Published in final edited form as:

J Community Health. 2014 February ; 39(1): 108–117. doi:10.1007/s10900-013-9746-1.

Access to Care Outcomes: A Telephone Interview Study of a Suburban Safety Net Program for the Uninsured

Joe Feinglass, PhD [Research Professor of Medicine],

Department of Medicine, Division of General Internal Medicine, Northwestern University Feinberg School of Medicine, 750 N. Lake Shore Dr., 10th Floor, Chicago, IL 60611, Phone: (312) 503-6443, Fax: (312) 503-2755

Narissa J. Nonzee, MA [Clinical Research Associate],

Institute for Public Health and Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, USA

Robert H. Lurie,

Comprehensive Cancer Center of Northwestern University, Chicago, IL, USA

Kara R. Murphy [Executive Director],

Access DuPage, Carol Stream, IL, USA

Richard Endress, PhD [President], and

Access DuPage, Carol Stream, IL, USA

Melissa A. Simon, MD, MPH [Vice Chair of Clinical Research] [Associate Professor]

Department of Obstetrics and Gynecology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA; Department of Preventive Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, USA; Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine, Chicago, IL, USA

Abstract

Access DuPage (AD) currently provides primary care for about 14,000 low income, uninsured residents of suburban DuPage County, IL, an area with a very limited healthcare safety net infrastructure. A telephone interview survey evaluated health care utilization, satisfaction, and health status outcomes and compared recent enrollees to individuals in the program for at least one year. Sequential new AD enrollees (n=158) were asked about the previous year when uninsured, while randomly selected established AD enrollees (n=135) were asked the same questions about the previous year when actively enrolled in AD. Established enrollees reported being more likely to get 'any kind of tests or treatment' (96.3% versus 46.2%, $p<0.0001$), fewer cost (78.5% versus 21.3%, $p<0.0001$) and transportation barriers to care, more preventive and mental health services, and better self-management care. However, established enrollees also reported 14% greater use of hospital inpatient and 9% greater use of emergency room care, as well as continued difficulty in accessing needed specialty and dental care services. Despite more (diagnosed) conditions, established enrollees were over 2.5 times more likely to report good to excellent health status and over three times more likely to rate their satisfaction with health care as good to excellent. Findings illustrate the substantial benefits of assuring access to care for the uninsured, but do not reflect immediate savings from reduced hospital utilization. Access to care programs will be an important tool to address the needs of the 30 million people who will continue to be uninsured in the United States.

Corresponding Author: j-feinglass@northwestern.edu.

Conflicts of Interest: No potential conflicts of interest were disclosed.

Keywords

Access to care; Safety net; Uninsured; Health care reform

Introduction

DuPage County, a large suburban ‘collar county’ of Chicago with just under one million residents, is confronting the national trend towards ‘suburbanization of poverty’ [1]. There has been a dramatic increase in the DuPage population living under the federal poverty level (FPL), with a 182% increase between 2000 and 2009. DuPage is rapidly becoming more diverse, with a 239% increase in the Latino population from 1990-2009 [2]. According to Round 4 (2007-2010) Illinois county-level BRFSS data, 6.7% of DuPage adults age 18-64 were uninsured, with a much larger proportion being uninsured at some point in the previous year [3]. The primary ‘port of entry’ of low income immigrants in Illinois is no longer Chicago proper but the suburban collar counties. There were over 170,000 foreign born DuPage residents in 2009, out of a total estimated population of 921,000. This includes over 75,000 non-citizens amongst whom an estimated 30,000 were uninsured [3].

The safety net in many ‘collar’ counties of large metropolitan areas is being stretched by the economic downturn and its associated job and housing losses. Safety net systems in many suburban counties are coping with a rapid influx of low income, uninsured, often non-English speaking patients, in a climate of spreading foreclosures, increasing homelessness and the migration of poor inner city residents with often complex health care needs [4, 5]. While many urban areas have long established public health care institutions and providers, the health care safety net of DuPage, like many other suburban and exurban areas, has had little publically funded infrastructure.

The DuPage Health Coalition, composed of health provider, civic, and community organizations and its Access DuPage Program (AD), has sought to provide primary care homes for low income, uninsured residents. AD serves uninsured adult residents of DuPage with a household income below 200% of Federal Poverty Level. In 2012, AD assigned approximately 14,000 enrollees to primary care doctors at four Federally Qualified Health Centers (FQHCs), over 100 private physicians, or the DuPage Community Clinic, the only free clinic in DuPage staffed primarily by volunteer physicians. Uninsured individuals can begin the process of enrolling in the program at 45 sites across the county [6].

