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Housing With Services: Year 1 Evaluation, October 2014

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HOUSING WITH SERVICES

YEAR 1 EVALUATION, OCTOBER 2014

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This report describes the initial findings of an evaluation of the Housing with Services project in Portland, OR. Support was provided by Oregon's State Innovation Model (SIM) grant from the Center for Medicare and Medicaid Innovation (CMMI).

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HOUSING WITH SERVICES

YEAR 1 EVALUATION

BACKGROUND

This report describes the initial findings of an on-going evaluation of the Housing with Services project based in Portland, OR. Housing with Services was supported, in part, with funding from Oregon's State Innovation Model (SIM) project grant from the Center for Medicare and Medicaid Innovations to Cedar Sinai Park.

Housing with Services, LLC is a collaborative model of supportive services delivered or made available to low-income residents of affordable housing. The SIM grant helped to establish the project and funded the evaluation of the program implementation and resident- and system-level outcomes.

The collaborative model includes partnerships between health plans, coordinated care organizations (CCOs), housing providers, health and social service agencies, and long-term supports and services providers. The mission is to improve the health outcomes, reduce health care costs, and to promote community inclusion and self-determination for seniors and people with disabilities living in subsidized housing.

The broad program goals include reducing hospital and long-term care service use, improving health outcomes among building residents, addressing social

PROGRAM HISTORY

Housing with Services LLC grew from the efforts of Cedar Sinai Park, a non-profit health, housing, and social services provider. After learning about housing with service programs in other states, CSP formed a workgroup in 2011 charged with the goal of learning how and whether to create housing with services in Portland, OR.

A consortium of agencies deliver, finance, and/or advocate for services to over 1400 low-income residents of 11 apartment buildings owned by four housing providers.

determinants of health, increasing member engagement in preventive health care, and saving health-related costs by coordinating services to low-income residents of affordable housing.

Affordable housing is an important resource for low-income older adults and persons with disabilities. Over half of all recipients of Housing and Urban Development (HUD) assisted housing are elderly or disabled (Sard, 2013). In order to identify policy and program solutions that support residents aging in place, LeadingAge, a national non-profit organization with support from Enterprise Foundation, organized a Learning Collaborative that includes 12 non-profit housing providers in 11 states (Leading Age, 2014). Cedar Sinai Park has been part of this collaborative since 2012.

EVALUATION PLAN

The evaluation includes several components:

- a process and implementation evaluation of the consortium model based on interviews with stakeholders and review of Housing with Services progress reports;
- a self-administered survey of residents in the 11 partner buildings that included questions about health status and health service use, satisfaction, social integration, and demographic information;
- tracking health service utilization, based on administrative data provided by the Housing with Services LLC and partner organizations; and
- a cost analysis of services delivered through the consortium.

The Appendix describes these components in more detail.

YEAR 1 FINDINGS

During the first year of the Housing with Services project, the scope grew from four properties owned by one non-profit organization to 11 properties owned by three organizations. A Limited Liability Corporation was created, Housing with Services, LLC, representing 10 partner agencies that are in the process of creating a new model of housing with services delivered to low-income older adults and persons with disabilities. The partner agencies are diverse, including small non-profit organizations with limited resources as well as Portland's housing authority, Home Forward, and CareOregon, the largest health plan service agency in the state, and a member of Health Share of Oregon, a coordinated care organization (CCO). Oregon created CCOs as part of the U.S. Affordable Care Act. CCOs are

local health entities that deliver health care and coverage for people eligible for the Oregon Health Plan (Medicaid), including those also covered by Medicare.

1. Consortium Model

A group of local stakeholders organized by Cedar Sinai Park participated in the program planning for the Housing with Services project. The planning process took place over three years, starting in the fall of 2010, and was led by Cedar Sinai Park's CEO, David Fuks. Initially, the project was intended to take place in four buildings associated with Cedar Sinai Park. Stakeholders were asked to participate in individual interviews to describe their organizations' experience with and attitudes about the Housing with Services program planning and implementation. As interest grew, so did the number of participating buildings – from four to 11. During the spring of 2014, 20 stakeholders were interviewed, including representatives from government agencies, housing providers, health and social service providers. At that time, the final set of provider partners, LLC partners, the final set of services to be made available and delivered, and the financial model, were still being finalized. Of these 20 individuals, 12 had been involved since the early planning meetings and eight joined the project over the last year.

> ***Cedar Sinai Park has four buildings and Home Forward is looking to add four buildings. We're working with CareOregon to provide a per-person per-month payment that will support health services. From our perspective, we're interested in housing stability and cost containment.***

HOUSING WITH SERVICES PROGRAM MISSION

To assess whether the Housing with Services mission was well-defined, stakeholders were asked to describe the mission and whether it had changed over time. Nineteen of the individuals described the mission in terms of supporting aging-in-place, linking housing with services, and/or reducing health care costs. Thirteen of 20 individuals said that the mission was clear.

> ***I see this project as bringing help to someone's doorstep, since the traditional Medicare model puts the onus on the patient to ask for help. I also see it as a cost-saving model.***

A few individuals believed that the program mission was becoming less certain over time, as suggested by one person who said, "I think they're still finding their way. Developing a sustainable program, the operational details is still a work in progress, it's not defined yet."

Asked whether the mission had changed over time, seven participants said no, four said that it was the same but had grown in scale, and another four said it had become more focused over time.

An exciting thing about this project is that it's not only piloting an approach to this target population, but in the midst of health care reform, it creates a new model that could be replicated in other populations and problems. The collaboration across sectors—if it can be figured out how to make it work economically…

CREATING A COLLABORATIVE MODEL

As the Housing with Services program developed, the concept of collaboration was a consistent theme that was discussed in program planning meetings and described in written materials. We asked stakeholders to describe the collaborative model and their attitude about using a limited liability corporation (LLC) to establish a formal partnership among service providers. Most participants agreed that the organizations involved in the planning meetings were appropriate because they had expertise serving the target population. How the organizations would collaborate was less certain to some stakeholders, yet they continued attending meetings because they believed in the mission and in the leadership provided by David Fuks. One stakeholder said, "I think David and other staff were excellent facilitators. They really paid attention to inclusion, sought input, provided updates" Another said, "I was very impressed with the breadth and depth of the organizations present."

LLC Members, 2014

Cedar Sinai Park
CareOregon
Home Forward
REACH CDC
Asian Health and Service Center
Jewish Family and Child Service
Sinai Family Home Services
LifeWorks NW
Cascadia Behavioral Healthcare

Several participants described being personally invited by David Fuks, appreciation for his facilitation skills, and noted his positive record in social services. Most

participants appreciated the opportunity to give feedback at meetings and to hear from other providers at the table. But there were challenges to creating a collaborative model, as well, including how to link different models and data systems, and differences in organizational culture and leadership. For example, housing providers do not collect health-related information and prioritize tenant independence and privacy. Health and social services agencies are organized to identify unmet needs and provide services.

