Leveraging the Housing-Health Nexus: Permanent Supportive Housing Financing Options for Charlottesville's Chronically Homeless

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May 3, 2018
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Leading People Home
TJACH
Thomas Jefferson Area Coalition for the Homeless

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Prepared for:
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On my honor as a student I have neither given nor received unauthorized aid on this assignment.

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Key Terms:

Listed below are several key terms mentioned throughout this report. Please note that many of these definitions have been adopted from the Department of Housing and Urban Development.

Chronically Homeless Individual refers to an individual with a disability who has been continuously homeless for one year or more or has experienced at least four episodes of homelessness in the last three years where the combined length of time homeless in those occasions is a least 12 months.

Community Development Block Grants (CDBG) funds are allocated by HUD to more than 1,100 local and state governments on a formula basis. This money is used by localities for activities such as affordable housing, anti-poverty programs, and infrastructure development.

Continuums of Care (CoC) are local planning bodies responsible for coordinating the full range of homelessness services in a geographical area, which may cover a city, county, metropolitan area, or an entire state.

Emergency Shelter is a facility with the primary purpose of providing temporary shelter for homeless people.

Housing First is an approach to quickly and successfully connect individuals and families experiencing homelessness to permanent housing without preconditions and barriers to entry, such as sobriety, treatment, or service participation requirements. Supportive services are offered to maximize housing stability and prevent returns to homelessness as opposed to addressing predetermined treatment goals prior to permanent housing entry.

Low Income Housing Tax Credit (LIHTC) was created by the Tax Reform Act of 1986 and is currently the largest source of new affordable housing in the United States. The LIHTC program is administered by the Internal Revenue Service (IRS) and gives state and local LIHTC-allocating agencies the equivalent of nearly $8 billion in annual budget authority to issue tax credits for the acquisition, rehabilitation, or new construction of rental housing targeted to lower-income households. The program does not provide housing subsidies, but instead provides tax incentives to encourage developers to create new affordable housing.

Permanent Supportive Housing (PSH) is a housing model designed to provide housing assistance (project and tenant based) and supportive services on a long-term basis to formerly homeless people.

Point-in Time Counts are unduplicated 1-night estimates of both sheltered and unsheltered homeless populations. The 1-night counts are conducted by CoCs nationwide and occur during the last week in January of each year.

Rapid Rehousing is a housing model designed to provide temporary housing assistance to people experiencing homelessness, moving them quickly out of homelessness and into permanent housing.

Safe Havens provide temporary shelter and services to hard-to-serve individuals.

Scattered-Site Housing is assisted housing that is typically dispersed throughout the community and usually rented from a private landlord. It is a form of housing that is publicly funded, but privately managed, typically by a third-party landlord or leasing company, depending on the housing type and the number of units.

Transitional Housing Programs provide people experiencing homelessness a place to stay combined with supportive services for up to 24 months.

Unsheltered Homelessness refers to people whose primary nighttime location is a public or private place not designated for, or ordinarily used as, a regular sleeping accommodation for people.

Executive Summary

In 2017, Charlottesville's Point-in-Time count identified 70 chronically homeless individuals living in the community. Among these 70 individuals, almost all were found in places not meant for human habitation, and the majority were identified to be living with chronic health conditions, disabilities, or both.

At present, Albemarle County is experiencing a dire shortage of permanent supportive housing (PSH) units, and as a result, the Thomas Jefferson Area Coalition for the Homeless (TJACH) has been limited in its ability to provide its chronically homeless clients with viable housing options for the long-term.

Chronically homeless persons are typically among the highest utilizers of hospital, emergency, and ambulatory services, and in Charlottesville they can cost the community, on average, upwards of $30,000-$40,000 per year in hospital charges alone. However, permanent supportive housing options can cost significantly less, at approximately $15,000 per year, often with much better outcomes.

The Thomas Jefferson Area Coalition for the Homeless is committed to making homelessness rare, brief, and non-recurring, however, the lack of available PSH units has made it challenging for TJACH to address the housing and health needs of its most vulnerable clients.

In this report, I provide analysis and recommendations to Anthony Haro, TJACH's Executive Director, surrounding PSH options for Charlottesville's chronically homeless. The overall goal is to provide 60 PSH units in hopes of improving the overall health and associated health expenditures of Charlottesville's chronically homeless population. I propose four policy options that have the potential to address this problem:

1. Hospital Funded Housing
2. Pay for Success and Hospital First
3. Managed Care Capital Investment
4. Status Quo: SOAR Program

I evaluated each policy option with respect to three evaluative criteria: administrative feasibility, timeliness, and cost. I quantified the outcomes for cost and used qualitive estimates for administrative feasibility and timeliness. My analysis shows that option 1, Hospital Funded Housing, provides the greatest benefits in terms of these criteria. Therefore, I conclude that **TJACH should partner with the UVA Health System to finance and develop 60 new PSH units in Charlottesville**. Through developing the infrastructure and funding necessary to make these units available, TJACH will be able to house the majority of its chronically homeless population, and in turn, is likely to improve overall health outcomes, and lower health expenditures for this population for the future.

Problem Statement

In FY 2017-2018, there were 346 homeless individuals served by programs administered by the Thomas Jefferson Area Coalition for the Homeless (TJACH). Of these 346 individuals, approximately 70 were identified as chronically homelessness, and almost all were found to be living with chronic health conditions, disabilities, or both. Currently, there is a dire shortage of available PSH units in the community, and as a result, TJACH has been unable to move the majority of these 70 chronically homeless individuals into a permanent place of residence.

At present, chronically homeless individuals cost the Charlottesville community, on average, $30,000 to $40,000 per year in hospital charges alone, whereas housing interventions, such as PSH, can cost significantly less, at $12,000 to $15,000 per person per year, often with much better outcomes. For many years, TJACH has been focused on providing new, innovative programs to provide better access to housing and healthcare for the chronically homeless in the Charlottesville community. Recognizing that access to safe, quality, affordable housing and healthcare constitutes one of the most basic and powerful social determinants of health, TJACH is looking for new ways to provide greater access to PSH and case management services for the homeless community. ***Most importantly, TJACH is interested in how to provide cost-effective, equitable access to housing that improves health and housing stability, while also reducing health expenditures.***

Background & Literature Review

The State of Homelessness in America:

According to the Department of Housing and Urban Development's latest *Annual Homeless Assessment Report*, the prevalence of homelessness in the United States increased for the first time in seven years. In 2017, HUD found that while the number of people experiencing homelessness increased by a little less than one percent, this increase reflected a nine percent upsurge in the number of people experiencing homelessness in unsheltered locations (HUD, 2017). On a given night in 2017, HUD found that approximately half a million Americans were experiencing homelessness, and that a majority of those individuals were located in emergency shelters or transitional housing programs (360,867), with the remaining persons found unsheltered, in places typically not meant for human habitation, such as the street or an abandoned building (HUD, 2017).

The most dramatic increases in homelessness have been among veterans (34.3 percent), individuals experiencing chronic homelessness (27.4 percent) and people living in unsheltered locations (24.6 percent); and in the past year alone, HUD found that the number of chronically homelessness individuals had increased by 12.2 percent, with roughly 19,000 individuals experiencing chronic homelessness on any given night (HUD, 2017).

The Housing-Health Nexus:

In recent years, a well-established and growing body of research has shown that social and economic factors substantially influence individual health. Lack of access to affordable housing stock has been shown to perpetuate health disparities and homelessness, and as a result, most individuals experiencing homelessness now comprise one of the nation's sickest, most vulnerable groups (HUD, 2016).

While a number of different factors have been found to lead to chronic homelessness, typically acute physical and behavioral conditions are the most common. According to HUD, people living in shelters are more than twice as likely to have a disability compared to the general population, and on a given night in 2017, 20 percent of the homeless population reported having a serious mental illness, 16 percent conditions related to chronic substance abuse, and more than 10,000 people had HIV/AIDS (HUD, 2017). Conditions such as diabetes, heart disease, and HIV/AIDS are found at the highest rates among the homeless population, and typically, this is due to the fact that homeless individuals often do not have access to health insurance, a primary care provider, or a stable living environment.

Many of these conditions also commonly arise from a number of tangible access barriers to doctors and clinics, such as limited hours, noncentral locations, and intake requirements of identification. As a result, homeless individuals continue to face a vast number of difficulties in trying to access a provider, pay for their care, and adhere to follow-up treatment and preventative services in the long term (Zlotnick, Zerger, Wolfe, 2013).

However, it's also important to recognize that poverty and homelessness in themselves also contribute to ill health by presenting other unique barriers to self-care. For example, individuals that are homeless

typically experience a heighted exposure to communicable diseases and parasites that can easily spread in crowded conditions, such as shelters. And untreated lice infections, insect bites, and minor infections frequently lead to serious, even sometimes life-threatening, systemic infections among people who are homeless. Second, lack of permanent housing also complicates basic self-care and treatment adherence. For example, limits on shelter stays during the daytime and competing needs to seek food and employment interfere with regular administration of medication as prescribed, as well as scheduled follow-up visits with health care providers. On the whole, poverty remains a powerful social determinant of poor health, and persons who are struggling to survive without stable housing comprise some of the most vulnerable populations in our communities (Zlotnick, Zerger, Wolfe, 2013).

As a result of these barriers to self-care and access to treatment, individuals experiencing homelessness are more likely to suffer from chronic medical conditions and serious mental illness; are more prone to prolonged gaps in health care access; and as a result, compared to non-homeless individuals of the same gender, age, and income-status, are among some of the highest utilizers of emergency, ambulatory, and hospital medical services (Cabello et al., 2017; Baggett et al., 2010; National Health Care for the Homeless Council, 2011; Riley et al., 2007).

Chronic Homelessness & Social Determinants of Health:

Acknowledging that individuals experiencing chronic homelessness now comprise one the nation's sickest, most costly, and vulnerable populations, health care professionals and policymakers have now begun to take a multi-faceted approach towards improving population health. At the core of their approach is a particular focus on broadening how the current system addresses the social determinants of health, which collectively have a tremendous impact on the health of our communities and the quality of care received overall (CSH, 2014).

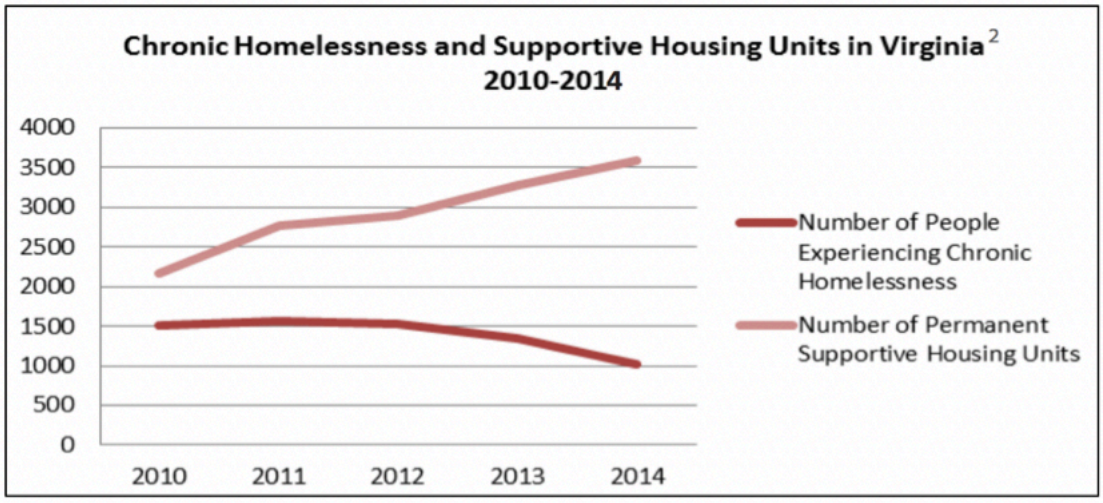
Social determinants of health are defined as "the structural determinants and conditions in which people are born, grow, live, work and age, and they include factors such as socioeconomic status, the physical environment, social support networks, and access to high quality health care" (KFF, 2017). Social determinants of health are one of the underlying factors of health inequities, and access to safe, quality, affordable housing (and the supports necessary to maintain that housing) constitutes one of the most basic and powerful social determinants of health (CSH, 2014). Housing is considered to be a necessary precursor of health, and supportive housing, an evidence-based practice that combines permanent affordable housing with comprehensive and flexible support services, has increasingly been recognized as a cost-effective health intervention for ending chronic homelessness for individuals and their families (CSH, 2014).