As part of on-going community based participatory research (CBPR) activities, AD and Northwestern University researchers conducted a two wave bilingual telephone interview survey of AD enrollees from over two dozen DuPage municipalities. The primary purpose of the survey was to provide evidence about the extent to which AD increased access to care and improved health status for enrollees, while at the same time providing data about the continuing challenges facing established enrollees. Results are highly relevant to current debates over implementation of the Affordable Care Act, and in particular, the value of access to care programs for the many millions who will remain uninsured.

Methods

Access DuPage

Access DuPage was founded by community organizations, hospitals and the county Medical Society and Health Department in 2001 to provide comprehensive medical services to low-income, uninsured residents. While most of AD’s funding comes from county hospitals, it is also supported by county government and foundations. AD pays a small capitated fee to

clinics and primary care physicians, coordinates purchase of prescription medications with small enrollee copays through a pharmacy benefits manager, and handles applications for Drug Assistance Programs, which provide enrollees with several million dollars of medications annually. The program also coordinates access to diagnostic testing, specialty care, and hospital services, all of which are provided at little or no charge by participating providers.

Survey Development and Sampling

The telephone survey study, conducted in 2011-2012, grew out of a long-term CBPR partnership. The study was funded by a small seed grant after peer review by Northwestern University. AD leaders provided overall direction and focus. All survey participants were asked about their health status, access to and satisfaction with their medical care over the previous year, including care coordination, perceived quality issues, and unmet needs. Northwestern investigators created a pool of commonly used, English and Spanish survey items from the Behavioral Risk Factor Surveillance System [7], the Medicaid Consumer Assessment of Healthcare Providers and Systems [8], and selected items from the Patient Assessment of Chronic Illness Care (PACIC). The PACIC measures receipt of patient-centered self-management care, consistent with the precepts of the chronic care model [9, 10]. During the survey development process, we conducted multiple English and Spanish cognitive interviews with volunteer AD enrollees. Their feedback on item meaning and framing was critical for bilingual editing of the final survey, especially editing skip patterns, stem phrasing and response ‘anchors’. The Northwestern University IRB approved the study, including the survey Spanish translations.

The 78-item bilingual survey was designed to be administered in two successive waves. Both survey waves asked respondents to recall their experiences with health care over a period of up to one year from the interview. Newly enrolled respondents were called sequentially within two weeks of their AD certification in 2011-2012 and were asked to reflect on the time they were uninsured during the year before AD enrollment when answering questions. The second survey wave was then administered to randomly selected AD enrollees with at least one year of AD enrollment (from September, 2011). Established AD enrollees were asked to reflect on the previous year when enrolled in Access DuPage when answering the same questions. The two wave approach was designed to address a major difficulty in studying the effects of access to care programs: selection bias resulting from uninsured individuals with health conditions being more likely to apply and be enrolled in programs than other uninsured individuals who are healthier. It is not feasible to simply compare individuals who enroll in a program to the general uninsured population.

Survey Interview Protocol

Beginning in October 2011, a study information flyer was distributed at all Access DuPage enrollment locations as part of the enrollment forms packet. We obtained names, phone numbers, and language preferences of new enrollees within approximately one week of certification. Based on a weekly enrollment call list, study interviewers called these individuals within two weeks of enrollment certification over a period of nine months. Our part-time study interviewers continued to make calls until we exceeded an a priori n=150 target. We used detailed social and demographic questions on the new enrollee questionnaire to validate original AD enrollment data for respondents’ age, sex, household income per household size ratio and preferred language.

In August 2012, we randomly selected a second call list of from all names of AD enrollees who had been enrolled in AD since September, 2011. We used new enrollee data to estimate a target for the number of follow-up calls needed to detect large differences when comparing

the same items between newly enrolled and established AD respondent waves. After receiving a study letter, established enrollees were called sequentially in random order over three months until we reached 135 completed interviews. Between one and three call attempts were made including leaving call back numbers.

Over the course of the study, ten part-time telephone interviewers completed human subjects training and were trained by investigators to conduct computer assisted telephone interviews using SNAP (Portsmouth, NH) mobile interviewer software. Interviewers were reimbursed \$10 for English and \$12 for Spanish calls. Participants were mailed a \$10 gift card within two days of a completed interview.

