Rural and Urban Domestic Violence in Vermont

2015-2019

Submitted to:
Department of Public Safety

Submitted by:
Robin Joy, J.D., Ph.D.
Megan Novak, MA
Crime Research Group
P.O. Box 1433
Montpelier, VT 05601
802-230-4768
www.crgvt.org

September 2021

This project was funded by the Bureau of Justice Statistics
State Justice Statistics Grant #2018-86-CX-K004

Contents

Acknowledgements

Crime Research Group would like to acknowledge and thank the following for their expertise and contribution to this work and report.

Karen Tronsgard-Scott, Executive Director, Vermont Network Against Domestic and Sexual Violence
Raenetta Liberty, RN, Vermont Forensic Nursing Program Coordinator, Vermont Network Against Sexual and Domestic Violence
George Merkel, Chief of Police for the City of Vergennes
Evan Meenan, Esq., Deputy State's Attorney, Vermont Department of State's Attorneys and Sheriffs
John Campbell, Esq, Executive Director, Vermont Department of State's Attorneys and Sheriffs
Omara Rivera-Vazquez, Ph.D., Vermont Center for Crime Victim Services

Introduction

It has been a long-time interest in both the victim advocate community and researchers to conduct a study to determine if individuals living in the rural areas of Vermont experience greater severity of injuries. Isolation in the rural areas creates a challenging barrier for a number of reasons: fewer people are around to witness behaviors, victims are removed from services, higher rates of substance abuse and unemployment, issues with transportation, and long distances to domestic violence and health-related services.

According to the Vermont Domestic Violence Homicide Fatality Review Committee, at least half of Vermont's homicides have been domestic violence-related almost every year since 1994 (Commission, 2020) (Vermont Fatality Review Commission, 2018). Research external to Vermont suggests that the rural nature of the state may be contributing the homicide rate as well as to the level of injury sustained in intimate partner assaults. A study of services provided to victims in Illinois found that rural victims were more likely to experience sexual assault than urban victims. Logan et. al. (2003 & 2005), found that rural victims of domestic violence are likely to be abused earlier in a relationship and be abused more often than urban victims.

Factors that contribute to more injurious intimate partner violence (IPV) in rural areas include isolation from other houses, few employment/housing opportunities, and distance from services and supports (Edwards, 2015). These issues are present in the rural state of Vermont with a longstanding affordable housing crisis, lack of accessible public transportation and services outside of larger population centers, and limited hospital options. Working with stakeholders, this study was designed to understand the impact that Vermont's rural nature may have on the severity of domestic violence in Vermont. The primary research question proposed for this project was: Do victims of domestic violence in the rural areas of Vermont experience more serious injuries than victims in urban and suburban areas? Breaking this down the project proposed to answer:

- Do intimate partner assaults result in more serious injuries in areas where there is no local police coverage versus those areas that have a local police force?

- Do Emergency Department visits coded with IDC codes for Domestic Violence[1] indicate that there is a difference in the severity of injuries of patients from rural areas versus urban areas?
- What distance barriers are present for victims of intimate partner violence in accessing services such as shelter, counseling, and economic services?

This study uses various data sources to categorize the injuries sustained by victims by their location and evaluates the data sources available to measure the prevalence of serious injuries in rural areas. Part 1 maps out the resources available to domestic violence victims. Part 2 analyzes the National Incident Based Reporting System (NIBRS) data to understand crimes of IPV reported to the police. Part 3 analyzes emergency room discharge data for domestic violence cases.

Part 1: Mapping Resources for Victims of Domestic Violence

To answer some of the research questions central to this study, it was imperative to first map the locations of key service providers in Vermont. Specifically, the locations of hospitals, urgent care centers, courthouses, police departments, victim services providers, and emergency medical services and surrounding areas were identified and then marked on a map using Tableau software. Visualizing resources on a map was helpful in identifying towns and cities that were more than five miles from domestic violence resources.

According to a 2016 United States Census Bureau news release, "rural areas cover 97 percent of the nation's land area but contain 19.3 percent of the population (about 60 million people)." (US Census Bureau, 2016) The Census Bureau's website (2019) roughly defines rural areas as "any population, housing, or territory not in an urban area." Further, urban is defined as "urbanized areas" with a population of 50,000 people or more and "urban clusters" as urban areas with a population of between 2,500 and 50,000 people. (US Census Bureau, 2019)

Vermont is the second smallest state by population (642,855) and the sixth smallest by area.[2] No cities or towns in Vermont have a population of more than 50,000. Burlington is the most populated city with 42,417 residents. The next largest town is Essex with 19,587 residents. Of the state's 251 towns and cities, only 8 have a population of over 10,000 (including Burlington and Essex), 65 have a population between 2,500-10,000, and approximately 72% (180) have a population of 2,499 residents or less.

