Where Are Homeless Women Dying? A Geospatial Analysis of the Deaths of Homeless Women in Orange County, California

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Abstract

While the medical causes of deaths of homeless women have been examined extensively in medical journals, public health journals, and psychological journals, there is a paucity of political science literature that examines the geographic locations of the deaths of homeless women. Without detailed information about the locations of the deaths of homeless women, it will be impossible for policy makers, medical professionals, and advocates for the homeless to formulate effective preventative policy responses. Using public data from the Orange County Coroner's office, this paper seeks to answer two questions: where are homeless women dying in Orange County, California? And, what implications do the locations of these deaths have for policy making and for local homeless services agencies in Orange County? This analysis uses Ersi ArcGIS software to map these deaths.

In the United States of America, people who are homeless experience a mortality rate that is three to four times the mortality rate of the general population. The average age of death for homeless women is forty-three years, compared to seventy-eight years for women in the general population (see Baggett et. al. 2013, O'Connell 2005, Hibbs et. al. 1994). Young women who are experiencing homelessness have a mortality rate that is approximately four times the mortality rate of young women who are housed (Cheung and Hwang 2004). Since 2013, Orange County, California has seen an increase in the number of people experiencing homelessness in the county. From 2013-2015, the number of deaths of people experiencing homelessness in Orange County, California increased by 53% (Aguilar 2016).

      While the magnitude and the medical causes of the deaths of homeless women have been examined extensively in medical

journals, public health journals, and psychology journals (e.g. Baggett et. al. 2013, Teruya 2010, O'Connell 2005, Cheung and Hwang 2004, Hibbs et. al. 1994), there is a paucity of literature that examines the geographic locations of the deaths of homeless women. The academic disciplines of public policy and political science have failed to produce work that addresses the deaths of homeless women in the United States. Without detailed information about the locations of the deaths of homeless women, it will be impossible for policy makers, medical professionals, and advocates for the homeless to formulate preventative service delivery provisions and effective policy responses to the rapidly increasing death rates of homeless women in the United States.

First, this paper reviews the literature on homelessness, mortality, and place and finds that the literature on these topics is incomplete. This study then proceeds to answer two central questions: where are homeless women dying in Orange County, California? And, what implications do the locations of these deaths have for policy making and for local homeless services agencies in Orange County? The findings reveal that homeless women are more likely to die outside rather than inside. The majority of deaths experienced by homeless women in Orange County occurred in the cities of Anaheim and Santa Ana (OC Coroner 2016). These two cities also contain the greatest number of homeless services providers targeting adult homeless women. In the cities of Orange and Santa Ana, the most highly concentrated geographic areas where homeless women died overlapped with highly concentrated areas of homeless services providers. These findings suggest that deaths of homeless women are more likely to occur in areas of Orange County where many service providers are located. Therefore, in order to prevent (and decrease) the deaths of homeless women in Orange County, policymakers should work with existing service providers that are located in these areas to find strategies for preventing and intervening in critical health incidents.

In addition, the analysis of the locations of deaths of homeless women in Orange County serves as a case study of the promising applications of geographic information systems technologies. Geographic information systems technologies can be used to design effective, efficient, and equitable public policies that target people who are experiencing homelessness.

Literature Review

Academic literature in the disciplines of political science and public policy lack empirical work on the deaths of homeless women in the United States of America, let alone research that deals specifically with the locations of these deaths. This pattern in the literature may be due to the absence of this policy issue on the national, state, and local policy agendas.

In policy studies, there are many theories that conceptualize different types of policy agendas. For example, Cobb and Elder (1983) differentiate between the systemic policy agenda and the formal policy agenda. The systemic agenda constitutes all policy matters that are collectively perceived by most members of the community as meriting public attention and requiring legitimate government action. The formal policy agenda constitutes all of the policy issues that are explicitly and seriously considered by decision makers in positions of authority (such as elected officials and policy makers) (Cobb and Elder 1983). While the large number of deaths of homeless women in Orange County, California receives public attention and concern to the degree that it can be considered part of the systemic agenda, this policy issue has failed to make it to the formal agenda.[1] In addition, the high number of deaths of homeless women has failed to appear on the formal agenda at the national level in the United States of America. Therefore, the lack of scholarly literature on this topic in the field of public policy may be explained by the absence of this issue on the formal policy agenda.