Survey Analysis and Non-response

Survey comparisons included patient demographic and health status characteristics, perceived access to the health care system (including mental health, dental, and specialty care), utilization of health care, satisfaction with the ease and quality of health care, and self-management care. Because only 5% of respondents identified as Black or African American, and because less than 5% of English speakers reported being Hispanic or Latino, we present data on Spanish versus English speakers rather than by race and ethnicity. Participants' household income (the mean was \$15,403) was dichotomized as greater or less than \$7,500 per household person, the approximate 50% cutoff.

The significance of differences between new and established enrollees on common core items was analyzed with chi square tests. Rates of non-response are presented for each item to highlight potential effects of differential access and utilization of care. Actual refusals to answer were rare, usually only 3-5%; however, many responses had much larger non-response rates due to being non-applicable, for instance, for ratings where a respondent had never received a particular type of care. For clarity and transparency about differential response rates based on different exposures to medical care, we present a separate non-response rate for each item with rates calculated based on valid responses only. The one exception was self-reported body mass index (BMI). For BMI, we categorized participants as either obese (≥ 30 kg/m²) or refused to provide weight, which is known to correlate with obesity, versus normal or overweight.

Two endpoints, self-rated health status and overall satisfaction with care, were analyzed using multivariable logistic regression, with Likert scale items dichotomized as fair or poor versus good, very good or excellent. For regression models, the significance of comparisons between new and established enrollees were controlled for respondents' age, sex, primary language, high versus low household income per household size, and the number of self-reported health conditions (diabetes, high blood pressure, high cholesterol, cancer, asthma and depression). In addition, we controlled for current smoking, performing at least 30 minutes of exercise several times a week or daily. Only a very small number (3%) of participants reported drinking alcohol more than four times a week; alcohol consumption was therefore not included in analyses.

Results

Table 1 presents sample sociodemographic and health status characteristics, which reflect the overall AD population well (for example, 43% of all current AD enrollees are male versus 40% in our sample). The only significant difference between groups was the reported prevalence of high cholesterol, which was part of a trend towards a higher prevalence of most health conditions among established enrollees. Differences in health conditions may potentially be related to under-diagnosis among new enrollees with less access to medical care.

Table 2 presents the results for access to care questions. Twice the proportion of established enrollees versus recent enrollees had tried to get ‘any kind of tests or treatment’ (96.3% versus only 46.2%, $p<0.0001$). In particular, established enrollees reported significantly higher rates of clinical preventive services in the previous year, including tests for diabetes, high blood pressure, cholesterol, and depression. There was also a very large difference between groups in delay of needed doctor visits due to cost (21.3% to 78.5%, $p<0.0001$). However, while established enrollees reported fewer transportation barriers and easier access to clinic hours and mental health care, they also reported more frequent telephone and appointment delays. Additionally, they had about the same difficulty in obtaining needed dental and screening and corrective vision care, which are not routinely covered by AD. Of interest, established enrollees also reported greater hospital utilization, including both inpatient and emergency room care. New enrollees predictably had higher use of convenience care at large retail outlets.

Table 3 presents ratings of ease and quality of care, with response categories for never and sometimes combined for ease of interpretation. The non-response rates for interaction with health care provider items were much higher for the new enrollees, reflecting their lack of access to care and inability to provide ratings. Responses for telephone care and specialty care also had substantial non-response. Nevertheless, there was a striking, statistically significant difference across all items except telephone care favoring established enrollees experiences with their care.

Table 4 presents patient care assessment results based on selected items from the PACIC. Responses indicated significantly higher care assessment among established enrollees. Over a quarter of all new enrollee respondents did not answer the care assessment questions, likely reflecting their lack of care while uninsured.

Figure 1 shows differences ($p<0.04$) in self-reported overall health between groups. Over two-thirds (69.8%) of established enrollees rated their health as good, very good, or excellent, compared to just over one-half of new enrollees (52.5%). Figure 2 shows even larger differences in health care ratings of ‘all doctors and other providers’ ($p<0.0001$). Over four times as many established enrollees as new enrollees rated their health care as excellent. These two endpoints are further analyzed in Table 5 using logistic regression for the likelihood of a good, very good, or excellent rating. Being an established enrollee was associated with 2.5 times the likelihood of reporting good to excellent health status (95% CI 1.4-4.3) after controlling for other significant factors such as household income, number of health conditions reported, obesity, and level of exercise. Being an established enrollee was also associated with a 3.2 times greater likelihood of giving a good to excellent rating of health care received (95% CI 1.5-6.9); being a Spanish speaker was associated with a 2.9 times greater odds of a good to excellent rating (95% CI 1.2-7.2). Higher satisfaction with care was especially prevalent among Spanish-speaking established enrollees: only 3% rated their health care as fair or poor as compared to 12% of English-speaking established enrollee respondents (data not shown).

