

Getting Pediatric Care in Gentrifying King County

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Abstract

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Introduction:

Gentrification is a public health crisis and significant environmental injustice. Rapid gentrification of Seattle unequally burdens and displaces families of color further south in King County. Gentrification changes the environment, forcing readjustments that can compromise the continuity of education, healthcare, housing and employment. Displacement removes families from familiar community support and resources such as healthcare and other social services. Telehealth became widely available when the COVID-19 pandemic required care from a distance and may help increase access to healthcare for displaced families. This thesis explores opportunities to support families of an urban children's community health clinic impacted by gentrification and displacement by identifying their needs, stressors, and perceptions of telehealth.

Methods:

A web-based survey was developed for this exploratory cross-sectional study. Qualitative and quantitative data from 177 randomly selected caregivers of pediatric patients were descriptively

analyzed to assess needs, barriers, attitudes toward telehealth, and stressors related to displacement and gentrification.

Results:

Telehealth is a useful tool to minimize risk of exposure during the pandemic and reduce travel stress. However, caregivers report less confidence in diagnosis and suitability of care delivered over telehealth, emphasizing quality is not comparable to in-person visits. Barriers to telehealth include limited internet access, video capability or comfort with technology, and privacy or safety concerns. A chi-square test found no difference in acceptability of telehealth among those who have and have not used telehealth. Housing instability is higher among participants than the rest of the regional area and a significant stressor. Affordability and safety/stability were top drivers of displacement. More support for stressful caregiving situations was desired along with gender-affirming and mental health care.

Conclusion:

Mental health care and support for caregivers are essential for children's wellness. Many needs identified by caregivers of the clinic's patients are not medical, confirming the clinic's health home model of healing with culturally responsive care and opportunities outside of exam rooms. Although in-person appointments are preferred, telehealth can offer flexibility to alleviate barriers like transportation and work conflicts. Increasing psychosocial support is crucial to mitigating negative effects of gentrification and the COVID-19 pandemic. An in-depth qualitative assessment of protective factors of health—including community, culture, and resilience—could better determine resources to promote lasting positive mental health such as support groups, information on housing rights, and education.

Land Acknowledgement

I acknowledge that this work was done on the stolen homelands of the Coast Salish Peoples, specifically the [Duwamish](#), [Tulalip](#), [Muckleshoot](#), and [Suquamish](#) tribal nations. I am grateful for the opportunity to live here and honor the citizens of these nations who have long known the ways to live in harmony and health. I thank the original stewards of the land who **are still here**.

[Seattle](#) is on occupied [Duwamish](#) ancestral land that is integral to Coast Salish culture as a [tribal gathering](#) place. Today, the [Duwamish](#) are without legal recognition as a tribal nation in a state named after a [slave owner](#) and still fight for rights denied since the [1855 Point Elliott Treaty](#). Forced removal and Indian Relocation programs of the 1950s displaced many Indigenous peoples from their traditional territories; [71%](#) now live in urban areas.

Colonial violence and white supremacy extracted people from their ancestral lands in Indigenous nations and African kingdoms to build this country and continue to inflict [harm](#). Descendants continue to resist genocide with tremendous power and wisdom. **These words are insufficient** and do not rectify repeated violations or ongoing oppression. Resources to **support sovereignty and liberation** include: [decolonizing data](#), [land back](#), [food sovereignty](#), [Real Rent Duwamish](#), [Idle No More](#), [King County Equity Now](#), and [Black Brilliance Research](#).

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Table of Contents

Abstract.....	i
Land Acknowledgement.....	iii
Acknowledgements	iv
I. Background	1
1. Theoretical Framework	1
1.1. Maslow’s Hierarchy of Needs.....	1
1.2. Environmental Health.....	2
1.3. Environmental Justice	3
1.4. Gentrification	3
1.5. Displacement.....	6
2. Health Effects of Gentrification and Displacement	7
2.1. Gentrification is an Environmental Injustice	7
2.2. Housing & Health.....	8
2.3. Stress & Health.....	9
3. Setting: Seattle, King County, Washington.....	10
3.1. Segregated Housing.....	11
3.2. Current Trends in Seattle, King County.....	12
3.3. King County Paradox.....	16
3.4. First Public Clinics for Communities of Color in Seattle.....	17
4. Odessa Brown Children’s Clinic (OBCC) Today.....	18
4.1. Othello Square	18
4.2. Mental Health.....	20
4.3. Gender-Affirming Care	20
4.4. Telehealth	21

II. Study Purpose and Significance	22
III. Methods.....	23
Study Design.....	23
Recruitment.....	23
Data Collection	24
Survey Measures.....	25
Analysis.....	25
Ethics	25
IV. Results	26
Demographics.....	26
Aim 1: Families’ Experiences in King County.....	29
Aim 2: Perceptions of Telehealth	34
Aim 3: Acceptability of Telehealth Based on Previous Use	38
Aim 4: Families’ Suggestions to OBCC	39
V. Discussion	42
Housing	43
Telehealth	43
Gender-Affirming Care	45
Health Home Model of Community Health	45
Supporting Caregivers.....	47
Domestic Violence/Housing Safety Screening	47
Suggestions for Provision of Services	48
Strengths.....	48
Limitations	49
Future Work	49
VI. Conclusion	50
VII. References	51

I. Background

This section defines terms to understand the environmental health crisis of gentrification and displacement. First, the theoretical framework used is presented, followed by an overview of pressures of gentrification and displacement on mental and physical health. Finally, the history of housing and racial discrimination in Seattle, King County is outlined to contextualize the current crisis focusing specifically on the significance of the Odessa Brown Children’s Clinic.

1. Theoretical Framework

1.1. Maslow’s Hierarchy of Needs

Humanistic theorist Abraham Maslow believed people strive for personal growth and proposed a hierarchal motivational model of needs (McLeod, 2018). Basic physiological and safety needs for survival must be met before progressing to higher psychological growth needs (figure 1). The ultimate progression of needs leads to self-actualization, where an individual fulfills their potential. If lower needs are no longer met, focus goes back to meeting the more basic needs before progress up the hierarchy can occur again. By exacerbating economic inequality, gentrification and displacement add challenges and competing demands to meeting basic needs, like housing, food, childcare and healthcare.

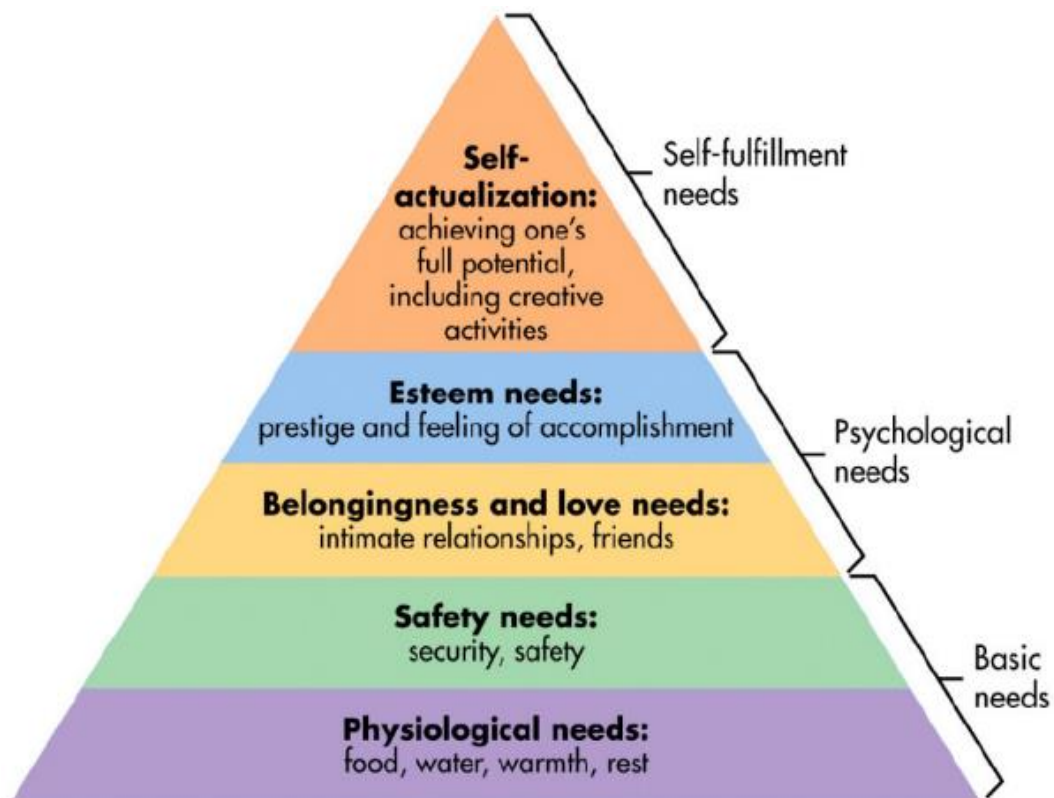


Figure 1: Maslow's hierarchy of needs (McLeod, 2018)

1.2. Environmental Health

The **environment** is everything outside of an individual, including the natural, physical, chemical, built, and social surroundings (figure 2). Each of these domains of the environment are not discrete; they all interact and are inextricably linked (Lopez, 2012). According to the U.S. Department of Health and Human Services (DHHS) in Healthy People 2010, **environmental health**:

“Comprises those aspects of human health, disease, and injury that are determined or influenced by factors in the environment. This includes not only the study of the direct pathological effects of various chemical, physical, and biological agents, but also the effects on health of the broad physical and social environment, which includes housing, urban development, land-use and transportation, industry, and agriculture” (DHHS, 2000; Srinivasan, 2003)

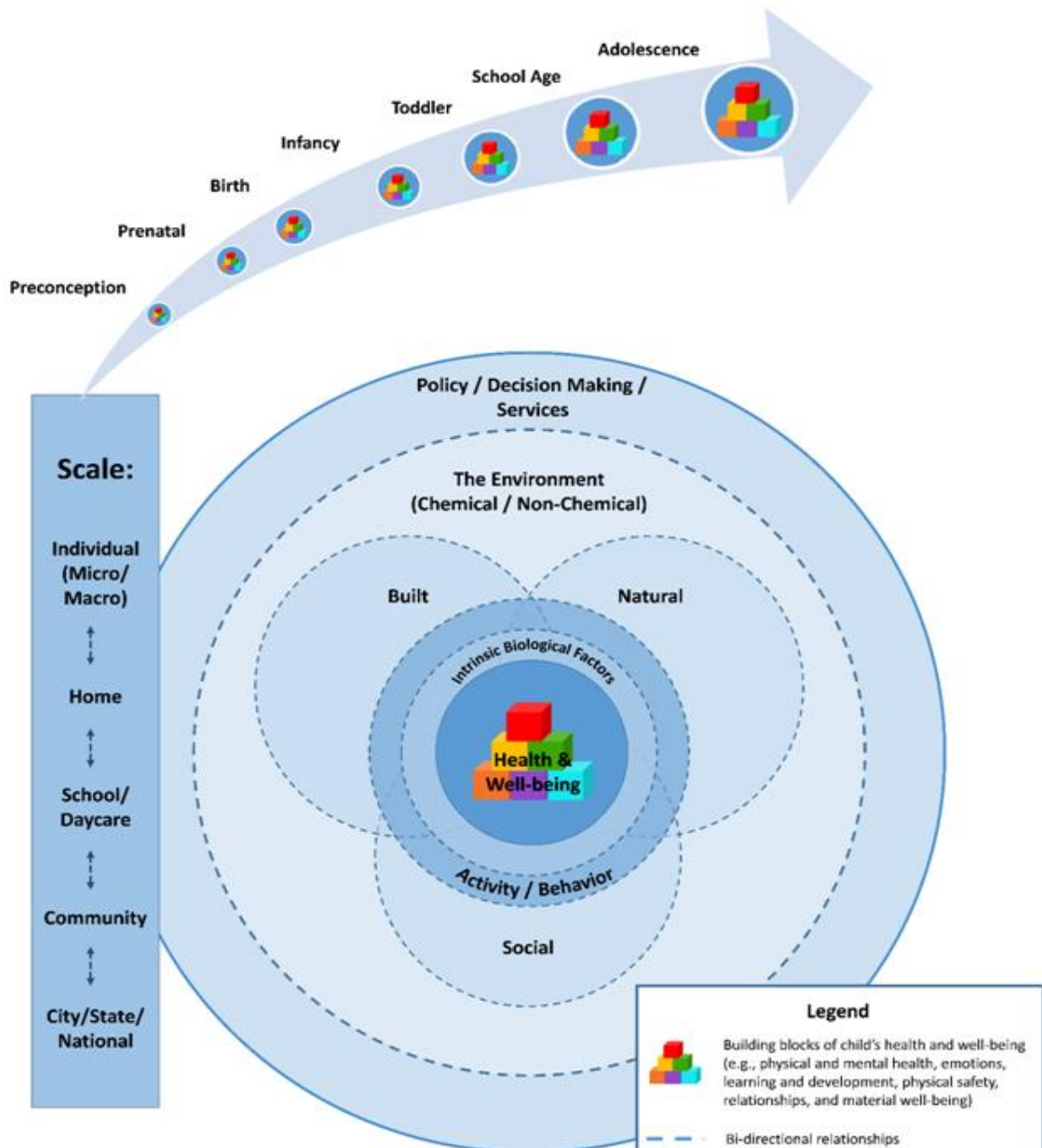


Figure 2: Conceptual Framework for Children's Health (Tulve et al., 2016)

DHHS' broader definition of environmental health accurately reflects the complexity of the total environment by encompassing elements beyond traditional ambient and chemical factors, such as economic and community pressures. Environmental health is determined by not only exposure to toxins, but also the loss of protective resources. Removal from positive community resources can reduce people's ability to mitigate and recover from adverse health consequences of chemical and non-chemical exposures. Nicolle Tulve and colleagues illustrate these connections in their conceptual framework for children's health (figure 2). This framework integrates the total environment with a life course approach to account for the impact of individual and intergenerational accumulation of stressors on growth and development (Tulve et al., 2016). Rapid waves of gentrification impact families' access to resources and can have a long-term effect on a developing child's health.

1.3. Environmental Justice

The Environmental Protection Agency (EPA) defines **environmental justice** as: "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies" (EPA, 2020). This concept originated in the Civil Rights Movement to define and confront the disproportionate pollution imposed on Black, Indigenous and People of Color (BIPOC) from toxic waste sites. To protect the interests of the wealthy, environmental racism embedded in institutions purposely placed hazards in the few places BIPOC were often allowed to live (Bullard, 2001).

Environmental justice requires equal power in decisions. Toxins produced by discriminating practices—such as unjust policies in education, housing, health care, policing, transit, city planning, climate change and employment—unequally disadvantage BIPOC and those with less capital (Bullard, 2008; Agyeman et al., 2016). This framework combines social justice movements to protect all from harms found outside of a person (the environment) by eliminating or preventing hazards and ensuring fair distribution of benefits and burdens.

1.4. Gentrification

Gentrification is the remaking of an area from low to high value with an influx of capital. Indicators of gentrification include upward socioeconomic transformation with above average increases in income, housing values, rent, education, and occupational levels (Lees et al., 2015; Zuk et al., 2017; Quastel, 2009). Property values appreciate and increase potential for capital gains.

Gentrification is a planned process that prioritizes profit over people. Causa Justa::Just Cause, a grassroots social movement group in the Bay Area explains, "gentrification is the profit-driven race and class remake of urban, working class communities and communities of color that have suffered from a history of disinvestment and abandonment" (Causa Justa::Just Cause, 2014). Ruth Glass

coined gentrification to describe a class-based transformation when areas inhabited by the working class get invaded by the higher “gentry” class (Glass, 1964). This process of systemic violence against working class, BIPOC communities can be predicted by its capitalistic drivers: the more depreciated the area is, the more vulnerable it becomes to opportunistic developers; when the influx of wealth starts, the more capital in the area, the more advanced the stage of gentrification.

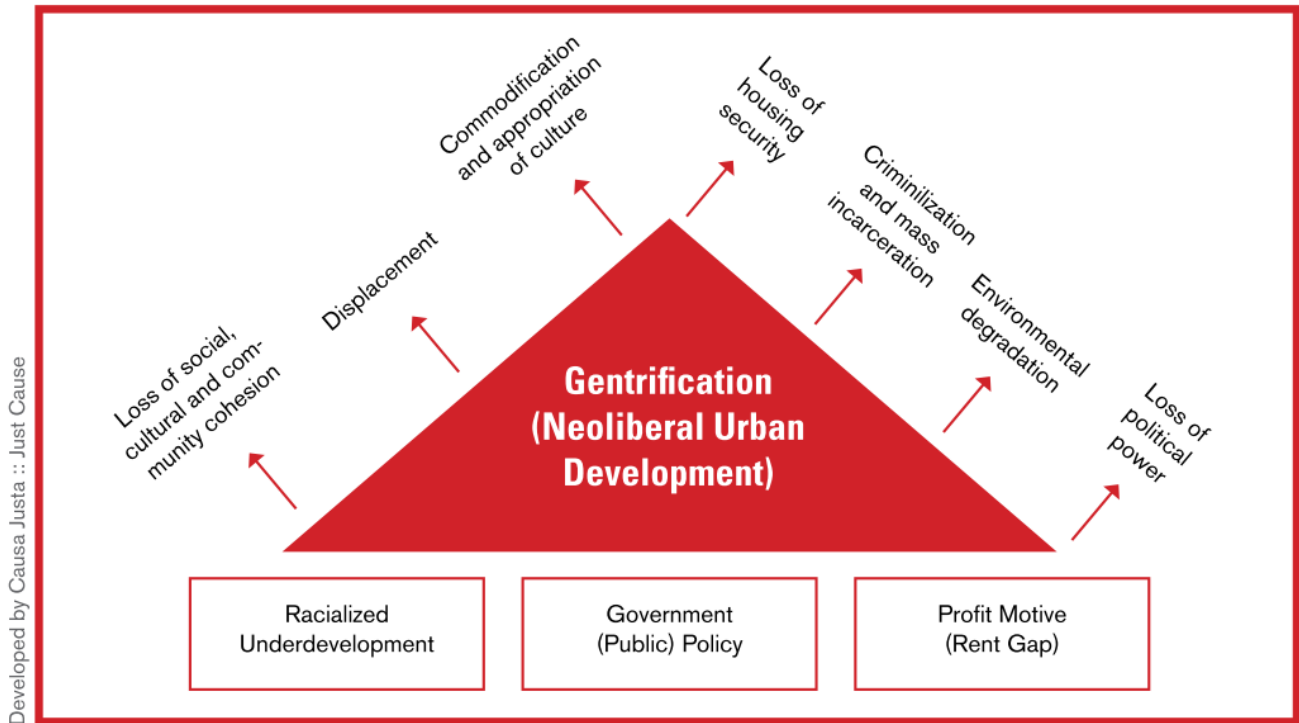


Figure 3: Overview of Gentrification (Causa Justa::Just Cause, 2014)

In *Neighborhood Renewal*, Phillip Clay outlines four stages of gentrification (below) that occur in waves. Journalist Peter Moskowitz expands on Clay’s model in *How to Kill a City* to hone in on the government’s direct role in gentrification by adding stages zero and five (Moskowitz, 2017):

- **Stage 0:** Governments establish pathway through segregation and disinvestment policies that neglect and devalue areas with people of color and sanction enormous investment and development into suppressed areas with loopholes in regulations and taxes.
- **Stage 1:** “Pioneers,” often with higher education, and artists move to area for convenient location and affordability. They purchase property and renovate for personal use.
- **Stage 2:** Second wave of middle-class attracted to renovations, purchase property, prices increase. Boutiques and restaurants open for upscale customers. Media promotes amenities.
- **Stage 3:** Third wave of high-class purchase property. Business and developers invest. Property values increase. Displacement of longstanding residents begins.
- **Stage 4:** Area gentrified and transformed to high-class with large luxury developments. “Pioneers” and gentrifying middle-class get displaced. Gentrification spreads to nearby neighborhoods. Few opportunities for low-income residents to move in.
- **Stage 5:** Larger foreign investment develops area for global elite, not for normal living.

