OHIO FAMILY HEALTH SURVEY
SPONSORED RESEARCH

Demographic Analysis of Low-Income Adults without Dependent Children: Implications for the Expansion of Medicaid

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OFHS Ohio Family Health Survey

What is the Ohio Family Heath Survey?

The Ohio Family Health Survey (OFHS) is a phone survey that gathers information on health-related issues impacting Ohioans. It is considered one of the largest and most comprehensive state-level health and insurance surveys conducted in the nation. Four iterations of the survey (1998, 2003/04, 2008 and 2010) have been conducted and current survey sponsors include the Ohio departments of Insurance, Job and Family Services, Health, and Mental Health, the Health Foundation of Greater Cincinnati, the Health Policy Institute of Ohio, and The Ohio State University.

The OFHS Steering Committee partners decided to conduct a smaller interim survey in **2010**, with HPIO continuing its involvement as the disseminator of survey data. The emphasis for the 2010 survey was gauging the level of economic stress on Ohio families and how that stress was is impacting Ohio's health system and indicators of health, in light of the severe economic downturn that began in late 2008. The 2010 OFHS included responses from 8,276 adults and proxy responses for 2,002 children.

Ohio Family Health Survey Web site (all sponsored research reports are available for download here):
http://grc.osu.edu/ofhs

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Introduction

A key feature of the new health reform law, the Patient Protection and Affordable Care Act (PPACA), concerns the expansion of Medicaid to previously ineligible populations. Under the new law, Medicaid will continue to cover many low-income and medically vulnerable residents (i.e., low-income children, disabled) but will be expanded in 2014 to include low-income adults with no dependent children. This newly eligible group—hereafter referred to as childless adults—is of particular interest to policy makers and health practitioners because they represent a large and diverse population which is uninsured at high rates and may have greater health needs than other uninsured groups (Broaddus & Angeles, 2010).

While some facets of PPACA are currently underway in the state (such as the expansion of a prescription drug discount program), a better understanding of health care utilization and health-related behaviors across ages and insurance status is needed prior to the full expansion of Medicaid in 2014. Results of this research will enable planners and policy makers to design appropriate health care and health information delivery systems and benefit packages, develop a plan to adequately allocate resources, and develop effective outreach and enrollment strategies among the newly eligible in Ohio (Somers, Hamblim, Verdier, & Byrd, 2010).

The primary goal of this project is to examine patterns of health status (physical and mental), health risk behaviors, and health care utilization among childless (non-elderly) adults in Ohio. An important contribution of the proposed research is to 1) provide an estimate of the prevalence of unmet need among the potential expansion population; and 2) determine whether unmet need among the expansion population is systematically related to gender, and to life course stage. An additional goal is to document variation in patterns of health status, health risk behavior, health care and insurance status according to gender and life course stage among the low-income uninsured more broadly. The findings from this project will fill an important gap, because little is known regarding health-related behaviors and health care utilization of the currently uninsured childless in Ohio. This study identifies unmet need for health services, and identifies potential challenges and barriers associated with the provision of care necessary for the successful implementation of health reform in Ohio.

This report is structured around three aims. First, we use the 2010 Ohio Family Health Survey to provide a profile of low-income non-elderly adults, many of whom will be eligible for Medicaid under the proposed expansion. We pay particular attention to non-elderly childless and parents by comparing and contrasting them in terms of health status, insurance coverage, and health care utilization. Second, we determine the levels of unmet need for health care services among the low-income uninsured overall as well as the low-income childless population, and document variation by life course stage and gender. Finally, we identify regions in Ohio which may expect a disproportionate share of low-income uninsured childless, and use additional data from the American Community Survey (ACS) and the DHHS Area Resource File to place each region in demographic context.

Data

The current research uses data from the 2010 Ohio Family Health Survey (OFHS). These data are particularly well suited for studying the health-related behaviors of the childless adults in the context of health reform because they are timely as well as state-specific. Other national surveys such as the Current Population Survey and the Medical Expenditure Panel Survey do not supply the needed subpopulation detail needed to assess the implications of health reform at the state-level. Prior research has found that several community factors which influence health care access and utilization, such as poverty rates, urban/rural status, and availability of primary care physicians (Andersen, 1995). Using FIPS codes, we append to the OFHS1) county-level economic characteristics from the 2006–08 American Community Survey, and 2) indicators of health care supply (i.e., physicians or hospital beds per 1,000 county residents) from the 2009–2010 Area Resource File (ARF) (available from the Department of Health and Human Services) to add to a demographic profile of each service region. Characteristics are aggregated for each of the eight Medicaid Managed Care regions in Ohio (Central, East Central, Northeast, Northeast Central, Northwest, Southeast, Southwest, and West Central).

Analytic Sample

There are several subpopulations addressed in the present study. The primary analytic sample is composed of low-income non-elderly adults aged 19 to 64, with respondents classified as low-income if their family income and composition places them at or below 138% of the 2009 Federal Poverty Level (FPL). We refer to the population interchangeable as adults or non-elderly adults. Various analyses construct key comparison groups of mutually exclusive categories of insurance status (e.g., uninsured, employer sponsored insurance, Medicaid, privately purchased insurance), as well as by parental status, based on the response to the question on the 2010 OFHS: Are you a parent of a child 17 or younger living within your household? Respondents are classified as childless if they are not a parent residing with a dependent child. It is important to note that this does not mean that an individual is not a parent per se, rather that they are not the custodians of an own child in their household.

While a special focus is placed on uninsured childless adults because they will comprise the bulk of the newly eligible in 2014, several analyses explore health care utilization for respondents already eligible for and using Medicaid managed health care plans (such as low-income parents). Contrasting patterns of health care utilization between this group and the target group of uninsured childless is critical for estimating post-reform health care utilization among the Medicaid expansion population.

Measures

Unmet Need (Health Care Access)

Unmet need arises when an individual does not receive care that would have improved his or her health. We create a global measure of subjective unmet need with a dichotomous indicator set to 1 if respondents answer yes to any one of four possible indicators (During the past 12 months, was there a time when you needed dental care but could NOT get it as that time?; have you NOT filled a prescription because of the cost?; needed vision care but could NOT get it at that time?; did not get any other health care that you needed, such as a medical exam, medical supplies, mental health care, or eyeglasses?). Given that a disaggregated approach is needed to generate policy-relevant findings (Somers et al., 2010), we also determine the prevalence of each type of unmet need (i.e., vision, dental, prescription and medical).

Health Status

We capture respondents' global level of physical health, as well as psychological distress. Respondents are asked to report on their level of health (Would you say your health is excellent, very good, good, fair, or poor?). The validity of this single-item self-reported health [SRH] measure has been supported by many public health studies (DHHS, 2000). We create a dichotomous measure of fair/poor health. To capture the prevalence of psychological distress among the target population, we sum individual responses from the six-item Kessler instrument included on the OFHS. This scale has shown consistent psychometric properties across major socio-demographic subsamples (Kessler et al., 2002). We create a dichotomous indicator of moderate-to-high psychological health based on the Kessler scale.

Health Care Utilization

Prior research has documented that uninsured individuals who may be unable to pay for private health insurance or ineligible for social health care such as Medicaid may not receive needed services (Broyles, Narine & Brandt 2002). While vulnerable populations may seek medical care for a more immediate health concern, they are less likely to access care that is preventive in nature such as routine check-ups (Silow-Carroll, Rodin, Dehner, & Bern, 2010). In the current research, multiple measures of health care utilization are explored. First, a single item in the OFHS measures an emergency room visit in the past 12 months. The data do not include the frequency of doctor's visits during the last year, but they do include information on whether the respondent has visited a doctor about their own health problem or visited a doctor for a routine check-up (distinguished from a visit for a specific injury, illness, or condition). We create an indicator on whether the respondent visited a doctor within the last two years. Further focus is placed on having an uncertain source of care, defined as having no usual source of care or only utilizing the emergency room for care.

Health Risk Behaviors

Weight Status. Overweight and obesity among adults is associated with increased health risks such as diabetes and hypertension (Visscher & Seidell, 2001), increased risk of circulatory diseases and cancer (Mokdad, Marks, Stroup, & Gerberding, 2004), and increased mortality (Flegal, Carroll, Ogden, & Curtin, 2008). Respondent's body mass index (BMI) is calculated from self-reported height and weight. Following Centers for Disease Control (CDC) guidelines, we classify childless adults as obese if BMI > 30. For example, a 5'9" adult weighing over 203 pounds, with a resulting BMI of 30, is considered obese.

Alcohol Use. Research has shown that excessive alcohol use is associated with many health problems (e.g., high blood pressure, cirrhosis and pancreatitis) and is now the third leading lifestyle-cause of death for people in the U.S. every year (CDC, 2008). CDC guidelines suggest excessive alcohol use is defined as heavy drinking (drinking more than two drinks per day on average for men or more than one drink per day on average for women), or binge drinking (drinking five or more drinks during a single occasion for men or four or more drinks during a single occasion for women) (CDC, 2008). Respondents are classified as at-risk for binge alcohol use based on whether they consumed at least five or more drinks (four or more for women) on any occasion during the last 30 days.

Current Tobacco Use. The relationship between tobacco use and a multitude of adverse health outcomes has been thoroughly documented in the extant literature. Respondents are identified as current tobacco users if they report currently smoking and have smoked more than 100 cigarettes in their lifetime or if they report currently using chewing tobacco and report having used it at least 20 times.