Discussion

Our findings indicate that Access DuPage enrollment greatly improved access to health care and perceptions of health status. Established enrollees reported more clinical preventive services utilization, fewer cost and transportation barriers, greater ease interacting with health care providers, and higher ratings of health status and health care received.

The Access to Care Outcomes Literature

There is actually a surprisingly small literature indicating that providing any access to care for uninsured, low income populations improves health status and other health outcomes. The reason this literature is so limited is that many of the currently uninsured are healthy, and when major health declines do occur, previously uninsured individuals may then qualify for disability and public insurance. Thus, at any given cross-sectional endpoint, the uninsured are likely to be healthier than age-matched individuals who are publically insured. It is also known that uninsurance is often a temporary condition, with individuals intermittently cycling in and out of employment-based insurance coverage over a period of years [11]. These factors have made it methodologically complex to measure the direct effects of access to care on health status and costs.

A recent analysis of states which provided expanded Medicaid coverage has documented potentially large health and mortality benefits as compared to similar states without expansions [12]. A number of studies of the older uninsured have also shown that earlier transitions to Medicare by individuals turning age 65 would save lives, reduce the number of major health declines, and save Medicare health care costs [13-15].

The most comprehensive access to insurance study to date was the quasi-randomized Oregon Medicaid lottery, in which newly eligible individuals who won a limited number of new Medicaid slots were compared to those who did not [16, 17]. Individuals who won the lottery had a greater chance of having an outpatient physician visit, receiving prescription medications, having a blood cholesterol or a blood sugar test, and had a 25% lower rate of unpaid medical bills sent to collection agencies [17]. Although physical health differences at the two-year follow-up were not significant, there was a 30% relative risk reduction in the incidence of depression [16].

This study attempts to document benefits of a very low cost access to care program rather than provision of insurance coverage. There are very few published data about outcomes of the many county level access to care programs created over the last decade [18-21], with only a single study we are aware of documenting improvements in health behaviors and health status [22]. It should be noted that the large improvements in access indicated by the AD study may simply reflect how poor the safety net infrastructure is for the suburban uninsured. It is unclear whether similar results would have occurred in areas with large numbers of FQHCs or public hospital clinics serving the uninsured. A 1998-99 study of low income respondents in 12 communities in the Robert Wood Johnson Community Tracking Study found that access to care was best where both insurance coverage and the number of FQHCs were highest, but insurance coverage was somewhat more important than FQHCs in determining overall ease of access [23].

It was remarkable that despite a higher prevalence of (diagnosed) chronic health conditions among established AD enrollees, they reported much better overall health status. Remarkably similar results were found in the Oregon study [17]. Self-reported overall health reflects a general sense of mental and physical well-being, and has been found to be a highly predictive, dynamic construct that reliably prefigures the trajectory of future health status [24-25]. The significantly higher self-management responses by established AD enrollees are also a potentially positive sign for future health behavior change and program costs [22, 26-27].

Hospital Use and Costs

Similar to the findings of the first year of the Oregon Medicaid lottery and the MilwaukeeCares access program for the uninsured, established AD enrollees reported higher

hospital use [17, 28]. The difference was about 14% between new and established AD enrollees in this study. In addition, there was a 9% greater incidence of emergency room visits among established AD enrollees. It is important to note, however, that hospital use may be sensitive to the time that individuals are enrolled in an access to care program. In Oregon, the two-year follow-up did not find significant differences in emergency room or inpatient hospital care [16]. In a program evaluation of a very similar access to care effort for the uninsured in Richmond, Virginia, individuals enrolled for more than one year experienced major declines in hospital use over their first year of enrollment. Compared to Richmond program enrollees in their first year, emergency room use dropped over 25% by the third year of enrollment, and inpatient costs dropped by almost 60% for multiple year enrollees [29].