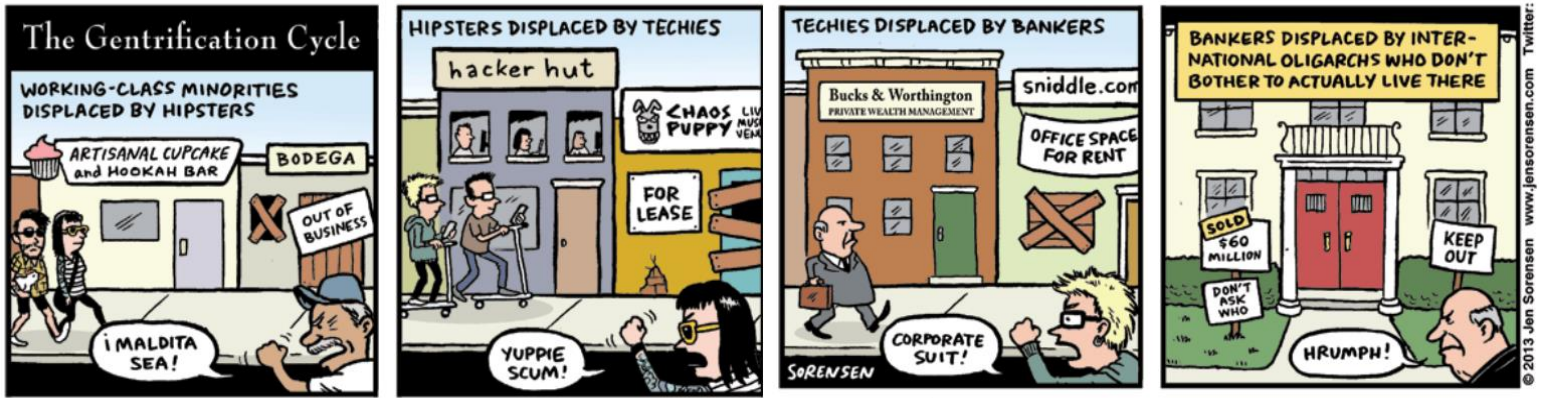


Figure 4: Gentrification Cycle: Who Gentrifies the Gentrifiers (Sorenson, 2013)

Prime targets for gentrification are neighborhoods where property prices are cheaper than surrounding areas, accessible to transit and near the city core (Freeman, 2005). Racialized underdevelopment from policies directing resources away from non-white residents dampen the value of the area. As poor neighborhoods become attractive to wealthier people, property values increase. Eventually, the areas progress through the stages of gentrification as the magnitude of investments increase—from small scale real estate to large corporate developments—until the global elite enter (figure 4). Residents who cannot keep up with rising living costs are priced out to more affordable areas. Homeowners with limited or fixed income like elders are especially vulnerable to getting priced out by higher property taxes from increased property values.

Upgrading property in rundown areas raises the market value and potential for profit. Urban geographer Neil Smith theorizes gentrification is incentivized by **rent gap**, the difference in property value in disinvested areas before and after changes raise its value to “highest and best” use (Smith, 1987). High rent gaps compel predatory developers to purchase property in underdeveloped areas and neglect them to depress costs. When property values increase, people without sufficient income are pushed out through price hikes, eviction, or other harassment tactics. Developers can then maximize profit by replacing them with richer tenants at higher rates or converting the property to its “highest and best” use. Exploiting for profit is enabled by the government and disproportionately puts nonwhite—particularly African American—communities in persistent poverty (Rothstein, 2017).

Gentrification is a government mechanism to make money by enticing those with more spending power to areas with low tax bases to increase revenue (Moskowitz, 2017). Local governments are driven to gentrify to make up for federal budget cuts, especially after President Reagan defunded several social welfare programs in the 1980s to promote privatized urban development (Aka, 2010; Whittle et al., 2015; Causa Justa::Just Cause, 2014). Governments build the structure for gentrification through policies rooted in racism that intentionally segregate and contain people of devalued identities to undesired margins (Bullard, 2001; Fullilove, 2016).

Concentrating people of color in confined areas facilitates disintegration of their communities through deliberate guidance of public and private capital away from those specific areas (Fullilove,

2016; Rothstein, 2017). Abandonment of these overcrowded areas created blighted slums with bargain priced property vulnerable to predatory development. Plans of “renewal” and “revitalization” to ease poverty destroyed affordable communities to clear slums. To capitalize on the best interest of corporations, affordable units were not all replaced, contributing to the current crisis in affordable housing shortages (Moskowitz, 2017). Appealing to economic growth and enhancement masked government intent of accommodating profit over nonwhite poor people (Moskowitz, 2017).

Several government strategies that dispossess and oppress BIPOC include: segregation, racial zoning (1911), restrictive covenants (1917), redlining (1937), urban renewal (1949), deindustrialization (1960s/70s), planned shrinkage/catastrophic disinvestment (1970s), mass incarceration/War on Drugs (1982), HOPE VI (1992), gentrification, subprime lending/foreclosure crisis (2000s) (Fullilove & Wallace, 2011; Rothstein, 2017). Racial/exclusionary zoning established boundaries to separate BIPOC from white communities. After explicit racial zoning was unconstitutional in 1917, restrictive covenants upheld segregation through contracts among sellers, distancing the government as the apparent director of discrimination (Rothstein, 2017). Each iteration of urban development policy is more covert in discriminating against poor BIPOC to maintain a racialized hierarchy (Rothstein, 2017). As a result of deliberately repeated harms to undermine their stability, poor BIPOC are subjected to **serial forced displacement**—repeated upheaval coerced by restrictive practices (Fullilove & Wallace, 2011).

1.5. Displacement

Displacement is involuntary relocation because of living environment conditions and signals the last stages of gentrification (Aka, 2010; Chapple & Zuk, 2016). While displacement can occur outside of gentrifying areas, it is endemic to poor communities (Desmond & Shollenberger, 2015). Contrary to voluntary moves that are intentional and often for beneficial reasons like being close to family or better space, displacement results from dispossession (Desmond et al., 2015). Miriam Zuk and colleagues summarize categories of displacement in figure 5 (Zuk et al., 2017).

Reasons for displacement can be forced or responsive. Forced displacement results from moves initiated by others and gives no choice (e.g. foreclosure, eviction, disaster). Responsive moves result from conditions of the home or neighborhood (e.g. safety/violence, cost, social support).

Figure 5: Categories of Displacement (Zuk et al., 2017)

	Forced	Responsive
Direct or physical causes	<ul style="list-style-type: none"> • Formal eviction • Informal eviction (e.g., landlord harassment) • Landlord foreclosure • Eminent domain • Natural disaster • Building condemnation 	<ul style="list-style-type: none"> • Deterioration in housing quality • Neighborhood violence or disinvestment • Removing parking, utilities, and so on.
Indirect or economic causes	<ul style="list-style-type: none"> • Foreclosure • Condo conversion 	<ul style="list-style-type: none"> • Rent increase • Increased taxes • Loss of social networks or cultural significance of a place
Exclusionary causes	<ul style="list-style-type: none"> • Section 8 discrimination • Zoning policies (restriction on density, unit size, etc.) • NIMBY resistance to development 	<ul style="list-style-type: none"> • Unaffordable housing • Cultural dissonance • Lack of social networks

Types of displacement associated with gentrification include physical (direct), economic (indirect) and cultural (exclusionary). Direct displacement is physical loss of homes from issues such as deteriorating housing quality, harassment and eviction. Indirect displacement stems from economic affordability reasons. Cultural displacement follows after people or institutions central to the area's culture leave, disrupting social connections and sense of belonging (Causa Justa::Just Cause, 2014; Hyra, 2015).

2. Health Effects of Gentrification and Displacement

Gentrification is a public health crisis where “the transformation of neighborhoods from low value to high value” disproportionately harms the health of minorities (CDC, 2009). The transformation reinforces conservative values driven by individual profit gain and colonialism, not wellbeing of all people (Moskowitz, 2017; Fullilove, 2016). By altering the environment, gentrification requires people to restructure their lives with destabilizing stressors that can accumulate and deteriorate health.

Gentrification is a term loaded with tension between excitement for revitalization from investments and discontent towards changes and fear of displacement by longstanding residents of the area (Kennedy & Leonard, 2001; Kearns & Mason, 2013). The critical difference between revitalization (revivals or enhancements of physical conditions) and gentrification is displacement of residents (Kennedy & Leonard, 2001; Newman & Wyly, 2006). While gentrification may bring amenities that can enhance health like parks and streetlights, any benefits exclude those displaced from the transformation (McCartney et al., 2017; Gibbons & Barton, 2018). This section explores how gentrification and displacement triggers toxic stress and adverse health outcomes.

2.1. Gentrification is an Environmental Injustice

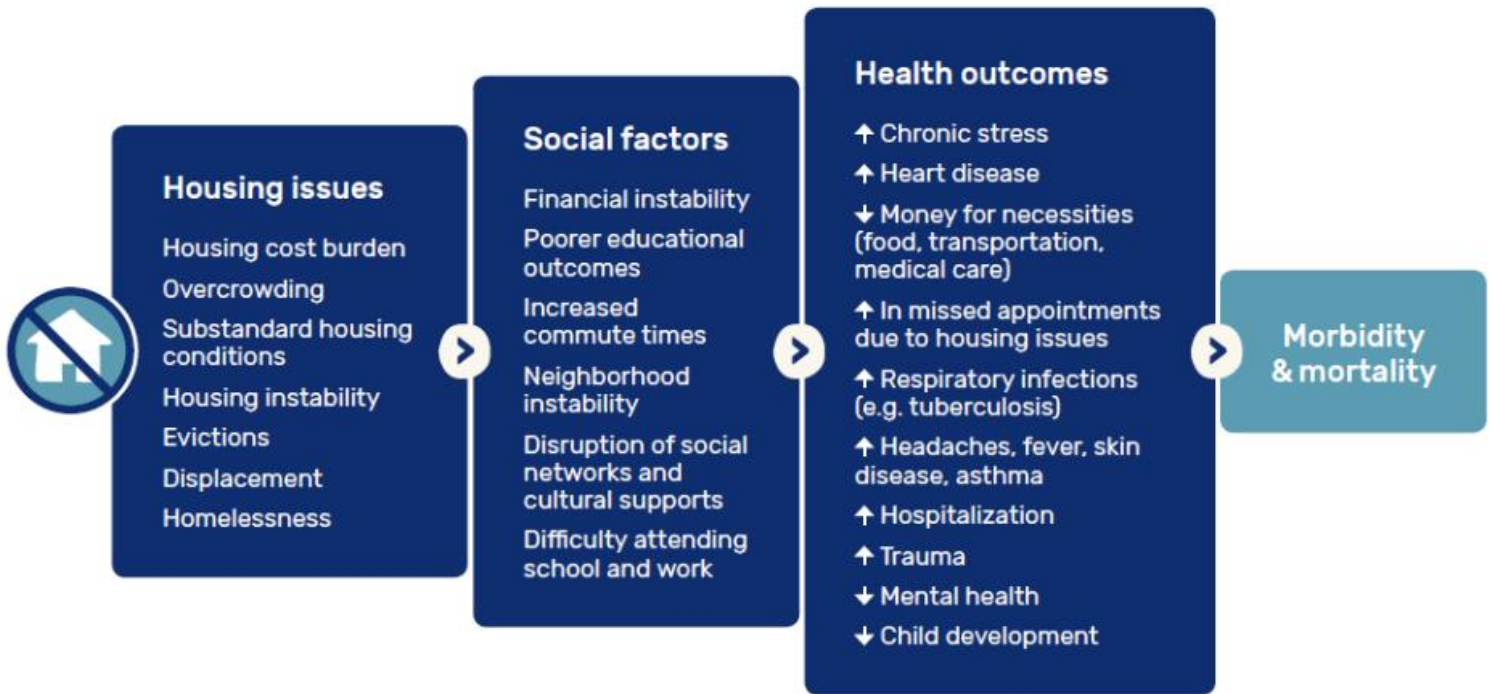
Burdens and benefits associated with the transformation process inherent in gentrification are not equally distributed, making gentrification an environmental justice issue. As a form of environmental racism, gentrification selectively affects areas historically disinvested through restrictive policies such as redlining, which depresses home values and hinders the accrual of wealth (Saegert et al., 2011; Fullilove, 2016). Racially segregated housing differentially exposes BIPOC to environmental toxins of discrimination and pollution, contributing to higher levels of environmentally sensitive conditions like asthma and lead poisoning (Bullard, 2001, 2008; Sandel & Wright, 2006). Displaced residents often move to available affordable neighborhoods with more substandard housing conditions near higher concentrations of toxins and pollution than their previous neighborhoods (Abel et al., 2015; Bullard et al., 2008; Ding et al., 2016). Accumulation of toxic exposures increases risk to adverse health effects such as heart disease, respiratory complications, cancer, and psychological distress (Jacobs, 2011; Hutch, 2011; Wilder et al., 2017; Sass et al., 2017).

2.2. Housing & Health

Housing is fundamental to health and survival (Fullilove 2010). Based on Maslow’s hierarchy of needs, housing is essential by facilitating safety and physiological requirements for growth (figure 1). Healthy housing is safe, affordable, protects privacy, and supports the physical and psychological well-being of residents (Bonney, 2007; Jacobs, 2011; Hutch, 2011). Quality of housing is closely associated to socioeconomic status and race (Kirkland, 2008). Housing instability is often exacerbated for underserved communities in gentrifying zones—areas with increases in household income, educational attainment, and home values and/or rents (City of Seattle DPD, 2015).

Although no standard definition of housing instability exists, the concept is often assessed through a combination of indicators such as affordability (30% or less of income on housing), frequent moves, tenure (rent or own), housing quality and overcrowding (Frederick et al., 2014; Cutts et al., 2011; Blake et al., 2007). A household is **housing burdened** when over 30% of income goes to housing costs (i.e., rent, mortgage, utilities). Housing instability negatively increases risk for displacement and adverse health outcomes (figure 6). People facing housing instability and displacement are likely to delay medical care, postpone medications, have more emergency department visits related to mental health, and experience intimate partner violence (Ma et al., 2008; Shi et al., 2017; Suglia et al., 2011; Lim et al., 2017; Rollins et al., 2012). Alameda County summarizes the many reasons healthy housing is vital in figure 6.

Figure 6: How Housing Affects Health (Aboelata, et al., 2017)



Changes to the urban and housing environment require readjusting and can compromise continuity of education, healthcare, housing, job, and food security. By adding competing demands to already challenging conditions, pressures from gentrification can force families to sacrifice health promoting resources for other essentials (Whittle et al., 2015; Liu et al., 2014; Ma et al., 2008). For example, a family might prioritize basic needs of food and housing over health care if the indirect costs of increased commute time, lack of sleep, energy, and lost income from time away from work add too much strain to the direct cost of health care services. Or, prioritizing the need for health care can cause tension at work from time off and exhaust resources available to adequately meet other needs such as housing, food, and utilities.

2.3. Stress & Health

Acute stress prompts the sympathetic nervous system to prepare the body for survival against threats through the “fight, flight, or freeze” stress response (Dhabar, 2014). Ideally, the body restores balance through **allostasis** after the emergency ends. The stress response is a protective mechanism intended to run the body through short-term threats. Long-term activation of the stress response is unsustainable. Chronic stress increases **allostatic load**, the burden on the body from stress (McEwen, 2004). Allostatic overload from accumulated stress corrodes the body’s ability to operate and speeds up aging through **weathering** (Geronimus et al., 2006). Long-term imbalance from repeated stress impairs the body’s ability to stabilize through allostasis, heightening inflammation and stress vulnerability (Clougherty, 2014; Walters et al., 2011). Dysregulation of several physiological systems—such as the cardiovascular, neuroendocrine, metabolic and immune systems—weakens the body and increases its susceptibility to infections and chronic illnesses like diabetes, asthma, cardiovascular disease, and cancer (McEwen, 2004; Dhabhar, 2014).