> "*Permanent Supportive housing is now one of the most potent interventions to impact housing stability and one that consistently helps people with disabilities achieve their desired goals*"- SAMHSA, 2017

The Current Extent of Chronic Homelessness in Virginia and Charlottesville:

Overall, in the past decade, Virginia has seen a 33.2 percent reduction in homelessness, and a 3.2 percent reduction in homelessness since just 2016. One of the major contributors to slight reductions in homelessness across the Commonwealth has been an increase in the inventory of PSH-from 2,164 supportive housing beds in 2010 to 3,582 beds in 2014 (VSH, 2015). This increase in the number of units and beds has helped reduce chronic homelessness (see Figure 1 below), however, VSH still estimates that Virginia needs at least 2,500 additional PSH units in order to meet the needs of the Commonwealth's most vulnerable individuals and families.

Figure 1: Supportive Housing and Chronic Homelessness in Virginia

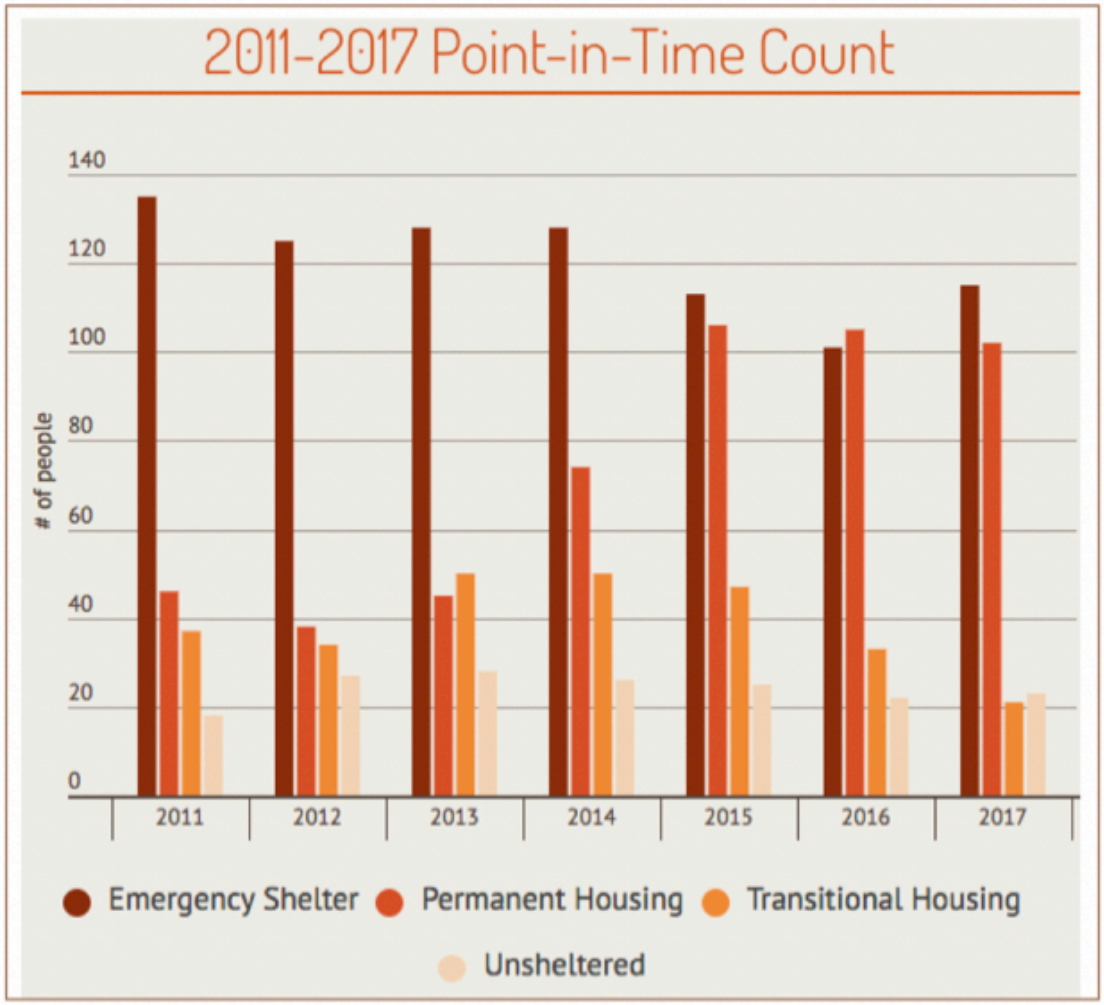


Source: VSH, 2015

According to HUD, 7 in every 10,000 Virginias were still experiencing homelessness in 2017. And in total, 6,067 individuals were homeless and 864 were chronically homeless. In Charlottesville, the 2017 point-in-time count identified roughly 250 individuals experiencing homelessness, of which 115 individuals were in emergency shelters, 102 were in permanent supportive housing, 21 were in transitional housing, and 23 were unsheltered (see Figures 2 and 3 below) (TJACH, 2017). In 2017, 15% of people experiencing homelessness were recommended for PSH (27 people), 49% were recommended for rapid-rehousing (86 people), and 36% were recommended for general support without financial assistance (63 people). And demographically, 80% of Charlottesville homeless population is represented by individual adults, with the remaining 20% comprised of people in families with children (HMIS, 2018).

Currently, Charlottesville has 60 scattered site PSH units funded by HUD, 30 PSH units at the Crossings, and approximately 20-30 rapid re-housing units that individuals can move into for up to 24 months. However, the community currently does not have enough PSH units to provide for the 70 chronically homeless individuals identified this past year. Developing the infrastructure and funding necessary to make these units available is a major goal for the community in the coming years and is a top priority for TJACH moving forward.

Figure 2: Charlottesville Point-in-Time Count (2011-2017)



Source: TJACH, 2017

Figure 3: Data from TJACH's Point-in-Time Homeless Census (January 2017)

Data from 2017 Point in Time Homeless Census – January 2017

	Emergency Shelter						Transitional Housing *				Permanent Housing						Unsheltered
	PACEM	SA	SHE	CA	MC	Total	MACAA	SA	SHE	Total	R10 DRC	R10 S+C	PP	VSH	RRH	Total	Unsheltered
2017	50	49	16	0	NA	*115*	18/4	0	3/1	*21*	47			33	22	*102*	*23*
2016	42	51	7	1	0	*101*	9/3	22/8	2/1	*33*	32			35	38	*105*	*22*
2015	48	50	15	0	0	*113*	10/4	27/9	10/3	*47*	13	19	8	29	37	*106*	*25*
2014	54	57	11	1	5	*128*	11/4	28/9	11/3	*50*	10	20	13	28	23	*74*	*26*
2013	55	57	10	1	5	*128*	10/4	32/9	8/3	*50*	9	25	2	29	0	*45*	*28*
2012	54	58	7	1	5	*125*	11/3	18/7	5/3	*34*	9	18	11	0	0	*38*	*27*
2011	57	54	18	1	5	*135*	12/4	18/9	7/3	*37*	8	19	19	0	0	*46*	*18*

**Individuals/units, usage rate should be determined by units in use, not numbers of individuals*

HUD-Designated Subpopulation Data for People in Emergency Shelter or Transitional Housing and Unsheltered People								
	Chronically Homeless Individuals	Chronically Homeless Families	Veterans	Severely Mentally Ill	Chronic Substance Abuse	Persons with HIV/AIDS	Victims of Domestic Violence	Unaccompanied Youth
2017	50	2	9	34	34	1	45	0
2016	30	2	16	40	41	2	23	1 under 18 2 18-24 1 parenting
2015	32	1	11	24	48	3	46	0
2014	32	0	12	37	54	1	48	1
2013	61	2	16	35	63	1	32	1
2012	76	0	12	22	34	1	23	1
2011	60	0	13	0	62	2	26	1
2010	117	0	17	90	99	11	16	1

	Emergency Shelter		Transitional Housing		Permanent Housing		Unsheltered	
	2016	2017	2016	2017	2016	2017	2016	2017
Households without children	86	100	0	0	100	99	22	23
Households with children	8	5	13	15	2	3	0	0
# of individuals in households with children	15	13	33	45	5	7	0	0
Total under 18 years old	8	11	20	28	3	4	0	0
Total aged 18-24 years old	7	5	1	1	3	0	0	2
Total over 24 years old	86	96	12	18	99	102	22	21

School data	Doubled up & at risk		Unsheltered*		# kids of concern		Displaced & temporarily doubled up		Migrant Camps	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
# of kids	89	52	16	31	105	226	85	195	71 adults, 3 (16-24y)	42 adults 1 (16-24y)

Source: TJACH, 2017

Permanent Supportive Housing: Insights from National Models:

Permanent supportive housing (PSH) provides long-term housing and case management services for homeless populations. Through a focus on improving housing stability, access to care, and reducing use of costly emergency and inpatient health services, PSH has been shown to help end the costly cycle of homelessness, incarceration and hospitalization through providing individuals with a stable home, and the supportive services they need to help address health, employment and housing services for the long term. These supportive services are a critical part of PSH that differentiates it from other housing initiatives (voucher programs, rapid-rehousing, and emergency and transitional housing shelters) and many of the supportive services commonly provided include community-based case management with peer recovery services, street outreach, landlord mediation, healthcare navigation, medication management, and assistance with benefits acquisition (VSH, 2013). In doing so, the goal of these supportive services is to help homeless individuals obtain access to housing, and then develop and maintain the necessary supports they need to maintain that housing permanently.

Numerous PSH programs across the country have had a dramatic impact on the lives of the chronically homeless and the communities in which they live, and in recent years, new studies of PSH programs in cities such as Los Angeles, San Francisco, Colorado, and Seattle have proven that many of these programs have been extremely successful at providing care for the most vulnerable, highest-costing homeless individuals (Hunter et al., 2017; Klein, 2014). In evaluating the impact of these cities' programs and their associated outcomes, research now shows that linking case management services to housing has led to not only greater housing stability, but lower use of intensive health care services overall (Hunter et al., 2017; Flaming, Burns, Matsunaga, 2009; Flaming et al., 2013; Toros, Stevens, Moreno, 2012; Klein, 2014).