While length of AD enrollment was not measured in this study, many established enrollee respondents had been in the program for only a single year. In this context, it should be noted that access to care programs are often less expensive (in terms of per member per month cost) than either Medicaid managed care or private insurance. A 2008 cost evaluation of four 'model' county-level access to care programs for the uninsured in four states carefully measured these programs' costs, including the value of referred, donated, and in-kind services. The study found that the access to care programs were between 25-50% less expensive when compared to risk-adjusted public or private insurance premiums for similar populations [30].

Limitations

Because this was a cross-sectional study of two different groups, it is impossible to rule out that differences were a function of group selection rather than the effects of access to care. Although there were few demographic differences in each group, and results were unchanged when controlling for enrollee characteristics, longitudinal studies would provide stronger evidence. Given that the study did not control for site of primary care assignment, impact of site of care of patient health and perceived health status cannot be evaluated. Not all respondents spent a full year as either uninsured or enrolled in AD; many had some periods of insurance either before or after AD enrollment. Further, we did not estimate whether emergency room visits or hospitalizations reflected ambulatory care sensitive or non-emergency causes versus elective admissions or true accidents or emergencies. Thus, we do not know if the additional hospital use by established enrollees reflected a 'backlog' of pre-existing health conditions or continued use of the hospital for conditions that could have been addressed in the outpatient setting. Finally, we did not measure financial outcomes, such as unpaid medical bills.

This study contributes to a small but growing literature documenting the benefits of access to care programs. Our results support the value of creating primary care medical homes for up to an expected 30 million U.S. residents who will remain uninsured. DuPage safety net leaders are well aware that there will continue to be a large uninsured population even after Affordable Care Act implementation begins in 2014, including an estimated 50% of current AD enrollees. Study results, including both the strengths and limitations of low-cost access to care programs such as AD, describe one approach to assuring access to care for the uninsured pending true comprehensive national health insurance for all.

Acknowledgments

We would like to acknowledge Carol Tritschler, Jesus Alvarez, Nadia Hajjar, Shaneah Taylor, Jennifer Neimeyer PhD, Yessica Cabrera, Jorge Cabrera, Elizabeth Cabrera, Megan Hannan, Brittany Linstrot, Anh Hien Chung, Samantha Torres, Mohammed Deeb, Belinda Reyes, and Dora Monroe for their invaluable assistance with telephone interviews, data processing, and research assistance for this project.

Research Support: This work was supported by a seed grant from the Northwestern University Alliance for Research in Chicagoland Communities.