One concern raised by stakeholders was that communication from the project staff ended when decisions were made about the LLC and the services to be offered. Although sub-committees formed to address services and assessment, including a Resident Advisory Committee (made up of at least two residents from each building), there were no longer email updates or meetings of the entire group of stakeholders who participated in planning meetings during the prior two years.

LESSONS

- A consortium model needs to provide clear and on-going communication and opportunities for feedback to project partners.
- Recognizing and incorporating the expertise of local organizations is vital during program planning.
- The stakeholders who participated in program planning efforts appear to have established a strong sense of project ownership and motivation to make the demonstration project a success.

THE BUSINESS MODEL

The business model was still being formed during when these interviews took place and participants were mixed on how and whether it would work. Key aspects of the initial Housing with Services model included: an on-site primary health clinic, a limited liability corporation (LLC) created from a group of local providers, involvement of at least one coordinated care organization, and a per-member per-month payment approach. In addition, Cedar Sinai Park applied for and received grant and foundation funding for a needs assessment and capital projects.

The possibility of offering an on-site primary care clinic, possibly a Federally Qualified Health Clinic, was discussed by the planning group. Stakeholder members with operational expertise in running health clinics assessed that the demand was insufficient in relation to the associated costs. Although a FQHC was not feasible, the space has since been renovated, with support from a grant to Cedar Sinai Park from the Harry and Jeanette Weinberg Foundation of Baltimore, MD. Finding appropriate tenants took time, and the space now houses a PACE clinic and a primary care physician. Asian Health and Service Center, an LLC partner that provides and coordinates culturally relevant services to residents from Asian countries, plans to use office space for two staff starting in the fall of 2014.

> ***We can possibly make an alternative payment structure, sort of a sub-capitation system, where all the funding silos can be merged together. The model doesn't lend itself well to a per-person per payment structure. It won't create the sort of sustainable, integrated care model we're trying to achieve.***

An early plan to pay for services through a per-member approach was not realized. No payer was willing to accept the risk without evidence that paying for a package of services, including coordination, preventive health, and social services, would be financially viable.

Different stakeholders evaluated whether the model was viable or a good fit for their organization, and whether to buy into the LLC. Some decided to continue offering services to their clients who lived in the 11 buildings, with the possibility that additional clients would be referred to their agency.

How best to fund services was of concern to several stakeholders who had experience in housing and/or health and social services. While most of the buildings are located in downtown Portland, three were not, raising concerns that residents would experience access barriers.

Regardless of concerns, health and social service providers described the Housing with Services model as a way to learn more about merging housing and health services.

Investing in an LLC was a business decision that non-profit organizations needed to assess internally and that required their board approval. This process took many months as providers examined the risks and benefits, legal consequences, and board expectations. Although some service providers were initially skeptical, most later bought into the LLC. Of the agencies that did not become LLC members, all continue offering services to current clients in the buildings as well as receiving referrals to new clients. Cedar Sinai Park, as the originator of the Housing with Services project and owner of four affordable apartment buildings, is the largest financial partner in the LLC, at 51%. The estimated capital expenses required for start-up and the initial three years of operation was $335,000. After Cedar Sinai Park contributed 51%, the remaining 8 organizations each paid a relative share of these costs. Each percentage of equity was worth $3,000, allowing smaller non-profit agencies to afford participation. A large part of this expense reflects personnel, including a part time Program Director and part-time Project Manager to coordinate and manage the Housing with Services implementation, and rent on clinic space.

The LLC is a major hurdle. It's the only project we've done that talks about doing an LLC. I need to learn the concept. Need to get the board involved. They have to agree to the rights and responsibilities. How much will we contribute? What is the return? What if the LLC goes into debt? What is the liability if we leave?

In addition the LLC equity contributions, Cedar Sinai Park began seeking funds to support needs assessment, capital improvements, and the demonstration project. During the program planning stage (2010), they received $75,000 from the Enterprise Communities to pay for a needs assessment. The results informed the State's application to CMMI for the SIM award to the Oregon Health Authority. The Housing with Services project received $440,000 for program implementation and evaluation. In addition, two sources of capital funds were received: a $430,000 gift from the Harry and Jeanette Weinberg Foundation and a HEDCO Foundation award of $60,000 both paid for construction of the on-site health clinic. In total, the funding support totaled $1,340,000 during the first year of the demonstration project.

LESSONS

- Because non-profit organizations must receive board approval in order to enter financial agreements, and board meeting schedules and agendas can take months to align.
- Questions and answers about the legal and financial expectations of an LLC must be prepared in advance of program implementation and presented in language that is accessible to community members who serve on boards.
- Because many non-profit social service organizations operate on a modest budget, they are cautious about committing limited resources to a project that might not allow them to recoup their costs. The cost of legal services required to form an LLC was of concern to several stakeholders.
- Setting a relatively low equity contribution rate allowed non-profit agencies with limited resources to participate in the LLC.
- Program success relies on fundraising for program implementation and evaluation.

DEFINING THE SERVICES PACKAGE

The goals of Housing with Services included reducing hospital and long-term care use by increasing resident's access to health and social services. A services sub-committee of stakeholders who were involved in the planning group, including residents, formed to identify the types of services most needed and wanted by residents. Committee members included resident services staff, Resident Advisory Council members, health and social service agency staff, and housing staff from the partner organizations.

The group met several times in 2013 to discuss services. They used results from a 2012 survey of residents in three Cedar Sinai Park properties as well as resident services employees' knowledge, and feedback from current residents, to inform the list of potential services. Meeting notes indicate that the group discussed the need to develop a realistic set of services that addressed resident choice as well as outcomes of interest to CCOs. They identified the need for a multidisciplinary team to assess and coordinate resident needs, including strategies to reach socially isolated residents. One person described a two-

> ***It wasn't strictly a business decision, but we wanted to invest in the community. We're not seeing this as a "return on investment" in terms of monetary but in knowledge. We wanted to have skin on the table. It's a model we think has great promise and we'll see where it goes.***

pronged approach that included health promotion activities to enrich the lives of residents who had less health care needs, and outreach to those with higher level care needs. They questioned whether a Wellness Clinic located in the basement of one building could be accessed by residents who lived further away, and suggested a shuttle to travel between buildings as well as mobile units for mental health, foot, dental, and vision care.

After several workgroup meetings, the draft set of services was shared with service providers, the LLC members, and CareOregon staff (see Appendix). Several providers had existing clients in the buildings and were well-positioned to expand their services. However, it remains uncertain how to pay for the staffing costs associated with care coordination or for services not traditionally paid for by health insurance companies. In particular, the Housing with Services staff requested, based on Resident Advisory Council feedback, that CareOregon offer on-site care coordination, preventive health services, and wellness activities such as food preparation, nutrition classes, and fitness classes. Providers agreed to be flexible and to provide services as resident needs and preferences were better understood over time.