Analytic Methods

We begin by presenting descriptive statistics on the uninsured non-elderly population in Ohio, the low-income uninsured non-elderly population. The OFHS uses a complex sampling method which requires the application of population weights as well as adjustments to standard errors. All estimates are weighted and all standard errors are adjusted to account for complex survey design, using Stata 11.1 for all analyses. We calculate the prevalence of health related characteristics and conditions and test for differences between low-income parents and low-income childless in Ohio using adjusted Wald tests. We construct a series of logistic regression models predicting the odds of the outcomes of interest (i.e., unmet need for health care, health status, and health care access) among two focus groups of interest—low-income uninsured childless adults and low-income parents who are currently enrolled in Medicaid (or are dual recipients of Medicaid and Medicare). For ease of interpretation we present the adjusted predicted probabilities based on analytic models.

Findings

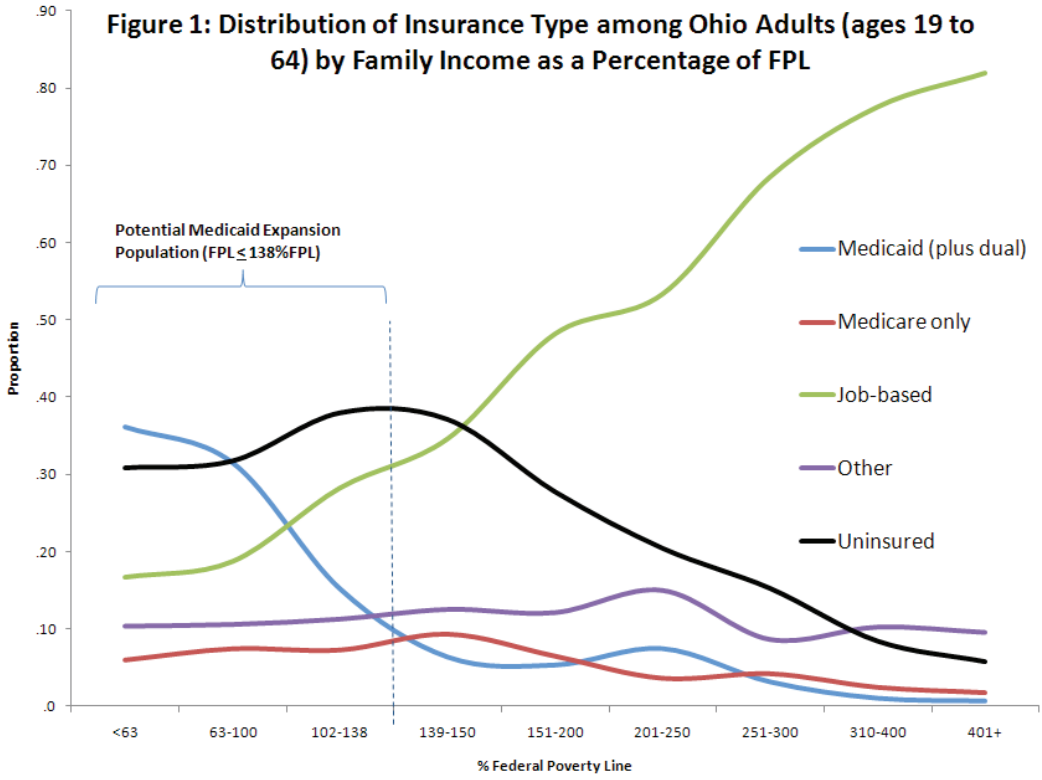
Insurance coverage among Ohio's Low-Income Adults

While the focus of this research brief is on the potential Medicaid expansion population (i.e., those with family income under 138% FPL), it is instructive to first examine the patterns of insurance coverage by family income to provide a better understanding of the full implications of PPACA. Figure 1 presents insurance type by family income as a percentage of the federal poverty level (FPL) among Ohio adults ages 19 to 64. **Just under a third of Ohio's non-elderly adults, roughly 2.3 million individuals, live in families with income at or below 138% FPL**, among which 29% are enrolled in Medicaid (or are Dual Eligible's with Medicare), just 6.5% are enrolled in Medicare only, 21% have employer-based coverage, 11% have some other type of coverage (including directly purchased, other, and unknown type), while 33% are uninsured.

Appendix A presents key demographic and socioeconomic characteristics by insurance status for low-income non-elderly adults (ages 19 to 64) in Ohio. Clear differences exist by insurance type due to eligibility rules for Medicaid and/or Medicare, but it is important to note that **the majority (71%) of Ohio's low-income uninsured are childless adults**.

Characteristics of Ohio's Low-Income Uninsured Adults

Ohio's uninsured population of non-elderly adults (ages 19 to 64) is estimated to be over 1.3 million in size, among which 57% will be eligible for the Medicaid expansion based on their family income and family size. Given that a significant proportion of the uninsured are above the 138% cut-point it is also instructive to consider possible features of PPACA which may provide for the availability of subsidized health benefits in an exchange plan for individuals and families between 138 and 400% FPL. With these plans, premium contributions may be capped and low-income families will gain cost-sharing credits aimed at reducing out-of-pocket costs (Silow-Carroll, Rodin, Dehner, & Bern, 2010). Table 1 presents the population estimates of Ohio's uninsured by family income as a percentage of the federal poverty line.



Source: 2010 Ohio Family Health Survey. Medicaid includes dual recipients of Medicare and Medicaid. Other captures directly purchased insurance, other, and nsured type unknown.

Estimates from the 2010 Ohio Family Health Survey suggest that there are roughly 758,500 low-income uninsured non-elderly adults—the most likely to comprise the future Medicaid Expansion population. The age and gender composition of this subpopulation, shown in Figure 2, reveals distinct variation with a concentration at younger ages for men, but at older ages for women. **For example, almost half of low-income uninsured women are ages 45 to 64; whereas two out of five (40%) low-income uninsured men are in young adulthood (ages 19 to 29)**. While minorities comprise 16% of the non-elderly adult population they comprise a disproportionately high amount of the low-income uninsured, nearly a third (31%). **Over a quarter (26%) of the low-income uninsured population of non-elderly adults has less than a high school degree—over twice the level for the state overall (11%).** Two out of five (or 41%) low-income uninsured adults are employed and well over a third (37%) has never been married.

Table 1. Distribution of Uninsured Adults ages 19 to 64 by Federal Poverty Level

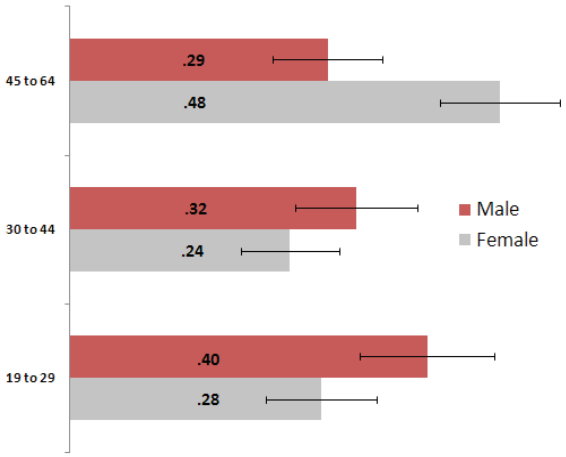
Federal Poverty Level	Percent	Estimated Number of Uninsured
<138%	57%	758,512
139-150	4%	52,514
151-200	12%	164,732
201-250	8%	109,978
251-300	6%	75,745
301-400	5%	65,439
401 or more	8%	113,067
Total	100%	1,339,987

Analysis of 2010 Ohio Family Health Survey based on family income as a percentage of FPL

Service Area Concentration of Ohio's Low-Income Uninsured Adults

Given that the sample size of the 2010 OFHS is not large enough to support county-level analyses, we present statistics which examine variation by the eight Medicaid Managed Care regions in Ohio (Central, East Central, Northeast, Northeast Central, Northwest, Southeast, Southwest, and West Central). We first present the distribution of the total non-elderly population as well as comparable ages of the low-income population (<138% FPL) by region. The first row in Table 2 presents the weighted population estimate (derived from 2010 OFHS) for Ohio adult's ages 19 to 64 in each of the service regions, followed by the share of the total population in each region.

Figure 2: Distribution of Low-Income Uninsured Adults by Age and Gender, Weighted Mean (95%CI)



Note: Low-income are respondents with family income ≤138 % FPL.

For example, 19.6% of the total population of non-elderly adults resides in the Central service region. (For comparison purposes, we also present population share estimates of the non-elderly adult population based on the 2005–2009 pooled American Community Survey data. It is important to note the similarity in the distribution of population shares between the OFHS estimates and those derived from the ACS.) This is followed by an estimate of the number of non-elderly adults with family income ≤138% FPL, and the share of the total low-income population by region. And finally, population estimates for low-income uninsured individuals are presented, followed by the share of the total low-income uninsured population.

