)</td>
<td>[3.1-12.3]</td>
</tr>
<tr>
<td>Other</td>
<td>23 (19.2%)</td>
<td>[12.9-26.9]</td>
</tr>
</tbody>
</table>


\(^8\) Source: Interpreting and using mortality data in humanitarian emergencies, F. Checci and L. Roberts, Humanitarian Practice Network, No 52, September 2005. The emergency threshold for the crude mortality rate in Latin America is deemed by Sphere at 0.3/10,000/day. For children under 5, the emergency threshold is deemed at 0.4/10,000/day.

\(^9\) Access to health in the health district of Petite Rivière, Verrettes and La Chapelle, results of two epidemiological surveys on mortality and access to health, MSF, September 2005.
For the under 5s, the principle causes of mortality are diarrhoea, fever, respiratory infections and malnutrition. No deaths linked to violence were reported amongst children under 5.

For the adults, violence was the first cause of mortality, followed by chronic diseases, fever, respiratory infections and diarrhoea. The majority of deaths by violence were linked to gunshot wounds.

“I took a bullet in my foot whilst working in my shop in February 2007. Now I’m financially ruined, as well as suffering from organic pain.”  
Man, Cité Soleil, witness account collected in August 2007.

“My mother was shot in the head whilst leaving the market. She died on the spot, it was really close to the Hasco. It happened in January 2006, and we’re still trying to get over it”. Woman, Cité Soleil, witness account collected in August 2007.

Violence represents 30% of the cases of death. For the entire period under study – from 1st January to the date of the survey – the survey data, when extended to the entire Cité Soleil population, corresponds to a minimum of 1000 persons for whom the loss of life was directly linked to the violent situation.¹⁰

“I live in Cité Soleil and one of my boys had only just got back from abroad; on arriving on main road 1, near the Vincent crossroads, a group of bandits kidnapped him. According to the information available, the bandits took him to the Boston district. Then they asked for a large sum of money. Despite the efforts we made to pass this sum over, they cut both his feet off one day later. We found him on main road 1, near “ Varreux”. We took him straight to hospital but he was in such a state that he died 3 days later. That was in December 2006. Since then, we’ve lived with a shadow over our lives. Our financial circumstances are under more and more strain because he was the family provider.”  
Woman, Cité Soleil, witness account collected 3rd August 2007.

Alarming homicide rates

Homicide rates can also be used as an indicator for the level of violence: it measures the degree of violence in a given context by taking into consideration all the homicide cases listed for a given period.¹¹

The homicide rate for the period under study reached 457/100,000/year – CI [417-500]. This rate reveals the extreme violence of the situation. It is very high compared to the data available for other contexts. In Latin America, for example, the available data indicates that this rate varies between 6.4 to 248 for 100,000 inhabitants per year in places such as Medellin in Columbia, considered highly violent.¹²

In 2006 and 2007, amongst all the cases of death linked to violence, two out of three involved men. For them, the homicide rates are significantly higher than for women. The group of men aged between 15 and 39 are the worst affected. For this group, violence is the first cause of mortality. In Cité Soleil, the homicide rates calculated for this age group exceed

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¹⁰ The variation is linked to imprecision concerning the number of Cité Soleil’s inhabitants. The total number of inhabitants is often estimated at between 150,000 à 200,000.

¹¹ In the scope of the survey, all the deaths linked to violence were listed as homicides. The other cases of death by accidental trauma were not taken into account.

1000 deaths for 100,000 inhabitants per year – 1109/100,000/year CI [1045-1175]. These tendencies have been observed in other contexts of violence in urban areas\textsuperscript{13}. Nonetheless, one case of violent death out of three concerns women.

**Mortality and MSF’s presence**

The interpretation of these mortality results should take into consideration the arrival of MSF in Cité Soleil in August 2005. Numerous victims of violence were treated in Choscal hospital from this date onwards. Between September 2005 and September 2007, 19,000 patients received emergency treatment. Amongst them, more than 20% were emergencies linked to violence (gun shot wounds, bladed weapon wounds). Given the type of violence managed on the hospital level, we can suppose that, for the period under study, the mortality rates linked to the violence would have been higher if MSF had not been supporting the health care offered to these victims.

