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# Empowering Victims of Lived Violence:

## Delaware's Hospital Violence Intervention Program (HVIP)

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### Abstract

Hospital Violence Intervention Programs (HVIP) are increasingly implemented across a variety of healthcare-associated contexts to prevent and address violent intentional injury. We describe the establishment of a health system funded HVIP in Delaware and the direct experiences of staff and violence-specialized Community Health Workers.

## Introduction

In the United States, the impact of assault injury is significant and widespread; according to 2021 data, homicide (i.e. fatal interpersonal assault) was among the top ten leading causes of death for persons in every age category from 1-54.[1] One estimate in 2017 of US adult Emergency Department encounters attributed 1.6% of all visits to violent injury.[2] However, there are many categories of violence and though there is increasing recognition of its impact on patients and the healthcare system,[3] disentangling the pathways that lead to injury and the recovery journey that follows is complex. In this article, we present an overview of the unique role and structure of Hospital Violence Intervention Programs (HVIPs) and the first-person perspectives of frontline workers describing their roles and contributions.

## Background

Firearm assault carries the highest morbidity, mortality, and per person cost of care compared to other mechanisms of assault injuries (such as bodily force, blunt object, or sharp object assaults) despite involving a younger population with relatively fewer comorbidities.[4] Firearm injury survivors also have worse outcomes related to pain, post-traumatic stress disorder (PTSD), functional limitations, and health-related quality of life even when compared to similarly severe injuries from non-assault mechanisms such as motor vehicle crashes.[5] Yet firearm assault and injury have been historically under-researched compared to other leading causes of death in the United States.[6] This is especially striking given how much of an outlier in firearm morbidity and mortality the US is compared to other countries; an estimate in 2016 placed Brazil and the United States as collectively contributing to *32% of the world's* estimated number of firearm deaths, and the US firearm homicide rate has been estimated to be 24.9 times higher than for other high-income countries.[7,8] These observations point towards the disproportionate burden of firearm violence within the United States as the consequence of structural forces. Gaps in

outcomes have also only widened since 2020, which saw an epidemic surge in firearm injuries that made it the nation's leading cause of death for persons 1-19 years of age with the specific rise in firearm homicide felt most acutely among those already historically most affected: non-Hispanic Black or African American men ages 10-44 with the highest levels of poverty.[9,10]

Therefore violence, and specifically firearm violence, is one of the most glaring and persistent examples of both severe disparity and inequity in American healthcare. Recent decades of advocacy and program innovation have sought evidence-based methods to challenge this inequity and among healthcare-based interventions, Hospital Violence Intervention Programs have been the most widely promoted and studied model for reducing related risk for violent reinjury, perpetration, and symptoms of posttraumatic stress.[11] However there is wide variation in implementation and measured outcomes for HVIPs.[12] In a review of studies, Webster et. al[13] summarized this heterogeneity of programs:

> Most HVIPs begin with a bedside connection intended to motivate the patient to participate in the program. The initial connection is often made by a "credible messenger," often someone who has personal prior experience with violence. Some HVIPs employ motivational interviewing techniques to use patients' own desire for safety and stability to facilitate behavior changes that lower risk for involvement in violence. Most HVIPs are designed to connect patients to needed social services and supports such as assistance with obtaining employment, housing, treatment for mental illness and substance abuse while facilitating postsurgery medical care. Some HVIPs also link survivors to community-based programs specifically designed to prevent revictimization or perpetration of violence such as mentoring or violence interruption programs. HVIPs usually emphasize that the programs are trauma informed and sensitive to the psychological challenges faced by individuals who have suffered serious injuries from violence. In addition to social service supports, some HVIPs provide some form of direct intervention to facilitate nonviolent responses to conflicts and provocations such as a violence prevention curriculum for youth or a support group for adults. In some instances, HVIPs will assist family members of victims, especially when the patient is an adolescent. HVIPs may also be a direct connection to crime victim assistance programs, legal representation, and health insurance for those who are eligible. The types of services and supports offered by HVIPs, of course, depend on their funding. HVIP teams often consist of social workers, nurses, messengers, and surgeons. Despite the considerable needs and the high risks facing gunshot wound survivors, hospitals without HVIPs might offer a social worker to assist with discharge issues, but they rarely offer follow-up supports. (p. 139)