People with devalued identities are constantly in survival mode, enduring stress from unjust systems designed to limit their access to resources (Geronimus, 2000; Fullilove, 2016; Walters et al., 2011). Trauma is the body’s protective response to perceived danger from a single or series of experiences (Menakem, 2017). Conditions that cause trauma often continue to exist in the environment as recurrent stressors, creating what Dr. Shawn Ginwright, professor of Africana studies and urban youth development leader, calls the **persistent traumatic stress environment (PTSE)** (Ginwright, 2016). Chronic stress from limited control over life conditions and finances is toxic (Robinette et al., 2016). Weathering from chronic stress of discrimination erodes the body’s ability to mitigate risk for adverse health outcomes and likely contributes to racial health disparities (Geronimus et al., 2006; Trent et al., 2019). Extended exposures to discrimination and stigma in the environment change the body’s physiology and lowers stress tolerance, limiting its ability to effectively cope with challenging circumstances (Trent et al., 2019; Choi et al., 2018; Walters et al., 2011). Gentrification and even the threat of displacement can exacerbate chronic stress, predisposing the body for multiple comorbidities and premature death (McEwen, 2004; Keller et al., 2012).

Displacement severs **place attachment**—the positive social bonds individuals hold with their meaningful environments (Anton & Lawrence, 2014; Scannell & Gifford, 2010). Psychiatrist Mindy

Fullilove, a specialist in the environment and mental health, conceptualizes displacement's affliction as **root shock**: "the traumatic stress response to the loss of part or all of one's emotional ecosystem" (Fullilove, 2016). Fullilove draws an analogy from the shock and life-threatening damage a plant undergoes when ripped up from its roots to describe the severe harm displacement inflicts on a person. When uprooted, people are disoriented and go into mental shock. The resulting trauma continues to wear on the body and mind long-term, over a lifetime or even generations (Fullilove, 2016). People who could not tolerate the severe psychosocial distress of root shock have died from the severed attachment to place and social support (Fullilove, 2016). Root shock can be felt individually and collectively as a chronic stressor and grief from losing a sense of security and identity linked to a beloved place (Fullilove, 2016).

Gentrification and displacement undermine protective factors of mental health, elevating risk of anxiety, depression, behavioral and emotional issues (Desmond & Kimbro, 2015; Fullilove, 1996; Shaw, 2004). By fragmenting communities, displacement cuts the social connections critical to wellbeing (Fullilove, 1996; Fullilove, 2016; Sullivan & Chang, 2011). Neighbors are less likely to know each other in gentrifying areas, limiting sources of social support nearby that are pivotal for resilience and overall wellbeing (Formoso, 2010). Consequently, serial forced displacement repeatedly extracts resources and the accumulation of loss can induce stress that carries across generations (Fullilove & Wallace, 2011; Saegert et al., 2011). Trauma from recurrent stressors of discrimination, loss, and constant unjust circumstances changes the body at the molecular level (Lehrner & Yehuda, 2018; Walters et al., 2011). Through **epigenetics**, stressors from the environment change genetic expression of DNA and historical trauma gets inherited by future generations (McEwen, 2012; Lehrner & Yehuda, 2018; Walters et al., 2011).

3. Setting: Seattle, King County, Washington

The City of Seattle is rapidly changing and currently the third most gentrifying city in the United States (Balk, 2019). With a booming technology industry, world-class facilities, and proximity to nature, Seattle is attracting more people and areas historically populated by racial/ethnic minorities are gentrifying (Kneebone & Berube, 2013; Brown & Morrill, 2011; McGee Jr., 2007). Despite historic exodus to the suburbs, renewed interest in the conveniences of an urban lifestyle leads more people to the city to take advantage of amenities such as youth facilities, public spaces, mass transit and reclaimed time from reduced commutes (Chapple & Zuk, 2016; Kneebone & Berube, 2013; Hyra, 2015).

To accommodate growth, neighborhoods near the downtown core, such as the Central District, International District and Beacon Hill, are being transformed into urban villages—walkable areas with residences, commerce, and recreation (City of Seattle DPD, 2015; Brown & Morrill, 2011; Misra, 2015). Influx of wealth and investments into historically disinvested areas has resulted in the displacement of many longstanding low-income BIPOC residents (McGee Jr., 2007; Brown & Morrill, 2011). Lack of rent caps and increased market competition pushes many further away from Seattle

in search of affordable housing (Kneebone & Berube, 2013; McGee Jr., 2007). Witnessing the disproportionate stress gentrification creates for its community, the Odessa Brown Children's Clinic (OBCC), founded to serve the majority African American and immigrant community in the Central District, is adapting to help its families survive and thrive.

3.1. Segregated Housing

In Seattle, racist policies contained BIPOC communities in the Central District, International District and Rainier Valley neighborhoods (figure 6). After racial zoning (1911-1917) became unconstitutional, white neighborhoods used restrictive covenants (1917-1948) to keep BIPOC out with explicit terms in property deeds, such as: "No person or persons of Asiatic, African or Negro blood, lineage, or extraction shall be permitted to occupy a portion of said property" (Seattle Civil Rights & Labor History Project, 2020). Homeowners associations continued to enforce segregation after overt racial discrimination became illegal (Seattle Civil Rights & Labor History Project, 2020). Crowding BIPOC into less desirable areas made it easier for the government to institutionalize segregation with redlining.

Redlining was instituted in 1937 as a federal policy by the Home Owners Loan Corporation (HOLC) to prevent foreclosures. Low interest federal loans were granted based on risk. To guide investment, maps were color coded to show security grade (figure 6). Economic stability was unjustly based on demographics: "best" areas were homogenous and colored green, while "hazardous" neighborhoods inhabited by African Americans and other people of color were colored red to show high risk (Zuk & Chapple, 2015).

As a result, white people were rescued from foreclosure and subsidized to purchase homes in the suburbs while BIPOC were cut off from essential opportunities to thrive. Economic racism denied loans and insurance to people with devalued identities, inhibiting their ability to build wealth and assets through homeownership (Bullard, 2001; Saegert et al., 2011). Restrictions limited resources available to generate wealth and sustain health, leaving BIPOC more susceptible to serial forced displacement and illness (LaVeist et al., 2011; Fullilove & Wallace, 2011).

Although the Civil Rights Act of 1968 made redlining illegal, its tradition continues in political and institutional decisions that distribute resources and risks. Systemic racism hinders the ability of families of color to meet their needs and build generational wealth by denying equal access to opportunities such as quality healthcare, education, and homeownership. In Seattle, African American's household median net worth is only 5% of the white household median net worth (\$23,000 vs. \$456,000) (Balk, 2019). This stark wealth gap shows how segregation practices like redlining have institutionalized the racial wealth gap and continue to fragment Seattle.

The African American community of the Central District fostered a vibrant culture rich in social capital despite persistent systemic oppression. From the area emerged world class activists and artists such as Vivian Caver, Dorothy Hollingsworth, Ernestine Young, Quincy Jones, Jimi Hendrix, and Ray Charles (Seattle Oral History Project, 2017). In 2000, when white residents outnumbered

African Americans for the first time in 30 years, Professor Henry McGee Jr., JD predicted current trends of gentrification in Seattle and concluded “African Americans are moving southeast into Seattle’s Rainier Valley or beyond into Renton and other inner suburbs” (McGee Jr., 2007). Today, the African American community in the Central District, once the largest north of California, has been displaced “to near extinction” with only 7% remaining compared to 90% in 1960 (Fong, 2019; Berger, 2013).

Zoning regulations also continue residential segregation. “Best” areas replace explicit racial terms with “single-family residential” codes to prevent “multifamily residential” apartments from being built in white neighborhoods (Charles, 2019). Zoning presumes nonwhite people with fewer resources cannot afford single-family homes and therefore must stay out of white neighborhoods (Charles, 2019). To address the housing crisis, Seattle is up-zoning to allow more single-family areas to convert to multifamily use. However, up-zoning has been mainly deployed in areas redlining deemed “hazardous” or “definitely declining,” therefore continuing to overcrowd already densely populated areas (Charles, 2019). By containing BIPOC to undesirable “hazardous” areas, policies from all levels of government protect the “homogenous” affluent white communities’ hierarchy and differentially expose BIPOC to toxic stress. The disparate effects are apparent today in the gentrification and COVID-19 pandemic crises.

3.2. Current Trends in Seattle, King County

The City of Seattle attempts to address its institutional racism by incorporating equity into its development. Part of the city’s framework is the Displacement Risk Index, which combines indicators of displacement (e.g. amenities, development potential, rent) to identify areas where residents are in danger of being uprooted (figure 8). The legacy of discriminatory policies remains clear: disinvestment in formerly redlined areas (figure 7) suppressed property values to set the stage for gentrification. Now, the long-standing residents who were denied resources are most vulnerable to displacement, as evidenced in the areas with highest eviction rates in Seattle (figure 9).

With the Central District and International District already in the late stages of gentrification, the next areas to gentrify are nearby South Seattle neighborhoods like Rainier Valley, Beacon Hill and Rainier Beach. Areas at greatest risk of displacement are clustered near Light Rail stations (see figure 8). This is consistent with Karen Chapple’s milestone work of mapping gentrification, which found the most significant drivers of gentrification are access to public transit and amenities (Chapple, 2009). After transit-oriented developments are completed, the low-income BIPOC who were limited to living in the disinvested areas get pushed out by rising costs. As a result, many people who were forced to endure the invasive construction process of these developments do not benefit from their convenience.

Figure 7: Seattle Security Map - Maps and Atlases - Special Collections Online (HOLC, 1936)

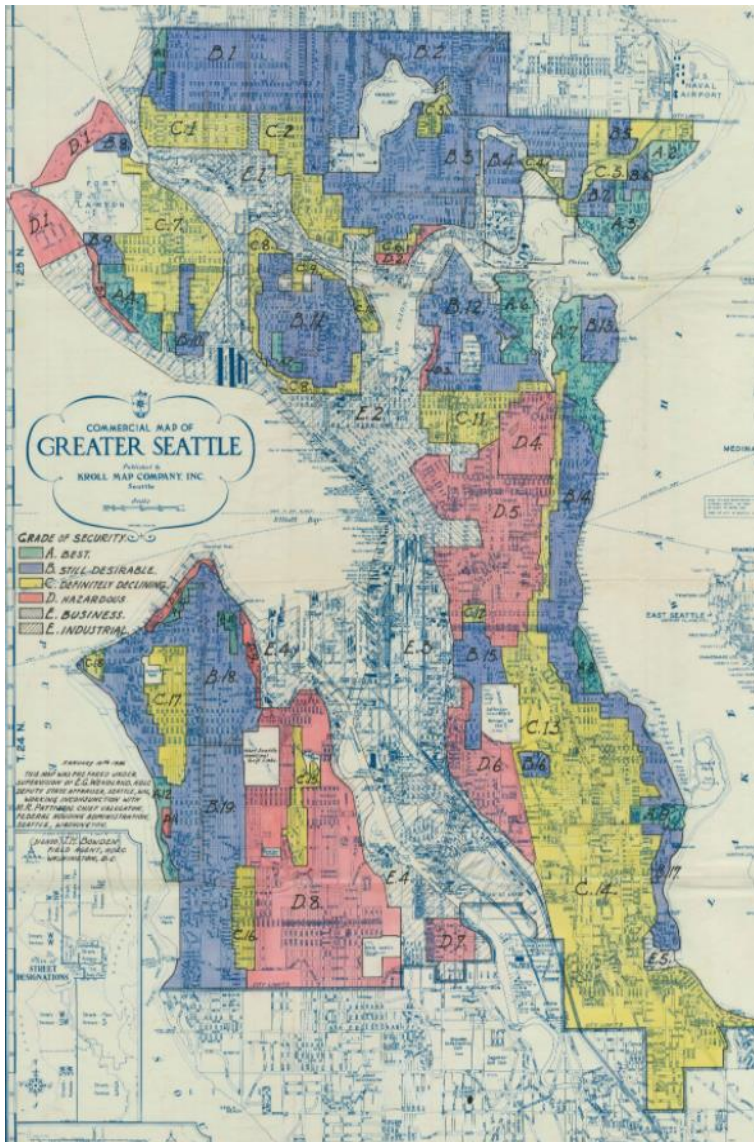
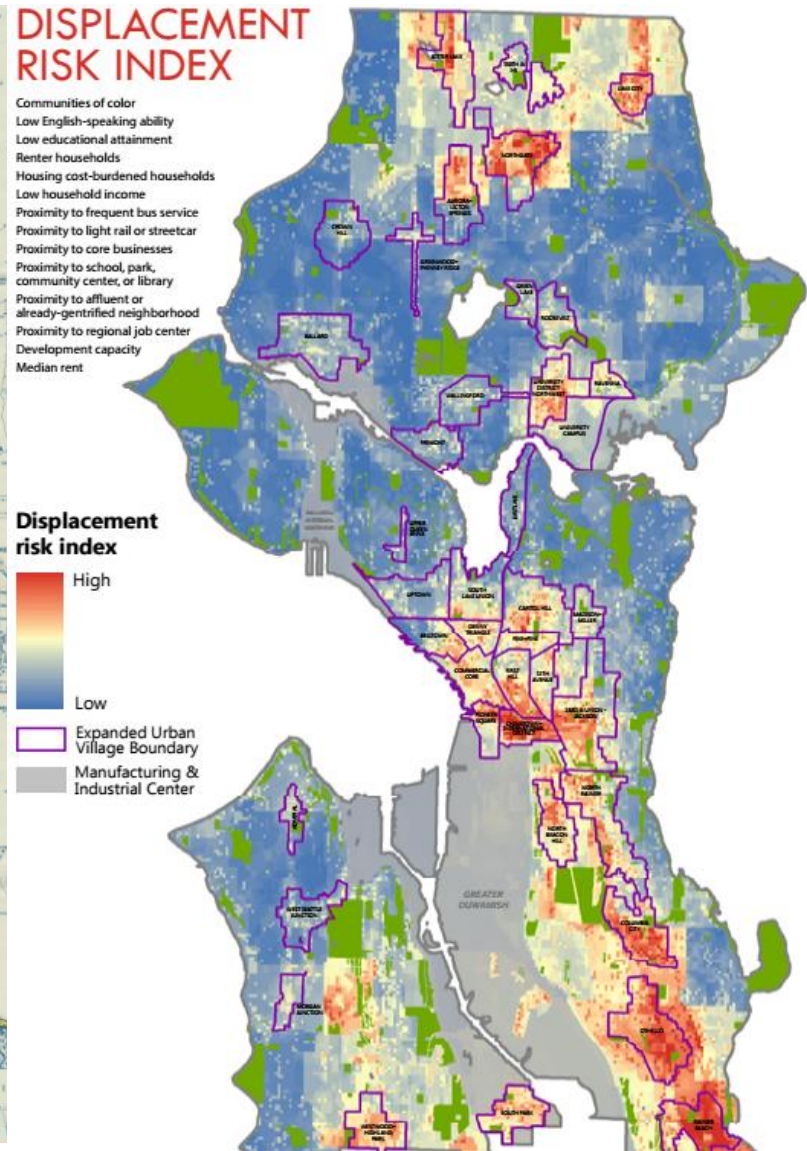


Figure 8: Seattle 2035 Growth and Equity Analysis Displacement Risk Index; (City of Seattle DPD, 2015)



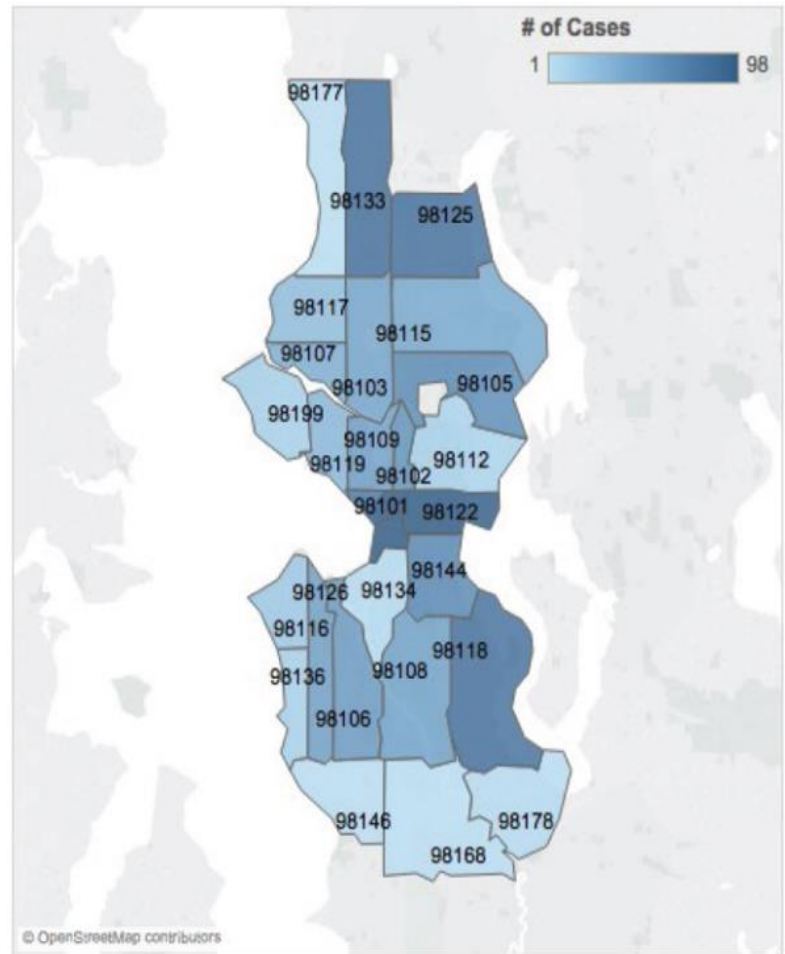
Maps illustrate the destructive legacy of segregated housing. “Hazardous” and “definitely declining” areas in redlining maps (figure 7) are now neighborhoods with the highest risk of displacement (figure 8), highest eviction rates (figure 9), highest positive cases of COVID-19 (figure 10), and highest burden of environmental health contaminants (figure 11).