“On 9th February 2007, the day the UN forces intervened in the Boston district, I was shot in the arm whilst going out into the alleyway, just close to my home. I dropped to the ground. Some time afterwards, Médecins Sans Frontières came to take me to the Delmas 19 hospital. I lost a lot of blood from my mouth and nose. I’m still suffering and am often in pain. I’ve thought about this a lot because I’m the head of my family. I’ve often missed hospital appointments because I didn’t have the money to pay for the minibus. I’ve become poor since then. I can’t go to work anymore. I’ve got no money left. Man, Cité Soleil, witness account collected in August 2007.

**Mortality: limitations of the results**

The survey does not cover the 2004-2005 period. Immediately following the departure of President Aristide, this was a time of intense fighting, as the families and available data at health facilities testify. The results obtained within the scope of the survey for the 2006-2007 period can serve as an indicator of the level of violence for the 2004-2005 period.

I live in the Bélékou district. I lost my father and mother at the same time, in 2005. My father was 65 and my mother 50. My mother was a rice trader, my father a mechanic. They were both hit by stray bullets and died instantly. I am the only son in the family. Since then, I search the streets daily for something to eat in the debris and rubbish. I sell aluminium to earn some bread and pay for the funerals. The death of my parents was linked to fighting between armed groups.” Man, Cité Soleil, witness account collected 1st August 2007.

The results collected in the scope of this survey concern only the cases of mortality that occurred in Cité Soleil. Numerous poor districts in Port-au-Prince have been affected by the violence since Aristide’s departure. There is no doubt that in addition to the high mortality in Cité Soleil, many victims of fatal violence could be counted in other districts.

✓ Daily violence: more than 1 family out of every 2 affected by the violence

“We’re in good health when we can meet our basic needs and there’s no violence.” Extract from discussion groups with members of the community, 2006.

“The violence was really terrible around here in 2006-2007. We couldn’t leave our doors open or even walk in the streets. I had to lock all the doors of my home and sleep under the bed. It went on day and night, our children were traumatised by the situation, killed by stray bullets... It was carnage. No children could get to school. A lot of people were killed when going to collect their young from school. Bandits broke into our houses, looted our belongings. A lot of people fled the district, choosing to live elsewhere because of the violence.”
Woman, Cité Soleil, witness account collected in August 2007.

The violence in Cité Soleil is not a problem that is limited to a targeted group, but had a wider impact on the general population. In total, 514 families out of 945 - 54.4% IC [51.2-57.6] – reported at least one form of non-fatal violence aimed at their belongings or against one of the members of their family.

In total, when considering fatal and non-fatal forms of violence, 527 families were affected, which is 55.8% CI [52.5 – 59.0]. Only 44.2% [41.0 – 47.5] of families were not affected by any form of violence.

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14 Amongst them, the districts of Martissant, Carrefour, Bel-Air, Cité De Dieu, La Saline, etc. can be cited
Violence involving belongings

450 families – 52.4% CI [49.2-55.6] – reported at least one act of violence aimed at their home or belongings. **Amongst the families who were victims of violence involving their belongings, the first form of violence is linked to shooting at the family home.**

“I live near Chapi, at the entrance to Cité Soleil. When the Minustah arrived, we knew full well that they were looking for bandits in certain districts, but the day our house became a target for shooting, we didn’t understand what was going on. It was the 9th January 2007, my son had gone to his mother’s house to find something to eat. When he came back, there was so much smoke around the house that he started coughing and couldn’t see anything. He thought the house was on fire. In fact, the bullets had gone through the walls and it was the sand causing all the smoke. Everybody was really scared but fortunately, thank God, nobody was hurt.”
Man, Cité Soleil, witness account collected in August 2007.