We create a ratio of the low-income uninsured to the total non-elderly population. **This is a rough measure indicating that some regions carry a disproportionate share of the potential Medicaid expansion population as it should based solely on its population size.** For example, the North East Central (NEC) region comprises 4.6% of the total non-elderly adult population in the state, yet has 6.1% of the state's low-income uninsured population. In contrast, the Northwest service region comprises almost 12% of the state's total non-elderly population yet carries only 9.4% of the low-income uninsured population. **The service region with the heaviest share in relation to their overall population size appears to be the North East Central region (1.34), followed by Eastern Central (1.27), and West Central (1.13).**

Table 2. Distribution of Potential Medicaid Expansion Population and Health Resources by Ohio Service Regions, Adults (ages 19 to 64)

	Service Region							
	NW	WC	SW	C	NE	EC	SE	NEC
Populations at Risk (ages 19 to 64)								
Population estimate[1]	841,190	744,540	1,073,206	1,387,334	1,330,416	949,786	431,880	323,597
Share of adults	11.9%	10.5%	15.2%	19.6%	18.8%	13.4%	6.1%	4.6%
Share of adults (ACS 2005-2009 estimate)	11.1%	9.6%	15.4%	20.2%	20.1%	13.2%	5.5%	4.8%
Low-income adults (≤ 138% FPL)	247,380	254,272	325,167	439,602	431,318	300,175	161,570	127,719
Share of total low-income	10.8%	11.1%	14.2%	19.2%	18.9%	13.1%	7.1%	5.6%
Low-income and uninsured adults	72,542	91,711	112,271	132,785	140,276	132,029	44,106	47,428
Share of the low-income uninsured	9.4%	11.9%	14.5%	17.2%	18.1%	17.1%	5.7%	6.1%
Ratio of low-income uninsured to total population	0.79	1.13	0.96	0.88	0.97	1.27	0.94	1.34
Unweighted sample count	(937)	(854)	(1,381)	(1,630)	(1,612)	(1,019)	(453)	(372)
Health Resources[2]								
Share of total population[3]	11%	10%	15%	20%	20%	13%	6%	5%
Primary Care Physicans[4]	1,043	984	1,722	2,077	2,667	1,302	393	528
Primary Care Physicians per 100,000 population	100.8	131.5	61.4	82.7	81.6	69.7	79.9	111.2
Share of Primary Care Physicians Statewide	10%	9%	16%	19%	25%	12%	4%	5%
Ratio of Primary Care Physicians to Total Population	0.87	0.94	1.05	0.99	1.22	0.91	0.66	1.00
Psychiatrists	99	99	209	175	316	119	23	26
Psychiatrists per 100,000 population	11.1	16.9	4.3	6.6	3.8	5.0	6.8	12.3
Share of Psychiatrists Statewide	9%	9%	20%	16%	30%	11%	2%	2%
Ratio of Psychiatrists to Total Population	0.83	0.95	1.28	0.84	1.45	0.83	0.39	0.50
Specialists	1,628	1,652	3,288	3,616	5,669	2,081	443	629
Specialists per 100,000 population	196.2	289.1	79.6	122.7	111.0	102.1	120.4	186.7
Share of Specialists Statewide	9%	9%	17%	19%	30%	11%	2%	3%
Ratio of Specialists to Total Population	0.77	0.89	1.13	0.97	1.46	0.82	0.42	0.67
Dentists	523	499	878	1683	1796	684	212	280
Dentists per 100,000 population	40.9	44.7	50.0	75.1	76.9	44.6	33.6	49.8
Share of Dentists Statewide	8%	8%	13%	26%	27%	10%	3%	4%
Ratio of Dentists to Total Population	0.71	0.78	0.87	1.31	1.34	0.78	0.59	0.87

1. Population estimates from 2010 Ohio Family Health Survey, weighted.
2. Area Health Resource File
3. Total population, all ages.
4. Primary Care Physicians include General Practice/ Family Practice, Internal Medicine and Pediatricians

We also utilize data from the Department of Health and Humans Services Area Resource File (ARF), a database containing detailed county-level information on health facilities, health professions and measures of resource scarcity. We aggregate county-level information from the most recent year available (2009) to the eight service regions. We present the relative share that each region has of the total population with respect to the share of select types of physicians. For example, the North Eastern region (NE) possesses 20% of the population, but 25% of the primary care physicians

statewide, whereas the South Eastern region possesses 6% of the state's population but comprises only 4% of the state's total share of primary care physicians. The distributions of specialists, psychiatrists and dentists follow similar patterns.

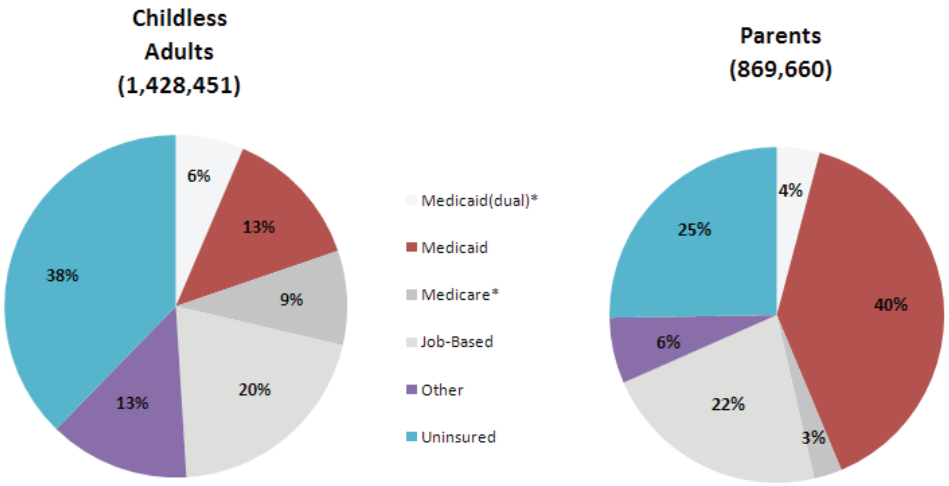
Table 3. Select Demographic Characteristics by Ohio Service Regions

	Service Region							
	NW	WC	SW	C	NE	EC	SE	NEC
Demographic and Socioeconomic Characteristics								
Educational Attainment (ages 18 to 64)								
Less than High School	10%	11%	11%	11%	11%	11%	13%	11%
High School	38%	34%	32%	32%	32%	37%	41%	42%
Some College	34%	35%	29%	30%	31%	30%	32%	29%
Bachelor's or higher	18%	21%	27%	27%	25%	22%	13%	17%
Old-Age Dependency Ratio	23.9	25.1	21.0	18.5	25.5	25.0	26.8	29.3
Labor Force Participation (ages 20 to 64)								
Employed	74%	72%	73%	73%	73%	74%	65%	68%
Unemployed	6%	6%	5%	5%	6%	5%	6%	6%
Not in labor force	20%	22%	22%	22%	21%	21%	30%	26%
Poverty Rate by Age Group								
Child (0 to 17)	25%	30%	27%	27%	33%	22%	29%	34%
Adults (18 to 44)	22%	24%	21%	21%	25%	16%	25%	27%
Adults (45 to 64)	12%	13%	13%	12%	16%	10%	14%	16%
Senior (65+)	16%	15%	16%	16%	19%	14%	17%	18%
All Ages	13%	14%	12%	12%	15%	12%	14%	16%

Source: American Community Survey 2005-2009 and 2007-2009 combined files.

Much of this variation may be attributed to the unique characteristics of each region. For example, some regions are marked by lower average levels of educational attainment among non-elderly adults, such as the South East and North East Central service regions, in which half have a only a high school degree or less (Table 3). These two regions also have higher proportions of adults who are not in the labor force and higher old-age dependency ratios (26.8 and 29.3, respectively). The dependency ratio is the number of people 65 and older to every 100 people of traditional working age (20 to 64). The higher the old-age dependency ratio, the greater the potential burden on the working age population and service agencies. The final rows of Table 3 present the poverty rate by age category for each service region. The poverty rate is calculated as the number of individuals residing in a family with income <138% FPL divided by the number of individuals in that age group. Overall rates of poverty vary across region ranging from 12% to 16%, with more variation within region by age category.

Figure 3: Insurance Status of Childless Adults and Parents (ages 19 to 64) with Family Income < 138% of FPL, Ohio 2010



*Recipients of Medicaid plus Medicare (Dual Eligible's) and Medicare in this age range are categorized as disabled. Disability here is defined as an individual that requires either 1) long term day-to-day assistance, 2) long-term therapies, 3) is in fair or poor health and needs personal care, domestic care or social assistance, 4) has a potential disabling mental health condition, or 5) has a Medicaid or Medicare waiver.

A Focus on Parental Status

As shown in Figure 3, **low-income childless adults are more likely to be uninsured than are low-income parents. Nearly two out of five (38%) of Ohio's low-income childless adults are uninsured**. Thirteen percent are covered by Medicaid, 6% are dual eligible's (receiving Medicaid and Medicare), and 33% have either job-based or some other type of purchased coverage. In contrast, 40% of Ohio's low-income parents are covered by Medicaid, with an additional 7% with access to Medicare or as dual eligible's. Twenty-eight percent have either job-based or some other type of purchased coverage, leaving the remaining 25% uninsured.