Medical, psychological, and public health journals have performed an adequate job of exploring topics related to the mental, physical, and emotional health of homeless women. The work that has been produced in these fields does a sufficient job of defining and explicating the major causes of death for homeless women in the United States of America. For example, in a cohort study of homeless adults in Philadelphia, Hibbs, Benner, Klugman, Spencer, Macchia,

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[1] The high number of deaths of homeless women in Orange County has received considerable public attention and has been covered by local news outlets such as *KPCC* and *The Orange County Register* (Aguilar 2016; Walker 2016).

Mellinger, and Fife found that the leading cause of death for homeless women was injury.[2] Their longitudinal study also found that over time, mortality rates for homeless non-white women were similar to those of homeless white women (Hibbs et. al. 1994). Unfortunately, their analysis relied on the binary racial categories of "white" and "non-white" for homeless women, thus failing to provide a comprehensive, intersectional analysis of the effects of race and gender on causes of mortality for homeless women.[3]

In addition, a study conducted by Hwang, Orav, O'Connell, Lebow, and Brennan examined the health outcomes and causes of deaths of homeless adults in Boston who had contact with a physician. They found that the leading cause of death of women ages 25-44 was the acquired immunodeficiency syndrome. For both men and women in the study, heart disease and cancer were the leading causes of death in persons who were 45 to 64 years of age. They also compared the mortality rates of the homeless adults in their study with mortality rates in the general population of Boston and found that the mortality rate for homeless women ages 25-44 was five times higher than the mortality rate for housed women in Boston (Hwang et. al. 1997).

Furthermore, a study of shelter residents in New York City concluded that the age-adjusted, standardized mortality rate for homeless women was 4 times that of the general population of New York City. Mortality rates for homeless women in New York City (particularly younger homeless women) were excessive and extreme compared with mortality rates in other cities and the mortality rates

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[2] Hibbs et al. did not specify types of injuries. For example, the authors did not note if sexual violence was included in the category of "injury".

[3] "Intersectional" or intersectionality is a theoretical framework that views gender, race, class, sexual orientation, age, and ability as intersecting elements of a person's identity. Intersectionality also describes how one person can experience overlapping, concurrent forms of systemic oppression. For example, a person can experience sexism, racism, and homophobia simultaneously (Crenshaw 1991). Unfortunately, research in many disciplines still employs a white/non-white racial binary. This classification scheme obscures different health and policy outcomes for people in different racial and ethnic groups. (For example, Latinas, African Americans, and Asian Americans are all included in the "non-white" category but may experience very different health outcomes.)

of people in other economic, gender, and racial groups in New York City (Barrow et. al. 1999).

Additionally, Cheung and Hwang examined the mortality rates of homeless women in seven cities in the United States, Canada, and the United Kingdom. They concluded that homeless women under the age of 45 exhibit very high excess mortality compared to the general population. They also found that the mortality rate for homeless women across the seven cities was roughly 5 to 30 times higher than expected among younger homeless women (Cheung and Hwang 2004).

Even though literature on the causes of mortality for homeless women exists, there is little information on where homeless women are located when they are dying. Are they indoors or outdoors when they are dying? Are they near to, or far from, homeless services providers or hospitals? Are these deaths highly concentrated or spread out? These questions have yet to be asked and answered. In addition to these omissions from the literature, due to the disciplinary goals of the fields of medicine, psychology, and public health, there is little information on how to design, implement, revise, or evaluate public policies in order to encourage better health outcomes for homeless women. This is not meant as a critique of the existing literature in these disciplines. Medical researchers should not be expected to act as public policy researchers. Instead, this note is intended to provide an observation on the lack of interdisciplinary communication that is occurring among various research disciplines on the deaths of homeless women.