<table>
<thead>
<tr>
<th>Types of violence</th>
<th>Number of families (%)</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>House targeted/hit by gunshots</td>
<td>255 (56.7%)</td>
<td>[52.1-61.2]</td>
</tr>
<tr>
<td>Theft of belongings</td>
<td>188 (41.8%)</td>
<td>[37.3-46.4]</td>
</tr>
<tr>
<td>House destroyed/burnt down</td>
<td>38 (8.4%)</td>
<td>[6.1-11.3]</td>
</tr>
<tr>
<td>Destruction of belongings</td>
<td>35 (7.8%)</td>
<td>[5.6-10.5]</td>
</tr>
<tr>
<td>Other</td>
<td>6 (1.3%)</td>
<td>[0.5-2.8]</td>
</tr>
</tbody>
</table>

NB: the families could cite several forms of violence. The total of forms of violence is therefore over 100%.

Of the total sample, 27.0% of families (255/945) were victims of shooting on their homes and 19.9% of families (188/945) were victims of theft.

Violence against persons

“I live in Cité Soleil, I’m a photographer. I remember that in January 2007, I was invited to take photos during a party for handing out diplomas. Whilst walking, I was stopped by the UN forces. As I’d been seen talking with the Minustah, an armed group took me for a mercenary and led me to its leader. They beat me up badly on the way. I thought they’d take my life.”
Man, Cité Soleil, witness account collected in August 2007.

216 families out of 945 – 22.9% CI [20.3-25.6] – reported at least **one victim of violence among their members**. The majority of these families – 91.8% - reported one victim of violence, 7.7% of families reported 2 victims and 0.5% of families reported 3 victims among their members. The total number of victims of violence – still alive at the moment of the survey – reaches **239**. If we take into consideration the total number of victims of violence reported within the...
families questioned (living and deceased) for the period between 1st January 2006 up to the day of the survey, this number reaches 274, which is 6% of the sample.

<table>
<thead>
<tr>
<th>Types of violence</th>
<th>Number of persons (%)</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blows</td>
<td>96 (40.2%)</td>
<td>[34.1-46.5]</td>
</tr>
<tr>
<td>Intimidations/threats</td>
<td>73 (30.5%)</td>
<td>[25.0-36.6]</td>
</tr>
<tr>
<td>Gunshot wounds</td>
<td>44 (18.4%)</td>
<td>[13.9-23.7]</td>
</tr>
<tr>
<td>Theft</td>
<td>31 (13%)</td>
<td>[9.1-17.7]</td>
</tr>
<tr>
<td>Kidnapping</td>
<td>6 (2.5%)</td>
<td>[1.0-5.1]</td>
</tr>
<tr>
<td>Sexual violence</td>
<td>4 (1.7%)</td>
<td>[0.5-4.0]</td>
</tr>
<tr>
<td>Wounds by bladed weapons</td>
<td>3 (1.3%)</td>
<td>[0.3-3.4]</td>
</tr>
<tr>
<td>Imprisonment with mistreatment</td>
<td>2 (0.8%)</td>
<td>[0.1-2.7]</td>
</tr>
<tr>
<td>Family rows</td>
<td>1 (0.4%)</td>
<td>[0.0-2.0]</td>
</tr>
<tr>
<td>Other</td>
<td>2 (0.8%)</td>
<td>[0.1-2.7]</td>
</tr>
</tbody>
</table>

These figures and the witness accounts of the families reveal the omnipresence of violence in daily life and how extremely difficult it is for families to live in a completely insecure environment.

Violence: limits of the results, under-reported and non-studied violence

Domestic and sexual violence

Due to the method used for collecting data, certain forms of violence risk being underestimated. In particular, cases of sexual and domestic violence were rarely reported by families. We suppose that the figures underestimate the reality of this type of violence due to the taboos surrounding them. Nonetheless, they should not obscure the terrible reality experienced by the victims and their families following such acts.

“I live in a district of Cité Soleil, I’m a young woman in my 30s. I vividly remember the day my family and I were sleeping in a small house, and bandits raped me. I have to confess that this unforgettable event killed my father. It’s hard for me: being a young woman, but knowing that no man in my district will take me for his wife.” Woman, Cité Soleil, witness account collected in August 2007.