Table 4: Demographic and Socioeconomic Characteristics of Low-Income Adults (≤138%FPL) ages 19 to 64 by Parent Status, OFHS 2010

	CHILDLESS ADULTS				PARENTS			
	Weighted Estimate	Unweighted N	%	95% CI	Weighted Estimate	Unweighted N	%	95% CI
Population Estimate	1,428,451	1,119	100%	-	869,660	588	100%	-
Age Groups								
19 to 29	378,249	170	26%	23% - 30%	278,971	129	32%	28% - 37%
30 to 44	241,485	171	17%	14% - 20%	399,898	296	46%	41% - 51%
45 to 64	808,717	778	57%	53% - 60%	190,791	163	22%	19% - 26%
Gender								
Female	740,475	683	52%	48% - 55%	585,547	425	67%	63% - 72%
Male	687,976	436	48%	45% - 52%	284,114	163	33%	28% - 37%
Race[a]								
White/Other	1,059,598	818	74%	71% - 77%	610,213	411	70%	66% - 74%
Black/Hispanic/Asian	368,854	301	26%	23% - 29%	259,447	177	30%	26% - 34%
Educational Attainment switched?								
High School or less	944,474	685	66%	63% - 69%	552,933	685	64%	59% - 68%
Some College (includes Associate's Degree)	340,755	310	24%	21% - 27%	245,877	310	28%	24% - 33%
College Graduate (4 or more)	143,223	124	10%	8% - 12%	70,851	124	8%	6% - 11%
Disabled[b]								
Yes	545,495	514	38%	35% - 42%	250,811	183	29%	25% - 33%
No	882,957	605	62%	58% - 65%	618,850	405	71%	67% - 75%
Region								
Appalachian	262,086	203	18%	16% - 21%	148,748	105	17%	14% - 21%
Metropolitan	840,842	616	59%	56% - 62%	483,125	316	56%	51% - 60%
Rural Non-Appalachian	158,958	159	11%	9% - 13%	106,365	84	12%	10% - 15%
Suburban	166,566	141	12%	10% - 14%	131,422	83	15%	12% - 19%
Insurance Status[c]								
Public	409,411	423	29%	26% - 32%	403,636	297	46%	42% - 51%
Private	480,232	354	34%	30% - 37%	246,319	163	28%	24% - 33%
Uninsured	538,808	342	38%	34% - 41%	219,706	128	25%	21% - 30%
Family Income (%FPL)								
FPL <=100	1,051,109	828	74%	70% - 77%	645,587	434	74%	70% - 78%
FPL >=101 to 138%	377,342	291	26%	23% - 30%	224,074	154	26%	22% - 30%
Employment Status								
Employed	540,453	364	38%	35% - 42%	410,964	271	47%	48% - 57%
Not Employed	881,849	749	62%	58% - 65%	458,356	316	53%	43% - 52%
Union Status								
Married/Cohabiting	433,678	292	30%	28% - 34%	478,950	286	55%	51% - 60%
Formerly Married	449,944	432	31%	29% - 35%	168,109	160	19%	16% - 23%
Never Married	529,664	379	37%	34% - 41%	218,637	139	25%	21% - 30%

a. Based on race_4_imp

b.Disability here is defined as an individual that requires either 1) long term day-to-day assistance, 2) long-term therapies, 3) is in fair or poor health and needs personal care, domestic care or social assistance, 4) has a potential disabling mental health condition, or 5) has a Medicaid or Medicare waiver. It is important to note this is not a true measure of disability, but a potential marker of disability.

c. Public is defined as Medicare, Medicaid or dual recipients; Private includes job-based, purchased, unknown type.

Low-income childless adults are older on average than comparable parents (43.5 years versus 35.5 years, p<.001), and are more likely to be male (48% versus 33%, p<.001), shown in Table 4 In addition, low-income childless adults are more likely to be considered disabled (38%) than are low-income parents (29%)(p<.001). Disabled here is defined as requiring 1) long term day-to-day assistance, 2) long-term therapies, 3) in fair or poor health and needing personal care, domestic care or social assistance, 4) having a potential disabling mental health condition, or 5) having a Medicaid or Medicare waiver. It is important to note this is not a true measure of disability, but a potential marker of disability. Low-income childless adults are older (43.5 years) on average compared to low-income parents (35.5 years). The low-income childless population is characterized by a bifurcated age distribution with concentrations at the upper and lower age ranges with 26% falling between 19 and 29, and 57% between 45 and 64. In contrast, low income parents are concentrated at the middle of the age distribution with 46% between the ages of 30 and 44.

Low-income parents are more likely to be employed (47%) than are low-income childless adults (38%) (p<.002), and are more likely to be in a marital or cohabiting union (55%) than are low-income childless (30%, p<.001). There were no statistically significant differences between low-income parents and childless adults with respect to deep poverty (<100% FPL), educational attainment, or region of residence (i.e., Appalachian, suburban, rural non-Appalachian, metropolitan).

Table 5 presents the weighted mean levels of unmet need for health care, health status, health care utilization and health risk behaviors among low-income adults by parent status. While there is no unadjusted difference in the proportion experiencing unmet need for health care overall across parent status, childless adults experience greater levels of unmet need for vision care and other types of health care such as mental health care or medical supplies, than do parents. **More specifically, 32% of low-income childless adults report an unmet need for medical care compared to comparable parents (21%) (p<.001)**. Interestingly there are only a few marginal unadjusted differences between parents and childless adults with respect to health care utilization and health risk behaviors. Specifically, parents are more likely to have been a patient in the emergency room in the last 12 months (40% versus 35%, p< .07), and are more likely to be current tobacco users than are childless adults (46% versus 41%, p< .06).

Table 5: Mean Levels of Unmet Need, Health Status, Health Care Utilization and Health Risk Behaviors among Low-Income Adults (ages 19 to 64) with Household Income Less than 138% of FPL, OFHS 2010 (standard errors).

	Childless		Parents		Difference	
Unmet Need for Health Care						
Global Unmet Need	0.497	(.018)	0.473	(.024)	0.024	
Dental	0.299	(.016)	0.276	(.022)	0.023	
Vision	0.282	(.016)	0.192	(.019)	0.090	**
Prescription	0.284	(.016)	0.260	(.021)	0.024	
Medical Care	0.317	(.017)	0.205	(.019)	0.111	***
Health Status						
Fair/Poor Health	0.397	(.017)	0.276	(.021)	0.121	***
Moderate to High Psychological Distress	0.362	(.017)	0.306	(.022)	0.056	*
Health Care Utilization						
Emergency room patient last 12 months	0.345	(.017)	0.399	(.024)	-0.055	#
Uncertain Place of Health Care[a]	0.344	(.018)	0.347	(.023)	-0.004	
Visit a Physician within last 2 years	0.831	(.014)	0.864	(.017)	-0.033	
Health Risk Behaviors						
Obese	0.362	(.017)	0.406	(.024)	-0.044	
Overweight or Obese	0.659	(.018)	0.658	(.023)	0.001	
Binge Drinker	0.186	(.015)	0.163	(.018)	0.023	
Current Tobacco	0.405	(.018)	0.460	(.024)	-0.055	#

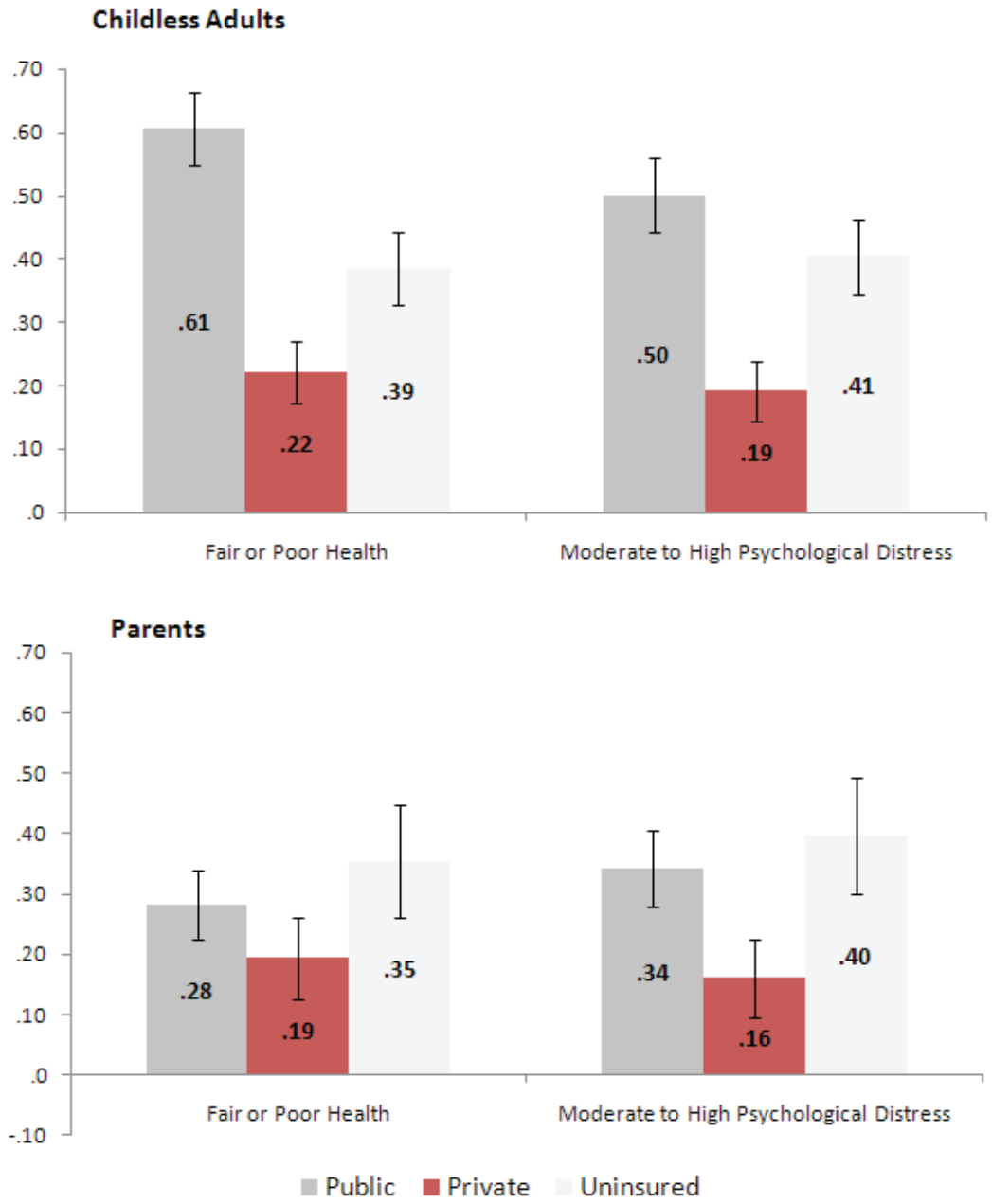
Note: p values are based on an adjusted wald test between parents and childless adults.