References

- Berube, A.; Keebone, E. Two Steps Back: City and Suburban Poverty Trends 1999–2005 Living Cities Census Series. Brookings Institution; Washington, D.C.: 2006. p. 1-23.
- American Community Survey. Jul 2. 2013 Retrieved July 5, 2013, from www.census.gov/acs/
- Illinois Behavioral Risk Factor Surveillance System. Nov 20. 2012 Retrieved April 23, 2013, from app.idph.state.il.us/brfss
- Center for Disease Control and Prevention. CDC Health Disparities and Inequalities Report - United States, 2011. MMWR. 2011; 60:1–113.
- National Study of Latinos. Pew Hispanic Center/Kaiser Family Foundation; Washington, D.C.: 2002.
- Access DuPage. 2012. Retrieved July 8, 2013, from <http://accessdupage.org/>
- Behavioral Risk Factor Surveillance System. Mar 10. 2013 Retrieved April 23, 2013, from <http://www.cdc.gov/brfss/>
- Consumer Assessment of Health Providers & Systems (CAHPS). n.d.Retrieved April 23, 2013, from www.cms.gov/cahps/
- Aragones A, Schaefer EW, Stevens D, Gourevitch MN, Glasgow RE, Shah NR. Validation of the Spanish translation of the Patient Assessment of Chronic Illness Care (PACIC) survey. Prev Chronic Dis. 2008; 5(4):A113. [PubMed: 18793501]
- Glasgow RE, Wagner EH, Schaefer J, Mahoney LD, Reid RJ, Greene SM. Development and validation of the Patient Assessment of Chronic Illness Care (PACIC). Med Care. 2005; 43(5): 436–444. [PubMed: 15838407]
- Sudano JJ Jr. Baker DW. Intermittent lack of health insurance coverage and use of preventive services. Am J Public Health. 2003; 93(1):130–137. [PubMed: 12511402]
- Sommers BD, Baicker K, Epstein AM. Mortality and access to care among adults after state Medicaid expansions. N Engl J Med. 2012; 367(11):1025–1034. doi: 10.1056/NEJMsa1202099. [PubMed: 22830435]
- Baker DW, Feinglass J, Durazo-Arvizu R, Witt WP, Sudano JJ, Thompson JA. Changes in health for the uninsured after reaching age-eligibility for Medicare. J Gen Intern Med. 2006; 21(11): 1144–1149. doi: 10.1111/j.1525-1497.2006.00576.x. [PubMed: 16879704]
- Baker DW, Sudano JJ, Durazo-Arvizu R, Feinglass J, Witt WP, Thompson J. Health insurance coverage and the risk of decline in overall health and death among the near elderly, 1992–2002. Med Care. 2006; 44(3):277–282. doi: 10.1097/01.mlr.0000199696.41480.45. [PubMed: 16501400]
- McWilliams JM, Meara E, Zaslavsky AM, Ayanian JZ. Use of health services by previously uninsured Medicare beneficiaries. N Engl J Med. 2007; 357(2):143–153. doi: 10.1056/NEJMsa067712. [PubMed: 17625126]
- Baicker K, Taubman SL, Allen HL, Bernstein M, Gruber JH, Newhouse JP, Smith J. The Oregon experiment—effects of Medicaid on clinical outcomes. N Engl J Med. 2013; 368(18):1713–1722. doi: 10.1056/NEJMsa1212321. [PubMed: 23635051]
- Finkelstein A, Taubman S, Wright B, Bernstein M, Gruber J, Newhouse JP, Baicker K. The Oregon Health Insurance Experiment: Evidence from the First Year. Q J Econ. 2012; 127(3): 1057–1106. [PubMed: 23293397]
- Ahmed SM, Maurana CA. Reaching out to the underserved: a successful volunteer program. Am J Public Health. 2000; 90(3):439–440. [PubMed: 10705868]
- Blewett LA, Ziegenfuss J, Davern ME. Local access to care programs (LACPs): new developments in the access to care for the uninsured. Milbank Q. 2008; 86(3):459–479. doi: 10.1111/j.1468-0009.2008.00529.x. [PubMed: 18798886]
- Taylor EF, Cunningham P, McKenzie K. Community approaches to providing care for the uninsured. Health Aff (Millwood). 25(3):2006, w173–182. doi: 10.1377/hlthaff.25.w173.

21. Uhlig PN. A call to leadership: Project Access--helping the uninsured community by community. *Ann Thorac Surg*. 2000; 70(2):354–355. [PubMed: 10969643]
22. McDonald EM, Frattaroli S, Edsall Kromm E, Ma X, Pike M, Holtgrave D. Improvements in Health Behaviors and Health Status Among Newly Insured Members of an Innovative Health Access Plan. *J Community Health*. 2012 doi: 10.1007/s10900-012-9615-3.
23. Cunningham P, Hadley J. Expanding care versus expanding coverage: how to improve access to care. *Health Aff (Millwood)*. 2004; 23(4):234–244. [PubMed: 15318585]
24. Feinglass J, Lin S, Thompson J, Sudano J, Dunlop D, Song J, Baker DW. Baseline health, socioeconomic status, and 10-year mortality among older middle-aged Americans: findings from the Health and Retirement Study, 1992 2002. *J Gerontol B Psychol Sci Soc Sci*. 2007; 62(4):S209–217. [PubMed: 17673534]
25. Ferraro KF, Kelley-Moore JA. Self-rated health and mortality among black and white adults: examining the dynamic evaluation thesis. *J Gerontol B Psychol Sci Soc Sci*. 2001; 56(4):S195–205. [PubMed: 11445612]
26. Harvey L, Fowles JB, Xi M, Terry P. When activation changes, what else changes? the relationship between change in patient activation measure (PAM) and employees' health status and health behaviors. *Patient Educ Couns*. 2012; 88(2):338–343. doi: 10.1016/j.pec.2012.02.005. [PubMed: 22459636]
27. Mosen DM, Schmittiel J, Hibbard J, Sobel D, Remmers C, Bellows J. Is patient activation associated with outcomes of care for adults with chronic conditions? *J Ambul Care Manage*. 2007; 30(1):21–29. [PubMed: 17170635]
28. MacKinney T, Visotcky AM, Tarima S, Whittle J. Does Providing Care for Uninsured Patients Decrease Emergency Room Visits and Hospitalizations? *Journal of Primary Care & Community Health*. 2013; 4(2):135–142.
29. Bradley CJ, Gandhi SO, Neumark D, Garland S, Retchin SM. Lessons for coverage expansion: a Virginia primary care program for the uninsured reduced utilization and cut costs. *Health Aff (Millwood)*. 2012; 31(2):350–359. doi: 10.1377/hlthaff.2011.0857. [PubMed: 22323165]
30. Hall MA, Hwang W, Jones AS. Model safety-net programs could care for the uninsured at one-half the cost of Medicaid or private insurance. *Health Aff (Millwood)*. 2011; 30(9):1698–1707. doi: 10.1377/hlthaff.2010.0946. [PubMed: 21900661]

Figure 1.