One notable exception to this pattern is a study on the health outcomes of homeless women, conducted by Teruya, Longshore, Andersen, Arangua, Nyamathi, Leake, and Gelberg (2010). This study does not focus specifically on the locations of death and dying for homeless women. However, the study was co-authored by an interdisciplinary team using an intersectional approach that examines the effects of gender, race, and ethnicity on health outcomes for homeless women in Los Angeles County. The team of researchers— which included policy practitioners and experts in the fields of public health and medicine—examined the effects of race and ethnicity on health outcomes for homeless women in Los Angeles County. They found that white, non-Latina women were more likely to report health needs than African American and Latina women. The authors

also found that homeless women who experienced drug addiction, violence, and depression encountered the most urgent need for health care services. These findings may provide us with a better understanding of why the death rate for homeless women in Orange County has increased substantially over time. If homeless women who are using harmful substances, experiencing sexual or domestic violence, and/or struggling with mental health issues are not receiving the health care they desperately need, then there may be actions that result from these experiences that prompt their deaths.

Materials and Methods

This study uses publicly accessible data from the Orange County Coroner's Office on the recorded deaths of unsheltered homeless women in Orange County, California during the period of July 2005-January 2016. It is notoriously difficult to collect reliable and valid data on people who are experiencing homelessness (Cordray and Pion 1991) and data on death and dying (Lunney et. al. 2003). Therefore, it should be noted that this data set likely does not represent an exhaustive list of deaths of unsheltered homeless women during this time period. The data points used in this analysis are the observable deaths recorded by the Orange County Coroner's Office. However, there could be additional deaths of homeless women that occurred during this time period that went unrecorded due to lack of bodies (i.e. missing bodies, hidden bodies), human error, or for additional reasons. In addition, this dataset does not contain the race, ethnicity, age, or sexual orientation of the deceased homeless women. Therefore, this project does not perform analyses or make conclusions that would require the consideration of these variables.

This analysis uses Esri's geographic information systems technology ArcGIS to map these deaths and examine the policy implications of the locations of these deaths. The first map contains one layer that plots each death incident as a geographic data point on the map. The purpose of this map is to provide a means for visually examining the frequency of the data points of death incidences.

The second map contains two layers. The first layer illustrates each individual death as a data point on the map. The second layer plots the sites of Orange County homeless services that were in

operation from July 2005-January 2016. Orange County homeless services include food banks, shelters, transitional housing programs, mental health resource centers, substance abuse and addiction recovery centers, government benefits offices, and other homeless services providers. These services are operated by government agencies, non-profit organizations, charitable organizations, and religious organizations. The purpose of this map is to provide a means for analyzing the proximity of the deaths of homeless women to locations (street addresses) of homeless services providers.

Unfortunately, there is no comprehensive list of homeless services providers in Orange County so this data set was constructed by researching service providers (and their geographic locations) in all of the thirty-four cities in Orange County. The data on the locations of Orange County homeless service centers was obtained from the websites of the service centers and when locations were unavailable online, they were obtained by contacting the service providers and agencies in person or on the phone.[4] Some shelters and service locations (such as those that serve victims of domestic violence) do not provide addresses and locations of their service centers. Therefore, such service providers were omitted from this analysis. Due to these limitations, it is unlikely that the list of homeless services providers used in this analysis is complete.

Additionally, when creating the list of data points for locations of homeless services providers, agencies that do not serve women (the target population for this analysis) were omitted. For example, agencies that only serve men or only serve children were omitted. This project is concerned with women who are aged 18 and older[5] and the homeless services agencies that assist adult women. Also, agencies that were not in operation during the time range for this project—July 2005-January 2016— were omitted from the dataset.

The third map contains the hotspot analysis of the deaths of homeless women and the hotspot analysis of the number of service

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[4] The database of resources that is maintained by Build Futures, an organization that services homeless youth in Orange County, was particularly helpful when compiling the database of street addresses of homeless service centers for this analysis (Build Futures 2016).
[5] Age 18 is the legal definition of adult womanhood in the United States of America (8 U.S.C. 1101, 10 U.S.C. Subtitle A, and 18 U.S.C. 2256)

providers overlaid on the same map for visual comparison. A hotspot analysis calculates the Getis-Ord (Gi*) statistic for each feature in a dataset. In a hotspot analysis, 'the resultant z-scores and p-values tell you where features with either high or low values cluster spatially...for statistically significant positive z-scores, the larger the z-score is, the more intense the clustering of high values (hot spot). For statistically significant negative z-scores, the smaller the z-score is, the more intense the clustering of low values (cold spot)' (CDC 2015). A hotspot analysis is warranted for this project because it detects locations that are statistically significant in their concentrations of death incidences and service providers. It provides information on the most concentrated areas where homeless women are dying and the most concentrated areas in which homeless services providers are located.