For example, one such study commissioned by the RAND Corporation in 2014 evaluated the outcomes (specifically health and social service use and associated costs) among program participants

Evaluations of supportive housing suggestion that its impact include:

1) Dramatic reductions in hospitalizations, ED usage, and criminal justice encounters for persons with complex, co-occurring disorders including chronic health conditions, mental illness, and substance abuse disorders

2) Improved health and mental health for individuals when comparing the period before and after they enter housing

3) A positive impact on housing retention, even among tenants with long histories of homelessness and the most severe health challenges

4) Improved self-reported empowerment, as measured by tenant's degree of choice in housing

Source: CSH, 2017

of Housing for Health (HFH)[1], a PSH program launched in 2012 by the Los Angeles County Department of Health Services (DHS). To assess the effectiveness of HFH, RAND utilized a pre-post study design to compare participants' service use before and after receiving housing. Their study examined 890 participants enrolled in the first 2.5 years of the program, of which 83 percent were chronically homeless, and 88 percent had co-occurring medical and mental health conditions (Hunter et al., 2017). Overall, their study found that following enrollment in HFH, clients' use of medical and mental health services dropped significantly, as did their associated costs. After moving into PSH, participants had an average of 1.64 fewer ER visits, outpatient visits were reduced by an average of four, and the associated costs for public services in the year following receipt of PSH declined by 60 percent[2]. For every $1 invested in the HFH program, the county observed a $1.20 savings in health care and other social service costs, and health service agencies saw the largest reductions, with the LA DHS (the primary provider of emergency, hospital, and outpatient services) observing a reduction of $20 million in spending after the first year. Upon completion of the study, RAND concluded that the HFH program has resulted in significant cost savings to taxpayers, while also providing the necessary support so that 96 percent of its participants remained stably housed (Hunter et al., 2017).

Over the years, similar studies (see appendix) in other communities have also shown that these outcomes tend to be similar across comparable program designs and across similar population types (CSH, 2014). As a result, many states have begun to explore PSH interventions to address the critical social determinants of health of their communities.

The Impact of Permanent Supportive Housing on Health in Virginia:

The impact of PSH on health expenditures and outcomes has also been noticeable in Virginia. For example, recent research from Virginia Supportive Housing (VSH), Homeward, and the VCU Health System (VCUHS) demonstrated substantial reductions in emergency department (ED) and inpatient visits after homeless individuals were stabilized through PSH interventions.

The study's initial data set included 253 VSH/VCUHS clients, of which 148 were identified to have been in housing for at least 12 months[3]. Using hospital cost data provided by VCUHS, VSH found that in the year prior to being housed, patients were seen for a total of 495 inpatient/ED visits during the 12 months prior to housing, and only 228 visits in the 12 months after housing-which reflects a 54% reduction in the number of total visits. They also found that 30-day return visits were reduced

[1] HFH focuses its efforts on homeless people in the highest tenth decile of spending, and participants are identified by social workers at one of 15 participating hospitals in LA using a triage tool that takes into account patients' housing status, number of hospital and emergency department visits, and number of medical and behavioral health conditions (Commonwealth Fund, 2014; Housing for Health, 2017).

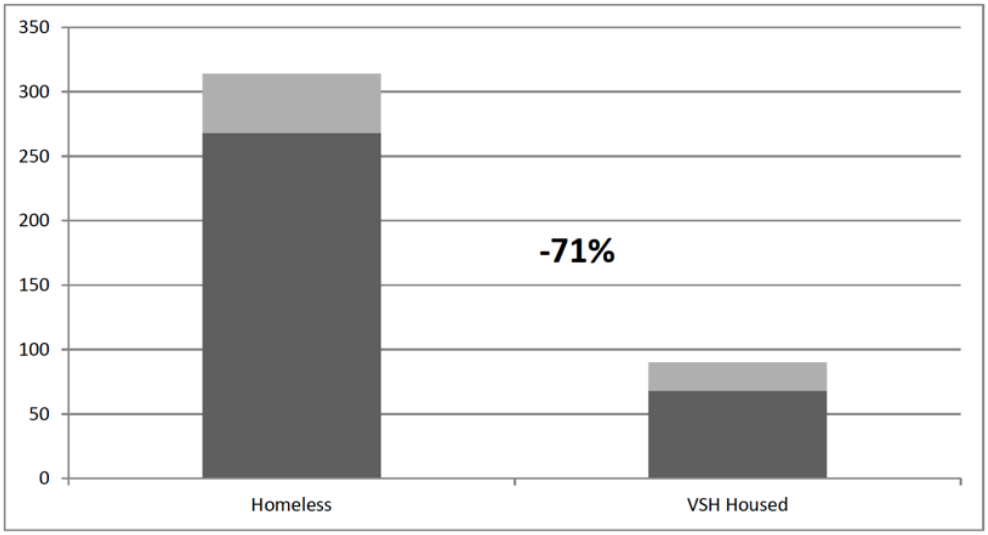
[2] The average public service utilization cost per participant also fell from $38,146 to $15,358 after the first year that participants received housing (Hunter et al., 2017).

[3] Note: VSH did not randomly assign these clients to PSH. They just identified 148 individuals who they had housed in the past year. This is an important limitation to note because lack of random assignment can introduce bias and other confounding factors into the analysis that we must be aware of.

by 67%, actual payments per ED visit increased by 76%, and payments per inpatient visit increased by 126% after being placed into VSH housing.

Taking a closer look at the 20% of VSH clients that were the highest utilizers of the VCUHS ED and inpatient services while homeless, the study found that targeting this group might actually yield the most effective partnership between the VCUHS and VSH. It also discovered that this small subset of patients actually accounted for 63.4% (314 visits) of the full group's inpatient and ED visits while homeless, averaging almost 9 ED visits and more than one inpatient stay in the 12 months before being housed. However, after being housed, this utilization dropped by 71% and returns to the ED or inpatient center within 30 days of discharge also dropped by 81%. (see Figures 4, 5, and 6 below[4]) (VSH, 2015).

Figure 4: Impact of VSH Permanent Supportive Housing on VCUHS ED/Inpatient Utilization

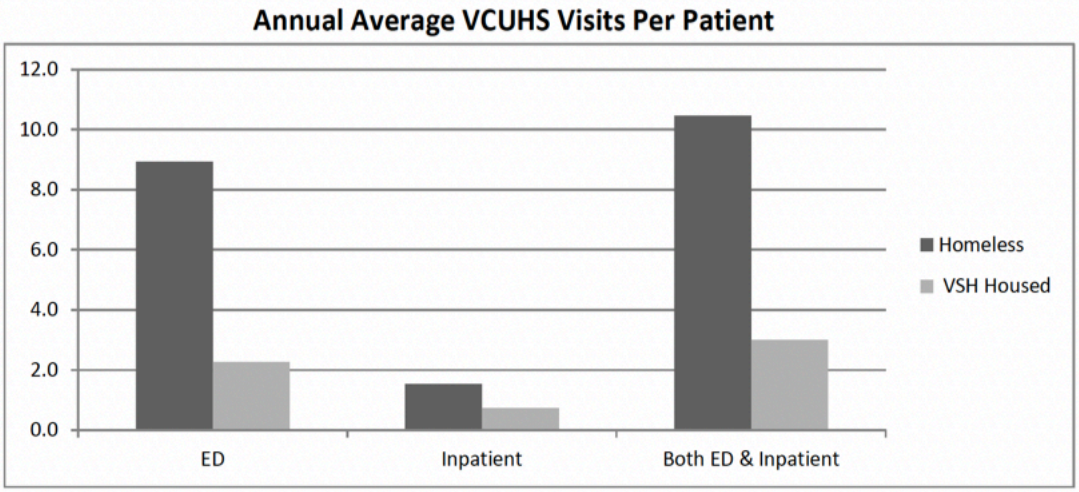


	ED Visits	Inpatient Visits
Homeless	268	46
VSH Housed	68	22

Source: VSH, 2015

[4] Note that the following Tables and Figures were taken directly from the 2015 VCUHS/VSH study *The Case for Permanent Supportive Housing and Hospital System Partnership*. I was unable to obtain access to the original data-set used to create these graphics, so I had to obtain the figures directly from the study.

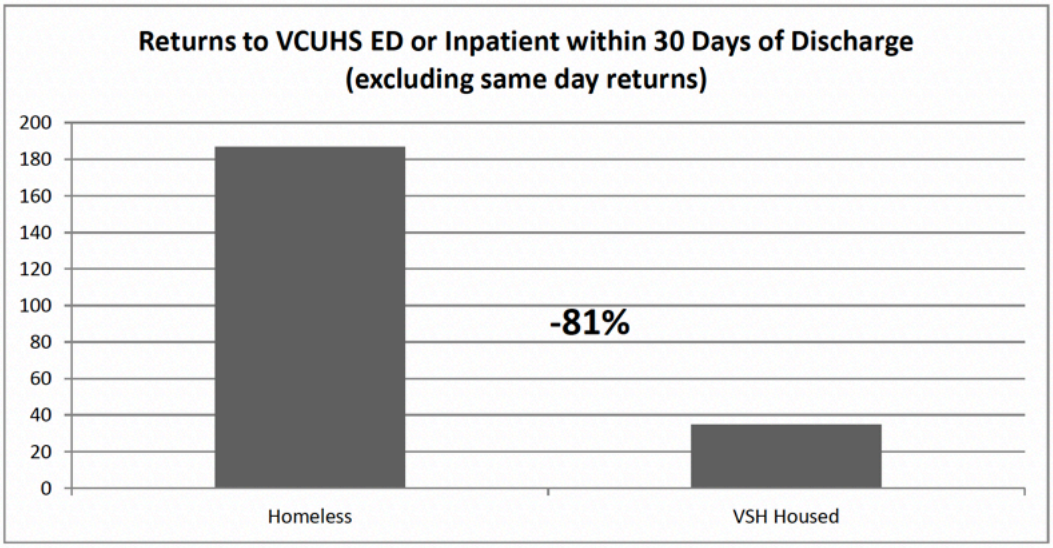
Figure 5: Annual Average VCUHS Visits Per High Utilizer Patient Pre-Post VSH Housing



	ED	Inpatient	Both ED & Inpatient
Homeless	8.9	2.3	10.5
VSH Housed	1.5	0.7	3.0
% Change	**-75%**	**-52%**	**-71%**

Source: VSH, 2015

Figure 6: 30-Day Readmission Data Pre-Post Housing Among Top 20% Utilizers while Homeless