Ratings of overall health in the 'past year' by recent (n=158) versus established (n=135) Access DuPage enrollees. (p=0.04)

Figure 2.

Ratings of health care received from all providers in the 'past year' by recent (n=123, n=35 missing) versus established (n=129, n=6 missing) Access DuPage enrollees. ($p < 0.0001$)

Table 1
Telephone Interview Participant Characteristics: Recent versus Established Access
DuPage Enrollees (n=293)

	Access DuPage Enrollees <2 Weeks 'past year while uninsured'	Access DuPage Enrollees >1 Year 'past year while an Access DuPage enrollee'	Item Percent Non- Response
	Percent of n=158	Percent of n=135	
Age 45-64	58.8	48.8	0.0
Male	39.9	32.6	0.0
Spanish language	44.3	44.4	0.0
Household income/household size	52.5	59.3	0.0
\$7,500			
Body Mass Index			
Normal	25.3	29.6	
Overweight	29.7	30.4	
Obese	31.0	32.6	
Missing/Refused	13.9	7.4	
Health conditions			
Diabetes	12.2	20.2	2.0
High blood pressure	28.8	37.2	2.0
High cholesterol *	26.3	40.3	2.4
Cancer	4.5	1.6	3.4
Asthma	7.1	5.4	3.4
Depression	20.5	25.6	2.7
Number of health conditions			
0	44.9	36.3	
1	27.8	26.7	
2	15.8	20.0	
3-5	11.4	17.0	
Current smoker	21.5	16.3	2.0
Exercise 30 min. > 1×/week	56.4	56.4	3.4

*
p<0.05

Table 2
Access to Care in the ‘Past Year’ Reported by Recent versus Established Access DuPage Enrollees (n=293)

	Access DuPage Enrollees <2 Weeks ‘past year while uninsured’	Access DuPage Enrollees >1 Year ‘past year while an Access DuPage enrollee’	Item Percent Non-Response
	Percent n=158	Percent n=135	
Did you try to get any kind of tests or treatment?***	46.2	96.3	0.0
Screening tests received			
Blood test for diabetes *	51.3	69.0	2.0
High blood pressure test *	81.0	90.7	2.0
Blood test for cholesterol *	60.1	78.9	2.4
Previous cancer screening tests (i.e. mammogram, Pap test or colonoscopy)	48.4	59.4	3.4
Breathing test for asthma or lung disease	17.7	24.8	2.0
Asked about mental health/depression *	27.8	42.6	2.0
Reasons for delaying medical care			
No money for cost or copay of visit **	78.5	21.3	12.3
Had to wait too long to see doctor or nurse	28.5	23.8	11.3
Clinic was not open when you could get there **	17.7	3.1	
No transportation *	30.5	14.6	10.9
Could not get through on telephone *	16.2	27.7	11.3
Could not get appointment soon enough *	21.5	33.8	11.3
Care needed but could not afford			
Mental health care or counseling **	15.3	3.9	2.4
Dental care ‘including check-ups’	68.4	66.7	0.0
Eyeglasses or vision care	49.4	40.3	2.0
Hospital and Convenience Care			
Received care in a hospital emergency room *	26.9	40.6	3.1
Received care at a clinic in Walgreens, Wal-mart or similar store	13.4	3.1	2.7
Stayed in hospital ‘overnight or longer’ *	10.3	19.2	2.7

* p<0.05

** p<0.0001

Table 3
Ratings of Ease and Quality of Care in the 'Past Year' Reported by Recent versus Established Access DuPage Enrollees (n=293)