What would be valuable would be to develop services that augment the primary care that those providers are not able to provide, like nursing, pharmacy assistance, and health and wellness workers. And it would be good to pay for that outright. Paying a per-member per-month to CSP would be a good way to do it.

CareOregon

As the payer with the largest number of clients in the buildings, CareOregon is a key decision-maker in terms of services, staffing, and reimbursement of services available to the residents of the 11 buildings. Rather than committing to a per-member per month payment plan, CareOregon committed in-kind staff and began offering health-related services and education. One key agreement was that these services would be available to all residents rather than to CareOregon members only. As of October 2014, CareOregon committed to and implemented the following (see Appendix for details):

- Two part-time registered nurses (1 FTE total), serving as a Health Navigator and a Care Coordinator, screen residents and provide advice and referrals
- A medication therapy management program called MedChart
- A Health Resilience Program for high-risk patients
- Assistance enrolling residents who are Medicaid clients with a providers of choice

Over the next year, PSU and CareOregon will track resident use of these and other planned services, and report on resident-level and program-related costs.

Primary Care

A primary care physician who accepts CareOregon and Family Care insurance is now available twice weekly in the clinic located in the basement of one of the downtown buildings. This arrangement allows Medicaid clients to choose this provider rather than the one they were randomly assigned to visit through Medicaid enrollment that occurred as part of the State's response to the Affordable Care Act. However, residents may choose to retain their own provider.

Program of All Inclusive Care for the Elderly (PACE)

A satellite PACE site opened twice weekly in the clinic located in the 1200 Building. Providence operates the only PACE program in Oregon, serving dual-eligible individuals who are age 55+ and who meet health-related eligibility criteria defined by Oregon Department of Human Services.

PACE uses a multi-disciplinary team approach to deliver and coordinate comprehensive health care and social services including: primary and specialty medical care, a day health program, nursing, therapy and social work services, rehabilitation. PACE Enrollees must agree to use PACE providers.

To date, one client has enrolled. Based on CareOregon administrative data, one of the partner buildings has 15 residents who are triple eligible for Medicaid, Medicare, and long-term care, and PACE staff are holding information sessions to inform residents about PACE services. As with all offered services, however, it is up to each resident to decide whether or not to receive services.

CONSUMER PARTICIPATION

Participants were asked whether they believed that the consumer voice had been heard as the Housing with Services project was being planned. Of the stakeholders interviewed, ten agreed that consumers were represented, four had mixed feelings, and five were uncertain. The program planning meetings that took place during 2011-2013 included resident services staff from the participating

properties, and some stakeholders agreed that these individuals represent consumer views. However, the Resident Advisory Council, formed in 2013, offered residents the opportunity to actively participate in the final stages of program planning when decisions about services and providers were being made. In addition, community organizations who represent diverse client groups, including immigrants from China, Korea, Vietnam, Russia, and Iran attended program planning meetings in order to provide feedback on culturally appropriate services.

One stakeholder raised concerns that Housing with Services staff did not understand the role of resident services staff or how to reach out to residents. Resident services staff who attended planning meetings explained that the majority of residents value their privacy and independence and that residents had the right to choose or ignore offered services, care coordination, or other planned activities. At the same time, staff and residents recognized that some residents were socially isolated or experiencing significance health-problems that, if addressed, would allow them to continue living in their apartment building.

Lessons

- Although this program seeks to provide services to residents who need or want them, both housing and service agency staff must protect the privacy of their clients. This makes sharing information and tracking service use over time a challenge.
- Resident Advisory Council participants appreciated that they were included and that all residents would have a choice whether or not to enroll in offered health services without affecting their residency.
- Resident services staff in some buildings have for many years organized the types of services, such as health fairs and clinics that the Housing with Services program now coordinates. It is important to understand and clarify roles and expectations in order to respect the knowledge and skills of resident services staff in the buildings.

2. RESIDENT SURVEY

A survey of all residents was done in order to collect baseline information before the services were to start, in the summer of 2014. The questionnaire asks about information not available in health plan administrative records such as social isolation, food access, medication adherence, and perceived need for supports, as well as information about health service use and diagnosis. Because participation in the Housing with Services project is voluntary, the survey provides information on individuals who do and do not participate in the services provided by the project.

A total of 546 tenants completed a questionnaire, for a 39% response rate. In-person interviews were conducted in seven languages.

A total of 1401 questionnaires were distributed to all units in the 11 apartment buildings. When information about double occupancy was available, two questionnaires were delivered. An information sheet that described the availability of interpreters was translated in Russian, Farsi, Spanish, Mandarin, and Cantonese languages. A follow-up mailing was sent to residents who had not responded after six weeks.

Asian Health and Service Center assisted in the recruitment and interviewing of individuals who requested an interview by a Cantonese, Mandarin, Korean, or Vietnamese speaker. PSU students interviewed residents who speak Farsi or Spanish. In addition, PSU staff conducted four in-person interviews with individuals who were vision impaired.

The questionnaire (see Appendix) includes questions that have been validated in national and international studies as well as questions developed for this project (available from PSU Institute on Aging).

The following sections summarize responses for the entire sample and the Appendix includes tables with data organized by the three property owners.

Resident Characteristics

The majority of residents who completed a survey were White (62.7%) and female (54%). Half the respondents were over age 65. Nearly all of them live alone and

most report being single: either never married (31%), divorced (41), or widowed (13).

All the residents qualify for rental assistance and so have very low incomes. However, 17% report no income and 59% report less than $11,000 in annual household income. Thus, over three-fourths of the respondents have incomes of less than $11,000 (the US poverty level is $11,670 for an individual). All but 10 residents reported health insurance, with most reporting Medicare and Medicaid or Medicaid only.

Table 1a. Demographic Characteristics of Residents

	n	%
Gender		
Men	230	45.4
Women	274	54.0
Age in years		
<65	244	49.3
≥65	251	50.7
Marital status		
Married	78	14.7
Widowed	71	13.4
Divorced/separated	217	41.0
Never married	163	30.8
Income		
No income	88	17.3
$1-<$11,000	301	59.1
≥$11,000	120	23.6
Health insurance		
No	10	1.9
Yes	509	98.1
Type of health insurance		
Medicare/Medicaid	208	39.3
Medicaid/OHP	111	21.0
Medicare	66	12.5
VHA	38	7.2
Employer-sponsored insurance	7	1.3
Private	33	6.2

Most respondents were born in the United States and speak English (Table 1b). However, the respondents are diverse, ranging in age from 23 to 96 (mean age 65), with 22% born in another country, and 37% identifying as a race other than White. Twenty-one percent say their preferred language is not English.