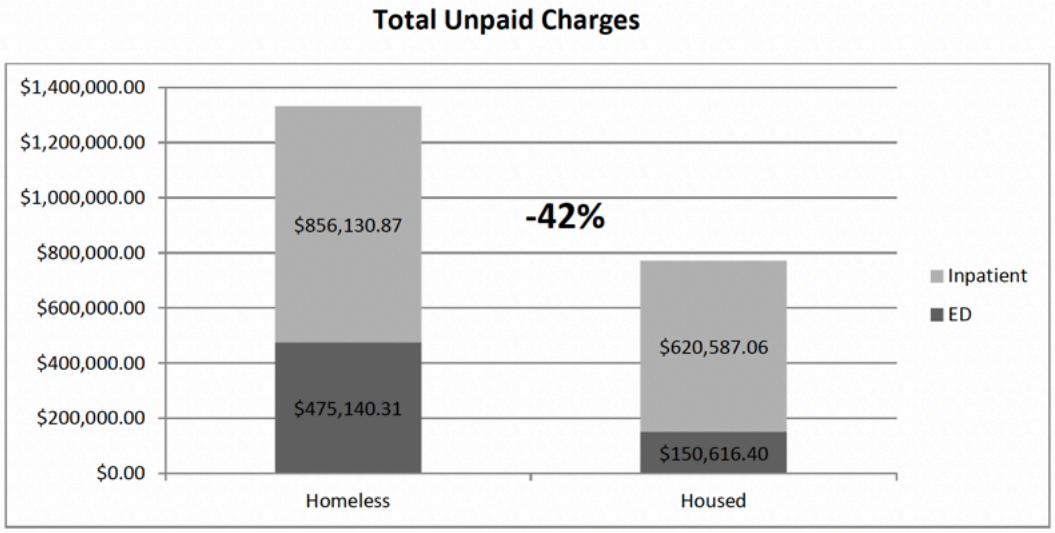


	Number of Return Visits Within 30 Days
Homeless	187
VSH Housed	35

Source: VSH, 2015

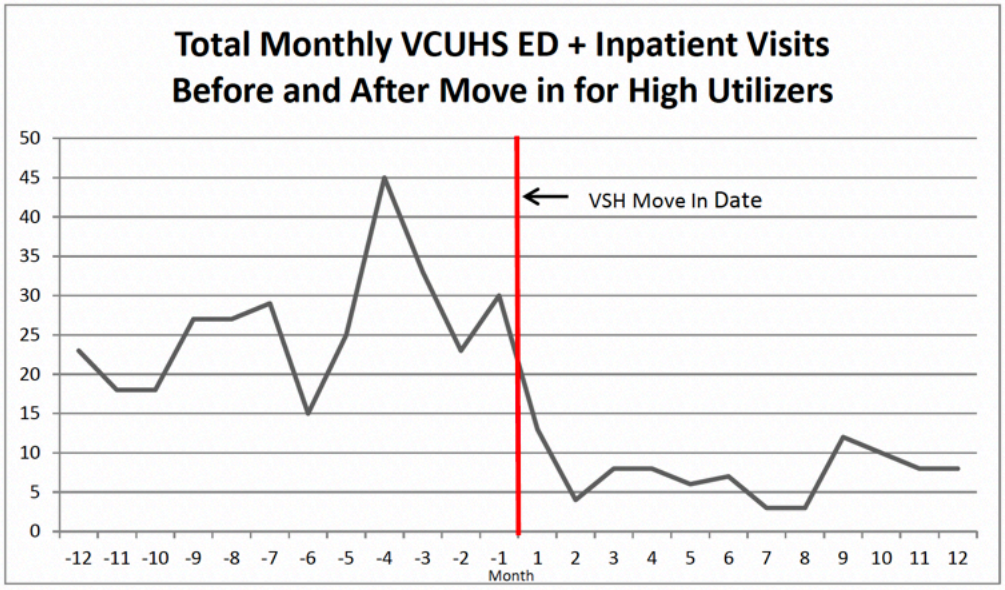
VSH and the VCUHS also found that the fiscal impact of providing housing to these patients was significant. Overall, there was a $560,068 reduction in total unpaid charges, reflecting savings of approximately $18,668 per patient. This demonstrated a 42% savings in unpaid charges in the first twelve months of the program, which was largely the result of fewer ED and inpatient visits (see Figures 7 and 8).

Figure 7: Impact of VSH Housing on Unpaid Hospital Charges



Source: VSH, 2015

Figure 8: Overall Impact of PSH on VCUHS ED and Inpatient Visits



Source: VSH, 2015

Overall, the VSH/VCUHS study found that the provision of PSH generated significant cost-savings for the Richmond community at large, and that there was a significantly positive association between the provision of the VSH housing and reductions of utilization and cost (VSH, 2015).

Interventions in Charlottesville: The Crossings:

In March 2012, VSH completed its first PSH complex in Charlottesville, the Crossings at Fourth and Preston, which provides 60 housing units for individuals experiencing homelessness and those earning less than 50 percent of the median income. Adopted from the Housing First model, the Crossings provides skills training to promote life skills such as budgeting, medication management, and good hygiene, and it also provides personalized on-site case management, with an emphasis on connecting clients with local mainstream services and income support. As of 2014, 71 individuals have been housed at the Crossings, 97 percent have not returned to homelessness, and income among those served increased, on average, by 184% from move in (VSH, 2015). Unfortunately, to date the Charlottesville community has yet to measure the impact that the Crossings has had on health outcomes and overall cost for the community.

The Thomas Jefferson Area Coalition for the Homeless (TJACH)'s Role:

As the HUD-designated coordinator of the Continuum of Care for the region, TJACH supports system improvement and collaboration to ensure a secure safety net for the homeless and impoverished. Founded in 1998, TJACH works every day to reduce homelessness through the initiation of creative solutions and coordination of regional resources and services. Since 2003, TJACH, in conjunction with the Virginia Inter-Agency Coalition for the Homeless has conducted an annual point-in-time count to provide valuable data on the number and characteristics of homeless individuals in the region. In 2003, TJACH also launched a regional Homeless Management Information System (HMIS), a web-based tool for data collection, case management, and program management. Currently, TJACH works within the community to assess homeless needs and vulnerability.

In 2015, TJACH released its Community Plan to End Homelessness for 2015-2018, and in doing so outlined its desire to provide more permanent supportive housing services in the community, including housing, healthcare services, and case management. In 2017, TJACH served 346 homeless individuals living in the community, of which 70 were identified to be chronically homeless. Unfortunately, TJACH was only able to place 11 of those individuals into a PSH unit, due to the lack of available PSH units in the region. At present, the organization is beginning a strategic planning process for the coming years, and is interested in local, state and federal partnerships to help make PSH for the chronically homeless a reality.

Agency Profile

The intersection of housing and healthcare touches upon a number of different local, state, and national stakeholders. Though not exhaustive, this section will provide a brief overview of many of the key agencies and organizations relevant to this Applied Policy Project (APP), TJACH, and the Charlottesville community at large.

The U.S. Department of Housing and Urban Development (HUD) is the federal agency responsible for overseeing and administering many of the major affordable housing and homelessness programs across the United States. HUD is charged with overseeing all Community Development Block Grants, Shelter Plus Care, and Emergency Shelter Grants, and is also responsible for releasing an Annual Homeless Assessment Report to Congress each year. In doing so, HUD provides point-in-time estimates of homelessness (both sheltered and unsheltered) on a single night each year, which helps localities and stakeholders better predict the number of people experiencing homelessness within particular populations. This report provides counts of the number of beds in emergency shelters, transitional housing programs, safe havens, rapid rehousing programs, and PSH. Many of these estimates are made available by the 399 CoCs operating across localities nationwide. In Charlottesville, TJACH works closely with HUD to apply for federal funding and is required to report its annual PIT count each year as the designated CoC for the region. On January 11, 2018, HUD announced that it would award a record $2 billion to homeless assistance programs across the nation. This money has since been divided among the 7,300 local homeless assistance programs under HUD's CoC program, which grants support to local programs serving individuals and families experiencing homelessness. Charlottesville received $1,527,985 of this funding this year (HUD Exchange, 2018).

Virginia Supportive Housing (VSH) is currently Virginia's largest supportive housing organization. Its mission is to end homelessness by providing permanent housing and supportive services, and today the organization manages more than 650 housing units in 15 communities across the Commonwealth. VSH opened its first mixed-income apartment community serving formerly homeless as well as low-income individuals, the Crossings, in Charlottesville in 2012. This provided an additional 30 PSH units for the chronically homeless in Albemarle County.

Charlottesville Redevelopment and Housing Authority (CRHA) is a quasi-governmental entity in Charlottesville that provides housing and tenant support to the city's lowest income population. Currently CRHA owns and manages 376 housing units and administers approximately 300 Housing Choice Vouchers (Section 8) rental units supported by HUD-designated federal dollars. At present, CRHA relies heavily on community partners such as TJHAC and the Charlottesville Public Housing Association of Residents (PHAR) to accomplish their overall goal of helping residents obtain housing success and independence. Approximately 2000 individuals are housed each year in the community through the CRHA's subsidy programs. Dwindling HUD resources in recent years have forced the CRHA to concentrate its efforts on landlord/tenant responsibilities, leaving the organization with limited resources for public outreach, advocacy and social supports. Currently the CRHA has

approximately 165 unused housing choice vouchers that could be utilized for a new PSH project in the community (Olsen, 2018).

Region 10 Community Services Board was established in 1969 and is part of a statewide network of 40 Community Service Boards working to provide mental health, intellectual disability and substance use services in the local community (Region 10, 2018). It is an agency of local government committed to serving the residents of the City of Charlottesville and the counties of Albemarle, Fluvanna, Green, Louisa and Nelson. Region 10 serves as a member of TJACH's Service Provider Council, a group of representatives from area social service agencies that provide critical prevention and intervention services to the homeless and very poor of Central Virginia. This council meets monthly and identifies different ways to improve the system of care for the homeless in Charlottesville by filling in gaps in the safety net and sharing information. Region 10 provides adult and child case management services for individuals experiencing serious mental illness, as well as emergency services, an array of center-based medical and associated nursing services, and substance use treatment.

Leveraging the Housing-Health Nexus with Permanent Supportive Housing

While a number of housing interventions have been tried in other communities across the nation, research now shows that PSH is one of the most cost-effective, evidence-based practices for addressing chronic homelessness and health. **As such, the following APP will focus exclusively on different ways to finance 60 PSH units here in Charlottesville**. Drawn from a variety of case studies and the existing literature, the policy alternatives to be discussed are as follows:

1. **Hospital Funded Housing**
2. **Pay for Success & Housing First**
3. **Managed Care/Accountable Care Capital Investment**
4. **Status Quo: SOAR Program**

It's important to note that while each option will present a different way to finance 60 PSH units for Charlottesville's chronically homeless population, the overall impact of providing this PSH on health expenditures and self-reported health outcomes is significant regardless of how it is financed.

The Projected Impact of PSH on Health Expenditures and Overall Health

Currently, TJACH utilizes the VI-SPDAT (Vulnerability Index-Service Prioritization Decision Assistance Tool) within the Homelessness Management Information System (HMIS, explained in the subsequent section) to determine which individuals are prioritized for housing placement. However, TJACH has yet to include a post-housing follow-up metric to measure the associated outcomes of providing this housing. As a result, the impact of providing housing on health and overall health expenditures is not currently available. Thus, I used estimates from the existing literature, specifically the VCUHS/VSH study, to measure the impact that PSH could have on health expenditures and self-reported health outcomes for Charlottesville's chronically homeless[5].

Overall, I estimate that providing 100 PSH units to Charlottesville's 70 chronically homeless persons will have the ability to reduce this population's average number of ED and inpatient visits by 71 percent, 30-day readmission rates by 81 percent, and total health expenditures by $18,668 per person after 12 months of being housed (VSH, 2015). Assuming that the funding is obtained in full for these 60 units, these policy alternatives would allow for the majority of Charlottesville's 70 chronically homeless individuals to be placed into housing and connected with case management services. Providing this housing is also projected to reduce overall utilization of other public services such as

[5] I projected my outcomes based off the VCUHS/VSH study after several conversations with my client, Anthony Haro, about the generalizability of the study. Anthony, as a subject matter expert on the topic, felt comfortable making the assumption that we could expect similar outcomes from a PSH Housing First intervention in Charlottesville.

shelters, correctional facilities, and health clinics, which is predicted to save the community money in the future. Please note that information on exactly how much money could be saved is not currently available for Charlottesville, since this data is not currently being collected by TJACH's data-system.

Methodology

The purpose of this Applied Policy Project (APP) is to propose, analyze, and evaluate practical policy options in order to help TJACH provide the chronically homeless with better access to housing, case management, and healthcare services. The overall goal is to determine which PSH financing model is the most equitable, cost effective, and impactful for the Charlottesville community. The remainder of this report will seek to develop and evaluate policy alternatives that TJACH could implement to meet this goal. This analysis will begin by presenting the evaluative criteria used to assess each policy option. The subsequent section will provide a brief overview of each potential policy option, followed by a more detailed description and evaluation. The report will then explore some of the tradeoffs of each option through a detailed outcomes matrix which will help compare and prioritize the policy options based on the evaluative criteria. Finally, the APP will conclude with a recommendation identified to have the greatest potential to address chronic homelessness in the Charlottesville community.