Since 2000, half of Seattle has already gentrified and trends show poverty shifting down the Interstate-5 (I-5) corridor—a federally subsidized highway to encourage white flight out of cities to the suburbs (Balk, 2019; Becker, 2002). Highways facilitated the destruction of the environment with construction of both roads and private developments in less dense suburbs outside of cities

(Rothstein, 2017). Suburban homes gave white people opportunities to build assets and require more travel, increasing pollutants released from traffic into the ozone. Since I-5 delineates industrial areas from redlined neighborhoods, people with devalued identities restricted to these areas were disproportionately exposed to air and noise pollution. Like many highways that razed through redlined areas nationally, the aggressive construction of I-5 in the 1950s-60s displaced many in the International District and left it blighted (Crowley, 1999).

Suburbs were designed for individualism and consumerism, not poor communities (Moskowitz, 2017). Suburbanization of poverty decentralizes underserved communities from resources concentrated in cities, making it harder to access services critical to health such as work, childcare, schools and clinics (Kneebone & Berube, 2013; Fullilove & Wallace, 2011; Desmond, 2015). Moving from one under-invested area to another area with fewer opportunities further depletes already limited resources (Ding et al., 2016; Kneebone & Berube, 2013). For instance, moving expenses may require rent for the first and last month and a security deposit upfront. Additionally, increased time and costs spent commuting farther to and from critical institutions such as work, home and healthcare, drains not only physical and mental energy, but also resources available to fulfill other needs. Longer commutes also add more pollution to the already heavier environmental burden people who are displaced carry (Hutch, 2011).

People searching for affordability in South King County find elevated risk to environmental harms (Abel & White, 2011). South King County is a floodplain area with high risk for water damage along with exposures emitted from commercial industry (Ervin, 2009; McGee Jr., 2007; Brown & Morrill, 2011). Remnants of the Asarco Smelter superfund site pollute the soil and lakes in South King County with lead and arsenic, neurotoxins that can enter food pathways and increase cancer risk (King County, 2019; Benfer et al., 2020). Additionally, if Mount Rainier erupts, most of the lahar (volcanic mudslide caused by eruption) would inundate and settle in Kent and Auburn (Seattle Office of Emergency Management, 2014). The eruption of Mount Rainier would devastate South



Source: 2017 Seattle Unlawful Detainers

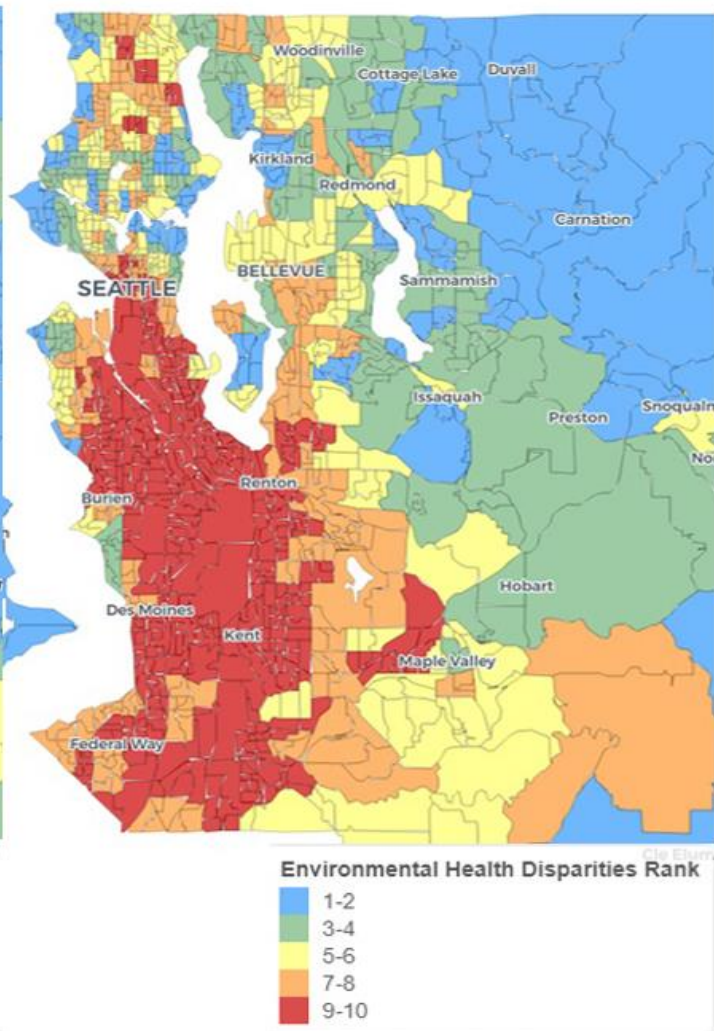
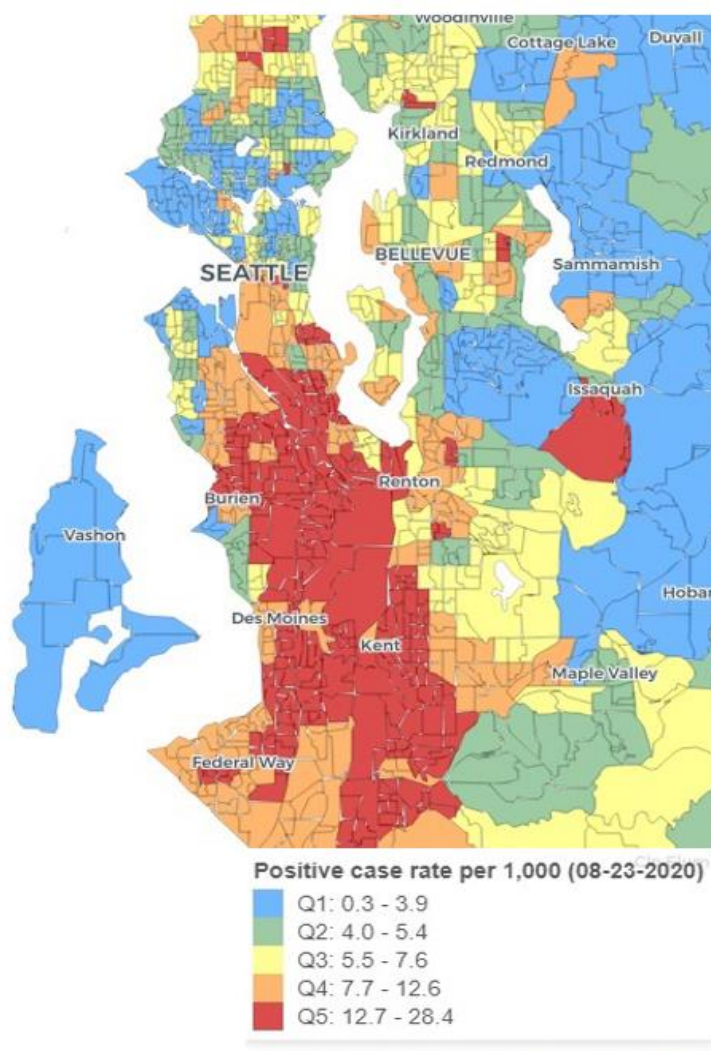
Figure 9: 2017 Evictions in Seattle by Zip Code (Cookson et al., 2018)

King County and is predicted to be even worse than the eruption of Mount Saint Helens in 1980—the deadliest volcano eruption in history that killed 57, destroyed infrastructure, and endangered the lives of thousands (WA Department of Natural Resources, 2019).

Unfortunately, people moving often already suffer from institutionalized wealth and health inequities. With limited wealth, displaced families have less capacity to strategize for catastrophes. Less financial security also decreases ability to handle damages, leaving the same communities disproportionately devastated, as seen in the current COVID-19 pandemic. Dr. Esther Min and colleagues visualize the cumulative impact of differential exposure among communities in Washington with environmental health disparities maps (Min et al., 2019). Figures 10 and 11 clearly illustrate the correlation between environmental health disparities and positive COVID-19 cases as an environmental injustice: 80% of the census tracts with high rates of COVID-19 also have the county’s highest concentrations of fine particulate matter less than 2.5 microns (PM2.5), a major risk factor for respiratory disease (Lockwood, 2020).

Figure 10: Positive Cases of COVID-19 in King County (Min et al., 2019; Lockwood, 2020)

Figure 11: Environmental Health Disparities in King County (Min et al., 2019; Lockwood, 2020)



3.3. King County Paradox

Washington has the most unfair tax system in the country, where the residents with limited income pay more in taxes than the wealthy (ITEP, 2018). The state's regressive tax code explains why King County is home of some of the richest households. Stark disparities in the county exemplify how wealth and health are inextricable. King County's life expectancy level is among the highest and lowest in the United States (Dwyer-Lindgren et al., 2017). Mercer Island in affluent East King County has more than double the median income of Auburn in South King County (\$147,566 vs. \$72,822) (US Census, 2020). Men in Mercer Island live on average 18 years longer than men in Auburn (Dwyer-Lindgren et al., 2017). Women in these areas have a life expectancy gap of 14 years (Dwyer-Lindgren et al., 2017). Large disparities in life expectancy and income confirm wealth can buy health. Persistent stress from systems created to limit resources from people with devalued identities makes them live sicker and die earlier. When disasters hit, inequities are magnified and the same communities denied adequate infrastructure disproportionately suffer, as evident in the gentrification and pandemic crises.

Gentrification has displaced many families to available affordable areas in South Seattle and South King County and its direct impact on health is clear in the drastic disparities of positive cases of COVID-19 (figure 10). Pressures of gentrification often force people to relocate to more resource-poor areas with higher concentrations of toxins and settle in homes with substandard conditions (Abel et al., 2015; Bullard et al., 2008; Ding et al., 2016; Desmond & Kimbro, 2015). Highest transmission and hospitalization rates concentrated in areas along I-5—Auburn, Federal Way, Renton, Tukwila—suggest disproportionate air pollution from I-5 increased risk to COVID-19. Suburbs were designed to disperse people and encourage privatization. Underdevelopment of community resources left these areas under-equipped to handle a pandemic.

Highest rates of eviction in King County are in gentrifying areas and South King County, with female-led renter households most heavily impacted (Cookson et al., 2018). BIPOC families are most negatively affected by gentrification and also overrepresented in essential industries like food and maintenance services, often doing direct work at lower wages (McNicholas & Poydock, 2020). Without the privilege to telework, they are most at risk of encountering and bringing the virus home. Additionally, BIPOC are more likely to live in high density multi-generational households and be caregivers to elders and children (McNicholas & Poydock, 2020). Restrictions in space make physical distancing difficult. Crowding (2 or more people in a room or doubling up) is a coping strategy to reduce financial strain from displacement pressures and housing burden (Blake et al., 2007; Chapple & Zuk, 2016). Increased stress from crowding negatively affects mental health, social relationships, and sleep. Risk also increases for childhood injuries, high blood pressure, respiratory conditions, and exposure to infectious disease (Gould & Giled, 2015; Shaw, 2004; Bashir, 2002). As a coping mechanism to reduce housing burden, crowding has inadvertently increased COVID-19 disease burden for those already facing preexisting challenges.

3.4. **First Public Clinics for Communities of Color in Seattle:** Carolyn Downs Family Medical Clinic & Odessa Brown Children’s Clinic

Historically, restrictive covenants and redlining confined African American communities mainly east of downtown Seattle in the Central District (better known then as Central Area). The neighborhood was omitted from many basic services including healthcare and sanitation trash pickup (Taylor, 1994; Brown & Morrill, 2007; Appel, 2000). Knowing they deserved better and energized by the momentum of the ongoing Civil Rights Movement, community members of the Central Area demanded critical services be brought to their neglected neighborhood.

In response to national unrest from racial injustices, the federal government established the Model Cities Program in 1966 to fund community projects in blighted neighborhoods for an “attack on social and economic problems, as well as physical decay” (Appel, 2000). As part of the War on Poverty, the Department of Housing and Urban Development (HUD) managed the Model Cities Program through the mayor’s office. In 1967, Seattle was awarded the first Model Cities Program planning grant and designated the Model Neighborhood as the Central Area, Pioneer Square and the International District—home to 61% of Seattle’s non-white population and 10% of the city’s overall population (SMCP, 1967).

The Seattle Model City Program’s (SMCP’s) Health Task had four committees: physical health, mental health, environmental health, and health resources. Central Area activists fought on the Health Task Force to have their own neighborhood health clinic. One of its most active members was Odessa Brown, a tireless outreach worker instrumental in the clinic’s creation. As a single mother, Odessa Brown was once rejected from a Chicago hospital prior to moving to Seattle and was driven to ensure others were not dehumanized in their journey to seeking care. In 1969, the Health Task Force won \$220,000 in seed funds to build a clinic from HUD (Appel, 2000).

After years of planning, the children’s clinic opened in 1970 at 1700 East Cherry Street. Sadly, Odessa Brown passed away, at the age of 49, before the clinic was completed. The clinic was named in her honor and continues to provide services in her spirit by providing “quality care with dignity” (Appel, 2000).

During this same time in 1968, the first Black Panther Party (BPP) chapter outside of California was established in the Central Area to address the urban Black community’s struggles from racial inequality and push towards self-determination (Taylor, 1994; Nelson, 2011). BPP’s community survival programs aimed to “Serve the People Body and Soul,” emphasizing that the body could not be separated from the mind (Nelson, 2011).



Figure 12: Odessa Brown Children’s Clinic at the Central Area Health Care Center on Yesler Way (Friends of OBCC Guild, 2020)

Community survival programs provided resources for oppressed peoples to meet basic needs, knowing a healthy Body and Soul is shaped by many external influences such as poverty, housing, community support, neighborhood conditions, education and discrimination (Nelson, 2011).

In 1969, Seattle Chapter of BPP created the Sydney Miller Free Medical Clinic, the first free medical clinic in the Black community (BPP Seattle Chapter, 2017). The clinic was entirely run by volunteers and operated mostly in Seattle's Madrona neighborhood (Pien, 2018). In 1978, the clinic was renamed for their founder and BPP volunteer, Carolyn Downs (Pien, 2018). The clinic later merged with Country Doctor Community Clinic in 1988. The Carolyn Downs Family Medical Center is the last operating BPP People's Free Medical Clinic (Givens, 2018).

These were the first public clinics created to serve the communities of color in Seattle and operated from many temporary locations to serve as many people as possible. After the SMCP funding ended in 1974, OBCC raised enough capital through grants and donations to construct a permanent home (Appel, 2000). In 1980, OBCC opened its newly built clinic at 2101 East Yesler Way and has since been an anchor for generations of families of color. The building expanded in 1994 to become the Central Area Health Care Center with Carolyn Downs Family Medical Center and Seattle-King County Public Health Women, Infants, Children (WIC) Nutrition Program and administration offices (figure 12). Today, the space is also shared with NeighborCare Dental.

4. Odessa Brown Children's Clinic (OBCC) Today

Currently, OBCC only has one location at the Central Area Health Care Center on Yesler Way. OBCC offers comprehensive services including medical, dental, mental health, and nutrition integrated under one roof to all families with dignity and respect, regardless of ability to pay. OBCC serves children from birth to age 21 and about 85% of patients are on Medicaid.

OBCC has been affiliated with Seattle Children's Hospital (SCH), a large regional hospital and research center serving the greater Pacific Northwest since it started. As the only primary care clinic directly associated with SCH, OBCC serves many children who are medically complex and deal with multiple chronic diseases. To improve comprehensive care and ease families' need to travel to SCH for specialty care, OBCC also has asthma and sickle cell anemia clinics.

In addition to the main clinic on Yesler Way, OBCC provides care in school-based clinics at: Garfield High School, Madrona Elementary School, John Muir Elementary School, Seattle Nativity School, and Beacon Hill International School. OBCC also collaborates with youth and family social programs such as Amara, Rainier Vista Boys and Girls Club, and Wellspring Family Services.

4.1. Othello Square

Over half of OBCC patients live in a high displacement risk area or are no longer in Seattle. To continue meeting the needs of displaced families, OBCC is growing with a new clinic at Othello

Square in Seattle’s Rainier Valley, 5 miles south of its current Central District location. Expanding to Othello Square strategically places OBCC near mass transit to serve families at high risk for displacement and improve accessibility for populations already displaced to South King County.

At Othello Square (set to open in 2021) OBCC will offer more services in the Orenda building including integrated medical and mental health care, dental, nutrition, sports medicine, physical therapy, and occupational therapy. OBCC will be co-located with Tiny Tots Early Learning Center and workforce housing. OBCC and many community organizations are adapting to rapid changes of gentrification by establishing Othello Square as:



Figure 13: Site of Othello Square on S Othello Street and MLK Jr Way S (Othello Square, 2020)

OBCC will be in the Orenda Building

“Seattle’s first community-driven equitable development project. A creative response to the pressures of extraordinary growth in Seattle.”

—HomeSight, Lead Community Organization of Othello Square

Since redlining deemed Rainier Valley “definitely declining,” the city abandoned it to sustain poverty and create a market for gentrification. Prior to the Link Light Rail opening in 2009, the area was an economic desert. When the major grocery store threatened to leave Othello for underperforming, residents fought for it to stay. While the Othello store does not offer the same quality of produce as other locations of the same chain, it is accessible by transit and its restrictive covenant prohibits any other grocery store from opening on the property (Spangenthal-Lee, 2009). Companies’ ability to monopolize with restrictive covenants and leave communities as food deserts further demonstrates leadership compliance in putting profit over people with another policy priming for gentrification (Holt, 2018). This systemic failure further destabilizes communities by allowing resources to be removed from already underserved areas, increasing their vulnerability to gentrification. Now, Othello is in the mid stages of gentrification.

Knowing gentrification is an upstream factor of health that interacts with all aspects of life, OBCC continues to care for families in and outside of the clinic with culturally responsive services. At Othello Square, resources will be more accessible and expand to support stability such as housing, mental health care, childcare, employment, education, business development and economic opportunity. Othello Square is the first transit-oriented development in Seattle that truly centers the existing residents’ needs and goals. By including community ownership, Othello Square increases opportunities for longstanding residents to stay anchored. In areas where gentrification is prevalent such as in Los Angeles, San Jose, San Francisco, Chicago, New York and Washington, DC, community activists and national development organizations promote community ownership as a strategy to weather gentrification and for healthy development without displacement (Aboelata, et al., 2017; Causa Justa::Just Cause, 2014; Voorhees Center, 2015; Zuk & Chapple, 2015).