[1] Vermont switched from IDC 9 to IDC 10 in 2015.
[2] Population numbers are based on 2010 census data.

Location data were analyzed to identify populations living more than five miles away from emergency medical services (EMS) (i.e., air ambulance, ambulance, first responder, or hospital) and criminal justice system (CJS) resources (i.e., police department, crime victim legal partnership, or a courthouse).[3] A focus was placed on access to emergency medical services (EMS) and criminal justice system (CJS) resources as many of these entities have a duty to respond. However, there are other resources (e.g., shelters, counseling, advocacy) available to domestic violence victims. The Vermont Network Against Domestic and Sexual Violence organizations were not mapped to maintain the security and privacy of the locations.[4]

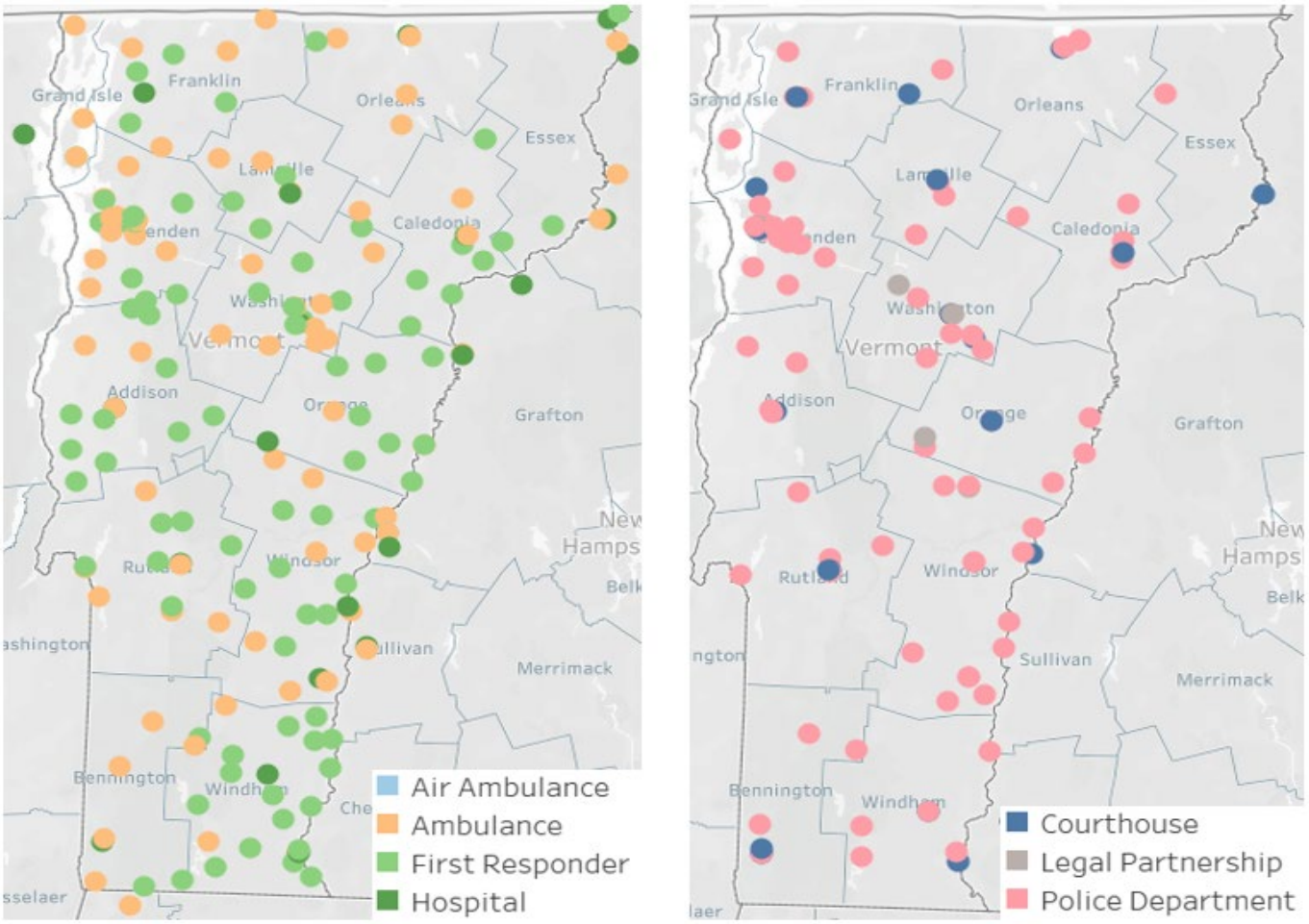
Of the 251 towns in the state, 65 are located outside of a 5-mile radius from emergency medical services. The total population of these towns is 68,728 meaning that approximately 10.69% of Vermont's population lives further than five miles from EMS. Additionally, 141 towns are located outside a 5-mile radius of CJS resources. These towns have a total population of 169,670 and represent 26.39% of Vermont's total population.

