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EDITORIAL

# Intimate partner violence crisis in the COVID-19 pandemic: how can radiologists make a difference?

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## Key Points

- *The COVID-19 crisis resulted in a variety of physical and mental health issues beyond the viral infection itself, as indicated by an increase in domestic violence.*
- *Radiologists should be aware of typical intimate partner violence (IPV) injury patterns, actively ask potential IPV victims about the cause of injury, and be familiar with support systems for IPV victims of their institutions.*
- *Emergency and radiology departments should review their protocols for identifying and supporting IPV victims, and train their staff to work together to implement these measures during and beyond the COVID-19 crisis.*

*Our heads are round so our thoughts can change direction. (Francis Picabia)*

The last few weeks have been challenging for radiologists. We had to prepare our departments for a new and highly contagious respiratory virus within a very short, and in some instances, no lag time before many seriously ill patients arrived [1, 2]. In parallel, we had to rapidly learn from peer experience and scientific studies how to recognize the radiological patterns of this new disease and its complications. The primary focus of radiological departments was shifted to providing prompt and confident diagnosis of COVID-19 while adopting safety precautions and social distancing. However, this unprecedented pandemic can also lead to other physical and mental health issues [3] which can present in the imaging department.

The COVID-19 pandemic has led to a combination of health and economic crisis, resulting from the combination of stock market crash in mid-February 2020, strong and sustained rise in unemployment, and the confinement of entire families to their domestic spaces following stay-at-home orders and school closures. The psychological stress affecting the domestically confined population led to outbreaks of violence, as observed by an increase in the numbers of domestic violence calls to the police departments in several cities in North America in the first months of the COVID-19 crisis (Table 1). This rise in intimate partner violence (IPV), defined by the World Health Organization as "any behavior within an

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**Table 1** North American cities whose police departments reported increased rates of domestic violence reports (all data directly communicated by the police departments)

| City | Lockdown date | Investigated period | Reference period | Change |
|---|---|---|---|---|
| Boston (MA) | March 24, 2020 | March 24–April 20, 2020 | March 24–April 20, 2019 | + 27%* |
| Chicago (IL) | March 21, 2020 | March 16–March 29, 2020 | March 4–March 31, 2019 | + 10% |
| Philadelphia (PN) | April 1, 2020 | March 1–March 31, 2020 | March 1–March 31, 2019 | + 7% |
| Portland (OR) | March 23, 2020 | February 29–March 23, 2020 | March 12–March 23, 2019 | + 20%** |
| Seattle (WA) | March 23, 2020 | February 29–March 31, 2020 | February 28–March 31, 2019 | + 21% |
| Toronto (ON) | March 17, 2020 | March 15–March 28, 2020 | March 1–March 28, 2019 | + 19% |

*Domestic violence-related aggravated assault

**Domestic violence-related arrests

intimate relationship that causes physical, psychological or sexual harm to those in the relationship," puts an issue into the spotlight which has existed in the fringe for many decades—visibly or invisibly. We see this increase in IPV as an opportunity for physicians in emergency and radiology departments to adapt and possibly expand measures to identify and support IPV victims during the COVID-19 crisis and beyond. Hence, this discourse aims to raise the awareness of the impact of the COVID-19 pandemic on IPV victims, and also to discuss how radiologists in Europe and around the world can make a difference for the victims.

Although several risk factors for IPV have been identified, such as female gender, low income, lower educational status, and unemployment of the partner, it is important to note that IPV may affect any person regardless of gender, religion, ethnicity, and socioeconomic status [4–7]. In addition, alcoholism and mental illness are also crucial health-related IPV risk factors [6, 7]. In the general population, the lifetime prevalence of IPV-related physical violence and/or unwanted sexual relations has been estimated at 23% among women [4]. IPV has a serious physical and emotional impact on the health of the victims [8].

Since the beginning of the COVID-19 crisis, many factors have negatively impacted on IPV-affected women seeking protection from their abuser. Emergency departments (ED) have been a safe haven for IPV victims, offering dedicated services for this patient population. However, because of perceived infection risk, IPV victims may prefer not to access the ED. Besides, as ED focused their services on COVID-19 patients, programs supporting IPV victims were often restricted or not available. Having anecdotal evidence that more severe IPV-related injuries were seen in ED during the stay-at-home measures, we assume that the threshold for IPV victims to seek assistance in the hospital was higher than usual.

Social distancing measures further affect the communication between IPV victims and their care givers. During telemedicine healthcare appointments, open communication is often not possible because of the difficulties in achieving physical separation from the abuser in the limited privacy of some homes. As a result, IPV screening questions in regular non-IPV-related appointments may have to be omitted. Any counseling, which many IPV victims in an ongoing abusive relationship may receive in this scenario, also becomes less useful in this setting. Physical separation from the abuser is more difficult to achieve while stay-at-home measures are in place. During the initial phase of the lockdown in Boston, restraining orders were difficult to obtain due to the closure of courts and finding a space in a woman shelter became even more challenging. Many shelters, which had already been in high demand in pre-COVID-19 times, were not accepting new residents because of the need to apply de-densifying measures to maintain social distancing.

A recent large retrospective emergency visit screen for IPV revealed that the median age of victims was about 30 years, over 80% were women, and around half of the injuries occurred at home [9]. The most common diagnoses were contusion/abrasions, lacerations, strain/sprains, internal organ injuries, and fractures [9, 10]. In general, most IPV fractures affect the face, neck, and head (nasal bones, orbit, maxillofacial bones, skull), with the middle third of the face affected in almost two-thirds of IPV cases [9–13]. However, the fractures most indicative for IPV are related to injuries of the upper and lower extremity, upper trunk, and head/neck [9]. The patient records may also give important clues as IPV victims generally visit the ED more often and undergo more imaging studies, and may contain terms like "contusion of soft tissue" and "superficial bruising" [10, 14, 15]. Many IPV injuries could easily be overlooked or misinterpreted as routine trauma in a busy emergency or radiology department. Therefore, we urge radiologists to be aware of the patterns of IPV-associated injuries and to carefully review the medical history even in common traumatic injuries. They should raise the alert in cases where there are inconsistencies between the injury and the reported history or where there are suspicious patient records. In practice, radiologists and emergency physicians may actively ask the potential IPV victim about the cause of injury and openly address the suspicion of IPV in interdisciplinary discussions to ensure that protective measures for the suspected IPV victim are introduced if needed. In the past,

radiologists have been trained to be adept in recognizing another form of domestic violence: child abuse [16]. We believe current social tensions provoked by the COVID-19 crisis require radiologists to be attentive in identifying and supporting victims of abuse.

The global COVID-19 crisis has direct effects on families and communities, and we are witnessing how it can reshape and exacerbate existing social issues. However, this also presents an opportunity for radiologists to use their diagnostic competence to make a difference. You may ask yourself: is this our core task? We think so. In an age where there is growing influence from artificial intelligence, radiologists must move closer to the patients, make their approach more patient-oriented, and identify themselves as physicians who understand the complexities of patient care [17–25]. As patient-oriented physicians, radiologists should pro-actively engage with their patients in a way that allows them to identify and support IPV victims. Radiologists should appreciate the significant increase in IPV and the challenges that IPV victims face in these times of freedom of movement restrictions, economic hardship, and reduced hospital-based support systems. In our opinion, the COVID-19 crisis is the right moment for emergency and radiology departments to review their protocols for identifying and supporting IPV victims, and to train their staff to work together to implement these measures during and beyond the COVID-19 crisis.

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## Compliance with ethical standards

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**Methodology**
• Editorial

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