Table 1b. Demographic Characteristics of Residents, con't		
	N	%
Race/ethnicity		
White	330	62.7
Black	32	6.1
Asian	94	17.9
Hispanic	15	2.9
Other	55	10.5
Country of birth		
United States	382	77.8
Non-US born	109	22.2
Primary spoken language		
English	383	79.0
Asian	73	15.1
Other	29	6.0

Satisfaction with the Building and Staff

Residents were asked to rate how well the building was maintained and how well the building staff did their jobs. Most residents rated the property management and building staff as excellent or good (75%) and the condition of the building (78%) and their own apartment as excellent or good (82%). Another question asked whether it was important to have a service coordinator (87% said yes) in the building and whether the service coordinator was helpful (78% said yes). Differences across the buildings (organized by property owner) were observed and are included in the Appendix.

Building Information

Owner	Building	# of units	Location
Cedar Sinai Park	Rose Schnitzer Tower	235	Downtown
	1200 Building	89	Downtown
	Lexington Place	54	Downtown
	Park Tower	162	Downtown
Home Forward	Hollywood East	286	East Portland
	Northwest Towers	150	NW Portland
	Hamilton West	152	Downtown
	Rosenbaum Plaza	76	Downtown
Reach CDC	Bronaugh	51	Downtown
	The Admiral	37	Downtown
	12th avenue Terrace	118	Downtown

Table 2. Satisfaction with Building		
	N	%
Management and staff's job		
Excellent/good	401	74.5
Neither	29	5.4
Fair/poor	108	20.0
Management and staff's ability to keep things in shape		
Excellent/good	448	83.2
Neither	33	6.1
Fair/poor	58	10.8
Condition of the apartment		
Excellent/good	443	82.4
Neither	25	4.6
Fair/poor	70	13.0
Condition of the building		
Excellent/good	414	77.6
Neither	30	5.6
Fair/poor	90	16.9
The building service coordinator is important		
Strongly agree/agree	468	87.0
Unsure/disagree/strongly disagree	70	12.9
The building service coordinator is helpful		
Strongly agree/agree	418	77.6
Unsure/disagree/strongly disagree	121	22.5

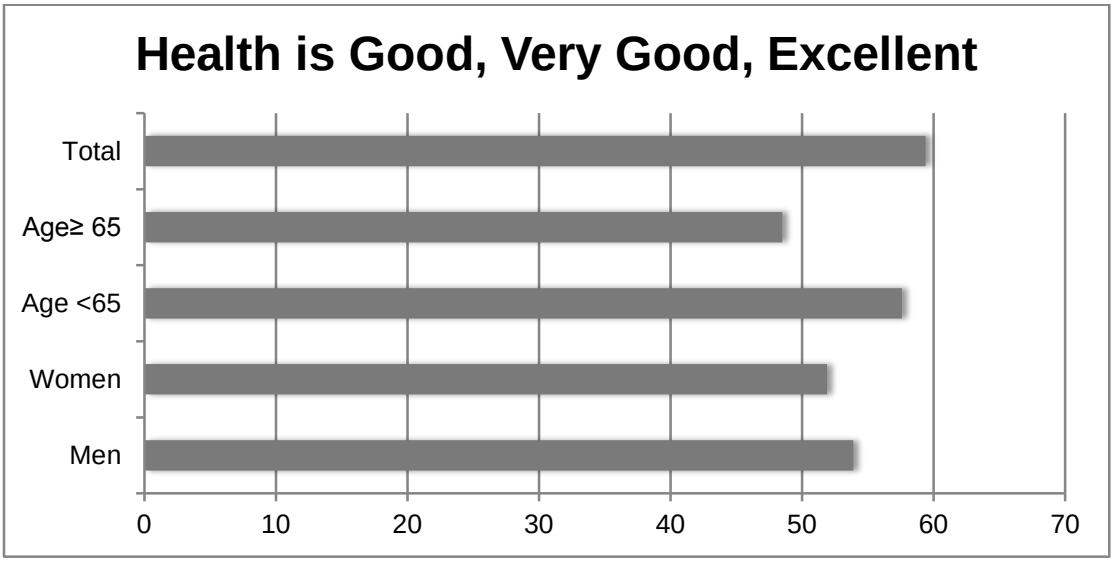
Resident Health Characteristics

The questionnaire included a limited list of diagnoses associated with poor health outcomes. The five most frequently reported conditions were high blood pressure/hypertension depression, anxiety, sleep disorder/sleep apnea, and acid reflux (Table 3). The rate of depression is very high – 43% compared to 25% of adults in Oregon reporting depression (BRFSS, 2011). The rate of COPD is also higher in this resident population compared to Oregon, with 16% of residents and 6.6% in the general population reporting this condition (BRFSS, 2011).

Self-reported health is a good indicator of morbidity and mortality. Most residents reported their health as good to excellent (59%). Both men and women rated their health similarly (Figure 1). Residents age 65 or older were more likely to report their health as fair or poor—52% of those 65 years of age or older reported fair/poor health compared to 42.4% of persons under 65 years of age.

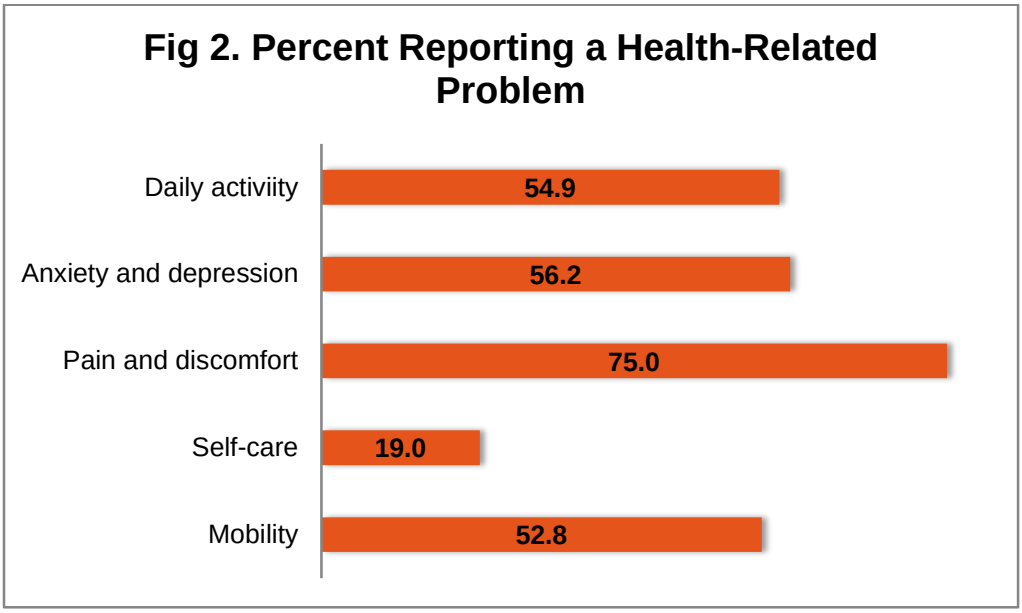
Table 3. Resident Health Diagnosis		
	n	%
High blood pressure, hypertension	272	49.8
Depression	236	43.2
Anxiety	202	37
Sleep disorder, sleep apnea	167	30.6
Acid reflux	157	28.8
Diabetes or sugar diabetes	129	23.6
Heart trouble or heart disease	117	21.4
Post-traumatic stress disorder	116	21.2
Asthma	109	20
Severe vision problems	94	17.2
COPD, emphysema, chronic bronchitis	88	16.1
Schizophrenia, bipolar disorder, or other mental illness	85	15.6
Kidney problems	61	11.2
Liver disease	57	10.4
Addiction to alcohol or drugs	50	9.2
Developmental or intellectual disability	47	8.6
Severe hearing problems	44	8.1
Dementia (such as Alzheimer's Disease)	13	2.4