Figure 1 captures the locations of both the EMS and CJS resources and their locations on the map of Vermont. Because this is a statewide view, and EMS and CJS are often located within a few miles of each other, the dots marking the locations may overlap. Readers are encouraged to interact with these maps here.

[3] The Vermont Legal Partnership is a group of organizations who aim to ensure that all Vermont crime victims have access to high-quality, trauma-informed legal services to address the legal challenges arising from their victimization in a manner that minimizes multiple intakes with different providers.

[4] The Vermont Network Against Domestic and Sexual Violence is a membership organization which was founded in 1986. Their members are 15 independent, non-profit organizations which provide domestic and sexual violence advocacy to survivors of violence in Vermont.

Figure 1. EMS and CJS Resources in Vermont



Some of Vermont's citizens live outside a 5-mile radius of both EMS and CJS resources. This is the case for 55 towns comprised of 47,021 people (7.31% of Vermont's total population). Most of these towns are patrolled by Vermont State Police (VSP) with the exception of Wolcott in Lamoille County. Notably, Bolton is the only city in Chittenden County in this category. Also, there are no towns in Grand Isle County located outside a 5-mile radius of either EMS or CJS resources. Figure 2 shows the EMS and CJS services with the 5-mile radius.

Figure 2. EMS and CJS Resources with 5-Mile Radius

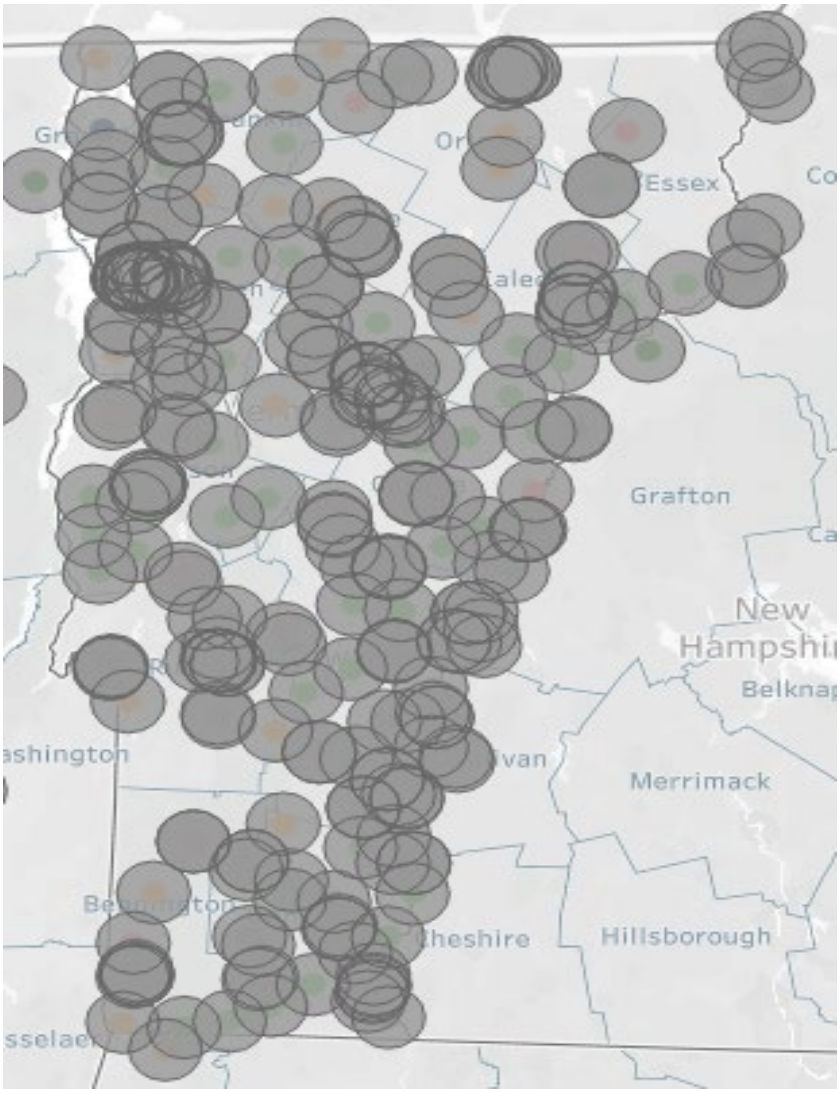
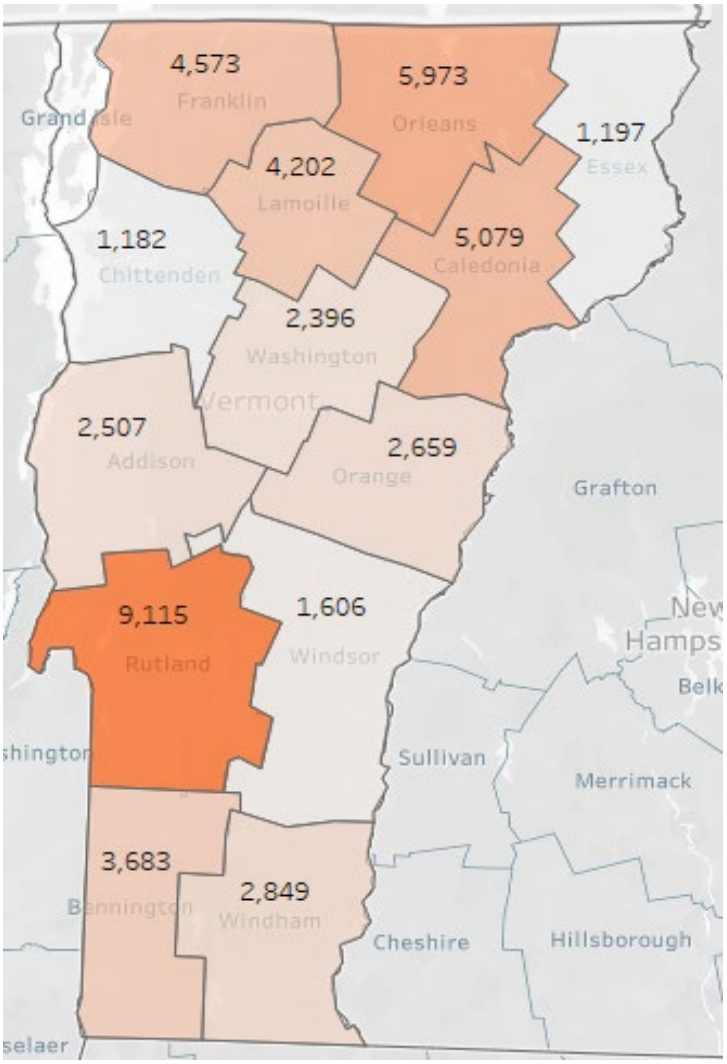