Results and Discussion

After analyzing the raw data from the Orange County Coroner's Office, I found 166 recorded deaths of homeless women in the period spanning July 2005-January 2016. While all of the deaths contained information about where the woman was declared legally dead, 48% of these death events lacked information about the specific location of the body at the time of death. For example, in these cases, we have no way of knowing whether or not the woman died indoors or outdoors. However, in 52% of these death events, details about the location of the body at the time of death — and specific details about the location of the woman while she was in the process of dying— are known and were recorded.

Of these events, 31% of the death events and dying processes occurred indoors and 69% of the death events and dying processes occurred outdoors. This finding might suggest that homeless services providers that provide services indoors exclusively (e.g. transitional housing and food pantry services vs. street outreach services) may not be in the position to observe or attempt to prevent deaths that occur outside as competently as providers that serve clients out of doors. If policymakers are looking to discuss strategies for intervening in potential critical health incidents with homeless services providers, they should first engage with agencies whose

activities are most likely to bring them in contact with women who are dying out of doors.

To provide some brief background on the circumstances surrounding the deaths of these women, 46% of the deaths were attributed to accidents. Included in this category are deaths caused by traffic accidents, drug overdoses, fires, falls, asphyxia, and drowning. The second leading cause of death among homeless women in this sample was natural causes, to which 31% of the deaths were attributed. In addition, 10% of the deaths were ascribed to suicide, 6% of the causes of death are still undetermined, and 5% of the causes of death are still pending[6]. Furthermore, 2% of the deaths in this sample were produced by homicide. Included in the homicide category were deaths caused by wounds from gunshots and blunt force trauma (OC Coroner 2016).

The deaths of homeless women occurred in 24 cities in Orange County. The greatest number of death events occurred in the cities of Anaheim (33 deaths), Santa Ana (31 deaths), Huntington Beach (14 deaths), and Orange (14 deaths). The cities in which a moderate number of deaths (3-11 deaths) occurred included Buena Park, Newport Beach, Costa Mesa, Garden Grove, Fullerton, Fountain Valley, San Clemente, and Mission Viejo. The cities of Irvine, Laguna Hills, Los Alamitos, Placentia, Westminster, Aliso Viejo, Dana Point, La Habra, Laguna Niguel, La Palma, and Stanton each saw a modest number of deaths (1-2 deaths) of homeless women during the time of this investigation. Figure 1 depicts the frequency and geographic clustering of the deaths of homeless women in these cities.

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[6] For example, the coroner is still investigating and may not ready to mark the death undetermined.
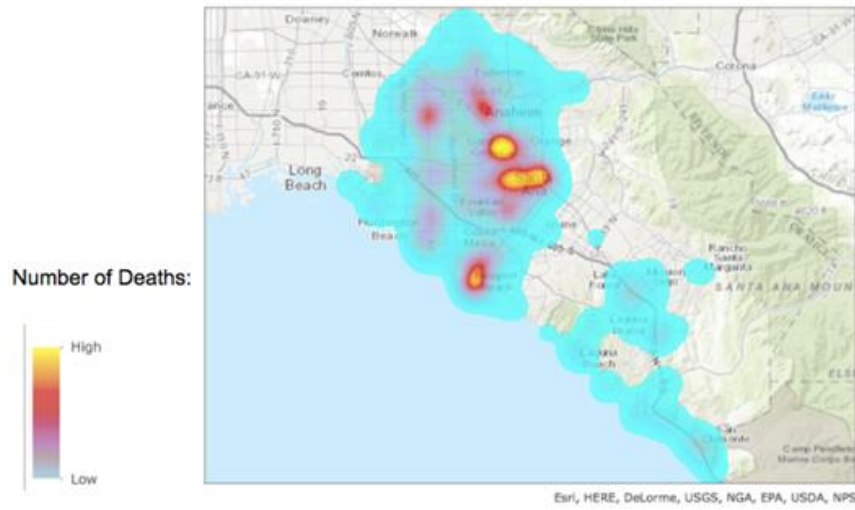
Figure 1. Deaths of Homeless Women in Orange County (2005-2016)