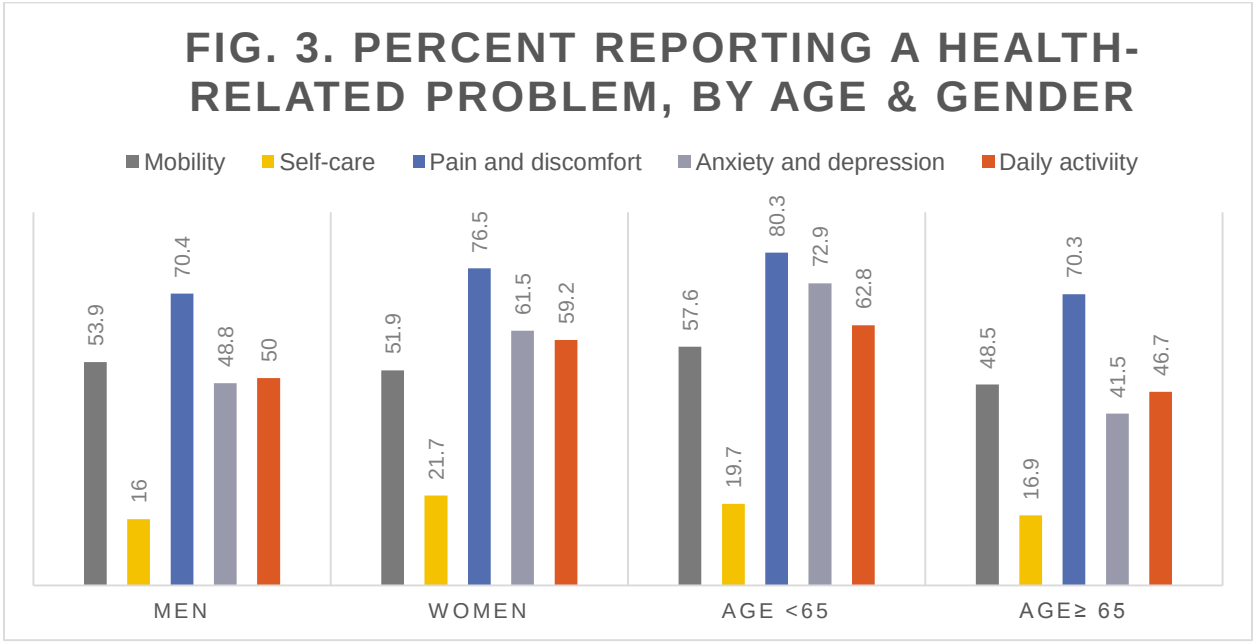
Figure 1. Self-Rated Health by Age and Gender



Another way to understand health characteristics is based on ability to get around and to manage everyday needs and tasks, pain, and anxiety/depression. A set of 5 questions asked about these issues (Figures 2-3). Three-quarters of respondents reported pain, and over half reported that they experienced anxiety or depression,

limitations in daily activities, or problems with mobility. Nearly one in five reported limitations in self-care, which represents a higher level of disability than the general population.





Health Risks

The questionnaire asked about health risks. Most residents reported problems remembering or concentrating (63%), with 24% reporting that this difficult occurs often/all the time. The level of difficulty remembering varied, with 17% reporting they remember nothing and 19% reporting they remember nearly everything.

46% of residents have problems with medication adherence

Falls are the leading cause of fatal and non-fatal injuries among persons age 65 and older (CDC, 2014). In the US, one-third of older persons had a fall in the prior year. A higher percentage of respondents, 40%, reported falling in the past year. In addition, about half reported feeling unsteady when walking, 47% worry about falling, or almost one-third reported a loss of some feeling in their feet. According to a Centers for Disease Control report, individuals who have fallen are more likely to fall again in the next year (CDC, 2014).

Problems taking medications as prescribed places individuals at risk for health service use, morbidity, and mortality (Morisky, 2008). Only 11% of residents reported not using prescription medicine. Of those who reported medication use, 46% had low adherence to taking medications as prescribed. Only 17% reported currently receiving help taking medications, and 15% reported that they would like help with their medication.

Table 4. Resident Health Risks: Memory, Falls, Medication Adherence, Alcohol/Drug Use

	n	%
Memory		
Difficulty remembering or concentrating		
None	194	36.7
Some	334	63.3
Frequency of cognitive difficulties		
Never	111	20.9
Sometimes	295	55.5
Often/all the times	126	23.7
Level of difficulty		
Remember nothing	89	16.9
Remember a few things	335	63.7
Remember a lot or almost everything	102	19.4
Fall		
Fell in the past year	211	40.2
Feel unsteady when walking	267	51.7

Worried about falling	237	46.6
Lost some feeling in his/her feet	166	32.4
Medication		
Take medication	459	88.6
Low adherence to medication regiment	209	46.4
Sometimes or often has difficulty remembering to take	234	47.6
Receives help with medications	81	16.5
Believe that he/she needs help with medication	72	15.2
Drug and alcohol use		
Drug use in the past 6 months	61	11.5
Current weekly drinker	65	12.2
Exceed consumption recommendation (>2 drinks per day)	39	7.3

Food Access

Access to food is a problem for many low-income persons in Oregon. Food access can also be a challenge for persons with mobility problems. Among the residents, access was a concern for at least 26% based on the traditional food access measures. About 19% reported hunger due to mobility issues, a measure that reflects the population of older adults and persons with disabilities.

Table 5. Food Access in the Prior 30 days

	n	%
Was concerned about having enough food to eat	156	29.4
Ate less because there wasn't enough money to buy food	137	25.9
Hungry but wasn't able to get out for food	98	18.6

Healthy Activities

Engagement in healthy activities has been shown to improve health outcomes for most people (World Health Organization, 2014). Of the residents who responded, most reported taking part in a fitness activity in the prior month, most had received a flu shot in the prior year, and most had a health screening. Although the percentage of persons receiving a flu shot (65%) is below federally-recommended guidelines, it is higher than the 35% of people who typically receive get vaccinated (CDC, 2014b).

Table 6. Healthy Activities.