Overall, this review found mixed evidence regarding effectiveness, noting that included studies were primarily limited by underpowered sampling and selection bias. Given that intensive case-management and/or care coordination interventions engage a wide variety of social needs, these

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findings are neither surprising nor necessarily discouraging. Context, specificity, and fidelity to implementation affect success, and analogous and homologous models show similar variability. Models of intensive case-management interventions for severe mental illness can demonstrate consistent impact for specific measures such as reduction in hospital readmissions and increased retention in care.[14] Complex care coordination interventions such as Camden Coalition's care management program for healthcare "super-utilizers" initially showed null effect in a randomized controlled trial testing primary outcomes (hospital readmissions), but did show positive effect on intermediate goals such as increased ambulatory care.[15] The Individualized Management for Patient-Centered Targets (IMPaCT) model for Community Health Workers (CHWs) serving low-income populations with multiple chronic conditions found marked improvement across a range of biomarkers and behaviors, improvement in self-rated health measures, and reduction in hospitalizations.[16]

Delaware experiences high rates of firearm violence as previously studied by the CDC and described in this journal.[17,18] Figure 1 depicts this disparity in firearm homicides as calculated by the RAND Corporation's analysis of CDC epidemiological injury statistics, with Delaware experiencing 26% higher death rate compared to the national average in 2021.[19] However, to gain insight beyond statistical descriptions into the implementation of new models of care requires creating spaces within academic arenas to learn from the experiences of frontline CHWs and case workers who provide valuable insight into this complex landscape.[20–22] Below, our program staff describe our experiences in Delaware in observing and contributing to the strengths and gaps in patient care, admitting the ways in which we have fallen short and can serve them better, and advocating for the principles and practices that protect their autonomy, dignity, and health.

Figure 1. 2021 Comparison of Firearm Deaths in Total Population of Delaware compared to National Average

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## Delaware | Total Population

ANNUAL DELAWARE DEATH RATES AS A PERCENTAGE HIGHER OR LOWER THAN THE NATIONAL RATE

| Firearm Deaths | Firearm Suicides | Firearm Homicides | Suicides | Homicides |
|---|---|---|---|---|
| **+7%** (−4% to +18%) | **−5%** (−19% to +10%) | **+26%** (+8% to +44%) | **−6%** (−16% to +4%) | **+31%** (+14% to +47%) |
| **Deaths per 100K** | **Deaths per 100K** | **Deaths per 100K** | **Deaths per 100K** | **Deaths per 100K** |
| Delaware avg: 15.7 (CI: 14.1 to 17.4) | Delaware avg: 7.6 (CI: 6.5 to 8.7) | Delaware avg: 8.0 (CI: 6.8 to 9.1) | Delaware avg: 13.7 (CI: 12.2 to 15.1) | Delaware avg: 10.3 (CI: 9.0 to 11.6) |
| National avg: 14.7 (CI: 14.6 to 14.8) | National avg: 7.9 (CI: 7.9 to 8.0) | National avg: 6.3 (CI: 6.3 to 6.4) | National avg: 14.5 (CI: 14.4 to 14.6) | National avg: 7.8 (CI: 7.8 to 7.9) |

### Delaware Firearm Laws

- Prohibitions on gun possession by subjects of domestic violence restraining orders
- Prohibitions on gun possession by subjects of emergency (ex parte) domestic violence restraining orders
- Extreme-risk protection orders ("red-flag" laws)
- Child-access prevention (safe storage) laws
- Universal background checks for handguns
- Minimum age of 20 for purchase of handguns
- Prohibitions on gun possession by those with mental health or cognitive disorders
- Prohibitions on gun possession by those convicted of violent misdemeanor crimes
- Comprehensive state preemption of all local gun regulations

NOTE: Ranges represent the 80-percent confidence intervals of the estimates. Listed state laws are among those included in the RAND State Firearm Law Database, version 5.0, as of January 1, 2024 (Cherney et al., 2024).