Figure 3 depicts the total number of people living outside a 5-mile radius of EMS and CJS resources in each county. Many of the 47,021 people living outside a 5-mile radius of both EMS and CJS resources are in Rutland County (9,115 / 19.38%), followed by Orleans (5,973 / 12.70%) and Caledonia (5,079 / 10.80%) counties.

Figure 3. Vermont County Populations Located Outside a 5-Mile Radius of EMS and CJS Resources



Part 2: National Incident Based Reporting System Data and Analysis

The grant proposal for this project anticipated the use of the Flat File developed in a previous BJS project which included all crime incidents reported to the police during the year. Previously, two computer systems (CAD-RMS) were used by law enforcement agencies in the state: Spillman and Valcour. When the extracts were received from the two separate CAD-RMS, for a variety of reasons merging these datasets was not possible. And at the same time, the state was in the process of contracting with Valcour to provide CAD-RMS services to all law enforcement agencies. Due to the

Department of Public Safety prioritizing the switch to Valcour, the attention of relevant personnel in Vermont and those addressing the respective CAD-RMS systems was redirected. As such, there were no additional requests for Valcour data or updated Spillman data.

In conducting the analysis, data from the National Incident Based Reporting System (NIBRS) replaced the CAD-RMS data. Unfortunately, this dataset is not sufficient to answer the first research question: Do victims of domestic violence in the rural areas of Vermont experience more serious injuries than victims in urban and suburban areas? This is because the town of the incident is not a NIBRS field.[5] The responding agency is a field, and from there the police coverage could be determined based on the population and square mileage of the agency's primary responding area.

NIBRS Analysis

Calendar years 2015-2019 were used for the analysis. Initially, all victims were identified where the offender was a current or former intimate partner.[6] Excluded were crimes having no element of violence, such as the larceny offenses. Retained were all violent crimes against persons including homicide, simple assault, aggravated assault, sexual assault, robbery, and human trafficking. Destruction of property was included because violence is involved in destroying property and there were some offenses coded with injuries in the data. The seriousness of the injury was coded as to whether the injury was serious, no injury, or minor injury. An injury was determined to be serious if the following NIBRS values were entered: severe laceration, loss of teeth, unconsciousness, suspected internal injury, apparent broken bones, other major injury, or if the offense code was for murder or negligent homicide.