4.2. Mental Health

Mental health is an essential pillar of wellbeing identified as a priority by the founding community of OBCC and the people it serves today (WHO, 2018). Community members knew the harm of enduring stress and trauma from systemic failures. They wanted mental health care to nourish the Body and Soul of their young people to strengthen the entire community.

OBCC Mental Health recognizes a tremendous need exists and wants to better serve families. Between 2017 and 2018, only 21% of kids who finally got off waitlist for initial appointment did not show up—far less than the rates at other urban child mental health centers (range 48% to 62%) (Harrison et al., 2004). Lower levels of intake non-attendance confirm the major need and desire OBCC families have for mental health services and warrants exploration of barriers.

Challenges to accessing mental health services include long waitlists, limited providers and affordability—including costs of travel and time needed for appointments more frequent than medical or dental wellness exams (Choi et al., 2018; Ofenedu et al., 2017; Larson et al., 2013). Racial/ethnic minorities have higher unmet need and lower rates of engagement in mental health treatment than white counterparts (Alegria et al., 2010; Chow et al., 2003; Coker et al., 2009). In particular, urban minority youth have greater risk factors for mental health problems from negative environmental stressors such as poverty, discrimination and violence (Larson et al., 2013).

Prolonged activation of the stress response system in childhood can disrupt growth of brain pathways and other organ systems, increasing risk for stress-related disease and cognitive impairment into adulthood (Jelleyman et al., 2008; Hibbert & Tulve, 2019; Dhabhar, 2014). Poor mental health increases susceptibility to chronic conditions such as hypertension, cardiovascular disease, and asthma that further risk for multiple morbidities (Sandel & Wright, 2006; Wilder et al., 2017). Negative consequences of gentrification emphasize the importance of mental health services to support youth in developing healthy coping skills early to mitigate lifelong stress and encourage future success (Kim et al., 2012).

4.3. Gender-Affirming Care

Gender-affirming care is medical or mental health care to support people who identify as transgender or gender diverse. Transgender people are often of multiple devalued identities and more likely to be under resourced, with 26% of transgender people below the federal poverty line compared to 15.6% of cisgender people (Quintana, 2009). Stigma and institutional barriers complicate transgender people's ability to receive care. Insurance exclusions and gatekeeping have led some to crowdsourcing to finance gender-affirming care and transitions (Kimseylove, 2020). Finding friendly providers experienced in supporting people of diverse gender identities can also be challenging (Gridley et al., 2016). The prejudice transgender people face contributes to high a suicide attempt rate at 40%, of which the majority of attempts occur before age 25 (James et al., 2016; Feinberg, 1996).

Seattle Children's Gender Clinic is one of the few places available to care for children, adolescents and young adults who identify with a gender different from their sex at birth and/or non-binary.

The Gender Clinic is currently in the Laurelhurst neighborhood of Seattle, an upper-class white enclave. Gender Clinic aims to make gender-affirming care more accessible to BIPOC and under resourced communities by partnering with OBCC. Integrating gender-affirming services into primary care improves coordination of multidisciplinary services for more timely care.

Early support helps youth develop coping mechanisms, think through identity and transition. Mental health support and access to puberty blockers are crucial for social transition (Sherer, 2016). If an adolescent chooses to transition with hormone therapy, delivery and monitoring of care can be more convenient at OBCC than going to a separate clinic location. The Endocrine Society recommends deferring puberty until age 16 before youth can initiate non-reversible medical transition (Olson et al., 2011). Going through puberty of their affirmed gender lets transgender adolescents develop normative relationships with peers, minimizing disruptions and need for invasive medical procedures to correct body features later (Olson et al., 2016). Therefore, early access to gender-affirming care will best support youth of all identities to happy and healthy lives. Telehealth may also help improve access to affirming care with lower barrier monitoring throughout the transition process.

4.4. Telehealth

Telehealth is the use of technology to provide care and improve health from a distance (Liaw et al., 2019). Originally, telehealth technology was developed in the 1960's/70's by NASA to examine and treat astronauts (NASA, 2013). Telehealth's success in delivering specialty care to rural areas and monitoring chronic conditions demonstrates its potential to improve access to care with reduced time and travel (Becevic et al., 2020). However, strict policies and parity with lower insurance reimbursement rates disincentivized widespread implementation and development of quality telehealth experiences (Tuckson et al., 2017; Shachar et al., 2020).

When the COVID-19 pandemic required telehealth adoption and scale up to maintain physical distancing, the U.S. Centers for Medicare & Medicaid Services temporarily loosened insurance policies (Shachar et al., 2020). The abrupt shift to telehealth forced a large learning curve on providers and communities alike, especially for those with limited digital literacy or broadband access, limited English proficiency, low income and racial/ethnic minorities overrepresented in the essential workforce (Nouri, 2020). Uncovering obstacles impeding people with limited income from using telehealth is crucial to expanding its benefits, as the American Telemedicine Association (ATA) reports only 4% of people on Medicaid get virtual care (ATA, 2020). Since the technology was not developed with marginalized communities in mind, how telehealth is set up must center their needs to avoid compounding existing barriers with new challenges and worsening disparities.

In March 2020, OBCC finally received resources to provide care remotely to maintain physical distancing during the pandemic. Knowing not all families could use telehealth, OBCC responded to the digital divide with kiosks for patients and families who may not have access to equipment, the internet or the space at home for private visits. This project hopes to assess if telehealth can be a useful intervention to increase access to health care for displaced and deserving yet institutionally devalued communities.

II. Study Purpose and Significance

Gentrification is an environmental injustice happening at an unprecedented scale in Seattle. Influx of wealth into historically disinvested areas has disproportionately displaced low-income communities of color. Gentrification and displacement alter the environment beyond one's control, inducing social, physical, psychological, and economic pressures that deteriorate health (Suglia et al., 2011). Pressures from gentrification strain resources available to respond or prepare for unforeseen events. The COVID-19 pandemic exacerbates precarity from gentrification by creating uncertainties that further threaten the loss of community, housing security, food security, and continuity of care. These stressors can all amass into adverse health outcomes. Residual impacts of the pandemic in the impending housing and economic crises will increase risk of displacement and challenges to recover for those already lacking choices with inequitable living, working and environmental conditions.

Through online surveys, this exploratory thesis aims to identify opportunities to improve support for families of Odessa Brown Children's Clinic (OBCC) by understanding their needs, stressors, and perceptions of telehealth during this period of rapid environmental change. To examine families' competing life demands that influence their ability to seek pediatric care, indicators measured include challenges getting to OBCC, services needed, housing pressures and anticipated displacement. The pandemic required adoption of telehealth to provide care from a distance. With many families already displaced, this thesis also explores if telehealth can be an acceptable tool to access healthcare by assessing caregivers' readily available technology, preferred communication methods, and perceptions of and barriers to engaging with telehealth.

Specific Aims

1. Describe OBCC families' experiences amid stress from gentrification and a rapidly changing environment to identify needs and barriers to accessing health services
2. Assess families' perception of telehealth as possible intervention to difficulties getting care
3. Examine if perceptions of telehealth differ between families who have and have not used telehealth at OBCC
4. Summarize families' recommendations to OBCC as the clinic responds and adapts to needs within the shifting environment

Gentrification is a manifestation of inequality and the pandemic magnifies long known truths of structural inequities. With the steep learning curve for telehealth amidst so many other changes, capturing families' perceptions of telehealth, barriers, and needs is vital to inform how OBCC can better support families exposed to destabilizing toxins and negative health effects of gentrification and the pandemic.

III. Methods

Study Design

Caregiver is broadly defined as someone who provides help with daily activities (Family Caregiver Alliance, 2009). This exploratory cross-sectional study operationalized a caregiver as the first legal guardian in a patient’s health record.

Web-based surveys were administered through an online link or over the phone with KL to assess caregivers’ perceptions of health service needs, stressors, barriers to getting care for their child, living situation and telehealth. Data collected was descriptively analyzed.

The survey was available in English and Spanish. A longstanding professional translation company translated the English survey to Spanish. Quality assurance review by a Spanish medical translator and Certificate of Translation of the file were included with the service.

Participants who took the Spanish version wrote responses in Spanish and English. Free-text responses in Spanish were translated to English using Google Translate and reviewed for accuracy by native Spanish speakers.

Table 1: OBCC Patients in High Displacement Risk Zones (OBCC Records, City of Seattle DPD, 2015)			
# Patients English (Spanish)	Zip	# Participants	High Displacement Risk Neighborhoods
638 (98)	98118	31	Rainier Valley (Columbia City, Genesee, Lakewood, Seward Park, Hillman City, Mt. Baker)
535 (169) 524 (19)	98144 98122	21 17	Central District, Mt Baker, Atlantic
80 (4) 0 (0)	98104 98164	1 0	International District, First Hill, Pioneer Square
288 (59)	98108	20	Beacon Hill, Van Asselt, South Park
201 (12)	98178	5	Rainier Beach, Rainier View, Skyway, Bryn Mawr
30 (1)	98101	0	Downtown
113 (32)	98106	5	White Center
2,409 + (394) = 2,803	2,803/5511 = 51%	100/177 surveys = 57%	Total English and Spanish-speaking patients in high displacement risk zones

Recruitment

Caregivers of established OBCC patients were invited to take part in the study through a randomized sampling strategy. Eligibility criteria included:

1. Child completed appointment at OBCC October 2019 to July 2020
2. Speaks English or Spanish
3. Understands and provides consent
4. Lives in high displacement risk zone (table 1)

If a patient had their most recent OBCC visit (by July 2020) categorized as confidential, their caregivers were excluded from recruitment to respect privacy. Potential participants were identified from administrative records of children who visited any OBCC clinic from October 2019 to July 2020 to capture experiences before and after the launch of telehealth in March 2020 because of COVID-19. During this 10-month period, OBCC encountered 5,511 patients who prefer speaking English or Spanish. Only 547 had completed a telehealth visit with OBCC. Over half of OBCC's English and Spanish-speaking patients live in areas deemed high risk for displacement (table 1). Those with zip codes at high risk for displacement were of special interest to identify perceived needs and challenges among families in gentrifying areas.

After filtering administrative data, names were randomized and invited via email/text/phone. Every third person was contacted until 138 surveys were completed. A goal of 138 completed responses was based on budget for stipends and sample size calculation. ClinCalc estimated a sample size of 134 (n=67 for each group, 1=used telehealth, 2=not used telehealth) is needed to detect differences in perceptions of telehealth acceptability sufficiently with 70% power. Sample size was calculated by specifying $\alpha = 0.05$ and $\beta = 0.30$ (for 70% power) and predicting telehealth is acceptable to 70% of caregivers who have used it, compared to 49% for those who have not (see figure 14).

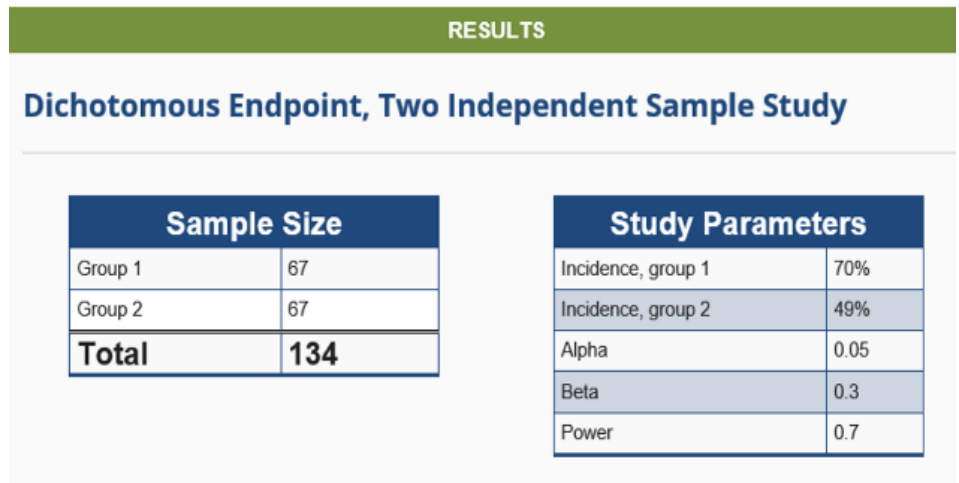


Figure 14: ClinCalc Sample Size Survey Calculator Tool
<https://clincalc.com/stats/samplesize.aspx>

Data Collection

Online surveys gathered data from September to October 2020. Caregivers consented to participate. Surveys were encrypted and de-identified with disabled tracking of any identifiers, including GPS data and IP addresses. For this reason, participants had to indicate if they wanted a stipend upon completion to get redirected to a separate secure survey for contact information. Contact information was not connected to survey responses and was saved in a password secure file in compliance with Washington state law before being destroyed. As compensation for engaging with the survey, participants were offered a \$20 gift card or were entered into a tablet raffle after gift cards were all claimed.

Survey Measures

The survey obtained demographic, service utilization/need at OBCC, housing instability and quality (tenure, expenses, relocations, and physical housing environment) indicators, transportation, and telehealth perceptions data. Indicators to capture the lived experiences of caregivers are reliable or slightly modified validated measures from the wisdom of OBCC, Tenants Union of Washington State, Got Green, Healthy Neighborhoods Study (Arcaya et al., 2018), Accountable Health Communities Screening Tool (Billieux et al., 2017), Barriers Survey (Dobkin et al., 2013), University of Pittsburgh (Parmanto et al., 2016), and Urban Displacement Project at the Center for Community Innovation at UC Berkeley (Zuk & Chapple, 2015). Many questions are specific to understanding OBCC service needs.

All caregivers were asked the same set of questions and always had the option to not answer. If a participant reported changing residences within in the past five years, a question was also asked to clarify reasons for relocation. Caregivers who had completed a telehealth visit with OBCC were given a shortened version of the University of Pittsburgh's Telehealth Usability Questionnaire (TUQ) to assess perceived usefulness, ease of use and learnability, interface quality, reliability, satisfaction and future use on a five-point Likert scale (ranging from 1=highly disagree to 5=highly agree) (Parmanto et al., 2016). Acceptability of telehealth was also measured on a five-point Likert scale (1=not at all to 5=extremely acceptable).

Analysis

Data from the survey were exported into Microsoft Excel for descriptive analysis to characterize experiences and perceptions of needs, challenges, and telehealth within quickly changing environments.

Items assessing perceptions of displacement and telehealth were measured on a five-point Likert scale and coded with 1 being the least favorable score, and 5 being most favorable. Each individual survey item measured a distinct indicator, no composite variables were used. Quantitative analysis calculated summary statistics (mean, median, range) for each item to identify trends and draw comparisons between needs and sentiments. A chi-square test of independence assessed if perceptions of telehealth acceptability differ based on prior use. Free-text responses to open-ended questions were qualitatively analyzed to identify commonalities on perceptions of telehealth, caregiver support, and suggestions. Comments were coded to identify trends using reflexive thematic analysis (Braun & Clarke, 2019).

Ethics

To protect patients and participants, approval to carry out this project was obtained from the University of Washington Human Subjects Division (STUDY00005551) and the Seattle Children's Institutional Review Board (STUDY00002822).

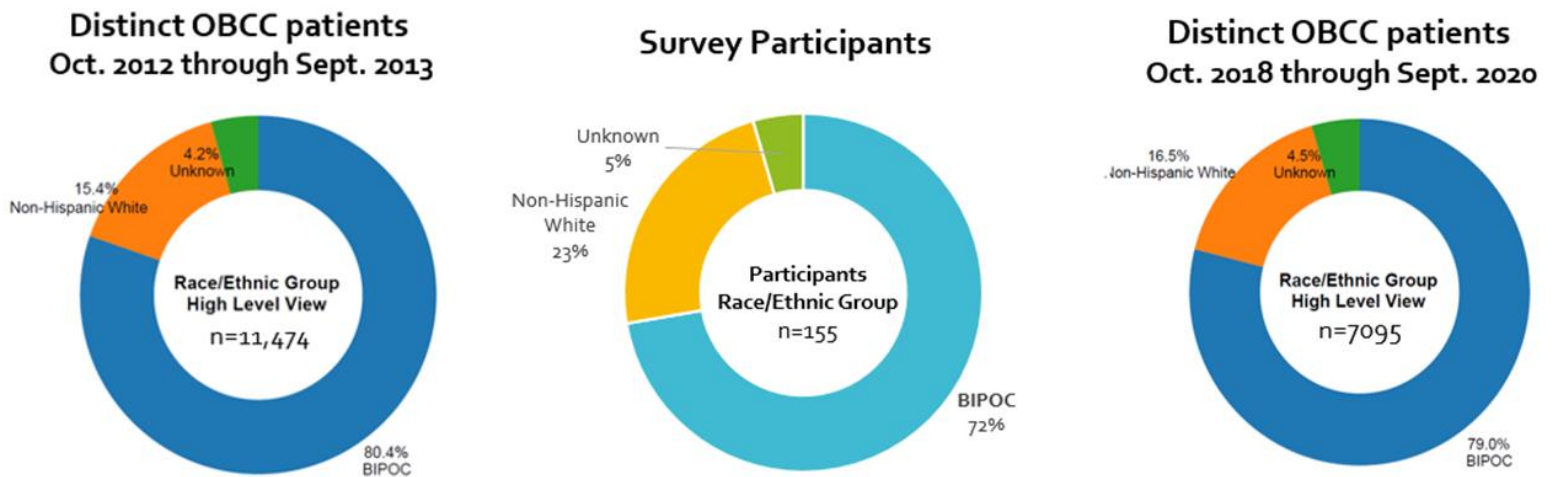
IV. Results

From October 2019 to July 2020, OBCC encountered 5,511 distinct English and Spanish-speaking patients, Caregivers of 2,803 patients who live high displacement risk zones in Seattle or South King County were eligible to participate. Among 900 caregivers invited, 17% responded (n=177), of which 88% completed the survey (n=155). Responses from 22 partially completed surveys are included in analysis and unavailable data are marked as “missing.”