## Medical Director: David Chen, MD, MPH

During my residency training within the state of Delaware, I lived for several years in the Northeast neighborhood of Wilmington, Delaware. My neighborhood experienced some of the highest rates of firearm violence within the city; I regularly heard gunshots in the community and on several occasions was a "streetside responder" in applying direct pressure to treat gunshot wounds for persons injured just outside my home. In the years since, I have continued to live within the city and assess the broad impact of gun violence on our community as well as the role of health systems in intervening both before and after the bullet wound. There have been many advocates and champions for this work within healthcare and the community of Delaware; my primary role has been to build a sustainable implementation of an HVIP and better understand the many ways in which gun violence affects health.

In 2019, ChristianaCare Health System (CCHS) began planning the launch of an HVIP aimed to create a single clinical care team to use two evidence-based synergistic strategies: core HVIP principles and function as articulated by the Health Alliance for Violence Intervention (the HAVI, formerly the National Network for Hospital Violence Intervention Programs/NNHVIP)

and the IMPaCT CHW model. This program was proposed to address the "safety/violence reduction" need identified in the CCHS Community Health Needs Assessment (CHNA) and align with larger organizational goals of ending disparities and simplifying access to care. The program is unusual among surveyed HVIPs, where only 36% have hospital funding, and to the authors' knowledge is the only program situated and entirely funded by a health system's Departments of Health Equity and Community Health.[20] Despite the extreme challenges faced by acute care health systems during the COVID-19 pandemic, where many institutions were challenged by drawback and reduction of services & staff,[23] the program began in February 2021 with the first patient enrollments.

The CCHS HVIP - Empowering Victims of Lived Violence (EVOLV) provides navigation support to patients impacted by community and interpersonal violence. Patients are approached during or directly following an initial hospital encounter for violent injury (including both blunt and penetrating assault) by a program CHW for enrollment. The program serves those ages 14 and older, but due to significant frontline staffing limitations and the preliminary nature of the program, initial inclusion and exclusion criteria focused on several key principles for implementation: focus on patient-centered & identified outcomes, high quality of service navigation and intensive case management, patients with more severe injuries and firearm injuries, and non-duplication with existing services. Consequently, enrollment was initially prioritized for patients with penetrating assault injuries requiring hospitalization, residence in New Castle County, and capacity for independent decision making (and for minors, with parental consent and patient assent). Through a grant funded by the Delaware Criminal Justice Council, this was also later expanded to include all residents of the state of Delaware and with exploratory work pending to expand enrollment for those receiving acute care with similar criteria at Nemours Children's Health. Relative exclusion criteria are those whose service navigation needs are more specifically met by other similar programs, such as an existing dedicated intimate partner violence/domestic violence (IPV/DV) CHW program operated by Child Inc. or other CCHS CHW program (e.g. where the needs are primarily related to behavioral health or substance use disorder). In such cases, a "warm handoff" is conducted to introduce other programs and typically the primary choice of service will be at the patient's discretion; in some cases, such as with the CCHS Food Farmacy program for food insecurity or CCHS Women's Health, multiple CHW programs will remain engaged.

The focus is on service navigation through working on the patient's identified needs and addressing social determinants of health (SDoH) barriers. Enrollment involves an SDoH screen but the patient may choose any number of self-determined goals with aim to achieve outcomes within 3 - 12 months (Table 1). Establishment of a primary care clinician for the patient is also considered a standard of clinical care and is an additional primary process measure of success.

Table 1. Screening and Service Categories

| SDoH Screening Categories | Patient-Centered Outcomes |
|---|---|
| Safety | Clothing |
| Financial Hardship | Physical Health Assistance |
| Healthcare Access | Mental Health Assistance |
| Transportation | Individual/Family Support |
| Housing | Housing/Utilities |
| Food Insecurity | Transportation |
| Health Literacy | Insurance |

| | |
|---|---|
| Utilities | Food Assistance |
| | Legal Assistance |
| | Education |
| | Employment/Workforce Development |

*Footnote: There may be overlap between multiple domains for SDoH screening categories and outcomes. Some services such as assistance with victims' compensation applications are included in multiple outcome domains.*

During our first 19 months of operation (which included operation with one active frontline worker/CHW and pandemic-related redeployment of staffing for critical shortages), the CCHS HVIP-EVOLV manually screened over 2,000 patients presenting for acute care from violent intentional injury or maltreatment for eligibility, approached 213 of those with the most critical needs for enrollment, and successfully enrolled 66 patients (30.9%). While program evaluation is ongoing, preliminary process measures compare well with similar established HVIPs; by comparison, a recent evaluation of five-year HVIP performance (2013-2018) for the Boston Violence Intervention Advocacy Program described a 37.4% engagement rate of participants.[24] On January 16, 2024, the CCHS HVIP-EVOLV was officially recognized as a Member Organization of the HAVI.