Figure 2 maps the locations of homeless services providers and the locations of the deaths of homeless women in Orange County. The first layer of the map depicted in Figure 2 contains the deaths of homeless women that were plotted on the map in Figure 1. Figure 2 contains an additional layer that shows the plotted points of the locations of homeless services providers in Orange County that were in operation from July 2005-January 2016. Each service provider is represented by a circular point on the map.
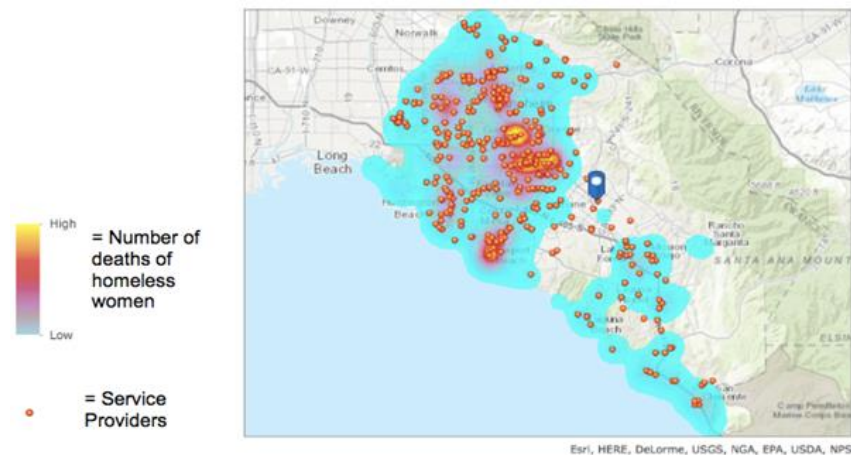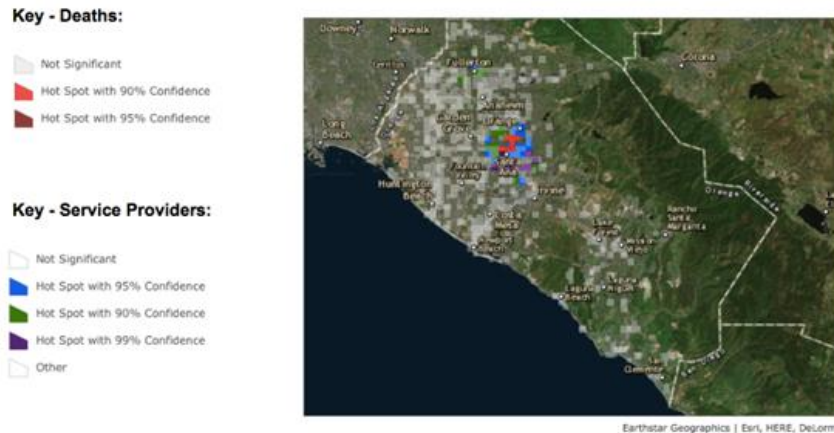
Figure 2. Service Providers and Deaths of Homeless Women

There were 411 organizations and agencies serving adult homeless women that were in operation from July 2005-January 2016. The cities with the greatest number of service providers included Santa Ana (55 service providers), Anaheim (45 service providers), Irvine (33 service providers), Huntington Beach (31 service providers), Garden Grove (31 service providers), Costa Mesa (30 service providers), and Fullerton (29 service providers). The cities with a moderate number of homeless services providers (10-21 service providers) included Orange, Los Alamitos, Fountain Valley, and San Clemente. The cities that housed a modest number of service providers (1-9 service providers) were Buena Park, Mission Viejo, La Habra, Placentia, San Juan Capistrano, Stanton, Tustin, Brea, Laguna Niguel, Laguna Beach, Laguna Hills, Aliso Viejo, Cypress, Newport Beach, Westminster, Yorba Linda, Lake Forest, Dana Point, and La Palma. The cities of Laguna Woods, Villa Park, Seal Beach, and Rancho Santa Margarita contained no homeless services providers for adult women. Figure 2 shows that Anaheim, Santa Ana, and Huntington Beach contain both a large volume of service providers for adult homeless women and a large number of incidences of deaths of homeless women.