✓ Violence has an impact on victims’ health in the short and long term

74.9% CI [68.8-80.3] of families declared a reduction in the quality of their lives after a violent event experienced by one of their members. Over and above the suffering of victims, the entire family can be affected by a traumatic event.

The survey documented the short- and long-term impact of violence on victims’ health. The results reveal the consequences of not only the physical wounds but also the mental wounds inflicted by violence.

NB: questions relating to the impact of violence on health were posed to all victims of violence (violence against people). The impact of violence involving families’ belongings was not studied.
Direct consequences of violence on victims’ health.

81.6% -CI [7.3-86.1]- of victims (195/239) declared that they had suffered direct medical consequences following a violent event: bodily pain, wounds and fractures were the most common physical descriptions. One victim out of four spoke of considerable mental suffering in relation to an aggression he/she had suffered. The main symptoms of psychological troubles reported by patients were: stress (30), fear (7), anxiety (4) and worry (2).

<table>
<thead>
<tr>
<th>Types of consequences</th>
<th>Number of persons (%)</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodily pain</td>
<td>78 (40.0%)</td>
<td>[33.3-47.0]</td>
</tr>
<tr>
<td>Wounds</td>
<td>48 (24.6%)</td>
<td>[19.0-31.0]</td>
</tr>
<tr>
<td>Psychological troubles</td>
<td>48 (24.6%)</td>
<td>[19.0-31.0]</td>
</tr>
<tr>
<td>Fractures</td>
<td>9 (4.6%)</td>
<td>[2.3-8.3]</td>
</tr>
<tr>
<td>Bruises/dislocations/sprains</td>
<td>4 (2.1%)</td>
<td>[0.7-4.9]</td>
</tr>
<tr>
<td>Other</td>
<td>17 (8.7%)</td>
<td>[5.3-13.3]</td>
</tr>
</tbody>
</table>

NB: the victims could cite several consequences. The total is therefore more than 100%.

80% of the victims considered that seeking medical assistance is necessary following a violent event. These figures confirm the necessity of offering services capable of responding to victims’ needs during periods of violence.

The survey data also emphasises the importance of an appropriate response for victims’ mental health. This poses a particular challenge to the Haitian health system which does not include this service in the package of health care offered to patients.

Health response to victims of violence in Cité Soleil

In Cité Soleil, of the 196 victims who considered that health care was necessary following a violent event, 22 took no steps to look for it (11.2%). The main explanatory reasons were insecurity and a lack of money.

Amongst the victims of violence who sought help, 6 victims out of 10 sought assistance in the modern system whilst 4 victims out of 10 preferred the traditional system.

This data confirms that the estimation of the level of violence based on official health facility statistics risks considerably under-estimating the reality of the violence in this type of context.

<table>
<thead>
<tr>
<th>Location of health care</th>
<th>Number of persons (%)</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>69 (39.7%)</td>
<td>[32.6-47.1]</td>
</tr>
<tr>
<td>Choscal hospital</td>
<td>54 (31.0%)</td>
<td>[24.5-38.2]</td>
</tr>
<tr>
<td>Other health care facility (hospital or HC)</td>
<td>36 (20.7%)</td>
<td>[15.2-27.2]</td>
</tr>
<tr>
<td>Chapi health centre</td>
<td>8 (4.6%)</td>
<td>[2.2-8.5]</td>
</tr>
<tr>
<td>Other</td>
<td>7 (4.0%)</td>
<td>[1.8-7.8]</td>
</tr>
</tbody>
</table>

- The traditional system seems to play an important role when violence occurs. The victims reported that they above all sought out traditional medicine following certain forms of violence such as blows, threats and thefts, and for certain medical
consequences such a bodily pain and psychological troubles. Very few victims of gunshot or bladed weapon wounds sought traditional care. The Haitian context is known for the importance of the traditional sector for patients seeking health care in the event of illness. The results of the survey suggest that this sector also occupied a large place in the response to victims of violence.