	Access DuPage Enrollees <2 Weeks 'past year while uninsured'				Access DuPage Enrollees >1 Year 'past year while an Access DuPage enrollee'			
	Percent n=158				Percent n=135			
	'Never/ Sometimes'	'Usually'	'Always'	Item Percent Non- response	'Never/ Sometimes'	'Usually'	'Always'	Item Percent Non- response
Interaction with health care providers								
'easy to get the care tests or treatments you thought you needed'***	68.9	17.0	14.1	14.6	31.6	21.5	46.9	3.7
'when needed care right away, how often did you get care as soon as you thought you needed it'***	66.7	17.4	15.9	60.1	14.8	21.3	63.9	54.8
'hard time speaking with or understanding your doctors or nurses because you spoke different languages'***	81.7	5.8	12.5	34.2	97.6	1.6	0.8	5.2
'doctor or nurse explained things in a way that was easy to understand'*	29.1	12.6	58.3	34.8	10.2	12.6	77.2	5.9
'doctor or nurse listened carefully to your medical problems'*	26.4	17.5	56.3	34.8	11.0	11.0	78.0	5.9
'doctors showed respect for what you had to say'*	18.5	19.4	62.1	35.4	9.3	8.5	82.2	4.4
'doctor or nurse spent enough time with you'*	30.4	15.7	53.9	35.4	11.8	11.8	76.4	5.9
Telephone Care								
When you called doctor or clinic during regular office hours did you get help or advice needed?	33.8	29.4	36.8	57.0	37.9	18.4	43.7	23.7
When called doctor or clinic when closed did you get help or advice needed?	52.0	4.0	44.0	84.2	33.3	5.6	61.1	86.7
Mental Health and Specialist Care								
How often did you get any mental	80.4	3.5	16.1	64.6	37.5	0.0	62.5	82.2

	Access DuPage Enrollees <2 Weeks 'past year while uninsured'				Access DuPage Enrollees >1 Year 'past year while an Access DuPage enrollee'			
	Percent n=158				Percent n=135			
	'Never/ Sometimes'	'Usually'	'Always'	Item Percent Non- response	'Never/ Sometimes'	'Usually'	'Always'	Item Percent Non- response
health treatment or counseling you needed for a personal or family problem? **								
How often did you get treatment you needed from a specialist? ***	65.7	3.0	15.2	84.8	44.4	8.3	47.2	46.7

* p<0.05

** p<0.0001

Table 4
Patient Care Assessment Ratings Reported by Recent versus Established Access DuPage Enrollees (n=293)

	Access DuPage Enrollees <2 Weeks 'past year while uninsured'	Item Percent Missing	Access DuPage Enrollees >1 Year 'past year while an Access DuPage enrollee'	Item Percent Non-response
	Percent n=158		Percent n=135	
Asked to talk about any problems with your medicines or their effects*	53.5	27.8	71.5	3.7
Shown how what you do to take care of yourself could influence your health**	54.0	28.5	79.2	3.7
Helped to set specific goals to improve your eating or exercise**	39.5	27.8	69.2	3.7
Helped to make a treatment or wellness plan that you could carry out in your daily life**	34.5	28.5	69.2	3.7
Helped to plan ahead so you could take care of your health even in hard times**	31.0	28.5	60.0	3.7

Table 5
Likelihood of (a) Reporting Good to Excellent Health Status or (b) Reporting Good to Excellent Rating of Health Care Received while Uninsured or Enrolled in Access DuPage

Characteristic	Odds Ratio (C.I.)
Likelihood of Reporting Good to Excellent Rating of Health Status	
Age 45-64	1.13 (0.60-2.14)
Household income/household size \$7,500	1.94 (1.13-3.35)
Spanish language	0.85 (0.50-1.61)
Male	0.76 (0.44-1.33)
High number of comorbid conditions (3-5)	1.44 (1.12-1.85)
Smoker	0.73 (0.36-1.47)
Body mass index	
Normal or overweight	Reference
Obese	2.30 (1.29-4.12)
Missing	2.26 (0.88-5.77)
Established Access DuPage enrollee (>1 year)	0.40 (0.23-0.70)
Likelihood of Reporting Good to Excellent Rating of Health Care Received	
Age 45-64	1.42 (0.63-3.21)
Household income/household size \$7,500	1.42 (0.71-2.84)
Spanish language	0.34 (0.14-0.83)
Male	0.97 (0.47-2.01)
High number of comorbid conditions (3-5)	0.99 (0.73-1.35)
Smoker	1.36 (0.56-3.31)
Body mass index	
Normal or overweight	Reference
Obese	1.36 (0.65-2.86)
Missing	1.06 (0.26-4.25)
Established Access DuPage enrollee (>1 year)	0.31 (0.15-0.67)