The final dataset had 4,968 victims, of which 4,636 were White. Female victims accounted for 3,459 victims (NIBRS does not record Gender Identity or Trans status). Asian victims and White victims were overwhelmingly female (92% and 80% respectively). However, Indigenous victims were 83% male and Black victims were 32% male. There were less than 10 Indigenous victims in the

[5] Vermont Crime OnLine, an online interactive NIBRS data website, was previously available to the Vermont Crime Information Center and researchers. Upon request, a specific VCIC employee would run a report that would match incident numbers in the CAD-RMS to the NIBRS data. The report was produced for the requestor's use of the data. The employee retired circa 2013, taking with her the knowledge of the reporting process. Valcour came online in 2014 as the second CAD-RMS system and matching the town of the incident to the NIBRS data became complicated. It is anticipated that this will become easier in 2022 with the move to Valcour for the entire state.

[6] The relationship values in NIBRS that were classified as intimate partner were: homosexual relationship, boyfriend/girlfriend, current spouse, ex-spouse.

5-year data frame. There were close to 200 Black victims in the dataset, but no patterns from the data have emerged yet to help understand why there were more male victims than white victims. Another study in progress that will explore this more deeply. That study is expected to be completed early in 2022.

The dataset was limited to victims thirteen years of age and older who had an intimate partner victim-to-offender relationship code. Vermont's relief from abuse orders are available to teens in dating relationships; this category is tracked separately from other intimate partner relations in state data. In this dataset, selection was made on age after selection on relationship to the offender status. Table 1 shows the age distribution of the final cohort.

Table 1. Victim Age Distribution

13-15	60
16-18	168
19-21	382
22-25	714
26-30	922
31-40	1,492
41-50	715
51-60	377
61-70	105
71-80	20
81-90	6
91-98	2
Missing Age	5

As expected, the largest number of victims were in the more populated areas. Table 2 lists the 10 agencies with the most IPV victimizations reported.

Table 2. Law Enforcement Agencies with Largest Number of IPV Victims

BURLINGTON	385
RUTLAND	317
BENNINGTON	281
ST. ALBANS	271
BRATTLEBORO	245
SP: ST. JOHNSBURY	228
BARRE CITY	210
SP: WESTMINSTER	171
SOUTH BURLINGTON	167
SPRINGFIELD	144

Eight of the agencies listed in Table 2 serve Vermont's largest cities. Burlington is the state's largest city with a resident population of 42,000 in the 2010 census. The Vermont State Police (VSP) Westminster barrack serves approximately 30,000 people in its primary jurisdiction towns in Windham County and the VSP St. Johnsbury serves 15,000 residents in its primary jurisdiction. St Albans has the jurisdiction with the smallest population in this table with approximately 6,000 residents.

Table 3 shows the ten agencies with the most serious injuries reported. The responding agencies reporting the most serious injuries in Table 3 do not seem to be driven by the size of the victim population listed in Table 2.

RUTLAND	71
BRATTLEBORO	24
SP: WESTMINSTER	23
SP: MIDDLESEX	19
SP: ST. ALBANS	18
SP: RUTLAND	17
BURLINGTON	16
SP: ROYALTON	16
ST. ALBANS	11
BARRE CITY	10

Table 3. Agencies Reporting Most Serious Injuries

The Rutland Police Department reports four times more serious injuries than the Burlington Police Department. Rutland City has a population of 16,500 in the 2010 census. To understand the disparity, the proportion of IPV victims who suffered serious injuries was reviewed. See Table 4 below.

Table 4 illustrates the departments that had at least 100 IPV victims during the study period and the percentage of the victims who sustained serious injury or were killed. Rutland City Police Department has the highest percentage of serious injury cases at 23.43%. Three VSP barracks in Westminster, Middlesex, and St. Albans, with primary jurisdiction in small towns, have serious injury rates over 10%. Large and medium-size cities with full-time police departments round out the list, with only two other rural VSP barracks represented. The other rural VSP barracks did not have 100 IPV victims during the study period and, therefore, are not included in the table below. Only VSP barracks in Derby, a very rural area near the Canadian border, had no IPV incidents with serious injury or death.