Nonetheless, the importance of the traditional system seems to vary according to the distance between the hospital and the victims' homes. Indeed, the results of the survey suggest that once the victims live in proximity to the hospital, they are half as likely to turn to the traditional system as when they live far away. As distances are not great in Cité Soleil, it is probably the insecurity that hindered victims' movements, especially during the most violent periods. The traditional system would therefore have played an accentuated role in the case management of victims of violence.

The importance of the traditional system also seems to be linked to the health services on offer. Thus, the traditional system played a key role in the case management of victims presenting mental health problems – more than one victim out of 2 received care in the traditional system - particularly before February 2007, when mental health care was not available at the Choscal and Chapi health facilities. The traditional system played the role of “safety net” at a time when this type of health care was not available in Cité Soleil. Insecurity could also have been a bigger hindrance to moving around.

These results are important: they reveal that the use of traditional medicine can be influenced by the availability and accessibility of modern health services.

- The case management of victims of violence at the level of facilities supported by MSF in Cité Soleil is also significant. More than one victim in 3 sought such assistance, mostly at Choscal hospital. The victims presenting gunshot wounds go the most frequently. Case management in a medical facility is critical for such wounds.

A member of the MSF team working in the operating theatre in Choscal hospital witnessed the care offered to these victims:

“It was on 22nd December 2006, I’ll always remember this date. We received more than 24 patients with bullet wounds. We went into the Cité on the same day, whilst the gun fight was going on. Another important date was the 24th January 2007, when the Minustah took control of the Boston district. We treated more than 100 cases of violence from August 2006 to February 2007. I was shocked by the frequency of aggressions in Cité Soleil.”

Doctor, Choscal, witness account collected in August 2007.

Longer-term consequences of the violence suffered

“We’ve been living in the area for a long time. I remember the difficult moments. My little sister and I were hit by the stray bullets of an armed group around the same time. It was hard for my mother, who’s a widow. I’ve still not really recovered, I still feel pain.”

Man, Quatre Cercueils district, witness account collected in August 2007.

15 Poor people’s medicine in the central plateau in Haiti. Journal of ethno pharmacology, 17, 1986.
74.1% of the victims of violence – IC [68.2-79.3] – declared that at the time of the survey, they were still affected by the consequences of the violent event (177 victims out of 239). The main consequences are as much physical – disabilities, persistent pain – as mental – stress, anxiety, fear, worry and diverse troubles.

<table>
<thead>
<tr>
<th>Types of consequences</th>
<th>Number of persons (%)</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>87 (49.2%)</td>
<td>[41.8-56.5]</td>
</tr>
<tr>
<td>Emotional</td>
<td>93 (52.5%)</td>
<td>[45.2-59.8]</td>
</tr>
<tr>
<td>Economic</td>
<td>9 (5.1%)</td>
<td>[2.5-9.1]</td>
</tr>
<tr>
<td>Other</td>
<td>2 (1.1%)</td>
<td>[0.2-3.7]</td>
</tr>
</tbody>
</table>

This data emphasises the longer term impact that violence can have on victims and their families and thus the necessity to respond to these victims’ needs even when the shooting has stopped.

Amongst other things, over and above the direct medical consequences, violence leads to numerous upheavals in family life. A major consequence of this is population displacement. The survey did not document this type of impact in figures. Nonetheless, both the number of abandoned houses in the area 16 and the families’ witness accounts confirm that displacement of families linked to the insecurity was not a minor problem. This displacement situation, even if one-off, certainly had consequences on the situations and living conditions of the families concerned.

“Three members of the same family were beaten by a group of bandits because the latter considered that the family did not belong to their camp. Amongst the three, there was a little girl of 12. They hit her repeatedly, and the other members of the family had to watch it going on without reacting, for fear of becoming victims themselves. After the event, the family was forced to find refuge in the countryside where it could take care of the victims. Following their departure, the bandits smashed down all the doors, stole all the belongings and shot at the house.”

Cité Soleil, witness account collected in August 2007.