Figure 3 illustrates where the deaths of homeless women and homeless services providers are concentrated and where the concentrations of these data points are statistically significant. Figure 3 represents the hotspot analysis of the dataset of the deaths of

homeless women overlaid with the hotspot analysis of the dataset of homeless services providers. These hotspot analyses reveal that the deaths of homeless women are spatially clustered around the cities of Santa Ana and Orange. The z-scores associated with the Gi* statistics for the dataset comprising the deaths of homeless women are great in these cities. As Figure 3 illustrates, the spatial clustering of these deaths is significant at the α=0.10 level and at the α=0.05 level, respectively.

Figure 3. Hotspot Analysis of Service Providers and Deaths Overlaid

In addition, the hotspot analysis of the locations of homeless services providers finds that service providers are most heavily concentrated in the cities of Fullerton, Orange, and Santa Ana. The clustering of homeless services providers in Fullerton is statistically significant at the α=0.10 level in the east and south and the clustering is significant at the α=0.05 level in the north of the city. In the city of Orange, the clustering of service providers exhibits statistical significance at the α=0.05 level in the central, east, and southern areas of the city. The concentration of service providers is statistically significance at the α=0.10 level in the western areas of the city of Orange. The clustering of Santa Ana's homeless services providers in the western, central, eastern, northern, and northeast areas of the city is statistically significant at the α=0.01 level. Santa Ana also contains hotpots of tightly clustered service providers located in the southern,

eastern, and northern parts of the city that are statistically significant at the α=0.05 and α=0.01 levels, respectively.

The highest concentrations of death incidences and homeless services providers occur in the cities of Orange and Santa Ana. These are the locations on the map where statistically significant clusters of data points overlap. Therefore, in Orange and Santa Ana, the highly concentrated geographic areas where homeless women are dying also contain many tightly clustered homeless services providers. The death incidences and the service providers are clustered together and overlap.

These findings may be prompted by a variety of factors. It is likely that deaths are concentrated in areas where services are concentrated because service providers attract homeless women who need the services that are being supplied by various agencies. Homeless women who lack access to quality health care services may have preexisting conditions that, gone untreated, could result in death regardless of their location (O'Connell 2005). However, if they are attracted to areas where services are highly concentrated, then homeless women may be more likely to experience death in these locations if they spend a large amount of their time there. Sections of cities in which homeless services are highly concentrated may also induce homeless women to spend most of their time there because such areas may be more likely to feel like safe spaces where they can congregate comfortably without being harassed by the police or angry citizens.[7]

However, these areas may also attract people who seek to prey on homeless women with substance abuse problems. In the city of Los Angeles, located in the county that is adjacent to Orange County, police officers who serve areas of the city with highly concentrated homeless populations note that drug dealers target these areas and exploit homeless residents who struggle with addiction (Biagiotti 2016). If this phenomenon is occurring in

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[7] Harassment and assault by police officers and housed citizens are constant fears for women experiencing homelessness. For example, in 2013 (the most recent year that data on this topic was available), the National Coalition for the Homeless reported that the state of California (the state in which Orange County is located) experienced the highest number of hate crimes against homeless people, including officer involved events (Stoops 2014).

comparable areas of cities within Orange County, then deaths of homeless women that are attributed to drug overdoses or substance abuse may be affected by the presence of drug dealers who are targeting the area. While the aforementioned ideas provide plausible explanations for the relationship between highly concentrated deaths of homeless women and highly concentrated homeless services agencies, more research is necessary to test these theories.

Policy Implications and Recommendations

The prevalence and the concentration of the deaths of homeless women in the cities of Anaheim, Santa Ana, Huntington Beach, Orange, and Newport Beach is great, however the quantity of service providers in these cities is also great. There is not an inverse relationship between number of homeless services providers and number of deaths of homeless women in Orange County. Therefore, a greater number or a higher concentration of service providers in a city does not necessarily guarantee fewer deaths of homeless women. This finding implies that these cities may not need new or additional services in order to prevent death incidences of homeless women. Instead, existing homeless services providers in the cities of Anaheim, Santa Ana, Orange, and Newport Beach should be the primary sites of action for decreasing the high mortality rates of homeless women.

The hotspot analysis of the death incidences of homeless women shows that the greatest clustering of deaths occurred in the cities of Santa Ana and Orange. These findings should be considered when Orange County makes decisions about allocating resources to prevent the deaths of homeless women. In order to formulate effective, long-term plans for reducing the mortality rate of homeless women in their cities, homeless services providers should increase their institutional knowledge of the locations and causes of the deaths of homeless women through training and record keeping processes.