We look forward to next steps in advancing medical care for our vulnerable patients: expanding our inclusion criteria and services, stronger and more specific advocacy for patient needs, and changing structural forces for better healthcare for victims of violence in our state.

## Program Coordinator: Johanna Rodriguez, MSW, LSW

As a program founded on principles of health equity, we intentionally enter spaces with patients knowing that we will see injustice and disparities in quality of care for our patients injured due to community violence. Preparatory work for, education in, and awareness of systematic oppression does not soften the blow when we witness these moments ourselves. We train our CHWs in bias, advocacy, and patient rights. As liaisons between the patient and the systems they are engaging with, they are not meant to speak on behalf of patients but rather help patients feel confident in taking up spaces where their voice is the most important. Unfortunately, we are often witness to a lack of understanding of how gun violence impacts patients and their continued loss of security.

Administratively, I often see gun violence housed with domestic violence when it comes to victim services. While at times some services may look similar, the experience of violence our patients have is distinct. Even within the world of gun violence, our primary patient population of victims of violent intentional firearm assault injury is not always the focus. Victims of attempted suicide, bystander injury, and domestic or intimate partner violence often have more facilitators to approach in conversation, care, and services. Gun violence as it occurs in Wilmington, Delaware is seen through a different lens, sometimes as a way of understanding nuances and, unfortunately, other times to further ostracize patients impacted. There have been many times where we have engaged with external parties to connect patients to resources only to find that their version of 'victim services' rarely includes gun violence survivors.

Negative commentary dominates when it comes to extending services to the "imperfect" patient. In my experience, the patient who is labeled "non-compliant," "difficult," or "aggressive" rarely engages with me in the same way. A traditional diagnosis of PTSD is insufficient when we

consider the systematic oppression, housing insecurity, community violence, and inadequate community resources our patients experience. It is hard to describe the feeling of relief and hope when we find a new partner who is excited to hear about our work. Historical distrust in systems meant to care for our patients creates a complicated relationship from the start, and one does not have to search for long to find examples of refusal to engage with "difficult" or "non-compliant" patients, whether by service systems or individuals.

Rather than dissect every negative interaction we've had, I'd like to focus on the successes that we've had in our three-year history. We have found partners who not only want to improve their services but repair the broken trust that already exists. We have come to lean into our ability to acknowledge that there is so much more work to be done. It has been encouraging to be welcomed in some spaces with open arms, but it's important to highlight that it's often because programming and trusted staff are hard to establish and maintain. The fact that we have been able to serve patients who have placed their trust in us is something that we take extremely seriously.

There are common themes among the staff in our most successful relationships. They are humble. They are patient. And most importantly, they are always building on their self-awareness. What is transformative is the ability to have difficult conversations with partners where we mutually acknowledge our areas for improvement. To be open and honest about our misconceptions and where we fall short in our patient care is essential for creating an environment where our patients themselves can be vulnerable. I admire the leaders that we have engaged with who have been open about negative experiences patients have had with their services in the past. It is uncomfortable to discuss mistakes we have made, but progress cannot be made without a commitment to learning and doing better. Conversations do not end at the acknowledgement. Action must be taken. Our HVIP has begun meeting with partners to share knowledge and experiences to ensure accountability on both ends, especially when we are able to bring our patients directly into these conversations in person or over the phone.