*** p< .001** p<.01, *p<.05, #p<.10

a. Uncertain care is defined here as reporting no usual source of care or reporting the emergency room as usual source of care.

In addition, childless adults on average have a higher prevalence of experiencing fair or poor physical health and psychological distress than do low-income parents. We consider whether health status varies over broad insurance type [Figure 4]. Well over half of low-income childless adults in Ohio utilizing public forms of insurance (i.e., Medicaid only, Medicare only, Dual Eligible's) report fair/poor health, and half report moderate to high psychological distress. **Among the potential new enrollees—the low-income uninsured childless—roughly two out of five (41%) report that they are experiencing psychological distress**. Both the publically insured (which will by definition include disabled adults), and the uninsured display worse health outcomes than low-income childless on private forms of health insurance (i.e., job-based, privately purchased, unknown type, and other). One important finding to emerge concerns the prevalence of fair/poor health among parents: not only are levels lower than childless adults, but parents enrolled in public insurance report similar levels of fair/poor health as parents enrolled in private forms of insurance.

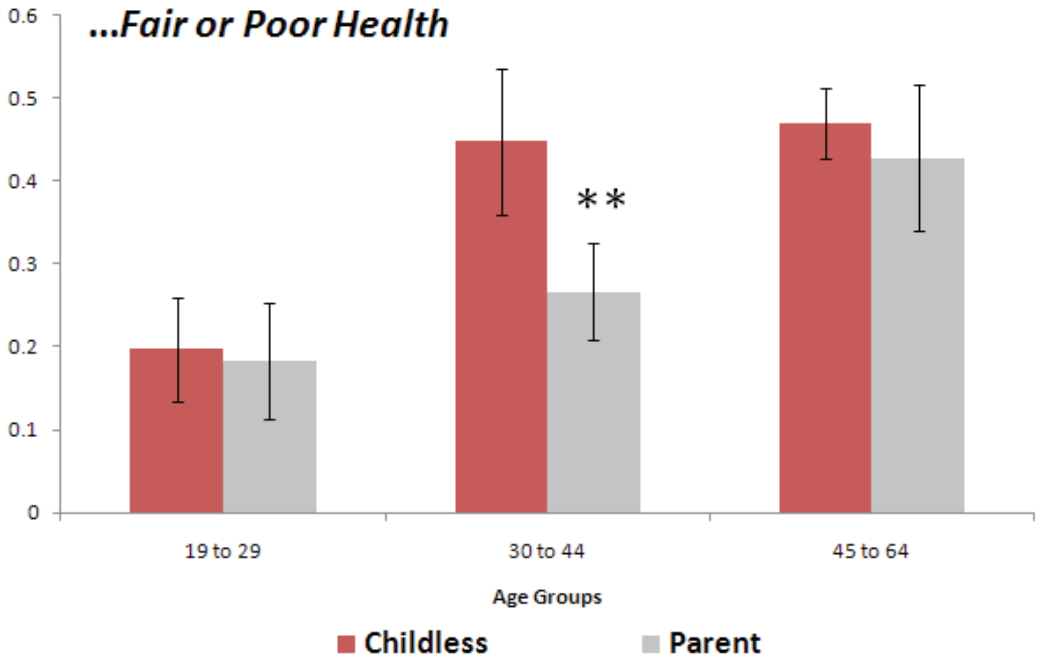
Figure 4: Fair/poor health, psychological distress among Ohio low-income childless adults and parents (19 to 64): Weighted Mean (95%CI)

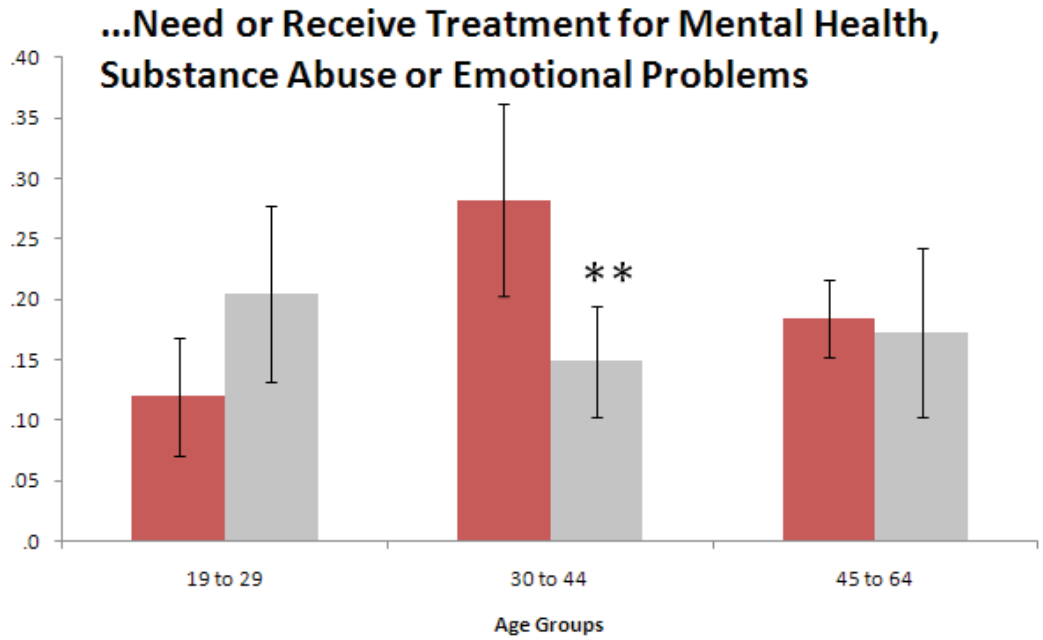


Public includes Medicaid only, Medicare only, and Dual Eligible's. Private includes job-based, privately purchased, unknown type, and other. No significant differences exist in fair/poor health between public and private, or between public and uninsured for parents. No significant differences in psychological distress between public and uninsured parents.

Given that one of the major compositional differences between parents and childless adults concerns age structure, we present select statistics by age category where sample size permits. Figure 5 presents the weighted mean level of low-income adults reporting fair or poor health by age category. We expect that reports of fair/poor health are likely to increase across the life course, and this is confirmed for both the childless and parents. Yet there are distinct differences in prevalence of fair/poor health among those in the middle age group (ages 30 to 44): **childless adult's ages 30 to 44 are significantly more likely to report fair or poor health than are parents of comparable ages (45% versus 27%, p <.001)**.

Figure 5: Ohio Parents and Childless Non-Elderly Adults at or below 138% FPL that Report...





Bars represent 95%CI for the estimated mean. Mean differences between parental status were tested. ** indicates difference between childless adults and parents is significant at the p < .05

The OFHS includes a question on whether the respondent *needs or receives treatment for mental health, substance abuse or emotional problems*. This question may capture a possible latent problem among childless adults: an unmet need for treatment of substance abuse or mental health problems. Results suggest that young adult parents (ages 19 to 29) have a

higher prevalence of needing or receiving treatment for mental health or substance abuse problems compared to same-age childless adults (.20 versus .12, diff. = .18, p<.059), whereas **childless adults ages 30 to 44 displayed a significantly higher level of needing or receiving treatment than parents in the same age category** (.28 versus .15, diff. = .13, p<.004)

Uninsured Childless and Parents with Medicaid Coverage

These results, however, do not consider differences in insurance status between the two groups, which may influence unmet need for health care, as well as health care utilization. Sample size restrictions prevent us from isolating the combined effects of parenthood status and the full range of insurance types, therefore we concentrate briefly on two contrast groups — **low-income childless adults without insurance versus low-income parents utilizing Medicaid**.