✓ Access to health care

During the violent periods

The data collected on access to health care reflects a period - between 1st May 2007 and July/August 2007 – in which gunshots were no longer part of the daily lives of Cité Soleil’s inhabitants. This data therefore does not allow us to measure the difficulties of access encountered by the families during the most violent moments.

16 In total, 12% of houses visited by the survey team were abandoned. Each abandoned house was replaced by the house closest to the abandoned one.
During these moments, the state-run health facilities quite simply had to close. The medical personnel did not even dare to make the journey to work.

As from August 2005, MSF’s support to state-run facilities (Chapi health centre and Choscal hospital in Cité Soleil) provided emergency responses and re-established primary and secondary health care services for the inhabitants of Cité Soleil. Even during this period, the personnel were unable to reach the health facilities during certain peaks in the violence. The drops in attendance register for the Chapi health centre clearly reveal the periods when violence prevented the health services from functioning.

NB: Chapi health centre is situated on the front line between the Minustah and the armed groups controlling the area.

The families questioned also confirmed that even when health care services were available in 2006 and 2007, it was sometimes difficult to reach the facilities. The majority of families questioned declared that they had had more difficulties in obtaining health care during the period preceding March 2007 – this month marks the start of the lull in fighting in Cité Soleil.

Since 1st May 2007

The data collected on the cases of illness occurring in families since 1st May 2007 indicates that, outside periods of fighting and when facilities were present, receiving support and rendered more accessible to the population in Cité Soleil, the majority of families sought health care in the event of illness. Indeed, 89.9% of families – IC [87.1-92.1] declared that they sought health care during the last episode of illness that occurred.

- The level of health care exclusion reaches 10.2% – CI [7.9-12.9] of the cases of illnesses; half of these cases declared that they did not seek health care for financial reasons.

The economic standing of the inhabitants of Cité Soleil is extremely low. Most of the families are without employment and struggle to find the necessary funds for daily living and eating. The number of people living in tiny homes constructed of

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17 Health care exclusion refers to all the people who considered that health care was necessary and yet took no steps to obtain it.
makeshift materials is striking. In this context, numerous families are incapable of gathering together the money required to pay for health care.

Amongst other things, Cité Soleil is densely populated and the capacity of the 2 state-run facilities supported by MSF - offering health care free of charge or for low fees – was limited\(^1\). Every day, patients formed queues from early morning in order to receive health care.

In the Chapi health centre, of the 400 patients who queued up each day, a maximum of 200 patients – the most urgent – were actually received in consultation. Numerous families raised this difficulty during the interviewers’ visits to their homes. The facilities’ limited capacity may also have presented a barrier to the use of services. For the patients who could not access these facilities, there was not always an alternative. Reaching another facility in town implied travel expenses and major health care costs, given that the majority of these facilities were fee-based.

- For the families who sought health care, 1 patient in 2 went to the Chapi and Choscal facilities in Cité Soleil.

<table>
<thead>
<tr>
<th>Location of consultation</th>
<th>Number of persons (%)</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapi</td>
<td>98 (19.1%)</td>
<td>[15.9-22.7]</td>
</tr>
<tr>
<td>Choscal</td>
<td>142 (27.7%)</td>
<td>[24.0-31.7]</td>
</tr>
<tr>
<td>Other facility (hospital/HC)</td>
<td>160 (31.3%)</td>
<td>[27.3-35.4]</td>
</tr>
<tr>
<td>Market</td>
<td>44 (8.6%)</td>
<td>[6.4-11.3]</td>
</tr>
<tr>
<td>Traditional/hougan (voodoo priest)</td>
<td>42 (8.2%)</td>
<td>[6.1-10.8]</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>18 (3.5%)</td>
<td>[2.2-5.4]</td>
</tr>
<tr>
<td>Private doctor or nurse</td>
<td>8 (1.6%)</td>
<td>[0.7-2.9]</td>
</tr>
</tbody>
</table>

The project’s data confirms this high use of services:

- Following the beginning of MSF’s intervention in Choscal, more than 50,000 patients were seen in external consultations.
- 10,000 patients were admitted to the different wards in the hospital.
- More than 3000 deliveries took place in the hospital.
- More than 2000 surgical interventions were carried out.
- More than 92,000 patients were treated in Chapi health centre.