Table 4. Agencies with 100+ IVP Victims

	No or Minor Injury	Serious injury or death
RUTLAND	76.57%	23.43%
SP: WESTMINSTER	87.13%	13.45%
BRATTLEBORO	92.65%	9.80%
SP: MIDDLESEX	84.80%	15.20%
SP: ST. ALBANS	85.71%	14.29%
SP: SHAFTSBURY	92.66%	7.34%
HARTFORD	92.91%	7.09%
BARRE CITY	96.19%	4.76%
ESSEX	95.28%	4.72%
SOUTH BURLINGTON	96.41%	4.19%
SPRINGFIELD	95.83%	4.17%
BURLINGTON	96.10%	4.16%
ST. ALBANS	96.31%	4.06%
SP: ST. JOHNSBURY	96.05%	3.95%
WINOOSKI	97.48%	3.36%
BENNINGTON	96.69%	3.31%
COLCHESTER	98.26%	2.61%

Discussion

The first assumption made was that intimate partner violence is proportional across Vermont and that rural jurisdictions have the same proportion of intimate partner violence as urban areas. The NIBRS data on IPV victims does support that assumption, however, some key cities with large populations are missing in the top ten police departments with the largest number of IPV victims as shown in Table 2. Essex (population 21,000), Colchester (17,067), Milton (10,352), and Winooski (7,200) are noticeable exceptions. The amount of IPV reported in NIBRS may be more a reflection of a training issue, data inaccuracies, or victim confidence in the local police department.

The hypothesis of this research was that rural domestic violence would be more severe than urban domestic violence. With the NIBRS data, Vermont State Police (VSP) jurisdictions are being used as a proxy for rural because many of the smaller towns in Vermont are less likely to have a local police department. VSP jurisdictions encompass small towns, with the average population of a VSP jurisdiction being 1,300. Notwithstanding the hypothesis, Rutland City had the highest number of IPV cases where the victim was seriously injured and the highest proportion of serious injury or death (23%), 8% higher than the next highest agency, VSP Middlesex, at 15%. Not all VSP barracks reported serious injury – including VSP's most remote barracks. When testing for a correlation

between the proportion of serious injury by officers per square mile, a slight statistical correlation[7] was found, but not enough to draw any concrete conclusions.

NIBRS and Court Data

Interestingly, when examining data on charges filed in criminal court, some law enforcement agencies are represented as having a high number of domestic assaults with attempted or actual serious bodily injury. Vermont law at 13 VSA § 1043(a)(1) defines [first degree] aggravated domestic violence as attempting to or willfully or recklessly causing serious bodily injury to a family member. For charges disposed between 2015 - 2019, Table 5 shows the following police departments had the highest number of cases.

Table 6. Law Enforcement Agencies with Highest Number of Aggravated Domestic Assault Filings

RUTLAND	101
BURLINGTON	76
BENNINGTON	69
ST. ALBANS CITY	57
BRATTLEBORO	54
VSP DERBY	54
VSP ST. ALBANS	43
VSP: SHAFTSBURY	42
HARTFORD	35
VSP MIDDLESEX	35

Rutland City is still at the top of the list, but, most interestingly, VSP Derby, which reported no serious injuries in NIBRS, has the same number of charges filed as Brattleboro. This indicates that data quality and data completeness may be issues.

Rutland City's numbers may be an outlier and it is worth exploring why this is so. One stakeholder recognized the work Rutland City did on an Office of Victims of Crime/Domestic Homicide Reduction grant, which included a review of its police reports in 2014 and offered suggestions on how to include and ask more questions designed to document a potentially lethal situation. The police chief in charge of that initiative left the department in 2016, but the culture of documenting domestic violence may have continued.

[7] Rutland was removed from the statistical analysis because it was an outlier.

Barre City, Rutland City, VSP, and other agencies use the Lethality Assessment Protocol (LAP) (Maryland Network Against Domestic Violence, 2021). The LAP is a national evidence-based screening tool used by law enforcement who ask a series of standard questions to assess the risk of homicide or near fatalities at the scene of a domestic violence incident. For example, a question might be posed about the use of firearms and/or if the perpetrator has ever strangled the victim . Continued training on, and use of, the LAP may be why VSP rates of serious injuries are high, in addition to Rutland and Barre City. A study on the influence of using the LAP (and other assessment tools) on NIBRS records would be a way to determine if using these tools has led to increased reporting on domestic violence assaults and injuries and/or better outcomes.

Even though firearms and asphyxiation are included in the weapons category in NIBRS data, the most common weapons used were personal weapons (2,931 victims of which 231 sustained serious injury) or no weapons (1,266 victims of which 36 sustained serious injury). Asphyxiation was reported for only 14 victims (across 10 different jurisdictions) and six of those victims were not reported to have sustained a serious injury. Handguns were used against 57 victims, resulting in serious injury to 11 victims. Using a handgun does not mean it was discharged, threatening is enough to record the use.