Data

The following section will provide a brief overview of the data utilized for this APP. It's important to note that at present TJACH only collects a limited amount of data on the health-related outcomes of its housing interventions. Thus, this data section will mention not only the relevant data that was used for this APP, but also what relevant data will be needed in subsequent years in order to best measure the impact of these policy alternatives moving forward.

Data from the Homelessness Management Information System[6] (HMIS), a local information technology system used to collect client level data and data on the provision of housing and services to homeless individuals and families, was utilized in order to assess the vulnerability of individuals experiencing homelessness in the community, as well as to capture the current housing capacity and number of individuals served by TJACH at present. This database collects demographic information, homeless history information, information on disabling conditions, insurance, income, non-cash benefits, and where people end up going after they exist a housing program. The HMIS system was utilized to assess the ongoing needs of the community, and to better understand the current demographics, health statuses, and housing priorities of the community in turn. Much of the information gathered from this system was also used to discuss the current state of Charlottesville's chronically homeless population and PSH infrastructure, which will be discussed in more detail in policy option 4 (status quo).

The VI-SPADAT (Vulnerability Index-Service Prioritization Decision Assistance Tool) was also used in order to better understand how individuals and families are prioritized when housing assistance is, or does become, available. Please note that the data collected from the HMIS and VI-SPADAT systems is self-reported and taken-up by the CoC only in intake appointments, meaning that an individual's vulnerability is only assessed prior to housing placement, not after.

As previously mentioned, TJACH does not currently collect information on the post-housing health, and associated health costs, of their clients. TJACH also does not currently have a data-sharing agreement in place with the UVA Health System, which poses another major informational barrier, since accurate, up-to-date information on the overall utilization, costs, and unpaid charges related to chronically homeless persons is not available for Charlottesville specifically. For this reason, the VCUHS/VSH data was utilized in order to evaluate the impact of PSH for Charlottesville's chronically homeless. For the future, it will be important for TJACH to establish this data-sharing relationship with the hospital system in order to allow them to accurately measure, and prove, the impact of their housing interventions moving forward.

[6] All federally and locally-funded agencies that are providing homeless services use this shared database to collect information about the clients served and the outcomes of those services for clients.

Evaluative Criteria

The policy options presented will be evaluated according to the following criteria: administrative feasibility, cost, and timeliness. Note that the scope of this project is limited to Charlottesville, VA, with a particular focus on how to finance PSH for the chronically homeless population. As mentioned, a data sharing agreement between TJACH and the UVA Health System is a necessary prerequisite to each of the policy options presented. This data-sharing agreement will help to ensure that high-utilizer homeless individuals can be easily identified, and that TJACH is better able to tailor their present and future services to those individuals. The overarching goal is to provide Anthony Haro, the current Executive Director of TJACH, with an evidence-based policy recommendation that both reduces health expenditures and chronic homelessness through the provision of PSH. Taken together, these criteria will help determine the extent to which each policy option will address this overall goal.

Administrative Feasibility:

This criterion will assess the administrative feasibility of implementing the proposed policy option. It will consider whether the policy option is feasible for TJACH and Charlottesville to implement within the next five years. It will consider the amount of personnel, skills, and administrative coordination required between housing developers, investors, HUD, VSH and TJACH itself. It will also evaluate a number of specific factors such as the likelihood that the PSH funding is received, the complexity of the policy option, and the associated coordination costs/number of agencies/organizations needed to carry out the policy option. In the long term, this criterion will assess whether the proposed policy option is feasible for TJACH and its partner organizations to maintain for the future. This criterion will be evaluated on whether or not the proposed policy option generates ***low, medium, or high*** administrative burden overall.

Timeliness:

This criterion will measure the policy alternative's ability to provide PSH in a timely manner. It will take into account how long it would take for the policy option to actually be funded, implemented, and capable of lowering health expenditures and rates of chronic homelessness. This information was gathered from the existing literature and from interviews with the relevant stakeholders involved. The criterion will be evaluated depending on whether the proposed policy requires a ***limited, considerable, or extensive*** amount of time to enact.

Cost:

This criterion will estimate the overall cost of each policy option. It will take into account the administrative, maintenance, and development costs. Since each option seeks to provide approximately 60 PSH units in the same geographic area, the cost of development will be held constant

for each policy option [7] at $5.6 million. Further, since maintenance costs are highly variable (depending on the type of building, its age, and the landlord/leasing company's maintenance/up-keep preferences) maintenance costs will also be held constant across each policy option and estimated from the Crossings here in Charlottesville (at $500,000 per year). Administrative costs will vary depending on how the project is financed and will be estimated from the literature, when available. The criterion is quantified in ***dollars*** using a range of best estimates.

[7] Note: I utilized the RS Means Construction Database software to estimate these development costs. RS Means uses data from 30 cities across the nation to calculate the national average for development costs. Assuming that the building size is 40,000 sf, 3 stories, and that it costs roughly $140 per sf, ($140 x 40,000 = $5,600,000), I found that it would cost roughly $5.6 million to actually develop 60 PSH units here in Charlottesville. I consulted Professor Edgar Olsen, who is a subject-matter expert on this topic, for assistance with this cost analysis.

Policy Options

Introduction: For decades, the affordable housing and healthcare sectors have operated in siloes, which has limited their ability to target their most critical, often overlapping, populations. This problem is two-fold. While many healthcare organizations recognize how critical affordable housing is to the needs of their high-utilizer patients and plan members, they are often unsure how to effectively support housing development and local community-based efforts. Similarly, while many housing developers and community-based coalitions acknowledge that the provision of safe, high quality housing to high need individuals could have significant benefits to health partners and their patients, they are often unsure about how to structure viable partnerships with relevant health agencies. In other words, this is a collective action problem in which healthcare organizations, housing developers, and community-based coalitions have failed to recognize the collective benefits from partnering on housing and healthcare initiatives. Nevertheless, the significant amount of overlap in both of these sectors and the individuals that they serve provides new opportunities for collaboration and engagement.

The following list of potential policy alternatives provides examples of several ways in which various healthcare and housing organizations can work together to take advantage of the strengths of each sector to reduce health expenditures and ensure long-term housing stability for the chronically homeless.

1. **Hospital Funded Housing**
2. **Pay for Success and Housing First**
3. **Managed Care Capital Investment**
4. **Status Quo: SOAR Program**

Each option will seek to accomplish the following performance goals: reduce the number of individuals experiencing chronic homelessness; increase the number of PSH units available; lower the number of emergency department visits among high-utilizer, homeless individuals; improve health outcomes for the chronically homeless; and reduce health expenditures overall. A number of case studies and existing literature was utilized to identify and support many of these policy alternatives.

Policy Option 1: Hospital Funded Housing

Overview of Hospital Funded Housing: Across the country, many tax-exempt, non-profit hospitals are now using their community benefit dollars and money from their community investment funds to provide PSH to the chronically homeless. In order to retain their tax-exempt status, nonprofit hospitals are required to give back to their communities. Many do so through providing free care to uninsured patients, sponsoring disease awareness, or offering free medical training, as many of these are declared as community benefits on their tax returns. However, in recent years, several hospitals have begun using revenues in an innovative way to address upstream many of the critical social determinants of health, of which housing is significant.

A motivating factor behind several of these initiatives goes back to 2015 when the IRS clarified that Hospital Community Benefits Obligations (HCBOs) money could now be used towards housing (Low Income Investment Fund, Mercy Housing, 2017). Similarly, recent Affordable Care Act provisions have begun to incentive and penalize healthcare providers to attend to their community's social determinants of health. For example, a recent ACA provision now requires that hospitals publish triennial community health needs assessments, which has encouraged other private and public hospitals to follow suit. Many of these reports highlight their community's most pressing health problems and their associated incidence, and homelessness is something that is often reported on. HCBO money and the requirement to publish these reports has now led many hospital systems to fund new affordable housing units, supportive medical respite care and transitional housing in an effort to reduce unnecessary health expenditures and provide better community supports for the chronically homeless. Further, the Hospital Readmissions Reduction Program, also introduced by the ACA, now reduces payments to hospitals with excess 30-day readmission rates. Since unstable housing is one of many factors that increases the risk of readmission, this has also motivated many hospitals to work with supportive housing providers or provide supportive housing to begin with (HUD, 2016).

For example, in 2016, five hospital systems and a non-profit healthcare plan in Portland Oregon donated $21.5 million to support the development of both PSH and an integrated healthcare facility in the city. This funding provides 175 units of supportive housing with 114 units for people in recovery from behavioral health disorders and 51 units of medical and mental health respite housing (Low Income Investment Fund, Mercy Housing, 2017). Additionally, other example of hospitals funding housing is with Bon Secours, a Catholic health system which operates more than 20 hospitals in six states and participates in the Medicare Shared Savings Program. In an effort to strengthen the communities around these hospitals and improve costs and health outcomes, Bon Secours has built more than 800 affordable housing units in Southwest Baltimore, and much of this work has been done alongside local housing coalitions and local businesses.

Other for-profit hospitals are also now following these health system's, with several managed care organizations and large health systems such as Kaiser Permanente looking at new ways to support underserved communities.

Hospital Funded-Housing in Charlottesville: Since many studies have found that investing in PSH has had dramatic reductions on health expenditures and other associated costs, hospital investment in PSH provides another potential policy solution for addressing the health needs of Charlottesville's chronically homeless. Since the Charlottesville community currently has around 70 chronically homeless individuals, which cost, on average, $40,000 per year in health-related costs, providing those individuals with safe, stable housing could serve as one way to provide better access to services, case management, and healthy living while also resulting in significant long-term savings. A partnership between the TJACH and the UVA Health System is one viable way to accomplish this goal.

Evaluation of Policy Option 1:

Administrative Feasibility:

The administrative feasibility of hospital funded housing in Charlottesville is **high**. Currently, the UVA Health System has already expressed a significant amount of interest towards improving the social determinants of health of the community and has already begun looking at how to establish a data-sharing agreement with TJACH. The hospital also currently supports a number of charitable organizations and programs that are aligned with its MAPP2Health[8] program, specifically those that are able to demonstrate an impact in at least one of its four community health improvement priority areas: promote health eating and active living, address mental health and substance use issues, improve health disparities and access to care, and foster a healthy and connected community. The hospital already has a Community Relations Coalition Steering Committee in place that works with registered non-profits and government agencies towards these goals, and this committee typically reviews applications submitted by community members which are then discussed with the hospital's executive leadership team. Oftentimes money is allocated via grants to programs and agencies that demonstrate a commitment to addressing these health priority areas, and TJACH has been a recipient of these grants funds in the past.

Conversations with members of the UVA Hospital's leadership have also indicated that the Health System is very interested in undertaking a PSH project, and that the hospital is already aware of the tremendous cost-savings a PSH project could have for their organization and the community at large. Dr. Mo Nadkarni, who is a member of TJACH's Board and also a part of the UVA Health System's MAPP2Health leadership has been working on establishing this data-sharing agreement between TJACH and the Hospital for the past few months and has also noted in several emails and in-person conversations that the hospital has the available land, technical staffing assistance, administrative capacity, and the necessary funding to develop this kind of housing and health intervention for the future. Since the UVA Health System already has this Community Health Grant Program in place to supports these kinds of initiatives, the administrative support needed to carry out this kind of project is already in place.