\(^1\) At the Chapi health centre, all the services were completely free of charge for patients. At Choscal hospital, due to the presence of several parties intervening on the site (MSPP, MDM and MSF), totally free access to health care could not be negotiated in all the wards. Thus, the emergency, paediatrics and maternity wards were completely free for patients. For the other wards (admissions in internal medicine and surgical services), patients continued to pay a forfeit varying between 150 and 300 gourdes. (\(+/-\) 4 to 8 USD).
These figures and the data from the survey emphasise the major role played by these facilities in the response to the populations’ health needs throughout the crisis period. They also draw attention to the sizeable needs of the inhabitants of Cité Soleil in terms of health care.

- The patients who did not go to Chapi or Chocal mainly went to “other health facilities”. The information concerning the exact location of patients’ consultations included in the category “other facilities” is not available. Given that this category covers health centres and hospitals, it is very likely that they refer mainly to facilities beyond the Cité. Indeed, apart from the facilities supported by MSF and the Sisters’ health centre (external consultations for women and children), no other health facility functioned in Cité Soleil at the time of the survey.

In total, more than 1 patient in 5 looked for health care outside a health facility in the event of illness: either in the traditional sector, in the market, in a pharmacy or with private practitioners.
Conclusions and implications of the results

The epidemiological survey carried out by MSF using a representative sample of the population of Cité Soleil reveals the degree to which these acts of violence have had a heavy and unacceptable impact on the population’s health.

✓ The violence has had a major impact on mortality: it is the first cause of mortality and directly cost the lives of at least 1000 people during the period under study.

✓ The homicide rates in Cité Soleil are extremely high.

✓ The violence largely affected the general population. It struck more than half the families, affecting both members of the family and their belongings.

✓ The violence has had an impact on the victims’ health: with direct consequences, often requiring emergency treatment, and more long-term consequences, affecting physical health as much as the families’ mental health.

The crisis situation in Cité Soleil has affected a population that is already marginalised, extremely poor and vulnerable, in a context in which access to basic social services, such as health care, is limited.

During this crisis period, MSF’s support to the state-run health system guaranteed free emergency case management for victims of violence. Choscal hospital played a particularly important role by offering emergency surgery for the seriously wounded, when no other such offer existed. The case management of victims of violence suffering from psychological troubles – introduced to Choscal and Chapi by MSF in 2007 – has also been a crucial element in the response to victims’ needs.

Over and above the management of cases linked to violence, MSF’s support ensured that the inhabitants’ basic health care needs were once again being addressed. Following the installation of MSF’s activities in the area, the high attendance at facilities reveals the population’s sizeable health needs. These needs were not previously covered by any other actor during the periods of violence.

These results should contribute to the reflections on the interventions required in violent contexts in urban environments such as Cité Soleil or elsewhere. They indicate:

- the disastrous impact of a “ghetto of violence” on the health and living conditions of victims and their families during and after peaks of violence.

- the necessity of a health response in this type of violent context. This response should be two-pronged:

1. It should include emergency case management of victims of violence.

2. It should allow the re-establishment of essential health care services for the general population, left to fend for itself because it lives in a context of violence.
Cité Soleil today...

The security situation has now changed in Cité Soleil, even if the situation remains fragile. The guerrilla warfare between armed groups has ended, and with it, the Cité and its 200,000 inhabitants have been set free. MSF decided to re-focus its intervention in districts that are still violent, requiring an appropriate emergency response, such as the district of Martissant19.

The population of Cité Soleil remains extremely vulnerable following this crisis. It is affected by the long-term consequences of the violence. The 2 state-run facilities in the slum cannot currently provide an adequate response to the populations’ needs.

Security no longer presents a major obstacle to the intervention of other players. Yet very few are setting themselves up in Cité Soleil and responding to the populations’ health needs.

19 Violence, mortality and access to health care in Martissant, Port-au-Prince, Haiti, results of an epidemiological survey, Médecins Sans Frontières, March 2008.