Table 6. Descriptive statistics of select variables for Low-Income Parents on Medicaid vs. Uninsured Childless Adults, FPL 138% Weighted Means (Standard Error)

	Uninsured Childless Adults		Parents covered by Medicaid[a]		Difference	
Unmet Need for Health Care						
Global Unmet Need	0.663	(.029)	0.369	(.034)	0.293	***
Unmet Need by Type						
Dental	0.439	(.031)	0.207	(.028)	0.232	***
Vision	0.447	(.031)	0.173	(.027)	0.274	***
Prescription	0.403	(.030)	0.178	(.026)	0.226	***
Medical Care	0.515	(.031)	0.140	(.023)	0.375	***
Health Status						
Fair/poor health	0.385	(.030)	0.275	(.030)	0.110	**
Moderate to High Distress	0.405	(.030)	0.341	(.033)	0.064	
Health Care Utilization						
Emergency room patient last 12 months	0.357	(.030)	0.473	(.035)	-0.117	*
Uncertain Place of Health Care[b]	0.499	(.031)	0.315	(.033)	0.184	***
Visit a Physicians within last 2 years	0.665	(.030)	0.930	(.019)	-0.265	***
Health Risk Behaviors						
Obese	0.318	(.029)	0.420	(.035)	-0.102	*
Heavy alcohol use	0.214	(.026)	0.129	(.024)	0.085	*
Current tobacco use	0.458	(.031)	0.484	(.035)	-0.026	
Unweighted Sample Size	342		279			

Note: p values are based on an adjusted wald test between parents and childless adults.
*** p< .001** p<.01, *p<.05, #p<.10

a Includes those on Medicaid or dual recipients (Medicaid plus Medicare).

b. Uncertain care is defined here as reporting no usual source of care or reporting the emergency room as usual source of care.

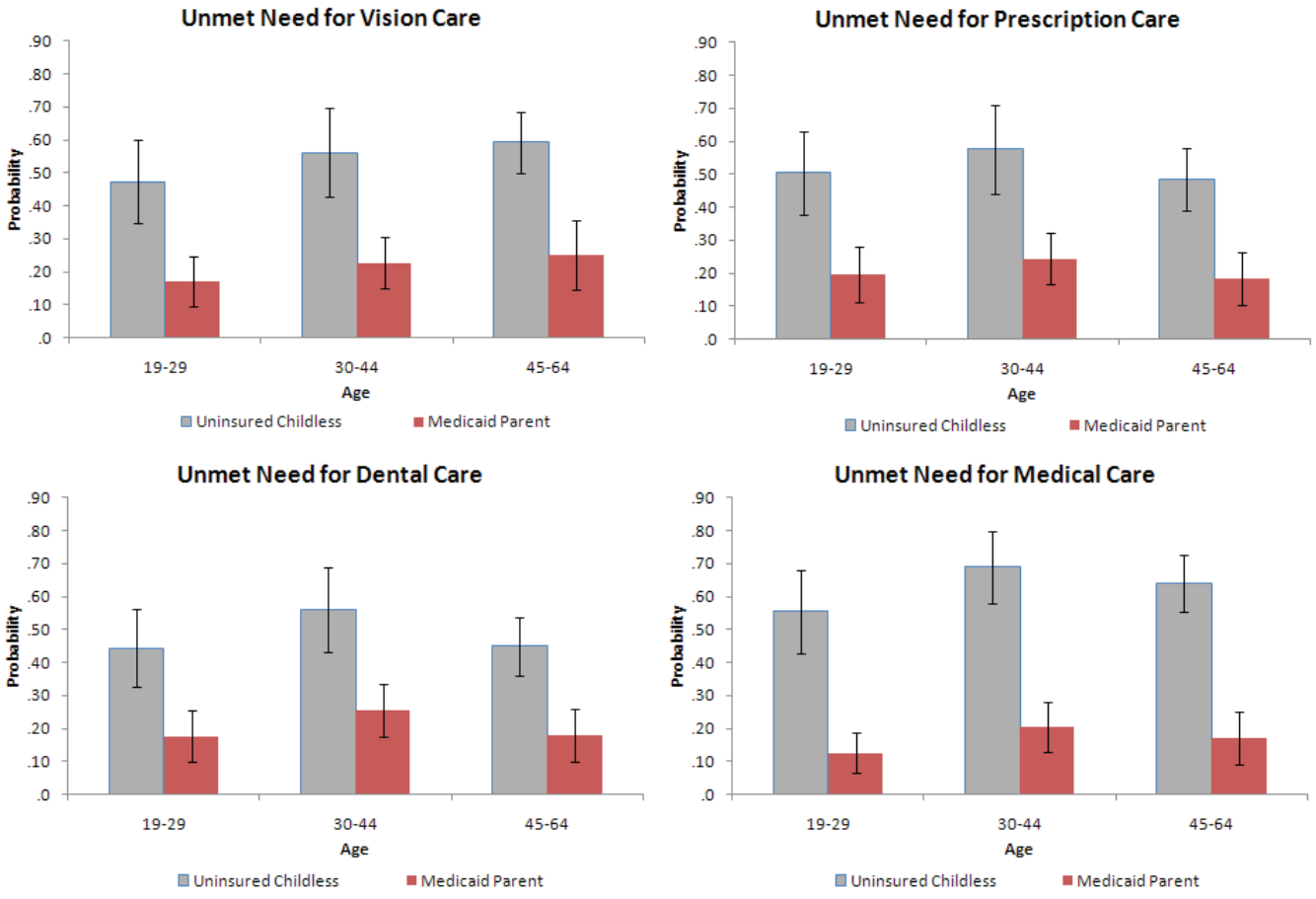
Results suggest that poor childless adults without access to Medicaid or other types of insurance (a majority of the future expansion population) have significantly greater unmet need for health care (66%) than do low-income parents currently with access to Medicaid (37%) (p<.001). This large difference in global unmet need is repeated when

we examine unmet need for dental, vision, prescription and medical care—childless adults exhibit much higher rates of unmet need by type. Table 6 details the wide differences in specific types of care. For example, the prevalence of unmet need for medical care among uninsured childless adults is almost four times as high as among low-income parents on Medicaid (52% versus 14%).

Uninsured childless adults in this low-income group report worse physical health, less health care utilization and access, and are more likely to experience heavy alcohol use than are low-income parents eligible for and using Medicaid. We found no difference between the two targeted groups in the prevalence of moderate-to-high psychological distress.

Perhaps these differences in health care needs, access and behaviors are attributable to demographic differences rather than differences in insurance access? We turn to multivariate analysis to understand whether variations in unmet need for health care, health care utilization and health status remain after accounting for demographic characteristics. We first estimate a series of logistic regression models of each type of unmet need (e.g., global measure, vision, dental), health status (e.g., fair/poor), and health care utilization (i.e., visited a physician in the last 12 months, visited the emergency room in last two years, or have uncertain access to care). We include a standard set of demographic variables, parental status and a block of indicators for region (metropolitan, Appalachian, suburban, and rural non-Appalachian). Region was found to have no significance and was dropped from the final models. We fit predicted probabilities of unmet need based on reduced form models which include gender, race, age and parent status. Predicted values were generated by plugging into the models combinations of values for parental status and age, while setting the other variables to zero. The choice determines the overall level of predicted values, but has no effect on the predicted differences between groups. We also present 95% confidence intervals around our adjusted predicted probabilities. (Note: In the following figures, when two estimates have non-overlapping confidence intervals they are statistically different. Differences in parameter estimates with overlapping confidence intervals were evaluated with t-tests.)

Figure 6: Adjusted Probabilities (and 95% Confidence Intervals) of Unmet Need for Vision Care, Prescription Care, Dental Care and Medical Care, Low-Income (≤138%FPL) Uninsured Childless Adults vs. Parents using Medicaid



Note: Based on reduced form logit models of restricted sample of low-income adults (19 to 64) with family income at or below 138% FPL. Estimated probabilities are for Non-Hispanic white women. Medicaid users include dual recipients of Medicare and Medicaid.