	N	%
Engaged in physical activities in the last 30 days	398	74.7
Received a flu shot in the past 12 months	348	65.4
Had a health screening in past 12 months	439	82.8

Social Isolation

Social isolation is associated with poor health outcomes (Lubben, 2006). Among those who responded, nearly 46% scored as having a high level of social isolation.

Community involvement supports health. The questions included involvement in the apartment building and the neighborhood. Respondents were more likely to report feeling a medium to high level of involvement with their building community (49.4%) compared to those who felt that level of involvement with their neighborhood community (38.7%).

Table 7. Social Integration

	n	%
Lubben social network scale		
High level of isolation	228	45.6
Low level of isolation	272	54.4
Involvement with building community		
None/low	264	50.6
Medium	161	30.8
High	97	18.6
Involvement with neighborhood community		
None/low	319	61.3
Medium	122	23.5
High	79	15.2

Health Service Use

Use of health services may be classified in generally positive or negative terms. Access to a primary health provider or clinic is generally positive, while use of a hospital emergency department might be classified as negative, especially when such use might have been prevented or health services provided in a less expensive setting.

The majority of individuals reported that they have a primary clinic (91%). Residents were asked to report their use of several health services in the prior six months: doctor/clinic visit, emergency department (ED) use, and overnight hospital stay (Table 8).

Over **one-third** of respondents visited an ED in the prior 6 months.

Table 8. Health Service Use in the last 6 months		
	n	%
Has a primary care provider	477	91.2
Three or more doctor visits	266	49.6
Went to the ED at least once	179	34.7
Overnight hospital stay at least once	87	16.7

Mental Health

Because a relatively large number of residents report a mental health diagnosis, additional analyses (Pearson chi square) were run to compare residents who reported a mental health diagnosis to those who did not.

Residents who reported a mental health diagnosis were significantly more likely than those who did not to have:

- low medication adherence,
- food insecurity,
- visited a doctor in the prior six months,
- visited the emergency department in the prior 6 months, and
- an overnight hospital stay in the prior 6 months.

Table 9. Comparison of Residents Based on Mental Health Diagnosis (Yes or No)					
	No		Yes		
	N	%	n	%	
Low adherence to medication regiment	61	32.3	148	56.7	*
Concerned about having enough food to eat	48	19.8	108	37.5	*
Ate less because there wasn't enough money to buy food	37	15.4	100	34.7	*
Hungry but unable to get out for food	20	8.3	78	27.3	*
Has a primary care provider	209	89.7	268	92.4	
At least one doctor visits	202	83.8	271	91.9	*
Went to the ED at least once	60	26.0	119	41.8	*
Overnight hospital stay at least once	26	11.3	61	21.2	*

*Indicate significant (p<.01) differences between those with and without mental health diagnosis

3. HEALTH AND SOCIAL SERVICE USE

As mentioned in the first section of this report, the stakeholders and business partners spent a great deal of time and effort deciding on the services to deliver and how to pay for those services. Service delivery began in September 2014,

thus this Year 1 report does not describe service use costs or outcomes. Instead it describes the process for tracking information that will inform the interim and final reports.

This evaluation uses a pre- and post-implementation study design. September 1, 2014 is the index date for comparing health service use and costs. The resident survey, conducted summer 2014, supplements these data.

The following types of health care services will be tracked because they represent large costs to insurers and are covered by health insurance:

- Inpatient behavioral health,
- Inpatient physical health,
- Outpatient behavioral health,
- Emergency department,
- Outpatient primary care,
- Outpatient specialty, and
- Pharmacy (# of claims).

Other service use to be tracked over time include:

- CareOregon services
    - Health Navigator
    - Care Coordinator
    - MedChart, and
    - Health Resilience
- On-site primary care physician visits
- Enrollment in PACE

SUMMARY

Housing with Services, LLC, represents an experiment in coordinating and financing culturally relevant, high quality health and social services for older adults and persons with disabilities who live in subsidized housing. This initiative was informed by stakeholders including health, social service, and housing providers, advocates, and residents.

SERVICES MIX

Based on the initial resident survey, it appears that the right mix of service agencies is involved. Specifically, there are many residents from Asian countries

(especially China, Korea, and Vietnam), and Asian Health and Service Center is assisting by informing the project partners about culturally appropriate services, advocacy, and translation services, as needed. Culturally relevant services are also available through Jewish Family Services (Russian) and the Islamic Social Services of Oregon (Iranian), as well as through Multnomah County Aging and Disability Services.

Similarly, many of the residents report a mental health diagnosis, and initial analyses indicate that these individuals fair worse than those who do not report a mental health diagnosis on several health outcomes (Table 9). Two mental health providers—Cascadia Behavioral Health and Lifeworks NW—are LLC members. In addition, other provider partners, including PACE, Outside In, and Central City Concern, offer behavioral health services.

Nearly half of residents (46%) have low medication adherence. CareOregon's MedChart program, which informs residents about tracking their medication use and communicating concerns to their provider, is designed to improve medication adherence.

The information collected in the resident survey can inform CareOregon staff as they screen and make referrals. For example, knowledge that 40% of residents reported falling in the prior year can be used to plan a falls prevention program, and information about memory and cognitive deficits can inform their use of screening tools. Similarly, food access issues identified in the survey can inform food programming.

Around half of residents appear to be social isolated or have low social engagement in either their building or neighborhood community. While some of the planned outreach by the Health Navigator and Care Coordinator, as well as social activities arranged by the resident services staff at each building, there are as yet no programs specifically designed to address social isolation.

PROGRAM SUSTAINABILITY

To be successful, this collaborative approach to integrating housing with services must find a financial model that works. As a demonstration project, one of the goals of the initiative is to develop a sound, replicable model. Although the planned per-member per-month payment has not been adopted, the organizational commitment of the three housing providers and the LLC partners, and SIM funding, provide a foundation for the next two years of this project.

NEXT STEPS

In sum, Housing with Services, LLC seeks to improve residents' quality of life by improving access to health and social services and offering culturally relevant and high quality services. It also seeks to reform healthcare by building on the economies of scale associated with high-rise apartment buildings designated for a low-income population. The information collected to date serves as a baseline for an outcomes-based evaluation conducted about 15 months after the start of the services. At that time, the final lessons and conclusions will be presented to stakeholders and to the public.