Timeliness:

The timeliness of this Hospital Funded Housing option is also **high**. Since the Health System has already established its Community Relations Steering Committee, it already has the administrative supports its needs in order to implement this policy option. Further, since this policy option would only require a data-sharing agreement between TJACH and UVA, this would also reduce the number of legal hurdles involved with establishing a data-sharing agreement from the onset. The ability to

[8] The Mobilizing for Action through Planning and Partnerships (MAPP) program is a strategic framework developed by the CDC in order to engage community stakeholders, key organizations, and citizens to come together to review health indicators and determine community health priorities for focus and improvement. Since 2008, the UVA Health System has utilized the MAPP framework to review health outcomes and align resources in the Charlottesville community. It publishes annual reports and works with agencies in the community to identify new health priority areas each year (MAPP2Health, 2016).

establish this data-sharing agreement quickly will improve the overall timeliness of the project and will allow for the 60 PSH units to be developed faster. Further, sine the UVA Health system would be the principal funder of this project, it would also be able to directly submit a Request for Proposals (RFP) for PSH development and would be able to fund the project directly out of its philanthropic endowment and community fund.

Cost:

The cost of hospital funded housing is approximately **$6.6 million**. This was determined by taking into account the total cost of development, maintenance, and administrative/case-management services. As discussed in the evaluative criteria section, the total cost to develop 60 PSH efficiency units is roughly $5.6 million and the total maintenance costs are expected to be roughly $500,000 per year[9] (Olsen, 2018; Moomaw, 2012). The administrative and case-management costs are also highly variable and uncertain at this time because a project such as this has not been done in this community before. While no data on this kind of policy alternative is readily available at present, we can assume that the administrative and case-management costs would be feasible for the UVA Health System to cover since the administrative capacity needed is already in place, and as a major public health system the case-management services are also already in place as well. Estimates from the Crossings indicate that it would cost roughly $150,000 per year to provide the case management services, and approximately $350,000 to run the actual building (Moomaw, 2012). However, note that the specific costs for providing these services will need to be obtained from a feasibility study.

Policy Option 2: Pay for Success & Housing First

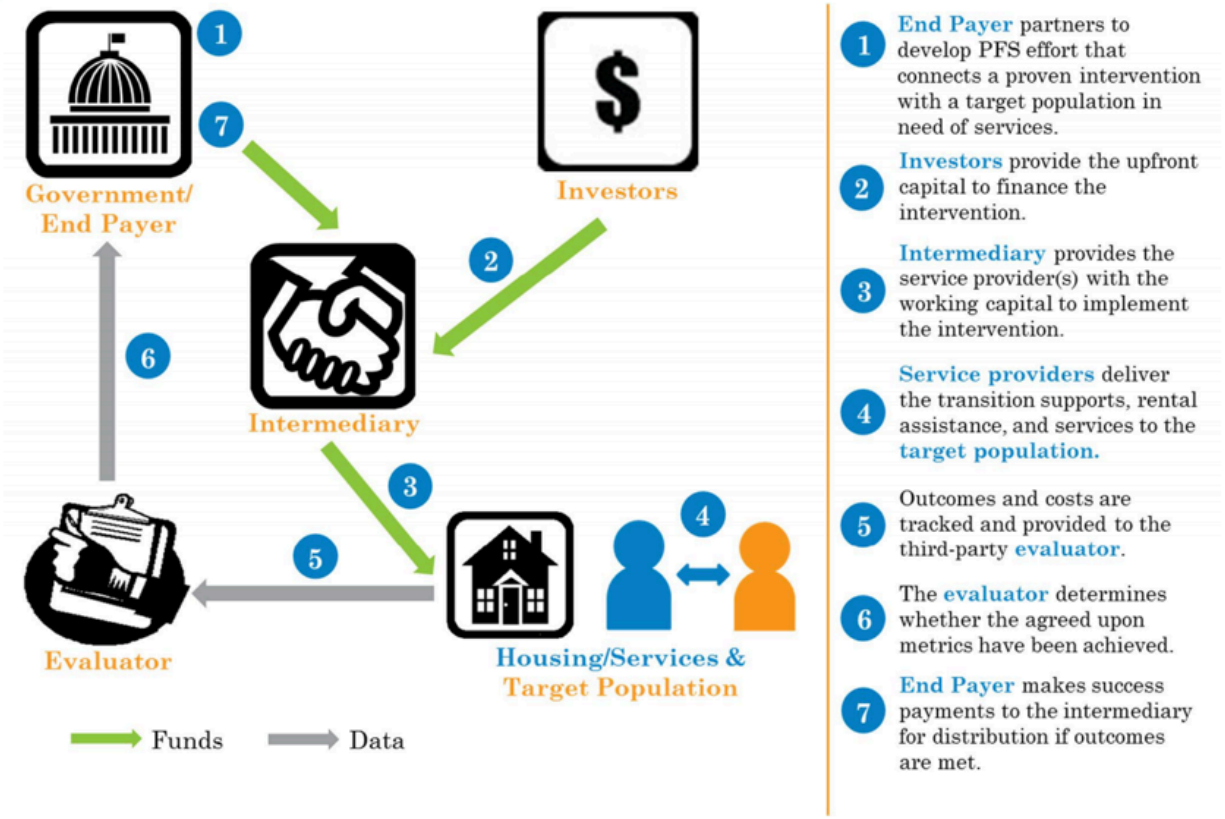
Housing First and Pay for Success Programs offer another potential policy solution to this challenging issue of housing and healthcare for the chronically homeless.

Overview of Pay for Success: Pay for Success (PFS) is a "collaboration between philanthropies, investors, and governments that creates performance-based contracts for expanding high-impact evidence-based social programs" (VCEH, 2015). In a PFS contract, the payer for outcomes (typically a government or private investor), agrees to provide funding if and when the services delivered achieve a pre-agreed upon result. Afterwards, an independent evaluator typically determines whether those outcomes have been met (PFS, 2018). While PFS financing varies depending on the type of project, most PFS programs are developed from a previous intervention that has already proven to produce desired outcomes, such as cost-savings over time. Upfront capital investment for PFS projects can be provided by a variety of investors and/or philanthropic sources, which typically receive repayment for their assistance via the success payments, along with a modest return on investment. In exchange,

[9] Maintenance costs, as discussed in the evaluative criteria section are highly variable depending on the leasing company preferences and the overall age of the building. Thus, while this number was estimated based on local data from the Crossings, it is important to note that these costs can be highly variable over time.

investors accept the repayment risk associated with the possibility that the project does not produce the required outcomes (see Figure 9 below) (CSH, 2017).

Figure 9: Example of a PFS Model



Source: CSH, 2017

The PFS model has been used to scale up effective programs and interventions, and across the U.S. dozens of PFS projects have been launched and many more are in development. A brief discussion of some of these effective PFS projects is warranted in order to explain why PFS could be a salient policy alternative for providing PSH in the Charlottesville community.

One example of a promising PFS project surrounding health and homelessness is the Denver Social Impact Bond Program, which scales up Housing First[10] and a modified Assertive Community Treatment[11] (ACT) model. These services, when implemented together, are designed to address

[10] Housing First provides permanent supportive housing to individuals experiencing homelessness through streamlining the application process for housing by removing unnecessary barriers, such as mandated sobriety, treatment or service participation requirements

[11] ACT is a multidisciplinary, team-based approach that combines assertive outreach with supportive services such as case-management, crisis intervention, substance use counseling, mental health treatment, peer support, skills building, primary care and many others (Urban Institute, 2018).

barriers to housing stability, improve health outcomes, reduce costs, and ultimately provide housing and supportive services through what is commonly known as permanent supportive housing.

In Denver, this PFS project is focused on addressing chronically homeless, high-utilizers of the criminal justice system, with overall outcomes focused on housing stability and reductions in the number of jail-bed days. The program utilizes a lottery system to provide supportive housing slots, which enables the use of a randomized control trial to measure the impact of the program. The project is targeting 250 individuals experiencing chronic homelessness, and the service providers are the Colorado Coalition for the Homeless and the Mental Health Center of Denver. Investors include the Colorado Health Foundation, Denver Foundation, Colorado Access (a managed care organization), and many others, with the overall outcome payor being the City and County of Denver. The overall size of the investment is $23.7 million, with $15 million in federal resources, and the project launched in 2016 (Denver Social Impact Bond Program, 2017).

Here in Virginia, PFS projects are also already ongoing, and/or in development. In fact, VSH was recently selected by CSH to be a sub-recipient of the FY 2014 Social Innovation Fund Pay for Success grant award. In doing so, this grant money has been helping VSH drive forward a Pay for Success initiative for the city of Richmond. The goal of the project is to provide funding for a local supportive housing initiative targeted to persons with histories of homelessness who are also super utilizers of the criminal justice system and the Richmond health system. As mentioned in the background section, the VSH/VCUHS study has already demonstrated the cost-effectiveness of providing housing services to Richmond's homeless population, and the overlap between homelessness, incarceration, and hospital super-utilizers has already been measured. This PFS project has already identified a key partnership with the city through the Richmond Justice Center, and the VCU Health system, which both intersect with homeless individuals living in the community and may potentially serve as the end-payors of the PFS project. The average investment size of this project has been estimated to be roughly $5M, and the feasibility study of this PFS project has just been completed in August of 2017.

PFS in Charlottesville: A PFS project similar to the Denver Social Impact Bond Program or the VSH PFS Project here in Charlottesville offers one potential policy solution to address the high costs of healthcare for Charlottesville's approximately 70 chronically homeless individuals. While Charlottesville's homeless population is obviously smaller than Denver's, it is relatively similar to the size of Richmond's, which makes the generalizability of a similar PFS project here in Charlottesville more viable. Further, because Charlottesville's homeless population is smaller this could make financing the project a bit easier as well. However, Denver and Richmond, unlike Charlottesville, have already established data-sharing agreements between the CoC, hospital system, criminal justice department and the Managed Care Organization. Since Charlottesville has yet to do this, it could make the feasibility and timeliness of accomplishing such a project all the more difficult.

Evaluation of Policy Option 2:

Administrative Feasibility:

The administrative feasibility of implementing a PFS PSH project here in Charlottesville is **medium**. As discussed, PFS projects are already ongoing in the Commonwealth, and a PFS project related to the housing-health nexus is already underway with VSH and the VCUHS in Richmond, Virginia. At present, TJACH has already been in contact with the Urban Institute to assess the feasibility of enacting a PFS project related to PSH for the Charlottesville community. In April 2018 the Urban Institute developed a *PFS Work Plan* for TJACH and the organization is already exploring ways to finance PSH either through new construction or a scattered site model. The Urban Institute and TJACH have already begun to conduct informational phone interviews with key stakeholders in Charlottesville including: the CRHA, the Crossings, VSH, Region Ten, People and Congregation Engaged in Ministry (PACEM), UVA Hospital, Albemarle-Charlottesville Regional Jail, and Offender and Aid Restoration, and are hoping to conduct periodic site visits to explore PFS feasibility with local stakeholders. The plan mentions how TJACH already has data sharing efforts in place related to criminal justice reform efforts but notes that currently a data-sharing agreement between the UVA Hospital's emergency department is not in place, and that this will be crucial in order to demonstrate the potential cost savings from a PFS/PSH project in the future. It's also important to acknowledge that TJACH and the Urban Institute have not yet solidified who the 'end-payor' of this PFS project would be if it was implemented, which is a crucial first step to any PFS project. Potential 'end-payors' mentioned in the work plan include the UVA Health System, Charlottesville city government, and VSH, however a financing contract has yet to be established with any of these potential payors at present.