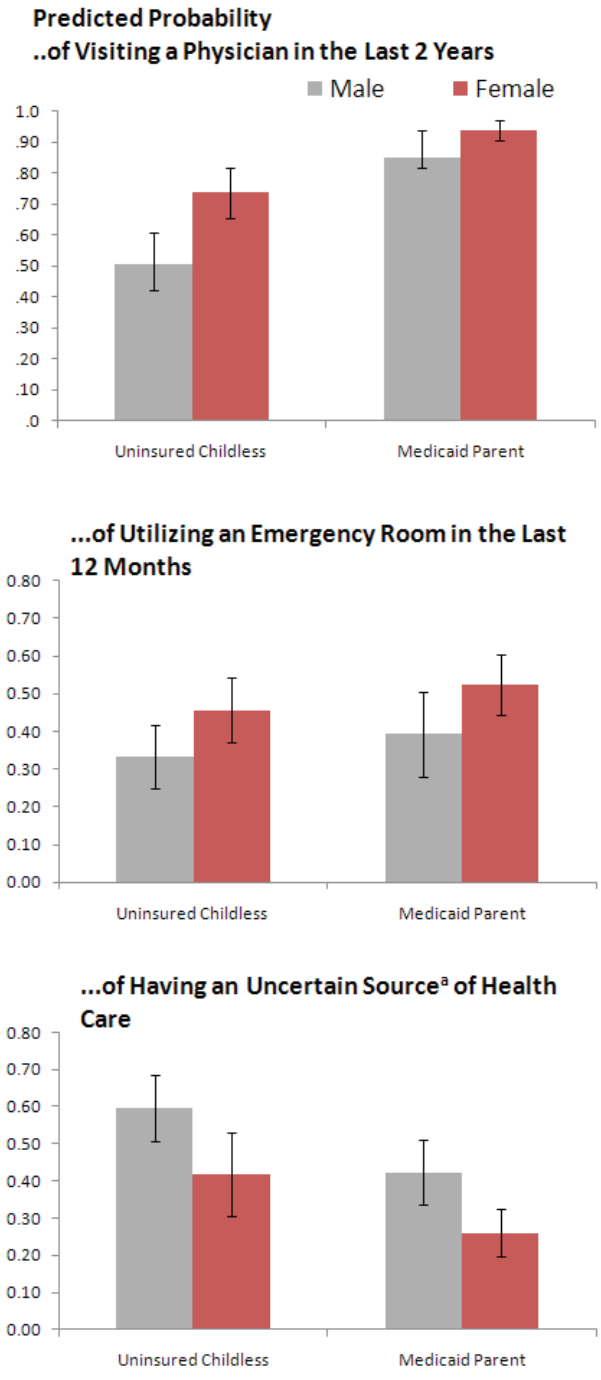
To understand the variation in needs, we calculated the predicted probability of specific types of unmet need for health care by parent status and age for low-income uninsured childless adults and Medicaid parents. (We present the predicted probabilities for white women in Figure 6.) **As seen in the bivariate results, the uninsured childless have much higher probabilities of unmet need for medical, vision, dental and prescription care than parents enrolled on Medicaid**. For example, the probability that an uninsured childless woman ages 30 to 44 will have an unmet need for dental care is (.56) compared with a comparable woman on Medicaid (.25).

The bivariate results suggested that uninsured low-income childless adults have worse self-reported health than do comparable parents enrolled in any form of public health insurance. We extend the analysis further, to examine whether low-income uninsured childless adults face more health problems than low-income parents with access to Medicaid. We generate a series of parallel models predicting the odds of 1) reporting fair or poor health, and 2) reporting moderate of high levels of psychological distress. Due to loss of power and sample size limitations, we drop non-significant predictors of race and gender.

We find that uninsured childless adults have higher odds of reporting fair or poor health than Medicaid parents (1.48, p<.09) net of age (significant at the p<.10 rather than p<.05 level), but there was no difference in the adjusted odds of reporting moderate to high psychological distress between uninsured childless and Medicaid parents. In other words, **the odds of reporting fair/poor health are 1.5 times as large for poor uninsured childless adults than comparable parents on Medicaid**. It is important to note that both groups—uninsured childless and Medicaid parents—have significantly higher odds of reporting fair/poor health and moderate to high psychological distress than do comparable low-income individuals with private health insurance (results not shown). Again, to ease interpretation we calculate the predicted probability of reporting fair/poor health for non-elderly adults of average age (37 years). **We find that the probability of reporting fair/poor health ranges from 28% [CI 22% to 34%] for parents with access to Medicaid, to 33% [CI 28% to 37%] for uninsured childless adults**.

Because of the importance of receiving needed health care, we investigate the factors that are associated with types of health care utilization by the two targeted low-income groups. The bivariate results suggested that uninsured childless have much less access to care, a finding that is supported in the multivariate models. Figure 7 presents the predicted probabilities of each condition of health care access based on reduced form models which include only significant predictors of health care access by gender, race, age, and parent status. (The predicted values presented are for non-Hispanic white men and women of average age, 37 years.)

Figure 7: Adjusted Predicted Probability (95% CI) of Health Care Utilization for Low-Income Uninsured Childless Adults and Medicaid Parents by Gender



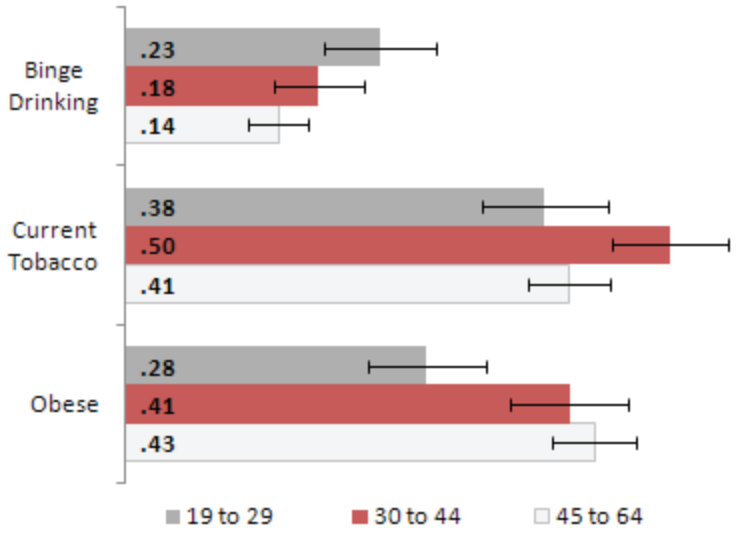
a. Uncertain souce of health care includes having no usual source of care or usually using the emergency room for health care.
Based on reduced form logit models of restricted sample of low-income adults (19 to 64) with family income at or below 138% FPL. Estimated probabilities are for Non-Hispanic whites of average age. Medicaid users include dual recipients of Medicare and Medicaid. Bars represent 95% Confidence Intervals around the predicted probability. Medicaid users include dual recipients of Medicare and Medicaid.

The probability of visiting a physician in the last two years for a routine check-up or medical care is much higher for low-income parents with access to Medicaid than for the childless and uninsured. We find no statistically significant differences between men and women in the probability of seeing a doctor in the last two years among low-income parents with access to Medicaid; however there are gender differences among the low-income uninsured childless.

For example, the probability of visiting a doctor is 51% for uninsured childless men compared to 74% for uninsured childless women.

We found no differences between the two target groups on utilizing an emergency room in the last 12 months, but we did find differences (at p<.10) between the uninsured childless and parents with access to Medicaid in the probability of having an uncertain source of health care (i.e., no usual source of care, or usually using the emergency room for treatment). More specifically, **we find that among men, 60% of the uninsured childless have an uncertain source of care compared to roughly 42% of parents with access to Medicaid**. Overall, our results suggest that the uninsured childless adults utilize fewer health care services than comparable parents with access to Medicaid, net of demographic characteristics.

Figure 8: Health Risk Behavior by Age Category, Low-Income Non-Elderly Ohio Adults (19 to 64), Weighted Means (95% CI)



Note: Estimated means were adjusted to account for missing data. Current tobacco use is significantly lower among 19 to 29 and 45 to 64 age groups compared to those ages 30 to 44.

A Focus on Health Behaviors among the Low-Income Population

The 2010 OFHS offers a glimpse into the health behaviors of Ohioans by including information on not only height and weight, but also tobacco and alcohol use. We turn our focus to the **variation in health behaviors across the life course among low-income Ohioans** because the health and social conditions of each life stage influences outcomes in the next, affecting not only individual-level but also community-level health (Lu & Halfon 2003).

The prevalence of obesity among the low-income population increases with age ranging from 28% among young adults ages 19 to 29 to over 40% among those ages 45 and older. Current tobacco use is concentrated among low-income respondents ages 30 to 44—**half of all low-income Ohioans ages 30 to 44 are current tobacco users**. Binge drinking was found to decline significantly with age—23% of young adults report binge drinking in the last year compared with 18% of those ages 30 to 44, and 14% of adults ages 45 to 64.

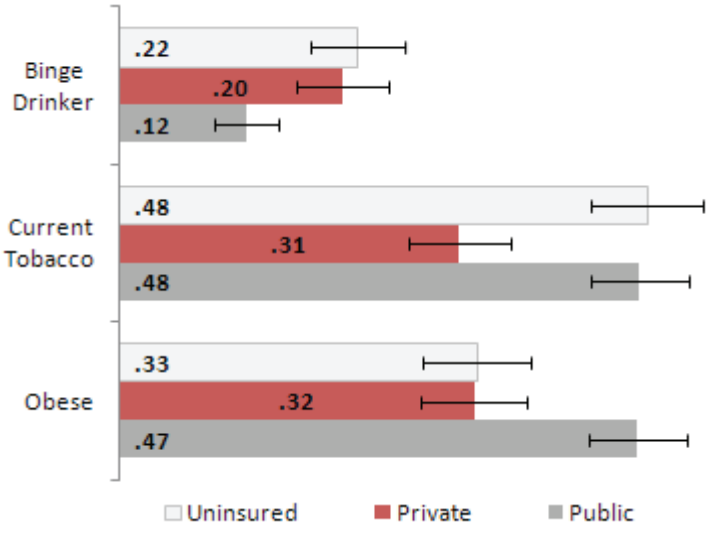
We examined patterns of health behaviors by broad insurance group—uninsured, private (i.e., job-based, directly purchased, other, unknown type) and public (Medicaid, Medicare, and dual eligible's) among low-income non-elderly adults. Figure 8 details prevalence estimates for obesity, current tobacco use, and binge drinking. **Almost half (47%) of those utilizing public health insurance have a BMI that places them in the obese category**. This is significantly higher than other low-income individuals utilizing private forms of health insurance, or those who are uninsured.