APPENDIXES

1. Initial Services Categories & Components, 2013
2. Program Planning Committee Participants, 2011-2013
3. Housing with Services/CareOregon Project Launch Game Plan, 2014
4. Survey Findings Organized by Building Owner

Appendix 1. Initial Services Categories & Components, 2013

CATEGORY	COMPONENTS
Navigation / Care Coordination / Primary Care Connection Management	- Person-centered, consumer directed case management / care coordination. - Biopsychosocial health care management, or Interdisciplinary Team approach. - Life coaching. - Collaboration between providers and clients. - Social work.
Cultural Specificity	- Culturally appropriate services. - On site translation/interpreters services.
Physical Health	- Management of chronic conditions. - Physical Therapy and Occupational Therapy. - Health Screenings.
Mental Health	- Outreach and triage. - Counseling, duration limited.
Dental Health	- Dental services.
Medication Management	- Set up. - Reminders. - Prescription education. - Poly-pharmacy review.
Preventative / Holistic Health	- Naturopathic. - Acupuncture. - Health Fairs. - Flu Shot clinics. - Tai Chi.
Home / Mobile Health	- Foot care. - Wound care. - Mobile physical and mental health screenings.
Nutrition	- Comprehensive nutrition programs. - Meal planning, affordable meals. - Consistent access. - Education, demonstration classes.
Transportation / Remote Access	- Shuttle to/from buildings to clinic. - Tele-medicine (Skype).
Volunteers and Peer Support	- Peer-to-Peer support. - Senior Companions / Friendly Visitors. - Volunteer Coordination. - Address social isolation.

Appendix 2. Housing with Services Program Planning Participants

Central City Concern

CareOregon

Multnomah County, Aging & Disability Services

Portland State University, Institute on Aging

Jewish Family & Child Service

Cedar Sinai Park

Providence Elderplace

LeadingAge Oregon

Cascadia Behavioral Health Services

Oregon Health & Science University

Home Forward

Asian Health and Services Center

Outside In

Portland Housing Bureau

Harsch Investment Properties

Appendix 3. Housing with Services/CareOregon Project Launch Game Plan, 2014

1. CareOreogn commits two .5FTE to initiate Health Navigation and Care Coordination services for the HWS Project.
2. The Health Navigator conducts initial resident assessments, makes social service referrals and refers to the Care Coordinator. The Care Coordinator will complete a more in depth assessment of health care needs and assist residents with development of care plans.
3. The initial focus will be on residents identified by CareOregon with high utilization profiles and/or chronic medical conditions. Services to be provided will include those available through Medicaid, Medicare, Multnomah County SPDS, social services, and as yet to be identified "flexible" services that may be billed to Medicaid.
4. CareOregon will complete an internal review of flexible spending strategies that can be implemented as part of the HWS Project.
5. Additional CareOregon resources will be made available to support clinical supervision, multi-disciplinary team support, medication management, data needs and program development.
6. Consideration may be given to additional staffing following an assessment of resident needs and the care coordination model.
7. CareOregon staff may use Health and Wellness Center as an office, activity and meeting location. Navigation and care coordination will happen in yet to be identified building locations and resident's homes.
8. HWS and CareOregon staff will meet, finalize a health assessment tool, and operationalize use of care coordination/record keeping software.
9. Initial outreach begins immediately following a review of enrollment data. Outreach activities include meetings with RSC's, site councils, the HWS Resident Advisory Council and building events. Navigation and Care Coordination services will be available in the buildings no later than September 1st 2014.
10. HWS will expand culturally specific services capacity through contracts with agencies serving specific communities.

Appendix 4: Survey Findings Organized by Building Owner

Table A1. Demographic Characteristics of Residents, by Building

	Cedar Sinai Park		Home Forward		Reach CDC	
	N	%	n	%	n	%
Gender						
Men	107	42.5	85	44.7	38	58.5
Women	144	57.1	103	54.2	27	41.5
Age in years						
<65	48	20.3	146	78.1	50	70.4
≥65	189	79.7	41	21.9	21	29.6
Race/ethnicity						
White	137	52.7	134	68.4	59	84.3
Black	8	3.1	20	10.2	4	5.7
Asian	87	33.5	6	3.1	1	1.4
Hispanic	7	2.7	7	3.6	1	1.4
Other	21	8.1	29	14.8	5	7.1
Marital status						
Married	64	24.6	14	7.0	0	0
Widowed	49	18.8	15	7.5	7	10.0
Divorced/separated	89	34.2	94	47.2	34	48.6
Never married	58	22.3	76	38.2	29	41.4
Country of birth						
United States	139	59.4	174	93.5	64	91.4
Non-US born	95	40.6	12	6.5	6	8.6
Primary language						
English	147	62.3	171	95.0	66	95.7
Asian	65	27.5	6	3.3	1	1.4
Other	24	10.2	3	1.7	2	2.9
Income						
No income	32	13.0	41	21.0	15	22.1
$1-<$11,000	152	61.8	114	58.5	35	51.5
≥$11,000.	62	25.2	40	20.5	18	26.5
Health insurance						
No	7	2.7	3	1.5	0	0
Yes	249	97.3	192	98.5	68	100
Type of health insurance						
Medicare/Medicaid/OHP	179	68.8	150	75.7	56	78.9
VHA	16	6.2	17	8.6	5	7.0
Employer-sponsored insurance	0	0	7	3.5	0	0
Private	27	10.4	4	2.0	2	2.8

Table A2. Satisfaction with Building, by Building

	Cedar Sinai Park		Home Forward		Reach CDC	
	N	%	n	%	n	%
Management and staff's job						
Excellent/good	223	82.9	131	66.5	47	65.3
Neither	16	5.9	10	5.1	3	4.2
Fair/poor	30	11.1	56	28.4	22	30.5
Management/staff keep things in shape						
Excellent/good	237	88.7	152	76.4	59	80.8
Neither	17	6.4	13	6.5	3	4.1
Fair/poor	13	4.8	34	17.1	11	15.1
Condition of the apartment						
Excellent/good	245	91.4	142	72.1	56	76.7
Neither	9	3.4	12	6.1	4	5.5
Fair/poor	14	5.2	43	21.8	13	17.8
Condition of the building						
Excellent/good	240	90.9	119	60.1	55	76.4
Neither	11	4.2	19	9.6	0	0
Fair/poor	13	5	60	30.3	17	23.6
Service coordinator is important						
Strongly agree/agree	242	90.7	165	83.3	61	83.5
Disagree/strongly disagree/unsure	25	9.4	33	16.6	12	16.5
Service coordinator is helpful						
Strongly agree/agree	234	87.6	129	64.5	55	76.4
Disagree/strongly disagree/unsure	33	12.3	71	35.5	17	23.7