The Urban Institute is currently using this work plan to implement a feasibility study of a PFS PSH project in Charlottesville, however this has not yet occurred. Further, most PFS projects require a substantial investment of time, energy, and financial commitment from all involved partners, and currently TJACH does not have sufficient staffing capacity to take on all the components of a PFS project. For this reason, the administrative complexity of this policy option was determined to be **medium.**

Timeliness:

The timeliness of this policy option is **low**. Developing an outcomes-based contract with a clear target population, specified intervention, data collection methods and robust evaluation is difficult (Urban Institute, 2018). To date, most PFS projects have required substantial investments of time, energy and finances from all involved partners. Projects can typically take a year or more to launch, and each project requires extensive data analysis, intervention and evaluation design, and contract negotiation. That said, there are a number of different tools and options that projects may use to offset some of these challenges, and PFS financing structures can have benefits that reach far beyond the projects themselves, such as seeding systems changes within government (Urban Institute, 2018). Overall, PFS projects typically take between 3-5 years to carry out.

In order for a PFS PSH project to be successfully carried out in Charlottesville, the community would first need to establish a robust data-sharing agreement between the hospital system, correctional facilities, Health District and TJACH. Establishing this kind of data-sharing agreement will likely perpetuate a number of legal challenges to consider. For example, HIPPA privacy protections will have to be upheld along the way. Nevertheless, this data-sharing agreement is a crucial component of any kind of PFS PSH project, specifically so that the impact of PSH on health and health spending can be measured. A feasibility study is also another necessary first step to any PFS project, and this can take up to one year to occur as well. Since the development of PSH will also take some time, and currently there is no new PSH in development, this could also add to the time of the overall project. Taking all of these factors into consideration, I determined that the overall timeliness of this policy option is **low**. Not only will it take a number of years for the actual PSH units to be developed, but it will also take several months/years for the PFS contract to be established and the feasibility study to be conducted.

Cost[12]:

The overall cost of implementing a PFS PSH project in Charlottesville is approximately **$7.15 million[13]**. This was determined by taking into account the overall administrative, maintenance, case management, advisory and development costs associated with a PFS PSH project (discussed in this section). Please note that every PFS project requires a significant amount of up-front investment, and that many of the associated costs are highly variable depending on which financing structure is chosen and who the overall end-payor is. I utilized estimates from the advisory firm Third Sector Capital Partners to approximate the costs of the project launch and management.

The total cost to develop 60 PSH efficiency units is roughly $5.6 million and the total maintenance costs are expected to be roughly $500,000 per year (Olsen, 2018; Crossings, 2018). The cost of conducting a feasibility study for most PFS projects is roughly $75-150,000, and another $150,000 is required for actual project construction[14]. After projects are launched, there is typically a 'project manager' that oversees the project which costs roughly $100,000 per year, and evaluation expenses can cost roughly 150,000 a year as well. Note that the cost of case management services is highly variable but will also need to be considered for the foreseeable future. Estimates from the Crossings indicate that it would cost roughly $150,000 per year to provide the case management services, and approximately $350,000 to run the actual building (Moomaw, 2012). Also, while the associated costs of this policy option are somewhat higher than the other options, it is important to recognize that the PFS financing structure allows the financial risk of this project to be spread out, which can be more appealing to investors upfront.

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[12] Note: Since specific cost information is not available for Charlottesville, I used estimates from the literature and other PFS projects in cities similar to Charlottesville.
[13] I made the assumption that the following PFS PSH project would take roughly 5 years to be fully implemented.
[14] This information was obtained through in-depth discussions with Josh Ogborn, UVA's Pay for Success Lab Director, who is a subject-matter expert on PFS projects

Policy Option 3: Managed Care Capital Investment

Overview of Managed Care: Today most state Medicaid programs rely heavily on risk-based Managed Care Organizations (MCOs) to serve their Medicaid enrollees. Broadly defined, MCOs are a type of health insurance company that have contracts with major health care providers and medical facilities to provide care for their members at reduced costs. These providers comprise the plan's network, and many MCOs now exist around the U.S. In recent years, many states have begun to expand their managed care programs beyond children and parents to include beneficiaries with more complex needs, including individuals with behavioral health conditions, seniors, persons with physical disabilities, and those experiencing chronic homelessness (Paradise et al., 2016). This was largely due to the fact that in 2015 the Centers for Medicare and Medicaid Services (CMS) issued an Informational Bulletin clarifying the "circumstances under which Medicaid could reimburse for certain housing-related activities, with [the ultimate goal that doing so would promote] community integration for individuals experiencing chronic homelessness" (Paradise et al., 2017). The Informational Bulletin outlined three types of housing-related activities and services that Medicaid could now cover and also discussed different Medicaid options and waiver authorities that states could now use to cover housing-related services and activities. Since the Bulletin's enactment, these waivers have allowed many states to integrate Medicaid and supportive housing services since Medicaid money can now be used for payment.

These Medicaid-housing partnerships have helped a number of cities and states address housing and other social determinants of health and have helped to achieve annual savings on the order of millions of dollars. This has largely been the result of many MCOs using their annual savings for "reinvestment strategies" to support the integration of health services and housing (Paradise et al., 2017). Today, many experts argue that MCOs can help to advance the "triple aim" of improving patient care and population health while also lowering per capita health care costs (Paradise et al., 2017).

One such example occurred with UnitedHealthcare (UHC), one of the largest MCOs in the United States. Partnering with Chicacos Por La Causa, a Community Development Corporation in Phoenix, UHC provided Chicanos Por La Causa with $22 million in capital investments to acquire and renovate nearly 500 rental apartments for permanent supportive housing in Phoenix, Arizona (Low Income Investment Fund, Mercy Housing, 2017). UHC and Chicanos Por La Causa have worked together since 2011, when the organization approached UHC to explore a collaboration to expand health care services for their community members. This partnership ended up establishing an electronic referral system between the two parties which provided comprehensive data and healthcare services to the community at large. Now, with UHC's financing of affordable PSH, both UHC clients and community residents will have access to housing and supportive health services. Other examples of MCO PSH investments have occurred in Philadelphia, Massachusetts, and California.

Managed Care Capital Investment in Charlottesville: Currently, Virginia's MCOs include Aetna Better Health of Virginia, Anthem HealthKeepers Plus, INTotal Health, Kaiser Permanente, Optima Family Care, and Virginia Premier, and Virginia's Department of Medical Assistance Services (DMAS) is the principal agency that oversees all of these organizations. At present, these organizations cover

approximately 1.2 million beneficiaries in Virginia, or 68 percent of the state's Medicaid population, and the total Medicaid expenditures managed by these MCOs for FY 2015 was approximately $8 billion. (CMS, 2017). Given that Virginia's MCOs have a tremendous amount of capital and cover roughly one million individuals in the state, an MCO PSH partnership could serve as another viable policy alternative. Managed care investments in Charlottesville could help the community finance 60 new PSH for the chronically homeless, while also improving cost-savings and the overall health of the population. However, it's important to note that the number of studies surrounding MCO and PSH are limited, meaning that there are a lot of unknowns surrounding managed care investments in housing/health initiatives. Nevertheless, it is an option worth exploring since it has been successful at addressing health expenditures and housing stability in other localities.

Evaluation of Policy Option 3:

Administrative Feasibility:

The administrative complexity of financing a PSH project with managed care capital investment is **high**. Because Virginia's Medicaid program is managed by six different MCOs, it is not certain at this point which MCO would serve as the principal financer of the PSH project. Further, TJACH does not currently work with any of Virginia's MCOs, which poses another challenge to carrying out this type of project in the near future. While MCOs are relatively large and have the administrative capacity to carry out this kind of project, most are regional, with the exception of Anthem HeatlhKeepers Plus (which is the largest Medicaid health plan in Virginia and the only statewide plan), meaning that they are not currently located in the Charlottesville area. This could make implementing this kind of project all the more difficult, since the relevant stakeholders involved would not be able to actively engage with one another on a regular basis. Further, the informational barriers to data-sharing would pose another administrative challenge for managed care PSH investment because this would require TJACH, the MCO, and the hospital to all be able to access the same data. This presents a number of legal barriers since ensuring patient privacy is an utmost concern of the UVA Health System. Finally, at present TJACH does not have the administrative capacity to assess the feasibility of this kind of financing alternative, and since the MCOs in Virginia have not yet entered into discussions on this kind of project, it is likely that additional staffing will be needed at both the MCO and TJACH to actually develop the PSH units for the community.

Timeliness:

Currently, the timeliness of managed care capital investments in PSH is **uncertain**. At present, TJACH has not engaged with any of Virginia's MCOs surrounding the possibility of investments in PSH, so I was unable able to predict how long it would take to finance and develop 60 PSH units in Charlottesville. Future discussions with Virginia's MCO and DMAS are needed to have a better grasp as to whether this type of investment could be a possibility moving forward.

Cost:

The cost of financing a managed care PSH project is also **uncertain**. While we know that it would cost roughly $5.6 million to actually develop the 60 PSH units, we do not know at this time how much it would cost administratively to implement this policy option. This is largely due to the fact that Virginia has more than one MCO, and none are located directly in Charlottesville the region. This has made it challenging to engage with any of the MCOs surrounding the feasibility of implementing this kind of project. Also, as previously discussed, there are only a few known studies about MCO's investing in PSH, and the costs associated with each of these projects has been highly variable since many have been carried out in vastly different cities across the nation.

Policy Option 4: Status Quo

Overview of Current State: Since community and/or system wide changes in investments and projects can result in instability, be difficult to implement due to timing or political feasibility, and often take several years to see outcomes, sometimes letting present trends continue is the most salient solution. Thus, this policy option allows for present trends to continue in Charlottesville, meaning that no new PSH units would be developed in the community at this time. To take this option requires a keen assessment of Charlottesville's existing interventions surrounding the housing-health nexus, and a determination of whether the current initiatives are tacking this problem in the most effective way.

As discussed in the background section, TJACH has experienced an increase in the number of homeless persons it serves over the course of the past few years, and at present, there are no PSH units available to house the community's 70 chronically homeless individuals. Without these available PSH units, TJACH is limited in its ability to move these individuals into stable housing, and as such, the majority of these chronically homeless persons will continue to remain unhoused for the foreseeable future. For example, last year TJACH was only able to move roughly 10 chronically individuals into PSH, and this was only due to the fact that housing was made available by those client's family members/friends. Over the course of the past few year, Charlottesville's chronically homeless numbers have also been increasing, which means that without new PSH units, this problem is likely to worsen.

Nevertheless, TJACH has continued to explore other ways to provide for the chronically homeless despite the lack of available PSH units. One of the primary ways TJACH has done so is through the SOAR program. The SOAR program is a case management program that targets people experiencing homelessness with a disability who do not currently receive benefits. Since this highly vulnerable population is most likely to die on the streets and is the group that costs the social service system the most in aggregated emergency care, health services, and criminal justice contact, this program helps connect these chronically homeless, highly vulnerable individuals to SS/SSDI benefits.

In 2017 TJACH received $50,000 in funding ($25,000 from the UVA and $25,000 from a private donor) to fund a SOAR case management program for the community. These funds have since been dedicated to support a full-time SOAR benefits specialist to assure that at least 35 eligible adults receive

needed SS/SSI benefits each year and are linked with housing and a medical home. This specialist currently serves as a community resource to provide expertise and comprehensive technical assistance on the benefits application process for both human service providers and eligible residents and enrolls clients in the HMIS system in order to make referrals and track post-housing outcomes.

In other communities, the SOAR program has been considered a best practice for improving access to income and housing. SOAR has also been shown to reduce health care costs because when a person receives their SSI/SSDI benefits, they are shown to reduce their emergency room usage, hospital stays and lengths of stay. TJACH estimates that the SOAR project has brought in an estimated $235,8000 in new federal financial benefits through transforming its program participants into paying customers in the behavioral and physical health care systems. TJACH argues that this has continued to save the community upfront by reducing the use of higher costing services while also bringing in additional state and federal income. TJACH is also confident that because of these known benefits, the SOAR program will likely continue to be funded in the coming years.