Women were more likely to suffer serious injury or death, 8.28% of all female victims versus 3.28% of male victims. No Indigenous victims sustained serious injury, 7% of White victims, 6% of Black victims, and 4% of Asian victims sustained serious injury.

Part 3: Emergency Room Discharge Data Analysis

The Vermont Department of Health releases individual level (de-identified) International Classification of Diseases (ICD) billing codes for emergency department discharges. Discharge data for the years 2016, 2017, and 2018 were accessed. There are two ICD 10 codes that could indicate IPV: T7411 (confirmed domestic violence) and T7611 (suspected domestic violence). These codes cover domestic violence that is broader than IPV. There are codes that name a male partner (Y0703) or female partner (Y0704) as the cause of the abuse. However, a victim may not be conscious or otherwise able/willing to identify the perpetrator. Therefore, the broader code of domestic violence was used understanding this would perhaps over capture IPV incidents.

Statewide, there were very few cases recorded every year. Forty-five cases were reported in 2016, 37 cases in 2017, and 46 cases in 2018. A patient's injury was classified as serious if the record had any of the following words: asphyxiation, laceration, fracture, sprain, and contusion.[8] Of the 128 cases in the data, 57 (44.53%) were classified as having a serious injury. There are 13 hospitals included in the data, 10 of which reported serious injuries. However, 7 of those reported less than 6 serious injuries in the 3-year data period.

Brattleboro Memorial Hospital was one of the hospitals with less than 6 serious injuries during the 3-year period. This is noted because Brattleboro Police Department and the VSP barracks in that area both had a high percentage of serious injury or homicides in the NIBRS data. Brattleboro Police Department reported 24 victims with serious injuries over a 5-year period and VSP Westminster reported 23. More than 6 cases in a 3-year time period would have been expected for this hospital.

The University of Vermont Medical Center, one of two Trauma 1 facilities serving Vermont residents,[9] had 39 of the 128 cases (30.46%), of which 16 were serious injury cases. Northeastern Vermont Regional Hospital, which serves a rural eastern county with one small city (pop. 6,000) had the second highest number of domestic violence cases (31) and the highest percentage of serious injury cases (61%). VSP St. Johnsbury reported 228 IPV victims during the 5-year NIBRS study period, 9 with serious injuries. Rutland Regional Medical Center had 7 serious injury cases during the 3-year period, compared to 71 reported by Rutland Police Department in the 5-year period.

One question raised by these data is why the numbers of patients with domestic violence incidents are so low, and why the number of serious injury cases are so low. A theory is that perhaps victims were accessing urgent care facilities instead of emergency rooms. There is no access to urgent care data, but the time of the incident record in the NIBRS data indicates that 164 (45%) of the 361 serious injury or death cases in the data occurred during the hours of 8:00 PM and 6:00 AM, when emergency rooms would be the only places to seek medical attention. Therefore, it appears that

[8] The IDC 10 discharge codes were merged with a dictionary of codes to English diagnosis terms. Following this was a search for strings (words) in a record and creation of a flag on that record to consider it a serious injury. The list of words was determined by reading all the records and matching diagnosis terms to the NIBRS category of injuries used to define seriousness. The strings searched for were based on the patient's records in the data and are not representative of all possible codes that could have been identified. All R code is available.

[9] The other is Dartmouth Hitchcock Medical Center in New Hampshire. Data for the facility was not included in this analysis. The data do not indicate in which state the injury was sustained.

either the cases are not being coded as domestic violence, victims are not seeking medical attention at emergency rooms, or the NIBRS data is over-reporting the number of serious injuries.

Discussion

When all data sources are analyzed together, a pattern does begin to emerge. Table 7 explores the relationship between NIBRS data and Criminal Court Data.

Table 7. IPV Incidents, Seriousness of Injuries, and Criminal Court Filings

BURLINGTON	385	RUTLAND	71	RUTLAND	101
RUTLAND	317	BRATTLEBORO	24	BURLINGTON	76
BENNINGTON	281	SP: WESTMINSTER	23	BENNINGTON	69
ST. ALBANS	271	SP: MIDDLESEX	19	ST. ALBANS CITY	57
BRATTLEBORO	245	SP: ST. ALBANS	18	BRATTLEBORO	54
SP: ST. JOHNSBURY	228	SP: RUTLAND	17	VSP DERBY	54
BARRE CITY	210	BURLINGTON	16	VSP ST. ALBANS	43
SP: WESTMINSTER	171	SP: ROYALTON	16	VSP: SHAFTSBURY	42
SOUTH BURLINGTON	167	ST. ALBANS	11	HARTFORD	35
SPRINGFIELD	144	BARRE CITY	10	VSP MIDDLESEX	35