Next, revisions to organizational policies within homeless services agencies will be necessary in order to reduce the number of deaths of homeless women. For example, many homeless shelters do not allow syringes on the premise and do not provide safe methods for storing medications (O'Connell 2004). This type of policy makes it impossible for homeless women with diabetes to manage their disease and prevent mortality. As aforementioned, the second leading

cause of death for the homeless women in the Orange County sample was natural causes, which includes diabetes-related deaths. Policies that encourage mortality prevention should be implemented in shelters, transitional housing programs, and other homeless services agencies.

In addition, the Coroner's data does not include information about the presence or absence of sexual violence or injuries sustained from domestic violence at the woman's time of death (OC Coroner 2016). Sexual violence and domestic violence are significant problems affecting homeless women (see Breton and Bunson 2009, Wenzel et. al. 2001). Nationally and locally there is a scarcity of programs that serve victims of domestic violence. It is estimated that at the national level, in 2015, 63% of people (mostly women) who were turned away from services due to scarcity of domestic violence resources cited housing (emergency shelter, transitional housing, etc.) as their primary need (FYSB 2016). Knowing that for women, there is a strong relationship between sexual violence or domestic violence and homelessness, it is natural to wonder if the increase in deaths of homeless women in Orange County is due in part to the sexual and domestic violence experienced by this population, and the lack of adequate resources available to address women's needs. In order to support further understanding of the relationships that exist among variables like interpersonal violence, death, and homelessness for women, the Orange County Coroner's office should maintain records of deaths of homeless women that may be related to injuries sustained from interpersonal violence. Orange County should also allocate more financial resources to services for homeless and housed women who are experiencing sexual and domestic violence.

Furthermore, an increase in collaborative work across sectors is imperative in order to find creative ways of reducing the number of deaths of homeless women. Law enforcement agencies, hospitals, medical facilities, government agencies, and homeless services providers must work together to develop preventative strategies and policies for addressing death and dying for homeless women. Including homeless women in these intra-sector conversations will provide collaborators with insider knowledge that will likely strengthen the effectiveness of the proposed methods for mortality reduction.

Conclusion

The process of mapping the deaths of homeless women in Orange County demonstrates how geographic information systems technology can be used to engage with salient questions about homelessness. Future policy work should address the applicability of geographic information systems to the analysis of deaths of homeless women in other counties, states, and geographic areas. For example, ArcGIS has the capability to perform a comparative analysis of the deaths of homeless women in two or more locations that may be geographically close to one another or share characteristics that would warrant a comparative analysis. Researchers and policy makers may want to perform a tri-county analysis by comparing the locations of the deaths of homeless women in Los Angeles County, Orange County, and San Bernardino County. A comparative analysis of this kind may reveal geographic patterns that could assist policy makers in the design, implementation, and evaluation stages of the policy process.

As aforementioned, the dataset that was used for this project does not contain information on the race, ethnicity, age, or sexual orientation of the deceased homeless women. Researchers who are conscious of employing intersectionality in their work may be interested in examining these variables in a future study on the locations of the deaths of homeless women. In order to assist researchers in this endeavor—and to provide more comprehensive information on the deaths of homeless women—the Orange County Coroner and coroners in counties across the country should consider adding these variables to their data collection processes, if the information is available.

In addition, future research should investigate methods for improving access to quality emergent and non-emergent health care for homeless women, including health measures that focus on preventing mortality. Researchers working on this issue should also consider enhancing methods for providing specialized outreach services to homeless women who are dying. Creative methods for service provision that address the mental, emotional, physical, and spiritual health needs of dying women should be designed and implemented.

More interdisciplinary and trans-disciplinary work that facilitates conversations among medical, public health, geoinformatics, and public policy experts—and homeless women themselves—will be necessary in order to find successful strategies for substantially reducing the number of deaths of homeless women. It is also imperative that a wide variety of stakeholders including scholars, homeless women, service providers, spiritual leaders, and representatives of government agencies work together to find methods for assisting homeless women who are in the process of dying.

References

Aguilar, Erika. 'Deaths among homeless in Orange County jump 53 percent in 2 years.' Jan. 19, 2016: *KPCC*.