Demographics

While the small number of participants (n=177) is not representative of the whole OBCC patient population, language spread was proportional (table 5). Our survey captured about 1.4 times more non-Hispanic white (NHW) (23%) than the entire OBCC patient population (16.5%) (figure 15). Demographics were broken down by ethnicity and race, with each participant represented in 1 ethnic category and one racial category (table 2). If Hispanic is selected in ethnicity, the caregiver is grouped with Hispanic. All other groups represent caregivers’ reported race category, with those selecting multiple race categories grouped into “2 or more races,” and participants specifying an unlisted category grouped into “other” (table 2). To better understand how participants identify, “2 or more races” and “other” categories were disaggregated to specified race groupings (table 3).

Figure 15: Race/Ethnic Group of Participants vs. OBCC Patient Population



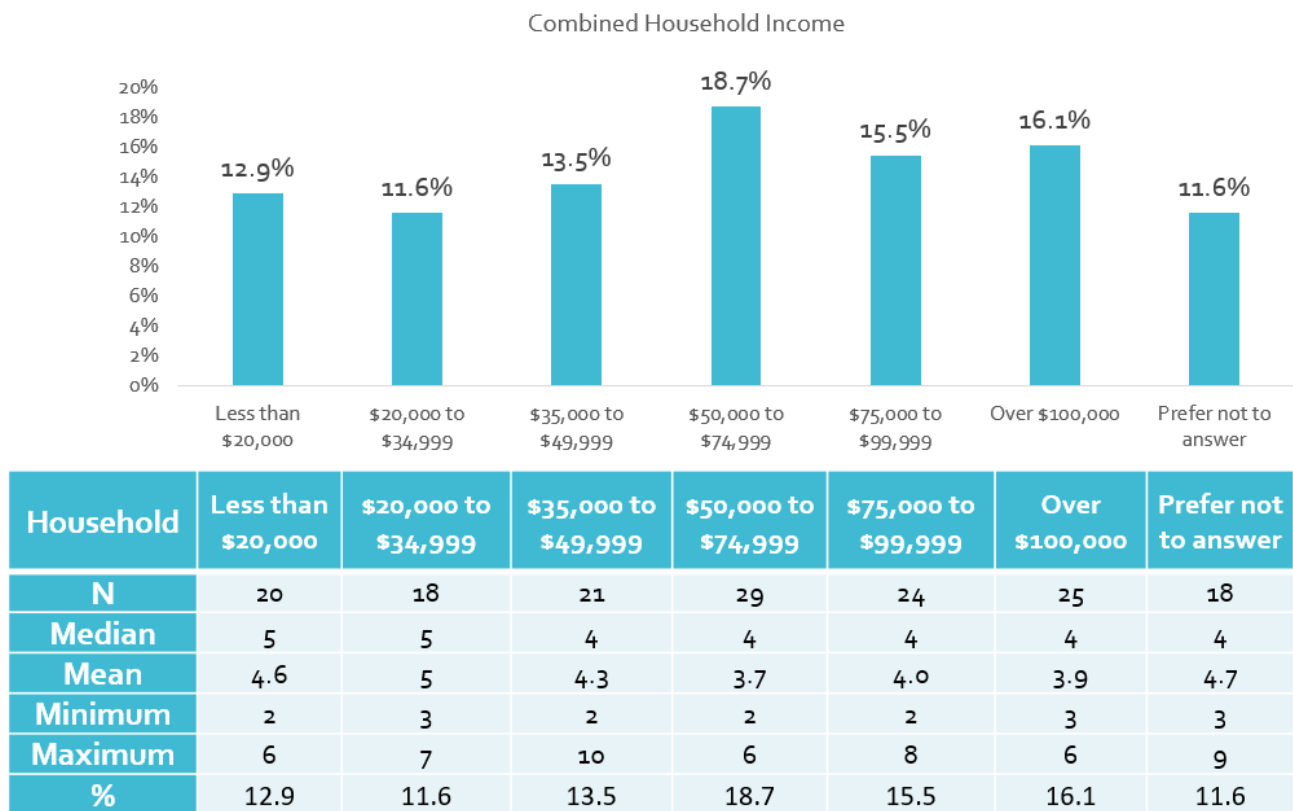
BIPOC: Black, Indigenous, and People of Color

Table 2: Ethnicity, Race by Distinct Patients (n=155)		Survey %	OBCC %
Ethnicity	Hispanic	28	19
	Non-Hispanic	68	77
	Unknown	3	5
Race	Black or African American	25	28
	American Indian/Alaska Native	0.6	0.3
	Asian/Pacific Islander	10	2
	White	31	38
	2 or more races	18	17
	Other	3	17
	Prefer not to answer	13	5

Table 3: "2 or more races" and "Other" (n=33)	n	%*
Black or African American	10	36
American Indian/Alaska Native	9	32
Asian/Pacific Islander	13	47
White	22	79
Other	11	39
Other: Creole, Hispanic, Israeli, Latinx, Mexican, None, Russian, Spanish, Xicana		
*will not add to 100%		

Figure 16: Household Size and Combined Income (n=155, missing=22)

Median household income: (4 people) \$50,00 to 74,999



Participants' households had a median of 4 people (range: 1 to 10). The most commonly reported household income was \$50,000 to \$74,999 (figure 16).

The majority of participants live near OBCC in high displacement risk zones of Seattle (65%). 32% live in South King County (table 4).

Table 4: Geography		
	Location	%
1	Seattle	65
2	Auburn	5
3	Federal Way	5
4	Burien	4
5	Renton	4
6	SeaTac	4
7	Kent	3
8	Tukwila	3
9	Des Moines	1
10	Mountlake Terrace	1
11	Out of State	1

Twelve different languages are spoken in participants' home (table 5). While the survey was only available in English and Spanish, the 23% of Spanish-speaking respondents is similar to the proportion of Limited English Proficient households (24%) in OBCC's total patient population.

Table 5: Languages Spoken in Household			
Language	n	Survey %	OBCC %
English	135	87.1	76.3
Spanish	35	22.6	9.8
Chinese (Mandarin, Cantonese, etc.)	1	0.7	3.4
Somali	5	3.2	3.3
Vietnamese	2	1.3	2.1
Tagalog	2	1.3	
Korean	2	1.3	
Hindi	1	0.7	
Marshallese	1	0.7	
Arabic	1	0.7	
French	1	0.7	0.2
Gujarati	1	0.7	
Prefer not to answer	2	1.3	
Total Respondents: 155, Missing: 22 Total OBCC Patients: 7,095			

Aim 1: Families' Experiences in King County

Housing

More renters (54%) took part in the survey than homeowners (38%), and 3% reported other living arrangements with family. Homeownership is equal among BIPOC and NHW participants at 48%, whereas more renters and those with other family living arrangements are BIPOC (83%) than NHW (9%).

Nearly half (49%) of participants spend over 30% of income on housing and are therefore **housing burdened**—an indicator of affordability, stability and a powerful predictor for displacement. Among those who are housing burdened, 68% are renters or have other living arrangements.

Table 6: Housing Tenure			
Tenure	n	%	Spend 30%+ of income on housing
Rent	85	54	60% (n=51)
Own	60	38	42% (n=25)
Other	4	3	50% (n=2)
Prefer not to Answer	10	6	
Responded: 159 Missing: 8			

Half of participants report a substandard housing condition. The top issues are bug infestation, mold, and water leaks (table 7).

Table 7: Housing Issues	%	n
Bug infestation	15	23
Mold	15	23
Water leaks	14	22
Oven or stove not working	9	14
Inadequate heat	7	11
Not sure	6	10
No or not working smoke detectors	5	8
Prefer not to answer	5	8
Lead paint or pipes	4	6
Environmental concerns	3	4
Neighbors/Other residents	3	4
Physical space	3	4
None of the above	50	79

Displacement (n=159, missing=18)

Almost half (47%) of all respondents moved on average 2 times (range: 1 to 8 moves) within the past 5 years. Of those who moved, 49% are housing burdened and 69% rent. Among housing burdened renters, 78% were forced out for reasons beyond their control (housing costs, eviction, and foreclosure).

To assess if Limited English-Proficient (LEP) caregivers have different experiences, results from the Spanish version of the survey are disaggregated from the overall responses. Among participants who took the survey in Spanish (n=15, missing=2), 87% are housing burdened and rent. 33% of participants who took the Spanish survey moved an average of 3 times in the past 5 years, (range: 2 to 4 moves) for affordability and safety/domestic violence.

Overall, 35% of movers were forced out—32% of those forced out are Spanish-speakers. Since few participants reported moving in the Spanish survey (n=5), all Spanish speakers were also disaggregated from total movers when identifying reasons for relocating (table 8).

<i>All Movers (n=71)</i>			<i>All Spanish-Speakers</i>		<i>Spanish Survey %</i>	
Reason for Moving	%	n*	%*	n	%*	n
<i>Housing Costs + Evicted + Foreclosed</i>	35	25	32	8	12	3
Needed more space or stability	31	22	18	4	9	2
To be closer to education and jobs	31	22	23	5	5	1
Rent or Home taxes too expensive	30	21	38	8	14	3
To be closer to family and friends	20	14	29	4	0	0
Purchased home	9	6	17	1	0	0
To be closer to social services	6	4	25	1	0	0
To be closer to stores and facilities	6	4	75	3	0	0
Better public transportation	6	4	25	1	0	0
Ethnic or racial tension in my neighborhood	6	4	50	2	0	0
Family and friends had moved out of the neighborhood	4	3	66	2	0	0
Eviction (landlord forces move)	4	3	0	0	0	0
Foreclosure (unable to pay mortgage or landlord foreclosed on)	1	1	0	0	0	0
Wanted to be closer to places of worship	1	1	0	0	0	0
Air Quality	1	1	0	0	0	0
*proportion of everyone who moved for reason Total Movers: 71 Didn't move: 79 Missing: 27			n=17 moved 35 Spanish-Speakers (28 bilingual English)		n=5 moved 15 Spanish Surveys Missing: 2 (7 LEP, Spanish only)	

Moving in the Future

To assess expected residential mobility as a stressor, participants were asked about relocating in the future.

Top reasons caregivers would move from their current residence are related to affordability and proximity to social capital (table 9). Half of participants “often” or “always” worry about increased housing costs and 35% “often” or “always” worry about being forced out. Additionally, 36% report a “moderately” or “extremely likely” chance of needing to move from their current residence within the next 5 years.

Among caregivers who took the Spanish survey, 85% “often” or “always” worry about increased housing costs and 39% “often” or “always” worry about being forced out. Half indicate a “moderately” or “extremely likely” chance they would need to move from their current residence within the next 5 years.

Table 9: Reasons Would Leave Current Residence Within Next 5 Years			
Displacement Type	Reason would move	%	n
Forced, Indirect, Economic	Rent or Home taxes are too expensive	43	79
Voluntary	To be closer to family and friends	23	36
Voluntary	To be closer to education and jobs	20	31
Responsive, Cultural	Ethnic or racial tension in my neighborhood	11	18
Responsive, Cultural	Family and friends moved out of the neighborhood	10	16
Forced, Indirect, Economic	Foreclosure (unable to pay mortgage or landlord foreclosed on)	9	14
Forced, Direct, Physical	Eviction (landlord forces move)	8	12
Voluntary	Buying a home	8	12
Responsive, Cultural	Stores and businesses moved or closed	7	11
	No plans to move	7	11
Voluntary	To be closer to stores and facilities	6	10
Voluntary	Better public transportation	6	10
Responsive, Cultural, Voluntary	To be closer to places of worship	6	9
Voluntary	To be closer to social services	4	7
Voluntary	Better space/Accessibility/Safety	4	6
Responsive, Cultural	Places of worship are no longer in the neighborhood	3	4
	Other (crisis, personal, greenspace)	4	7
	Prefer not to answer	10	16
Responded: 158 Missing: 9			

Needs/Barriers

OBCC is opening a new clinic to be closer to families who have already been displaced, but the original Yesler location remains the most preferred place to get pediatric care (table 10). Those who indicated preference for Yesler come from full income range (less than \$20,000 to over \$100,000) and 28% live outside of Seattle.

Location		%
1	Yesler	70
2	Othello Square	46
3	Seattle Children's	37
4	Telehealth	35
5	School Based	3

Top barriers to accessing health services include work, availability of provider/clinic hours, transportation, school activities, and childcare. Caregivers were asked what current services are needed but not receiving and what services they want available at OBCC. Services needed and wanted indicate families desire more wellness support. For a summary of services used, needed, and wanted, see table 11.

	Using	Need	Want at OBCC	Will use at Othello Square
1	Medical	Fit 4 U (swimming and cooking classes)	Food/Groceries	Medical
2	Dental	Mental Health	Financial Mentoring	Dental
3	Mental Health	Nutrition	Child Care	Fit 4 U
4	Women, Infants, Children Nutrition (WIC)	Dental	Support with stressful caregiving responsibilities	Gym/Movement Room
5	Nutrition	Mindfulness and Compassion	Transportation	Mental Health
6	Sickle Cell Program	Parent-Child Interactive Therapy (PCIT)	Employment advice	Nutrition
7	Parent-Child Interactive Therapy	Group therapy/Support Groups	Gender-Affirming Care	Tiny Tots Daycare, PT/OT

Other services caregivers want available at OBCC include Child Life Services, courses on child development, social skills, therapy play, and speech language pathology. Physical and occupational therapy (PT/OT) were also indicated as a need and will be offered at Othello Square.

Mental Health

Mental health care was the second most needed service. Of caregivers who indicate a need for mental health, 33% of want their child to see a mental health provider at least monthly.

Gender-Affirming Care

Caregivers were asked what, if any, gender-affirming services they would like OBCC to offer.

Table 12: Gender-Affirming Care Wanted	%	n
Support groups for transgender or gender diverse youth	12	20
Support groups for parents of transgender or gender diverse youth	9	16
Mental health support around gender	9	16
Mental health support around gender for family members	6	11
Hormone therapy	4	7
Puberty blockers	4	6
Menstrual suppression	3	5
Prefer not to answer	5	9
Other (conversations and support on identity, gender)	1	2

Among all caregivers, 20% indicated desire for having gender-affirming services available at OBCC. These caregivers come from the full income range (less than \$20,000 to over \$100,000) and all ethnic/racial groups. Top services wanted are support groups for youth and families, mental health support around gender, and support to make gender identify commonplace by discussing in well child appointments (table 12).

Transportation (n=168, missing=9)

93% of participants travel by car to OBCC and can get to the clinic from home within 1 hour. Public transit can be taken easily by 54% of participants and need an average of 2 connecting transfers to reach the clinic.

Similarly, 94% of participants who took Spanish survey travel by car to OBCC and 83% can get to the clinic from home within 1 hour. While 47% of Spanish respondents can travel to OBCC by public transit easily, 73% need to transfer 2+ times—twice as much as the 37% of overall respondents who need 2+ connecting transfers.

Table 13: Traveling to Othello		%
1	Car	80
2	Light Rail	25
3	Bus	18
4	Walk/Wheelchair	9
5	Bike	2

Aim 2: Perceptions of Telehealth

With telehealth, travel to the clinic is unnecessary. Technology participants readily have available for telehealth are: cell phone (84%), email (77%), internet (74%), computer or tablet (71%), webcam (61%) and telephone (25%). Three percent did not readily have access to any of these technologies.

Most respondents felt “comfortable” or “very comfortable” using technology to communicate with their health care provider: 80% via phone, 73% by email, and 69% by webcam. Preferred communication methods were ranked from the most to least favorable: email, cell phone/text, phone, MyChart electronic health portal, and mail. Though 34% report no challenges to using telehealth, the top barriers included: limited internet access, video capabilities, comfort with technology and privacy/safety concerns at home (table 14).

Attitudes toward telehealth were assessed to understand families’ receptiveness to receiving healthcare through technology.

	%	n
Internet access is limited	17	28
Video capabilities	8	13
Not comfortable with technology	8	13
Privacy/safety at home	7	12
Not comfortable being seen	5	8
Scheduling	4	7
Child’s attention span	4	7
Prefer physical examination	4	7
Limited cell phone minutes/data	4	6

n=155	Not beneficial			Beneficial		Excluded
Acceptability	Not at All	Slightly	Somewhat	Moderately	Extremely	Prefer not to answer (PNA)
n	6	6	33	62	48	8
%	4	4	21	40	31	Responded: 163, Missing: 14

Acceptability of telehealth was measured on a 5-point Likert scale and dichotomized into beneficial or not beneficial groups (table 15). Neutral (“somewhat”) responses do not indicate any perceived benefit and therefore combined into the not beneficial group. Overall, after excluding PNA, 71% of participants view telehealth as beneficial.

Key themes that emerged from free-text responses to open-ended questions on telehealth include benefits of convenience through flexibility with time, less stress from traffic and parking, and staying connected while staying from COVID-19. Barriers to telehealth include fear of missed information from lack of physical exam, children’s limited attention span, technology/connection issues and comfort on screen. Ambivalence on the efficacy of telehealth also emerged. Many indicated preference for in person appointments over telehealth for reasons such as:

“Patients need the in-person security to know their health matters. That they’re getting quality care how you can get quality care in two different places” —Participant 34, English

For more representative quotes of themes, see table 16.