Agencies are made up of humans with an array of lived experiences. We are not robots. Asking our patients to engage with us or perform in ways that we don't ourselves is unfair and perpetuates power dynamics. I invite our readers to challenge themselves in new ways. Consider ways in which we could have supported our neighbors better or extended kindness to others that we have judged without reason. Often, we make promises that we can't keep or give patients time frames for something that we miss. Could we have taken an extra minute to ensure our participants felt comfortable asking for clarity? Were there times where we could have ensured a patient understood our conversation before ending a call or a visit? Engage with those difficult conversations and watch yourself when dismissing the imperfect patient as undeserving of your patience. Do not underestimate the power of being a support person for your patient - you never know when you might be the only one by their side.

## Community Health Worker: Mishai Pendleton, BS

As someone with a background in public service, the decision to apply for this position was by fate. Throughout my career, I've dedicated countless hours assessing safety, identifying needs, and creating case plans. I reached a stage in my career where I desired to make a positive impact within the community in a different way. A role within ChristianaCare involving support for victims of violence caught my attention since I hadn't encountered much discussion on this critical issue. As our senior CHW, I have encountered disparities in the treatment of clients

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across various circumstances. I have personally made significant progress in understanding how to better support victims of community violence by closely observing clients, providers, and outside agencies.

My initial encounters take place within the hospital environment. I never truly understood the stigma behind gun violence until I witnessed it myself. I remember my first patient's face and the hopelessness and shame that accompanied this stigma. I engaged in a conversation with a client who has been hospitalized for nearly a month. Upon asking about the patient's well-being, the patient expressed that he was coping adequately within his confinement, alluding to a prison cell. Clients may experience feelings of isolation in the hospital, exacerbated by the restricted interactions they have with their loved ones. To mitigate this feeling of isolation, I try to see patients as often and consistently as conditions allow, which helps to build rapport and show them that they are not alone. I've witnessed patients demonstrate a variety of coping mechanisms while undergoing care for their traumatic injuries throughout their hospital stay. Patients have different ways of expressing their stress and with that in mind, it's imperative for staff not only to be trauma aware but to display empathy during their patients' toughest times. I bridge the gap between providers and patients by actively learning from them. As a staff member, I provide clients with a level of autonomy that generates positive relationships and helps them feel empowered to confidently articulate their needs. I initiate difficult conversations with both providers and patients with the goal of building a level of understanding where everyone can be respected.

Throughout my patient-facing interactions, I've learned that PTSD and other stress reactions will not always manifest visibly at the bedside. Patients will receive a certain level of care and have their basic needs met in the hospital setting, but once patients are stable for discharge, their social determinants of health needs aren't necessarily fully attended to. The work within hospitals can be fast-paced and busy, but during quiet hours clients may struggle with thoughts about the incident, their injury, life before and after the event, and how to navigate life after discharge. These stressors, both spoken and unspoken, often go unaddressed. My goal is not to offer clients medical diagnosis, but empathetically connect with them and identify barriers that arise during their journey. We recognize that upon discharge from the hospital, clients often have many tasks necessary for their ongoing healing. However, for many whom were previously physically healthy and had never been hospitalized or treated for serious illness before, it is overwhelming. Many clinicians may not fully understand the initial steps required to begin this process. As a CHW, I identify the needs of clients and help address those barriers so they can continue their healing journey. No journey is easy, but being someone to accompany them through it is how we can learn and fulfill the role of a true advocate.

Once patients leave the walls of the hospital, there continue to be hard challenges in meeting patient needs. I have witnessed my clients be discouraged and disengage with community partners when their needs are overlooked. While this may be due to structural barriers in systems not designed for our patient population, it is also not uncommon for my clients to encounter other workers displaying a lack of empathy, adequate attention, or provision of accurate information. I act as a liaison when connecting clients with community supports; I also serve as their advocate, assisting them in obtaining the necessary information, collaborating with community partners, and holding everyone accountable. For example, victims of domestic violence can receive certain items such as cell phones to help them stay in communication with their supportive agencies and other personal needs. However, that support is also very important

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for victims of community violence and other forms of assault. Commonly, individuals are stripped of their cell phones during their initial contact with law enforcement and hospitals, making it unlikely for them to get their phones back due to the circumstances of their injury. Patients may lose track of their devices and on occasion never get them back due to ongoing investigation, and so there is a gap in addressing the need patients have for phones when they return to their communities. This gap directly impacts their ability to contact myself, medical providers, and outside community agencies to start their healing journey. When patients can't communicate with people with whom they are supposed to follow up, they may be labeled as non-compliant, further worsening stigma associated with violent injury.