Baggett, Travis P., Stephen W. Hwang, James J. O'Connell, Bianca C. Porneala, Erin J. Stringfellow, E. John Orav, Daniel E. Singer, and Nancy A. Rigotti. "Mortality Among Homeless Adults in Boston: Shifts in Causes of Death Over a 15-Year Period." *JAMA internal medicine* 173, no. 3 (2013): 189-195.

Barrow, Susan M., Daniel B. Herman, Pilar Cordova, and Elmer L. Struening. "Mortality among homeless shelter residents in New York City." *American Journal of Public Health* 89, no. 4 (1999): 529-534.

Biagiotti, L. (Mar. 25, 2016). "On the Streets: A Feature Documentary About Homelessness in Los Angeles." *Los Angeles Times*.

Breton, M., & Bunston, T. (2009). Physical and sexual violence in the lives of homeless women. *Canadian Journal of Community Mental Health*, *11*(1), 29-44.

Build Futures. 'Resources' (2016):http://buildfutures.org/resources/

Center for Disease Control and Prevention. 'GIS III: GIS Analysis,' *Spatial Analyst Tools*. (2015) Children's Environmental Health Initiative: https://www.cdc.gov/dhdsp/maps/gisx / training/ \module3/files/2_spatial_analyst_module.PDF

Certain activities relating to material involving the sexual exploitation of minors, 18 U.S.C. 2256 (2012).

Cheung, Angela M., and Stephen W. Hwang. "Risk of death among homeless women: a cohort study and review of the

literature." *Canadian Medical Association Journal* 170, no. 8 (2004): 1243-1247.

Cobb, Roger William. *Participation in American politics: The dynamics of agenda-building.* Johns Hopkins University Press, 1983.

Cordray, David S., and Georgine M. Pion. "What's behind the numbers? Definitional issues in counting the homeless." *Housing Policy Debate* 2, no. 3 (1991): 585-616.

Crenshaw, Kimberle. "Mapping the margins: Intersectionality, identity politics, and violence against women of color." *Stanford law review* (1991): 1241-1299.

Family and Youth Services Bureau (2016). Domestic Violence and Homelessness: Statistics (2016): https://www.acf.hhs.gov/ fysb/resource/dv-homelessness-stats-2016

General Military Law, 10 U.S.C. Subtitle A (2015).

Hibbs, Jonathan R., Lawrence Benner, Lawrence Klugman, Robert Spencer, Irene Macchia, Anne K. Mellinger, and Daniel Fife. "Mortality in a cohort of homeless adults in Philadelphia." *New England Journal of Medicine* 331, no. 5 (1994): 304-309.

Hwang, Stephen W., E. John Orav, James J. O'Connell, Joan M. Lebow, and Troyen A. Brennan. "Causes of death in homeless adults in Boston." *Annals of Internal Medicine* 126, no. 8 (1997): 625-628.

Immigration & Nationality Act, 8 U.S.C. 1101 (1993).

Lunney, June R., Joanne Lynn, Daniel J. Foley, Steven Lipson, and Jack M. Guralnik. "Patterns of functional decline at the end of life." *Jama* 289, no. 18 (2003): 2387-2392.

O'Connell, James J. "Premature mortality in homeless populations: A review of the literature." *Nashville, TN: National Health Care for the Homeless Council* (2005).
Orange County Coroner's Office (2016). *Homeless Deaths 2005-2016* [raw data]: http://ocsd.org/divisions /fieldops/coroner/stats.

Stoops, M. (June 2014). "Vulnerable to Hate: A Survey of Hate Crimes and Violence Committed against Homeless People in 2013." *National Coalition for the Homeless.*

Teruya, Cheryl, Douglas Longshore, Ronald M. Andersen, Lisa Arangua, Adeline Nyamathi, Barbara Leake, and Lillian Gelberg. "Health and health care disparities among homeless women." *Women & health* 50, no. 8 (2010): 719-736.

Walker, Theresa. 'Homeless deaths in Orange County jumped in
2015 - and 2016 may be worse.' Jan. 21, 2016: *The Orange
County Register.*

Wenzel, S. L., Leake, B. D., & Gelberg, L. (2001). Risk factors for
major violence among homeless women. *Journal of interpersonal
violence*, *16*(8), 739-752.