Table 16: Perceptions of Telehealth

Theme	Representative Quotes	n
Efficacy of Telehealth		
<p>Efficacy: Appropriate for some situations</p>	<p>“I would like to use email with the doctor and <u>depending on the health situation</u> have an in person medical consultation or telehealth is ok if observation is not needed” —Participant 167, Spanish</p> <p>“Telehealth is both <u>helpful and not depending on my child’s circumstances</u>. If it’s an urgent or non-urgent matter makes All the difference and at that point the doctor will inform me if I need to bring in the kids for an in person visit or diagnose over the phone.” —Participant 12, English</p> <p>“It is nice to follow up & discuss our daughter’s health but they are not able to properly examine her. Therefore <u>I am not 100% confident in telehealth assessments.</u>” —Participant 38, English</p>	16
<p>Efficacy: Preference for in person</p>	<p>“They can’t really [improve the telehealth experience]. Patients need the in person security to know their health matters. That they’re getting quality care <u>how can you get quality care in two different places</u>” —Participant 34, English</p> <p>“Challenge with telehealth is that for most scenarios, seeing a doc in person is more reassuring. Also, a physical touch is almost always needed for checking kids conditions.” —Participant 133, English</p> <p>“I don’t like it very much because I think the doctor can’t meet my needs online.” —Participant 119, Spanish</p>	75
Barriers to Telehealth		
<p>Barrier: Child’s Attention Span</p>	<p>“Child doesn’t want to stay in front of screen” —Participant 165, English</p> <p>“Children’s in general <u>limited attention span</u> using online tools vs. in person makes visit less effective.” —Participant 111, English</p> <p>“provider can’t accurately see everything since the child doesn’t always want to sit in front of the screen” —Participant 165, English</p>	7
<p>Barrier: Missed Details/Lack of Confidence in Virtual Care</p>	<p>“I don’t like the fact that I can’t see the health providers in person. Because when you’re sick it’s better for a professional to check you out in person. I’m worried about getting an incorrect diagnosis as it’s not a face-to-face appointment.” —Participant 99, Spanish</p>	23

<p>Barrier: Missed Details/Lack of Confidence in Virtual Care</p>	<p>“It is nice to follow up & discuss our daughter’s health but they are not able to properly examine her. Therefore <u>I am not 100% confident in telehealth assessments.</u>” —Participant 38, English</p> <p>“Doctor gets limited information as can’t see/touch directly. Lack of in-person makes it hard to have real communication.” —Participant 161, English</p> <p>“Care doesn’t feel personal and if there are issues that need to be diagnosed in person (e.g. a skin allergy that would be better assessed by seeing it in person).” —Participant 47, English</p>	
<p>Barrier: Privacy/Comfort</p>	<p>“<u>Not super comfortable with the camera.</u> Sometimes physically seeing the doctor in person is advantageous.” —Participant 99, English</p> <p>“<u>Not feeling a connection and feeling comfortable</u> with provider through the screen” —Participant 19, English</p> <p>“I have inconsistent internet access due to living in a rural area. Also, my sons have ADHD and ASD. <u>They do not communicate well over webcam. They hate it.</u>” —Participant 164, English</p> <p>“I think my children will be <u>less likely to speak/share</u> then they are in a private exam room with Dr. in person” —Participant 81, English</p>	<p>14</p>
<p>Barrier: Technology/ Connection Issues</p>	<p>“Just the ease of getting set up. There is a glitch and I will get it situated but it is an extra step/barrier when something doesn’t work right. Requires follow up (and remembering to follow up).” —Participant 54, English</p> <p>“...the <u>internet disconnected</u> or zoom’s network or being in service as it did in August this year. It could also be that the mobile device that we were going to use was downloaded did <u>not have anywhere to recharge the cell phone, computer or not have access to the email</u> because “<u>we forgot the password</u>” etc. A phone call from the provider to the patient or second phone contact would help a lot if the patient has not connected in the first 5 minutes of the appointment (it is only a suggestion)” —Participant 166, Spanish</p> <p>“<u>Internet service was spotty.</u> But clinician did the best she could. She is a great doctor and we are so appreciative of her and OB.” —Participant 161, English</p> <p>“Knowing exactly <u>where to find links and how to use the system</u>” —Participant 18, English</p> <p>“The <u>link didn’t work</u> but the provider reached out to us and sent a different link” —Participant 21, English</p>	<p>17</p>

Benefits of Telehealth		
Benefit: Convenience	<p>“It’s a lot <u>less stressful</u>. When I drive all the way to Seattle, there is traffic and I live in Auburn.” —Participant 21, English</p> <p>“Telehealth allows us more <u>flexibility</u> in making it to our appointment. Drama happens and Telehealth allows us to do our appointments rather than cancel last minute.” —Participant 164, English</p> <p>“It’s been a very positive, easy and successful experience. It was wonderful <u>not having to commute</u> or put myself, my child, and the providers at greater risk through an in-person visit when our needs could be met through Telehealth.” —Participant 132, English</p> <p>“Based on what the issue is, telehealth <u>could help resolve things quicker, lessen wait and transportation time</u>. The convenience reduced being at home would be great.” —Participant 27, English</p>	77
Benefit: Safety with COVID-19	<p>“Telehealth is <u>convenient and safe</u>, pandemic wise. It is also easier to make those appointments, because I don’t have to find a way there.” —Participant 24, English</p> <p>“It provides an outlet for mental health to give the kids a temporary solution during quarantine. Something is better than nothing. It’s an <u>adequate bridge during Covid quarantine</u>.” —Participant 150, English</p> <p>“...convenience is not <u>needing to expose my kids during a pandemic</u> but overall I think <u>in person appointments are great</u> because my kids are different in in person interactions and a lot of checking off development milestones is about having a doctor check in and give feedback.” —Participant 62, English</p>	40
Benefit: No Parking	<p>“It works very well as we do not to have to go to the clinic <u>avoiding delay and parking</u>. Besides that, if my children are away from me but have access to a phone or computer ‘we could both <u>connect with the doctor’s appointment no matter the distance</u>’ (I’m not sure if the link I receive could be shared with another email address or cell phone)” —Participant 166, Spanish</p> <p>“I do like the fact you will be able to see a doctor especially if it’s for something that’s not as urgent and <u>I won’t have to drive and look for parking</u>.” —Participant 39, English</p> <p>“It’s been a very positive, easy and successful experience. It was wonderful <u>not having to commute</u> or put myself, my child, and the providers at greater risk through an in-person visit when our needs could be met through Telehealth.” —Participant 132, English</p>	7

n=number of caregivers mentioning theme in free-text response

Aim 3: Acceptability of Telehealth Based on Previous Use

About 33% of caregivers had completed a telehealth visit with OBCC by the time they took the survey. Telehealth is more acceptable to those who had not used telehealth (73%) than those who had (67%). Acceptability among caregivers who had not used telehealth is also higher than previously predicted in sample size calculations (75% compared to 49% predicted).

A chi-square test of independence found no statistically significant association between experience with telehealth use and view of its acceptability (beneficial or not beneficial), $X^2 (N = 155) = 0.509, p = 0.48$.

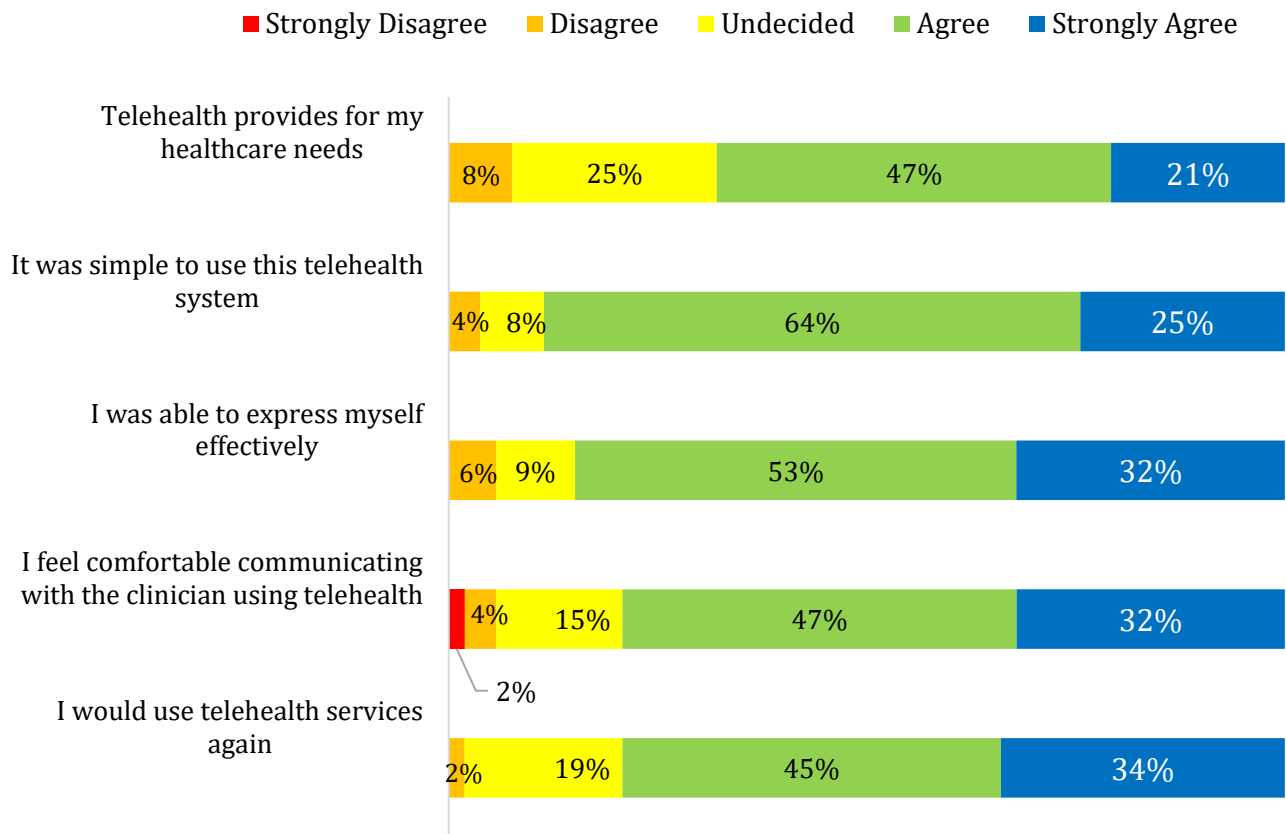
Table 17: Acceptability of Telehealth Based on Prior Use

	Used Telehealth	Not Used Telehealth
Beneficial (n=110)	35 (67%)	75 (73%)
Not Beneficial (n=45)	17 (33%)	28 (27%)
Excluded* (n=8)	*2 PNA	*6 PNA
Total	54 (*52)	109 (*103)

Telehealth Usability Questionnaire (TUQ)

Of the 54 participants who completed a telehealth visit with OBCC, 53 responded to an abbreviated TUQ to assess perceived usefulness, ease of use and satisfaction (figure 17) (Parmanto et al., 2016).

Figure 17: Telehealth Usability Questionnaire (n=53)



Aim 4: Families’ Suggestions to OBCC

In the last section of the survey, caregivers had space to share anything that would help OBCC better support them. Besides level of support felt, key themes that emerged include needing support for stressful caregiving situations, customer service, suggestions for improvement, and gratitude for OBCC. For illustrative quotes of themes, see table 18.

Caregivers want more support during stressful caregiving situations, especially for single parents, such as support groups to provide 1-2 hours of breathing space. A simpler process of connecting to care also helps. For telehealth, caregivers suggest including the appointment link in all reminders and calling the second contact if a patient is not connected within 5 minutes of the scheduled time to troubleshoot. When referring out for services, only specialists that accept their insurance/new patients should be listed. Guidance navigating disabilities services and education for kids and adults were also requested.

In clinical settings, caregivers want providers to be attuned to domestic violence and model discussions on mental health and gender so families can continue conversations to normalize and reduce stigma:

“Quality discussion or Q and A at well child appointments. By opening a discussion it will build trust and might be the only safe place a child can ask questions or chat about gender. Normalizing talk about gender is important. It also teaches families how to talk about it.”

–Participant 63, English

Spaces caregivers would like access to include: community rooms where non-profit agencies could offer classes related to child development, financial mentoring, education, employment, housing, support, citizenship, etc.; therapeutic playroom; more accessible restrooms or secure areas large enough to change clothes in with assistance. Child Life Services such as activities for preteens and afterschool programs were also suggested.

Table 18: Suggestions to Better Support Families

Theme	Representative Quotes	n
Well Supported	<p>“Excellent; our biggest challenge these days is just getting in to see our provider” —Participant 94, English</p> <p>“I love caring for my son and I feel like I have a lot of support with Odessa brown” —Participant 36, English</p> <p>“I feel very support, We love the Pediatrician we have now. She help us in many ways, Always is there for us or concern we have. My children love Odessa Brown. It is one of the best clinic we ever have.” — Participant 14, English</p>	45

Supported	<p>“At this stage I feel supported despite COVID-19”—Participant 62, English</p> <p>“I’ve always felt very ‘heard’ at Odessa Brown. We don’t come in frequently, but when we do, I’ve felt supported and respected, thank you.” —Participant 27, English</p> <p>“Well, their support is good and I’m comfortable with the clinic they do a good job” —Participant 127, Spanish</p>	40
Somewhat Supported	<p>“I’m pretty isolated and my family is not too near/available. Thank goodness for an awesome neighbor and sometime available friend here and there. My coparent continues to make my life pretty darn difficult so it feels the opposite of support or co-anything and actually creates more stress and labor and barriers to my own wellness/care...which is hard and hard to stay hopeful about.” —Participant 97, English</p> <p>“Somewhat, some staff I haven’t interacted with are very caring and let me know I am doing a good job taking care of my baby” —Participant 139, English</p> <p>“Somewhat. Child care is very expensive in Seattle so it tends to be hard to get the necessary relief.” —Participant 45, English</p>	9
<p>Need Support</p> <p>Isolation</p> <p>More help for single parents</p>	<p>“I need more support I’m a full time caregiver to my grandmother” —Participant 64, English</p> <p>“I feel supported, but Covid has made me feel more alone, isolated, and overwhelmed.” —Participant 76, English</p> <p>“I feel alone and depleted. I stay up too late because I’m unhappy and stressed. I am so angry about my situation and life.”—Participant 164, English</p> <p>“Support is always needed. I am a single parent with a child of the other gender. They have questions and concerns that I’m not able to answer.” —Participant 56, English</p> <p>“More help with single parents” —Participant 96, English</p>	13
Suggestions	<p>“It’s very difficult being a single parent with no family or friends. Even just an occasional hour or two a week breathing room would be so helpful.” —Participant 26, English</p> <p>“Domestic violence training for staff to better support my child and protect medical records privacy”—Participant 99, English</p> <p>“Have resources in Odessa brown on available clinics when referring out. It’s very complicated for me when referred, I still have to look for clinics that accept apple health and ask my child’s provider to send the referral. Today it has taken me more than 3 years to look for an allergy referral” —Participant 126, Spanish</p> <p>“Improving interpreters”—Participant 121, Spanish</p>	12

	<p>“I wish there was a place to change my teenage kiddo who wears diapers in a safe and secure bathroom.” —Participant 146, English</p> <p>“Easy information available about education for parents. I feel lost and embarrassed in trying to go back to school.” —Participant 63, English</p> <p>“I would like them to have community rooms so that non-profit agencies could give other classes related to the development of our children” —Participant 166, Spanish</p>	
Customer Service	<p>“The departments ie; nurses via booking staff should be on one accord of what is the process”—Participant 6, English</p> <p>“Be nicer at appointments” —Participant 2, English</p> <p>“Why can we not reach the receptionists at Odessa front desk directly, when we call??? Why do we have to go through the scheduler even when we do not want to” —Participant 46, English</p> <p>“Our experience with Odessa brown is good, the only issue is getting in touch with nurse line- leave message and being available when they return call.” —Participant 108, English</p> <p>“My experience this week when I went was THE WORST! ... I’ve been going to Odessa Brown since 2010 and I have never been so disrespected in my life. <u>I’ve never had a problem with Odessa Brown but since I started with this guy he’s always had a problem with me.</u> I’ve always wanted to write a complain on him but I was like no just give him a chance but he crossed the line yesterday.” —Participant 50, English</p> <p>“I feel 99% of the providers are VERY SUPPORTIVE AND HELPFUL... <u>it really only takes one person to make a wonderful caring clinic seem uncaring or unavailable.</u> To everyone else I have met at this clinic, they are the most compassionate and wonderful people. I am very grateful for the care they provide and the resources they have.” —Participant 47, English</p>	7
Gratitude	<p>“We LOVE the staff at OBCC. We have been going to them for over 17 years.” —Participant 136, English</p> <p>“Very - OBCC is a special and wonderful place that is very affirming of all families. I’ve always felt supported as a caregiver by her entire care team.”—Participant 132, English</p> <p>“We love Odessa Brown!”—Participant 154, English</p> <p>“Thank you for all the changes and efforts for a better future for all, starting with the most vulnerable ‘our children, the disabled and the elderly’” —Participant 166, Spanish</p> <p>“Odessa brown is just wonderful! we are thankful that we chose this for our kids care.” —Participant 133, English</p> <p>“Odessa Brown has been a really valuable source for my daughter and I.” —Participant 154, English</p>	12

n=number of caregivers mentioning theme

V. Discussion

Gentrification and displacement are unsettling processes that bring uncertainty and threaten stability. Changes in the environment disrupt protective factors of mental health that are key for wellbeing such as emotional resilience, social connectedness, and self-efficacy (Fullilove, 2016; Keene & Geronimus, 2011). Children are particularly vulnerable to difficulties of housing instability, with challenges including poor sleep, academic performance, social connection, and caregiver support (Cutts et al., 2011; Kingsley et al., 2012).

Rapid gentrification of Seattle has pushed many families further south. However, OBCC's patient demographics have remained relatively unchanged between 2012 and 2020, though fewer patients were seen in 2020 likely because of the COVID-19 pandemic (Figure 15). During this period, OBCC had a 4.2% decrease in African American patients and 1.1% increase in non-Hispanic white patients—reflecting the regional demographic changes from gentrification (PSRC, 2018). Despite more options for health services widely available, families' willingness to spend extra time and energy in transit to continue care with OBCC validates the significance of not only a comprehensive children's community health center but also one that understands the history and complexity of challenges families of color navigate.

Caregivers report the major challenge of commuting to OBCC is the lack of parking available to accommodate the increasing number of patients driving to the clinic. Currently, 93% of participants drive to OBCC. Despite the future Othello clinic's location near mass transit, 80% of our survey participants plan to drive to Othello because Light Rail and Metro lines are not easily accessible for people in South King County. Reaching a Light Rail station from Auburn or Kent requires a long drive and wait time for transit. The direct commute to OBCC by car is more logical and convenient. When construction is completed, Othello Square will only have one level of below-grade parking with 50 spaces for residential use and 50 spaces for commercial use (Absher, 2019). Therefore, limited parking will continue to be a barrier to getting care at both Yesler and Othello clinics.