Safety is another concern that clients face. It's likely that clients are injured within their communities and returning home to the same environment poses a threat to their safety once again. There are community agencies that have shelters dedicated to certain populations, but there's insufficient resources that can help our patients avoid returning to the literal scene of the crime and being retraumatized emotionally as well as physically.

Through my work as a violence-specialized Community Health Worker, I can see how community programs and systems may not be aware of or built to handle differences in needs for patients facing violence. Here, professional development also offers opportunities for advancing care. As an example, while I participated in a conference aimed at assisting victims of violence, I observed that most conversations focused solely on domestic violence. In taking this opportunity to express my role as a CHW and highlight the importance of engaging in these discussions across different spaces including for community violence, not only did I learn more about other community resources but other agencies showed interest in my role and demonstrated openness to incorporating this knowledge into their respective spaces.

Becoming a HAVI recognized Hospital Violence Intervention Program (HVIP) in Delaware marks an initial phase. We have more work to do. I have prioritized empowering individuals who feel marginalized, which is central to my work. Through reflective practices, I have effectively contributed to reducing Emergency Department visits and promoting improved health outcomes. Furthermore, I have empowered clients to advocate for their healthcare needs and address social determinants of health. Beyond that, I have provided support for clients in pursuing career opportunities and furthering their education. In terms of community involvement, I have stepped into spaces and invite agencies into constructive conversations. Regardless of the nature of individuals injuries or the circumstances surrounding them, I strive to promote the idea that everyone deserves equitable care.

## Community Health Worker: Nichole Johnson, CMA

In both my role as a medical assistant and a community health worker, I have seen the difference in care received by patients depending on their visit reason. I have witnessed firsthand the degree of stigma surrounding a gunshot patient where the preconceived notion that gunshot patients are "bad" individuals or "must have done something wrong" to cause the injury often directly impacts the quality of care. As a Community Health Worker, I advocate for patients who often have the quality of their services impacted by knowledge of the nature of their injury. Sometimes the verbiage and descriptions by healthcare staff – both inside and outside the hospital – paint the picture that the patient is "difficult to engage" or has an "unsavory demeanor." Often times, my engagement with a patient does not align with the description.

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Community Health Workers such as myself often have to buffer communication between partners and our patients. This looks like filling gaps in communication and explaining things in simple terms to ensure that patients feel as though they are just as much a part of the conversation as us and partners. It is important to build trust, ensure understanding, and more importantly advocate when necessary. We want patients to speak for themselves, but sometimes we must step in and present about patient concerns to encourage them in explaining their concerns and explain why a patient may feel uncomfortable. I have seen the difference in how a "normal" acute patient may have access to more visitors for comfort and more family supports, whereas those who are victims of violence have more limited access. While this may be done from a security perspective, it deepens feelings of isolation and reduces support that would need to be in place in the home setting after discharge. I have also seen firsthand barriers with clients who may need physical therapy or rehabilitation services that are "turned down," possibly due to the nature of the assault injury and the lack of facilities' knowledge on subject matter.

The individuals we serve often need advocacy, understanding, and someone who knows how to navigate the system while ensuring the patient's priorities are placed first. While I am privy to knowledge of resources, sometimes this is not enough, and providing support emotionally or physically being there to help bridge gaps and provide understanding for individual clients and needs is necessary. Having broad experience across a diverse caseload allows me to provide timely examples and context that a patient or service provider might not otherwise have noticed.

Direct and indirect barriers to care is impacted by both verbiage in charts and the way people speak to and about the patient in general. I feel that it is important for agencies to understand that these are individuals: at the end of the day, although the care may be complex, the need is still the same.

## Conclusion

These themes affecting victims of gun violence are consistent with other emerging observations within HVIP research literature: stigma within healthcare and social service systems, challenges to recovery in hospitalized settings, social isolation, mental health needs, and the lack of specific services for injuries *not* related to intimate-partner or domestic violence.[5,25,26] Our aim is to give voice and validation to our patients' experiences, to care for them well with the resources collectively available, and highlight the work needed for future accountability and innovation.

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