However, it's important to also reiterate that the SOAR program does not provide actual housing for the chronically homeless, and the overall goal of this APP is how to best provide PSH units for Charlottesville's chronically homeless. Also, the SSI benefits typically received by individuals in this program only amount to roughly $600 per month, which is not enough to cover living expenses in Charlottesville. Thus, this option does little to actually address the PSH shortage in the community, and without these available units, chronic homelessness is expected to continue to worsen.

Evaluation of Policy Option 4:

Administrative Feasibility:

The administrative feasibility of letting present trends continue is **high**. Since TJACH has already hired the SOAR Benefits Specialist, the organization already has the staff person it needs to continue the program moving forward.

Timeliness:

The timeliness of this policy option is **negligible** since this option allows present trends to continue and does not require any the enactment of new programs or policies.

Cost:

The cost of letting present trends continue is approximately **$50,000**. This is the cost associated with funding the SOAR program each year. While the cost is considered to be **low**, it is important to note that this is only because no new PSH units are actually being developed by this policy option.

Outcomes Matrix

The holistic analysis produces the following comparative outcomes matrix, with Option 1, Hospital Funded Housing, performing best.

Table 1: Outcomes Matrix				
Evaluative Criteria	**Policy Alternatives**			
	Option 1: Hospital Funded Housing	**Option 2: Pay for Success & Housing First**	**Option 3: Managed Care Capital Investment**	**Option 4: Status Quo**
Administrative Feasibility	**High**	**Medium**	**High**	**High**
Timeliness	**High**	**Low**	**Uncertain**	**-**
Cost	**$6.6 million**	**$7.15 million**	**Uncertain**	**$50,000**

Recommendation

Option 1: Hospital Funded Housing Partnership

Anthony Haro, Executive Director of TJACH, should partner with the UVA Health System in order to finance and develop 60 new PSH units for the chronically homeless in Charlottesville. Specifically, TJACH should work closely with the UVA hospital's Community Relations Coalition Steering Committee in order to establish a formal PSH financing partnership and data-sharing agreement.

Based on the evaluative criteria selected for this APP, I recommend that TJACH pursue Option 1 (Hospital Funded Housing). This option ranks highest on the administrative feasibility and timeliness criteria and has the potential to provide the biggest impact on health outcomes, health expenditures, and overall utilization of public services in the long-run. While each option brings unique value to TJACH and the Charlottesville community at large, option 1 has the greatest potential to effectively develop the PSH needed to address the critical social determinants of health of Charlottesville's chronically homeless population.

Option 2, Pay for Success and Housing First, was not recommended because it entails considerable costs, time, and is administratively complex, involving a wide-range of stakeholders. Specifically, this option requires a complex financing structure between a variety of investors, philanthropic organizations, and governmental agencies that may be difficult to implement in a timely fashion. This complex financing structure also threatens the feasibility of establishing a data-sharing agreement between the relevant stakeholders in a timely manner. However, if given sufficient time, this option could be adopted in conjunction with option 1, especially if the UVA Health System agreed to serve as the ultimate 'end-payor' of the project.

Option 3, Managed Care Capital Investment, was not recommended because it entails too many uncertainties and is extremely administratively complex. Further, Virginia's managed care system is very fragmented at present, and there is no way to predict how this may change, particularly if Virginia chooses to expand Medicaid in the coming months/years. The number of stakeholders involved in this option also poses a major challenge to obtaining a viable data-sharing agreement between TJACH, the MCO, UVA Hospital and city government.

Option 4, the Status Quo, was not recommended because it does not address the overall issue at hand: insufficient available PSH. While it costs significantly less than the other three policy options, case management alone is not an evidence-based practice recognized for its ability to address housing stability and health concerns for the chronically homeless. However, it's noteworthy to consider that this option could perhaps be adopted in conjunction with option 1 as well, especially because the SOAR program is already being funded by UVA at present.

Overall, based on my analysis **I recommended that TJACH partner with the UVA Health System to develop new PSH units for the chronically homeless**. As noted throughout this report, Hospital

Funded Housing is an evidence-based practice discussed extensively in the literature, and it has been shown to dramatically improve housing stability and overall health outcomes, while also reducing associated health expenditures. Through developing these new PSH units, TJACH will have the capacity to move the 70 unsheltered individuals living in its community into stable housing. In turn, this will help TJACH and the UVA Hospital better accomplish the "triple aim" of social determinants of health: improving patient care and population health while also lowering per capita health care costs.

Implementation

It is recommended that TJACH begin the implementation of this option by developing a formal partnership with the UVA Health System's Community Relations Coalition Steering Committee. TJACH has already worked directly with this committee in the past to secure funds for its SOAR program, and already has a working relationship with Elizabeth Beasley, one of the chairs of this committee. TJACH should work with the Committee in order to establish a data-sharing agreement with the UVA Health System. This is a crucial first step to this option, since it will help UVA and TJACH identify their most vulnerable, highest-costing clients. Establishing this data-sharing agreement will also allow for the impact of future PSH to be measured, since information on high-utilizers' number of ED/outpatient visits, unpaid charges, and health outcomes can be collected pre and post housing.

It is also recommended that TJACH and the Community Relations Coalition Steering Committee conduct several monthly meetings with the city government, UVA Hospital Executive Leadership, Virginia Supportive Housing, and the VCU Health System in order to determine the best location to build and develop this housing, and to learn from VCU/VSH's current hospital-housing partnership. Since VSH was also the project lead for the Crossings housing project here in Charlottesville, and the organization has a wealth of knowledge on how to appropriately go about developing PSH, their expertise and support should also be leveraged.

Over the course of the next year, it is also recommended that TJACH and the UVA Health System submit a Request for Proposals for developers, after the necessary land has been acquired (or donated on behalf of UVA/the city). Active engagement with UVA's Executive Leadership (CEO, CFO, CTO) will be crucial to ensuring that this project is carried through to completion, since their approval is needed in order to secure the proper funds for PSH development from the Hospital's Philanthropic Community Development Fund. In the coming years, UVA and TJACH will need to also secure adequate nursing staff, case managers, social workers, and administrative support to ensure that the chronically homeless persons placed into the newly developed units are able to be connected to the healthcare and case management services they need to stay housed long-term.

Word Count: 11,998
(excluding in-text citations, acknowledgements, and title page)

Appendix

Innovative Models in Housing and Health: PSH Case Studies

Case Study	Partners / Location	Capital Approach	Housing Approach	Health Care Approach
1. Central City Concern	Five hospital systems, nonprofit healthcare plan, project sponsor which is both an affordable housing developer and a Federal Qualified Health Center (FQHC). Portland, OR	Health providers donated $21.5MM up front to developer under their Hospital Community Benefits Obligation.	Creation of 379 units of affordable, workforce units, as well as supportive and transitional housing, in conjunction with an FQHC.	Housing includes supportive units for people with behavioral health disorders as well as a site for an FQHC providing primary care and behavioral health services.
2. Central California Alliance for Health	Managed Care Organization (MCO), affordable housing developer. Northern California	MCO provided $2.5MM up-front capital grant from capital investment fund.	Creation of a 90-unit mixed-use development, with 20 units set aside for homeless high-users of the healthcare system.	Targeting service-enriched housing to the homeless high users of the health system is expected to reduce utilization and improve health.
3. Chicanos Por La Causa/ United Healthcare	Managed Care Organization, Community Development Corporation. Phoenix, AZ	MCO provided a $22MM low-interest loan.	Creation of 500 supportive housing units without using LIHTC.	Up to 20% of the units will be targeted to clients identified by the CDC as "housing insecure," and supportive health services will be provided.
4. Health Plan of San Mateo	Managed Care Organization, housing services provider. San Mateo, CA	MCO provides ongoing funding for housing program, supporting transition of individuals from long-term care to independent supported living.	Housing services provider offers coordinated care, and supports relocation to, and stability in, independent housing or residential care facilities.	124 individuals, primarily Dual Eligible for Medicaid and Medicare, transitioned from skilled nursing facilities to service-enriched independent living. Initial results show 50% cost reduction.
5. Minnesota Group Residential Housing/ Hennepin Health	County-run Accountable Care Organization, State Government. Hennepin County, MN	State provides income supplement to homeless adults for housing and personal needs, supplemented with Medicaid and grant funds for services.	Housing navigator service combines with income supplement to reduce homelessness. The operating cost of supportive housing is partially offset by the supplement.	Over 10 years, the supplement has been used in over 1,000 units for disabled homeless adults. Accountable care agency spends a portion of savings for housing specialists to identify enriched supportive housing units for high users of healthcare services.

Case Study	Partners / Location	Capital Approach	Housing Approach	Health Care Approach
6. San Francisco Department of Public Health/ Direct Access to Housing	City Department of Public Health, Mayor's Office of Housing, affordable housing developers. San Francisco, CA	City of San Francisco designated local funding to expand supportive housing rather than using federal vouchers. Documentation of cost savings is not required, though savings were achieved.	The city moved from master-lease agreements with private owners and subsidizing the rent and operations, to contributing to up-front capital costs of housing development.	Created 1800 new units of supportive housing. Preliminary results of a randomized trial confirmed significant healthcare cost reductions were achieved for residents, primarily formerly homeless adults.
7. Los Angeles Department of Health Services/ Housing for Health	County Department of Health, affordable housing developers. Los Angeles, CA	Los Angeles allocated $14 million annually for development, plus $4 million in foundation funding for vouchers for supportive services and other housing-related costs.	The program supports 1200 units of new housing with a goal of 10,000 units by 2019.	A flexible housing pool is a one stop shop fiscal entity for government funds and philanthropy and provides rental subsidy and services contracts for homeless adults who are high users of public health services
8. Ohio Stygler Village/ National Church Residencies	State Department of Medicaid, State Housing Finance Agency, affordable housing developer, foundation. Gahanna, OH	State Housing Finance Agency was to provide a $5.5MM loan to fill a project financing gap. In a Pay-for-Success type transaction, repayment source would be medical cost savings backstopped by a foundation guarantee. This transaction did not move forward.	Designed to refurbish 75 units of affordable housing for seniors, and reconfigure 75 units for assisted living for individuals who would otherwise be housed in Skilled Nursing Facilities.	Designed to produce cost savings and improved quality of life for residents by transitioning seniors and individuals in need of supportive services from institutional to residential settings.
9. California Developmental Disability Housing/ Brilliant Corners	State Department of Developmental Services, affordable housing developers. California	State contributed up to 20% of cost for acquisition and rehabilitation of housing units, while non profit developers financed the remaining 80% with conventional debt.	Housing is restricted to people with developmental disabilities. Services and operations are funded by Medicaid and SSI.	Adults with developmental disabilities are transitioned from institutional to community residential facilities, producing both cost savings and better outcomes.

Source: Mercy Housing and the Low Investment Fund for the California Endowment, 2017

State of Homelessness in America:

Geographically, half of all people experiencing homelessness did so in one of five states: California, New York, Florida, Texas, or Washington (see Table 1), and the highest incidences of homelessness were found to typically be in urban centers, with cities such as Los Angeles and New York City reporting a 26 percent and a 4.1 percent increase in homelessness, respectively (HUD, 2017).

Table 2: States with the Highest Incidences of Homelessness in the U.S.

State	*# of Homeless Persons (% of total national homeless population)*
New York	89,503 (16%)
California	134,278 (25%)
Florida	32,190 (6%)
Texas	23,548 (4%)
Washington	21,112 (4%)

Source: HUD, 2017

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