Many caregivers express love and gratitude for OBCC as a “wonderful caring clinic” (participant 47, English), with a majority feeling supported or well supported (table 18). In addition to current services, other **opportunities to enhance support for families include:** adding tailored support groups for caregivers (single parents, affinity groups, children's needs, etc.), revisiting domestic violence training for staff, developing strategy for telehealth engagement to screen for domestic violence, availability of staff to check families in for virtual appointments, and increasing capacity for more staff, especially mental health providers. Families would also benefit from more wellness classes like Fit 4 U (swimming and cooking classes) and Mindfulness and Compassion, and resources in the clinic on housing rights for tenants, housing/utilities assistance programs, and information on all levels of education for youth and adults.

Housing

Housing instability is a major predictor of displacement and adverse health outcomes. Survey results indicate OBCC families are more affected by gentrification than the general Seattle population. Nearly half (49%) of survey participants spend over 30% of their income on housing and therefore qualify as housing burdened, a significant factor in housing insecurity and displacement. Comparatively, only 29.4% of Washington state residents report housing insecurity (Stahre et al., 2015). Among survey participants who moved in the past five years, 35% were displaced for reasons beyond their control. In comparison, 26% of movers in Seattle overall were forced out (PSRC, 2020). This aligns with findings from Berkeley's Santa Clara Displacement Study, where people who are housing burdened are more at risk for displacement due to affordability (Zuk et al., 2017). Our study confirms high risk of housing instability among OBCC families.

Anticipated displacement is a significant stressor for participants, with over one third reporting persistent worry of being forced out or moving in the next 5 years. Financial stress is also prevalent, with half of participants constantly worrying about rising costs. This likely explains caregivers' requests for financial mentoring as a service at OBCC. Additionally, mental stress of displacement is exacerbated by poor housing conditions. Half of participants report substandard housing conditions such as bugs, mold, water leaks, and inadequate heat—all of which are associated with higher rates of psychological distress (Sass et al., 2017; Krieger & Higgins, 2002).

Housing burden fell more heavily on renters (62%), who have been found to be more vulnerable than homeowners to mental health effects of unaffordable housing (Mason et al., 2013). Since more families rent than own, having resources available for tenants in the clinic can inform families of their rights to improve conditions and be in stable, healthy housing. This is especially important because families with kids are at higher risk of housing discrimination and eviction (Desmond et al., 2013). HomeSight (co-located in Othello Square), King County Bar Association's Housing Justice Project and Tenants' Union of Washington are valuable organizations nearby that can advocate for families and advocate against displacement. Housing instability indicated in the high prevalence of housing burden, renters, relocations, and physical housing issues affirms the need for a second health home co-located with several service organizations to improve accessibility and coordination of essential services.

Telehealth

While telehealth is acceptable to OBCC caregivers for its convenience and protection from virus exposure during the pandemic, most still prefer in-person exams, citing missed details as a major risk of telehealth. Textual analysis of comments revealed that the benefit of telehealth depends on the purpose of the appointment. Confidence in care delivered through telehealth is inferior to in-person exams without physical connection. These views are in line with previous studies that found patients without exposure to telehealth have concerns regarding the quality of care and diagnoses made virtually (Jenkins et al., 2015; Fatehi et al., 2015).

Prior use of telehealth seems unrelated to its acceptability. No statistically significant difference on perceptions of telehealth was found between those who had previously used telehealth and those who had not. Among those who had used telehealth prior to the survey, 33% reported that telehealth does not meet their medical needs, but a majority reported having positive experiences with telehealth with 80% saying they would use it again. This suggests other conditions influence caregivers' perception and willingness to use telehealth. Further exploration is needed to understand the circumstances families would engage with telehealth. Caregivers want appointment links in every reminder and noted that navigating through the MyChart portal is an extra challenge. Caregivers reported preference for communicating by email and texting. Together these findings suggest that single use encrypted links without the portal could simplify the process to using telehealth.

Low-income kids in gentrifying areas have higher diagnoses of anxiety and depression than low-income kids in non-gentrifying neighborhoods (Dragan et al., 2020). Prior to the pandemic, mental health services were already oversaturated. Uncertainty of displacement and unprecedented times intensifies the need for psychosocial support. While in-person therapy is ideal, telemental health can improve access to counseling. As one caregiver expressed, telehealth can also keep youth connected to mental health support: "I don't like it [telehealth] more but I'm very happy that my daughter is able to maintain a close, working relationship with her therapist" (Participant 154, English).

One third of caregivers want their child to see a mental health provider at least monthly, confirming the desire for regular behavioral support. Telehealth could be useful in providing recurrent mental health care. In addition to simplifying the connection process, presenting telehealth as a relevant tool can encourage use so more people can benefit from its convenience. A qualitative short cultural assessment (SCA) to understand the influence of identity on engagement with telehealth can improve its usage (Ramos & Chivas, 2019). A SCA assesses beliefs and attitudes toward digital approaches to care through cultural values, customs, and beliefs to determine expectations of telehealth. Findings from a SCA can guide the framing of telehealth with appropriate words to improve its acceptability.

While SCA's elements on comfort/familiarity with technology and pros/cons of telehealth informed this study, integration of SCA into the survey was limited. Several aspects of SCA require conversations to fully elicit information on culture and identity. For example, the SCA asks how an individual identifies and "In your particular case, what aspects of this identity do you think make a difference for your [use of telehealth]?" Getting the intended insight from this question requires a dialog where probes and clarification help identify potential areas to culturally adapt telehealth implementation. Greater engagement with telehealth can increase access to mental health support, which is especially important in Washington State, where high rates of mental illness are inadequately supported, even among those with insurance (Nguyen et al., 2018).

Gender-Affirming Care

Even in the relatively small sample of the entire OBCC patient population, 20% of survey respondents from all ranges of income and demographics endorsed wanting OBCC to offer gender-affirming services. One caregiver noted, “My child does not need these services at this time, but we are interested in Odessa Brown providing them for all families who need them.” (Participant 160, English). A larger need for gender-affirming care likely exists, supporting the integration of gender and mental health care into primary care.

Integrating gender and mental health into primary care allows universal anticipatory guidance to normalize conversations on affirming identity, mental wellness, positive coping skills and resilience. Universal education during wellness visits helps families incorporate gender into common knowledge and facilitate early affirmation. Increased dialog and greater social acceptance can improve health outcomes for gender diverse OBCC patients. Hopefully, conditions improve with reduced stigma and discrimination to prevent harmful conditions: among transgender residents in Washington in 2015, 28.0% were in poverty, 26.0% experienced housing discrimination, and 37.0% were unhoused at some point (James et al., 2016).

Health Home Model of Community Health

Survey findings underscore the need for OBCC’s new health home model of care. Keeping communities healthy in an ever-changing environment requires collaboration, trust and empathy to treat symptoms of comorbidities often resulting from accumulation of systemic failures. OBCC is a special health home that collaborates with patients to challenge health inequities by highlighting their strengths to show gaps and patterns that create disparities. OBCC also fills those gaps with direct care and resources that bridge support outside of the clinic to treat symptoms’ root causes in the environment.

The integrated health home at Othello Square is a robust approach to help families heal and thrive. It is especially needed to support families through a longer recovery period, with residual challenges of the pandemic compounding stressors from gentrification. Supportive care in and outside of the clinic—including education, housing, employment, nutrition support—are essential for health. Survey participants highly requested social services such as groceries, guidance on education and disabilities services, and financial mentorship. While these services typically are not in the medical model, social determinants of health have long been integrated into OBCC’s practice of “radical healing [which] refers to a process that builds the capacity of people to act upon their environment in ways that contribute to well-being of the common good” (Ginwright, 2016).

Healing Centered Principles

OBCC has been innovative in its holistic approach to healing and models principles of CARMA (culture, agency, relationships, meaning, and aspirations) (figure 18). As a healing establishment that fosters social connections and community cohesion, OBCC buffers against weathering damage from stress (Gibbons, 2019). Its health home model supports the whole child through inclusive and culturally relevant services that address roots of illness beyond medicine. Emphasis on social determinants of health, trauma-informed care, and restorative justice helps families heal and thrive outside of the clinic.



Figure 18: CARMA Principles of Healing Centered Care (Ginwright, 2016)

OBCC recognizes the importance of healing communities, not just treating symptoms with pharmaceuticals. Health systems pushing for efficiency restrict the time patients can spend with clinicians. Brief assessments for housing instability, environmental hazards and safety in health examinations could give clinicians more context to the patient history and inform delivery of anticipatory guidance (Rollins et al., 2012). Clinicians should continue working with neighborhood organizations to validate families' experiences, teach about toxic exposures and ways to mitigate adverse outcomes. Additionally, families would benefit from getting connected to appropriate resources like tenants' unions, domestic violence programs, mental health services, and information on all levels of education for youth and caregivers.

Through the integrated health home, OBCC can better support against the latest federal gentrifying tactics: school zones/educational redlining and Opportunity Zones. Distribution of resources continues to be predicted by residential segregation patterns. School attendance zones are the "new redlining," where boundaries resemble HOLC security maps and neighborhood desirability is ranked by public school performance (Martin, 2016; DeRoche, 2020). Resources available largely determine school performance and are proportional to the area's tax base. School zones perpetuate inequities by attracting more wealthy residents to neighborhoods with higher ranked schools, thereby concentrating funding in the same desirable areas, while students in lower resourced areas continue to lack adequate support. OBCC's key performance indicator is children's readiness for school and can be used in advocacy for resources and enrichment opportunities.

Congress created the latest urban renewal program in the 2017 Tax Cuts and Jobs Act with Opportunity Zones that encourages private investment into distressed areas with tax deferrals and few guidelines (Kimbo & Philips, 2018). The Othello Square health home can be a model for

investing in communities from the bottom up—centering their needs from the start—to improve conditions and minimize displacement from development with protections to keep communities in place. By opening up with community services, OBCC strengthens partnerships and remains a constant force in bolstering the wellbeing of the entire family.

Supporting Caregivers

Gentrification and displacement can undermine protective factors of mental health such as emotional resilience, social connectedness, and self-efficacy that are key for wellbeing by fragmenting communities (Choi et al., 2018; Gibbons, 2019; Fullilove, 2016). Survey participants' strong interest in support services for caregivers, especially for single parents, reinforce the importance of supporting caregivers in healing because their well-being directly influences the child's health and mental wellness (Bennet et al., 2012; Ofenedu, 2017). Caregiving is fatiguing, especially amidst stressors from gentrification and a pandemic. Offering support groups or single session events integrating mindfulness or parent child interactive therapy (PCIT) could give caregivers respite. Even if online, these sessions could strengthen social connections that are protective factors of mental wellness. PTSE requires a long healing process and adults must heal themselves in order to support youth in realizing their aspirations, strengths and self-efficacy (Ginwright, 2016, 2018). Qualitative exploration of protective factors of mental wellness and community can better determine when and what support at OBCC would be helpful for caregivers.

Domestic Violence/Housing Safety Screening

Unfortunately, risk for domestic violence (DV) is especially high in times of crises and stress. Challenges and uncertainty from both gentrification and the COVID-19 pandemic has inadvertently created a DV pandemic (Campbell, 2020). Caregivers reported moving within the past 5 years for safety concerns and suggested OBCC staff revisit DV training to protect patient security.

Few formal best practices for DV screening over telehealth exist, especially for youth and people with Limited English Proficiency. General privacy precautions remind clinicians to assume a patient is never alone, their space or device is accessible to others, and only professionals should serve as interpreters, not families (Lu & Bollinger, 2020). The key recommendation to safely address DV over telehealth is universal education, where everyone is asked closed-ended questions about stress, relationships, and challenges (Futures Without Violence, 2020). Since immediate intervention in high-risk situations is not possible over telehealth, developing a safety plan once DV is identified also advised (Futures Without Violence, 2020).

Screeners normally used in clinic should be avoided to prevent tipping off perpetrators (Jack et al., 2020). However, screening can be challenging without a standard tool. Chiquita Rollins and colleagues found housing instability is a strong predictor of DV and poor health using a survey tool that could be adapted for OBCC's patient population (Rollins et al., 2012). A tailored screener sensitive to experiences of OBCC families can highlight aspirations and facilitate healing with a

positive focus that empowers rather than problematizes (Ginwright, 2018). In response to challenges and changes from the COVID-19 pandemic, Susan Jack and colleagues developed a guide for providers with tips on using telehealth to recognize DV, discretely assess for harm, and practice self-care (Jack et al., 2020).

Suggestions for Provision of Services

The last part of the survey asked caregivers to share anything that would help OBCC better support them (see table 18). Several caregivers expressed gratitude in free-text responses that indicate OBCC is a beloved community resource: “OBCC is a special and wonderful place that is very affirming of all families. I’ve always felt supported as a caregiver by her [my child’s] entire care team” (Participant 132, English) and “there should be more children[s] clinic[s] like Odessa brown for kids” (Participant 7, English). Even though health systems driven by efficiency and profit restrict allocated time with patients, OBCC has used clinical interactions as a unique opportunity to buffer against destabilizing forces and promote health beyond medicine. Findings suggest support can be enhanced by:

- Increasing staff capacity for mental health care services and patient education to
 - Teach recognition and techniques to mitigate environmental harms including pollutants and discrimination during anticipatory guidance
 - Screen for housing instability and domestic violence using universal education
 - Normalize stigmatizing topics by modeling how to have discussions on stress, mental wellness, education, caregiving, race, gender, healthy relationships, etc.
- Having resources available on housing and all levels of education
- Offering more wellness courses like mindfulness and compassion, nutrition, and fitness
- Holding support groups or single session events for caregivers to connect/decompress
- Assisting families with limited income and limited English in understanding advantages of telehealth to quell fears or misconceptions associated with virtual visits

Strengths

The significant work of the Odessa Brown Children’s Clinic and Seattle Children’s Gender Clinic to continue providing quality care inclusive for all gives this study meaning. Perceptions caregivers share give direction on how to develop relevant resources and amplify existing services. As OBCC continues to fulfill its mission of being an enduring community partner for both the folks it originally opened up to care for and the growing patient population, exploring telehealth as a tool during the pandemic is timely. The strengths of this pilot exploratory study include a high completion rate of 88%, where 155 of the 177 surveys started were finished. The survey was available in the top two most spoken languages among OBCC patients (English and Spanish). Electronic surveys offered participants flexibility to take part with some degree of convenience.

Limitations

Underrepresentation of caregivers who are essential workers especially limit this study. People on the frontlines keeping society running during the COVID-19 pandemic likely did not have the time or resources to participate. More specific outreach to those without email or mobile phone numbers on file could have increased participation of essential workers. This study was not language inclusive, since only Spanish translations of the survey were available as an alternate option for people with limited English proficiency.

Although invitation to the survey was extended in random order, participants ultimately self-selected to respond, introducing selection bias. By conducting an online survey, responders were more likely to already have access to tools for telehealth (e.g. internet connection, device) than non-responders. Of the 900 caregivers invited, only 17% responded (n=177). The low response rate of 17% shows potential non-response bias, where responders might have different traits than non-responders. However, those who did not complete the survey cannot be characterized because demographic questions were asked last.

Future Work

A qualitative exploration of families' experiences with mental health, gentrification, and telehealth would obtain more in-depth and meaningful insight on protective factors—such as culture, resilience, and community—to promote long lasting positive mental health. Deeper understanding of cultural contexts can better highlight positives to inform support for healing during these disconnecting times. Aside from tangible barriers like devices and broadband, widespread implementation of telehealth requires further evaluation of intangible barriers, such as fears and views on circumstances appropriate for virtual visits. A Short Cultural Assessment or other similar brief sets of questions can elicit families' expectations and barriers to using telehealth and guide effective delivery of telehealth services (Ramos & Chavira, 2019).

VI. Conclusion

Gentrification is a public health crisis and significant environmental injustice. Families of color are unequally displaced and cut off from access to health and other social services. The COVID-19 pandemic has magnified long known truths of structural violence and racism that many OBCC families experience. OBCC has consistently served the needs of resilient families facing complex stressors and trauma and continues to be a critical resource to help families succeed. Despite advancements in science and society, the same issues that OBCC was established to solve still exist: its multicultural community continues to suffer from inadequate opportunities and worse health outcomes. Now, challenges are compounded with gentrification and the consequences of the COVID-19 pandemic.

Gentrification reorients areas to create and accommodate wealth, not community health. OBCC has been innovative to adapt to the changing environment and serve families. Results found higher housing burden and displacement among participants than the regional area, confirming what OBCC has long known and planned to weather—its families have tremendous stamina and endure many socially complex challenges too often resulting from systemic failures. OBCC families are incredibly wise and strong to persist in a culture not designed for BIPOC to thrive, and creative despite inadequate resources to create and maintain health.

This study adds to the growing discourse on gentrification, telehealth, and health. The COVID-19 pandemic amplifies inequities and may accelerate gentrification with the widening gap in wealth and health disparities. As COVID-19 related policies such as rent moratoriums continue to be debated, more families will face even greater challenges and housing instability. Timely, convenient, and affordable psychosocial support is essential to weather the residual effects of the crises that will continue to impact OBCC families disproportionately.

From its founding and grounding in the community, OBCC has been an anchor for generations of families of color. OBCC maintains its commitment to supporting families by expanding its reach to buffer against destabilizing residual effects of the pandemic and gentrification crises. Gentrification and the COVID-19 pandemic are multidimensional phenomena that emphasize the need for interdisciplinary services to improve accessibility and quality of care. Increased strain on resources limits choices and fractures connections of social support, making it harder for families to resist displacement.

OBCC bolsters protective factors of wellbeing by integrating culture, community and social support into care. As Dr. Ginwright explains, “Well-being is both a function of external opportunities such as access to jobs, good education, quality health care, and our capacity to hope for a more equitable, inclusive, and fair society. Both are intimately tied to one another, creating an inextricable fabric of possibility” (Ginwright, 2016). OBCC continues to curate services on the health home model by addressing social determinants of health at a single location to support the whole child and family. The radical activism that created OBCC precipitated from long struggles that continues today. Like the birth of OBCC itself, the opening of Orenda at Othello Square is one answer to tremendous need and signals hope that positive lasting changes will come.

VII. References

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