Table A3. Resident Health Characteristics, by Building

	Cedar Sinai Park		Home Forward		Reach CDC	
	n	%	n	%	n	%
Diabetes / sugar diabetes	58	21.6	53	26.1	18	24.3
Asthma	34	12.6	60	29.6	15	20.3
High blood pressure, HTN	136	50.6	99	48.8	37	50.0
COPD / emphysema	27	10.0	41	20.2	20	27.0
Heart trouble or heart disease	59	21.9	44	21.7	14	18.9
Kidney problems	32	11.9	25	12.3	4	5.4
Liver disease	14	5.2	29	14.3	14	18.9
Acid reflux	68	25.3	64	31.5	25	33.8
Severe vision problems	42	15.6	38	18.7	14	18.9
Severe hearing problems	26	9.7	14	6.9	4	5.4
Depression	78	29.0	125	61.6	33	44.6
Anxiety	71	26.4	106	52.2	25	33.8
Schizophrenia, bipolar, other MI	24	8.9	45	22.2	16	21.6
Post-traumatic stress disorder	27	10.0	72	35.5	17	23.0
Sleep disorder, sleep apnea	66	24.5	83	40.9	18	24.3
Developmental disability	19	7.1	21	10.3	7	9.5
Dementia	6	2.2	6	3.0	1	1.4
Addiction to alcohol or drugs	9	3.3	28	13.8	13	17.6
Self-rated health (good/excellent)	167	64.0	101	51.8	45	63.4
No problem w mobility	137	53.1	78	40.6	30	43.5
No problem w self-care	206	80.2	157	80.9	59	84.3
No problem w pain, discomfort	81	31.6	35	18.0	14	20.3
No problem w anxiety, depression	145	57.1	57	29.2	25	36.2
No problem w daily activity	139	53.7	62	31.6	36	50.7

Table 4. Resident Health Risks: Memory, Falls, Medication Compliance, Alcohol/Drug Use							
		Cedar Sinai Park		Home Forward		Reach CDC	
		n	%	n	%	n	%
Memory							
	Difficulty remembering, concentrating						
	None	101	38.5	60	30.6	33	47.1
	Some	161	61.4	136	69.3	37	52.9
Frequency of cognitive difficulties							
	Never	60	22.6	34	17.3	17	23.9
	Sometimes	155	58.5	102	52	38	53.5
	Often/all the times	50	18.9	60	30.7	16	22.6
	Level of difficulty						
	Remember nothing	40	15.2	32	16.4	17	25.4
	Remember a few thing	175	66.3	120	61.5	40	59.7
	Remember a lot or almost everything	49	18.6	43	22.1	10	14.9
Fall							
	Fell in past year	91	34.7	91	47.2	29	41.4
	Feel unsteady when walking	127	49.8	107	56	33	47.1
	Worried about falling	118	47	90	47.6	29	42
	Lost some feeling in his/her feet	79	31.2	67	35.1	20	29.4
Medication							
	Take medication	225	88.2	170	88.5	64	90.1
	Low adherence to medication regime	88	41.3	93	53.8	28	43.8
	Sometimes/often has difficulty remer	106	44.6	98	52.4	30	44.8
	Receives help with medications	52	21.8	21	11.4	8	11.8
	Believe he/she needs help	45	19.7	18	9.8	9	14.3
Drug and alcohol use							
	Drug use in the past 6 months	20	7.6	30	15.4	11	15.5
	Current weekly drinker	26	9.9	21	10.6	18	25.7
	Exceed 2 drinks per day	10	3.8	13	6.5	16	22.9

Table A5. Resident Food Access by Building

	Cedar Sinai Park		Home Forward		Reach CDC	
	n	%	n	%	n	%
Concerned about having enough food to eat	55	20.8	79	40.3	22	31.4
Ate less because there wasn't enough money to buy food	40	15.2	75	38.3	22	31.4
Hungry, but unable to get out for food	27	10.2	52	26.7	19	27.5

Table A6. Healthy Activities, by Building

	Cedar Sinai Park		Home Forward		Reach CDC	
	n	%	n	%	n	%
Engaged in physical activities in the last 30 days	206	77.4	140	71.8	52	72.2
Received a flu shot in the past 12 months	186	70.5	117	59.7	45	62.5
Had a health screening in past 12 months	218	82.6	161	82.6	60	84.5

Table A7. Social Integration, by Building

	Cedar Sinai Park		Home Forward		Reach CDC	
	n	%	n	%	n	%
Lubben social network scale						
High level of isolation	96	39.7	97	51.6	35	50.0
Low level of isolation	146	60.3	91	48.4	35	50.0
Involvement with building community						
None/low	108	42.0	113	58.5	43	59.7
Medium	93	36.2	48	24.9	20	27.8
High	56	21.8	32	16.5	9	12.5
Involvement with neighborhood community						
None/low	108	42.0	123	63.7	49	69.1
Medium	93	36.2	41	21.2	16	22.5
High	56	21.8	29	15.0	6	8.4

Table A8. Health Service Use in the last 6 months, by Building

	Cedar Sinai Park		Home Forward		Reach CDC	
	n	%	n	%	n	%
Has a primary care provider	237	90.8	173	90.1	67	95.7
Three or more doctor visits	126	47.5	101	50.8	39	54.2
Went to the emergency room at least once	61	23.7	87	46.4	31	44.3
Overnight hospital stay at least once	36	14.0	33	17.0	18	26.1

METHODS

Process and implementation evaluation

Representatives who participated in the project planning meetings during 2012-2014 as well as provider partners were asked to take part in an in-person individual interview with PSU researchers. A total of 24 were invited and 20 completed an interview.

Resident survey

The initial evaluation plan included interviewing a randomly selected sample of building residents. However, when the project scope increased to include 11 rather than 4 buildings, the plan was revised to include a self-administered survey to all building residents. The evaluation was planned in response to the emerging service delivery and financial model, and based on consultation with researchers at PSU, Providence CORE, and others, it was decided that a full census would provide a robust dataset for evaluating outcomes among residents who did and did not take part in the Housing with Services project. The research plan was reviewed and approved by PSU's Institutional Review Board. The cover letter explained that completing the questions was voluntary, that responses would be presented in aggregate and individual identities kept confidential, and that PSU staff were available to assist if requested. A random drawing for a $20 gift card was done and 150 cards were mailed to individuals who returned a questionnaire.

A survey was hand-delivered to the door of each apartment in the 11 buildings during July and August, 2014. These months were selected because the services component was expected to start in July. Building staff (service coordinators and property managers) assisted by providing access to the buildings and informing the team about units with two occupants or that were vacant. Sealed drop-boxes were provided in all buildings for the return of completed questionnaires.

PSU project staff conducted three interviews with Spanish speakers, four with individuals who had low vision or who requested in-person interview, and three Farsi speakers. Asian Health and Service Center was contracted to conduct in-person or telephone interviews with individuals who speak Cantonese, Mandarin, Korean, or Vietnamese. A total of 38 interviews were completed by AHSC. An online survey was provided and several residents used this method.

A total of 1401 questionnaires were distributed. In order to increase the response rate, residents who had not yet returned the questionnaire received another copy, along with a postage-paid envelope. The final response rate, based on 546 respondents, was 39%.

The resident questionnaire is attached. It includes standard questions from sources such as BRFSS, CDC, and others. The primary outcomes of interest include: decreased emergency department use, increased access to primary health clinic or provider, and decreased use of long-term care.

Health service use and cost data

PSU has data use agreements with Cedar Sinai Park and the Housing with Services LLC and is developing an agreement with CareOregon. During implementation of services described above, PSU researchers will work with CareOregon and PACE staff to document participants and costs. A data request from Oregon DHS will be submitted in November, 2014 for the period of July-September 2014.

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