In Table 7 above, the left column is the number of total IPV incidents recorded in NIBRS, the middle column is the number of serious injuries recorded in NIBRS, and the right column is the number of aggravated domestic charges in the court data filed by the law enforcement agency. Rutland Police Department is clearly the standout, and as discussed, *supra*, this may be due to the focus this agency placed on domestic violence just prior to the study period.[10] State police jurisdictions reported higher numbers of serious injuries than some larger population cities. This lends credence to the idea that rural domestic violence is more injurious. Four VSP jurisdictions (but only 2 of those that are in the middle column) are in the top 10 reporting agencies for aggravated domestic filings.

The hospital discharge data further support that rural domestic violence is different. Northeastern Regional hospital, serving a large rural area and the small city of St. Johnsbury, had the highest number of serious injuries. The State Police barracks covering St. Johnsbury had a high number of IPV cases, although the injuries are not reported as serious in NIBRS. Three other hospitals serving a small city and large rural areas had more serious injury cases than non-serious injury cases.[11]

[10] This department also has Project Vision, which is a coordination of police and community responders. During the study period an advocate from the local battered women's organization had an office in the police station and participated in meetings with Project Vision.

[11] The numbers are very small, and they are not listed to avoid identifying victims.

Conclusion

It is disappointing that the data that needed for this project were not accessible. We strongly encourage Vermont to add town of incident do the NIBRS dataset. It is clear is that there is a data quality issue that researchers and stakeholders should explore. It is possible that a department that is trained in the dynamics of IPV and the seriousness of injuries will investigate the cases with an aim of documenting the seriousness of injuries more than an untrained department. This may be why we see higher than expected cases in Rutland and within some VSP Barracks. It could also be a simple data quality issue that the police in the narratives are recording a serious injury, but it is not being entered into NIBRS. This may explain why VSP Derby has a high number of Aggravated Domestic Assault charges filed in criminal court, but no serious injury cases in NIBRS.

It is also clear that if victims of domestic violence are seeking help in emergency rooms, the injuries are not being recorded as resulting from domestic violence. Further exploration with stakeholders, including the Vermont Forensic Nursing Association, is needed to understand why there are geographic disparities in the number of cases found in the emergency department records and what can be done to increase the reporting or more accurately code the source of the injury.

The mapping of services, presented in Part 1, illustrate how many Vermonters do not live near the services that will help keep them safe. There is enough evidence presented in the NIBRS analysis in Part 2, and in the hospital data in Part 3, to suggest that domestic violence is different in the rural areas of the state. Data limitations and obvious data quality issues make us hesitant to make concrete recommendations. We do encourage stakeholders to carefully consider the geographic differences presented here and public health and safety policies to ensure that Vermont is working to eliminate domestic violence.

References

Beyer, K., Layde, P., Hamberger, K., & Laud, P. (2013). Characteristics of the Residential Neighborhood Environment Differentiate Intimate Partner Femicide in Urban Versus Rural Settings. *Journal of Rural Health*, 281-293.

Commission, V. F. (2020). *2020 Final Report to the Legislature.* Retrieved from https://legislature.vermont.gov/assets/Legislative-Reports/2020-Final-DV-Report.pdf

Edwards, K. M. (2015). Intimate Partner Violence and the Rural-Urban-Suburban Divide. *Trauma, Violence and Abuse*, 359-379.

Maryland Network Against Domestic Violence. (2021, Sept 22). *LAP Program Overview*. Retrieved from Maryland Network Against Domestic Violence: https://www.mnadv.org/lethality-assessment-program/lap-program-overview/

Sandberg, L. (2013). Backward, Dumb and Violent Hillbillies? Rural Geographies and Intersectional Studies on Intimate Partner Violence. *Affilia: Journal of Women and Social Work*, 360-365.

US Census Bureau. (2016, December 30). *New Census Data Show Differences Between Urban and Rural Populations*. Retrieved September 17, 2021, from The United States Census Bureau: https://www.census.gov/newsroom/press-releases/2016/cb16-210.html

US Census Bureau. (2019, December 2). *2010 Census Urban and Rural Classification and Urban Area Criteria*. Retrieved September 17, 2021, from The United States Census Bureau: https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural/2010-urban-rural.html

Vermont Fatality Review Commission. (2018). *2018 Final Report.* Retrieved 3 20, 2020, from https://ago.vermont.gov/wp-content/uploads/2018/10/2018-Final-DV-Report.pdf