Low-income Ohioans who are uninsured exhibit the highest prevalence of binge drinking (22%) compared to those with private forms of insurance (20%) or those on public forms of insurance (12%). However, the difference in binge alcohol use between the uninsured and those on private insurance is not statistically significant. Current tobacco use was found to be significantly higher among those who are uninsured or are utilizing public forms of health insurance—**less than a third of low-income adults (ages 19 to 64) utilizing private insurance report current tobacco use compared to almost half who are uninsured or using Medicaid, Medicare or both**. However, the difference between the uninsured and those using public forms of insurance was not statistically significant.

Discussion

A key feature of the Patient Protection and Affordable Care Act (PPACA) concerns the expansion of Medicaid, a public health program funded by state and federal governments which provides necessary health care coverage for free or reduced cost under certain income and category restrictions. Prior to health reform, most low-income childless adults were not eligible for Medicaid regardless of their income. However, under the new rules, Medicaid will be expanded in 2014 to cover nearly all low-income individuals living up to 138% (133% plus a five percent income allowance) of the federal poverty line (Kaiser Family Foundation, 2010).

Figure 9: Health Risk Behavior by Broad Insurance Status, Non-Elderly Ohio Adults (19 to 64), Weighted Means (95%CI)



Note: Public includes Medicaid, Medicare, and dual recipients; Private includes job-based, purchased, other and unknown type.

The new health reform law creates the possibility for uniform coverage of Ohio's low-income population—all individuals regardless of family structure or parental status will have access to Medicaid. This is an important addition given that Ohio is home to over 538,000 uninsured, low-income childless adults—the population typically barred from accessing Medicaid. There is also the possibility that a large segment of Ohio's population with income between 138% FPL and 400% FPL will be eligible for subsidized health insurance coverage through an Insurance Exchange Plan. Just under a third of Ohio's non-elderly adults (approximately 2.3 million individuals) live in families with income at or below 138% of the Federal Poverty Level.

Our analysis of the low-income uninsured population suggests that a large segment of the potential Medicaid expansion population are men in young adulthood (ages 19 to 29) and women in later middle age (ages 45 to 64). **Taken as a whole, almost a quarter (24%) of Ohio's low-income uninsured adults is composed of women ages 45 to 64**.

We examined variations in demographic and health characteristics of Ohio's low-income childless and parents finding that the childless are more likely to be older, less likely to be married and less likely to be insured than are Ohio's low-income parents. We also found that c**hildless adults have lower self-rated health than comparable parents, as well as higher rates of needing or receiving treatment for mental health or substance abuse problems**. Indeed, this latter finding varied significantly by parental status and life course stage, with prevalence among childless adults increasing with age, yet decreasing with age among low-income parents.

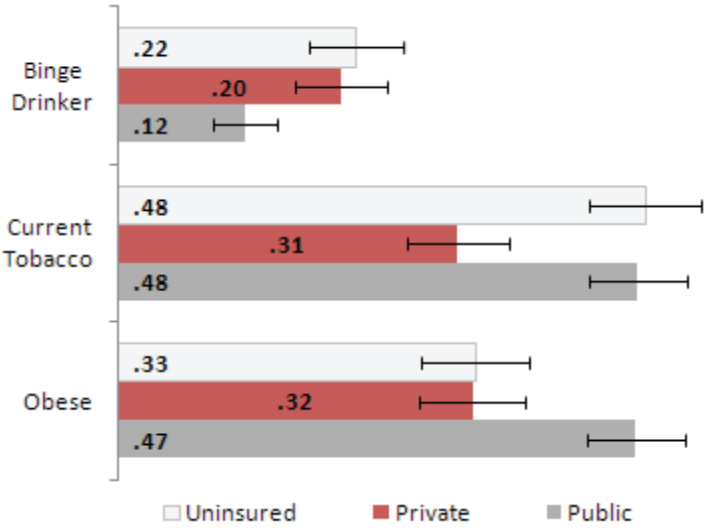
To understand how health insurance status may impact the results, we turned the focus to low-income childless adults without insurance and low-income parents utilizing Medicaid. In 2009, over a half-million non-elderly childless adults were uninsured, representing 71% of the uninsured non-elderly adults in Ohio. This population may be particularly vulnerable to poor health. **For example, our results indicate that almost 40% of low-income uninsured childless adults report fair/poor health or moderate-to-high levels of psychological distress, yet a substantial proportion lacks a usual source of health care**. It may be that a lack of health insurance coverage among childless adults in Ohio has discouraged many from seeking much needed care, and consequently currently uninsured persons may postpone treatment until 2014 when Medicaid becomes available to them. This unmet need may be particularly salient in Ohio, given that Ohio is one of 27 states in the U.S. that has not previously offered some form of alternative coverage (such as a Medicaid waiver or access to a fully state-funded program) to uninsured low-income childless adults (Somers et al., 2010).

To understand this pent-up demand for health services we assessed unmet needs for medical, dental, vision and prescription care. **We find that almost two-thirds of Ohio's low-income uninsured childless adults have some form of unmet need for health care**. We also find that low-income parents with access to Medicaid services have substantially higher levels of self-reported health, and much lower levels of unmet need for health care. Understanding patterns and characteristics of this pent-up demand for health services provides valuable information toward identifying potential challenges and barriers associated with the provision of care necessary for the successful implementation of health reform in Ohio. The uninsured and childless living at the lower ranges of family income is a group that may be the first to enroll in Medicaid. They have high levels of unmet need for health services, and delay seeking medical treatment, while also displaying high rates of smoking, drinking and obesity. After the enactment of the expansion, there may be a large demand from this group for treatments of serious ailments that are often associated with these behaviors, such as diabetes or asthma.

These differences between uninsured childless and parents with access to Medicaid shed some light on the ways in which PPACA may help change the current health status of the potential expansion population. A limitation of the study,

however, is that we cannot determine from the data precisely why parents utilizing Medicaid have better health profiles than do uninsured childless adults. There may be selection factors at work in which low-income parents possess unmeasured characteristics that predispose them toward meeting their health care needs, or achieving better self-rated health than do low-income childless adults.

Figure 9: Health Risk Behavior by Broad Insurance Status, Non-Elderly Ohio Adults (19 to 64), Weighted Means (95%CI)



Note: Public includes Medicaid, Medicare, and dual recipients; Private includes job-based, purchased, other and unknown type.

Our final analysis explored the relationship between health behaviors (tobacco use, binge drinking and obesity) among Ohio's low-income population. We find substantial variation in prevalence of health characteristics across insurance status and across stage of the life course. **Obesity is concentrated among those with access to public health insurance, reflecting its persistent link to socioeconomic status (SES)**. This is important to note given that most states, like Ohio, are not using their statutory or regulatory authority to expand public and private insurance coverage of obesity assessment and treatment (Lee, Sheer, Lopez, & Rosenbaum, 2010). Given the long-term negative health consequences of obesity and the fact that it is a continually growing problem, policy makers should consider the need for stronger obesity prevention among this population.

Furthermore, current smoking is significantly higher among those who are uninsured or on public forms of health insurance. This may be explained by one of the more enduring findings in the public health and demographic literature: higher SES is associated with better health outcomes and behaviors. Our results also find that among Ohio's non-elderly population, young adults are much more likely to be at-risk for excessive or binge alcohol use and are just as likely to be current tobacco users as those ages 30 to 44. Early adulthood is an especially critical period for developing positive health trajectories for the adult life-course (Harris 2010). Recent research has shown that disease onset has shifted down the age spectrum into early adulthood for a number of crucial health conditions. For example, the prevalence of diabetes has increased 63% among adults ages 20 to 39, compared with 22% for older ages (CDC 2008); meanwhile, rates of risk behavior such as smoking have increased 25% among young adults ages 18 to 24, compared with 11% among older ages. Diseases typically associated with aging, such as hypertension and kidney disease, are becoming more common among young people (Muntner, He, & Cutler, 2004), yet recent estimates from national data suggest that young adults between 19 and 29 are at greatest risk of being uninsured, with more than a third lacking health insurance (Roberts & Rhoades 2008). It may be this group that will need to be targeted for preventive care.

Policy Implications

The low-income uninsured in Ohio is a diverse group experiencing a wide range of demographic characteristics, economic circumstances, and health needs and behaviors. We find that the uninsured are at an elevated risk of experiencing an unmet need for health care. In particular we find that unmet need for health services is concentrated among the childless—the group that historically has had very limited access to Medicaid.

Uninsured low-income childless adults face health problems, and lack a secure avenue to obtain health care. With the confusion surrounding the implementation of health reform, it will be important for Medicaid programs to provide suitable outreach to enable this group not only to be enrolled in the program but to access the care that they need. The demographic composition of Ohio's low-income uninsured is also cause for concern. A concentration of young men and older women among the low-income uninsured means that health providers must take into account varying health needs. This may be a defining feature of future health care needs or outreach efforts.

One factor that we cannot assess is the amount of transition that may occur once expansion is enacted. Many of the new enrollees may move between coverage status as their employment status changes, a common occurrence among many low-income families who move back and forth across the poverty line, while at the same time transitioning from eligibility for various public assistance programs. Yet it is important to note that only one in five (21%) of Ohio's low-income population currently has employment-based coverage and few are likely to voluntarily transition from private to public insurance options.

Our results also indicate that there are some service regions in the state that may shoulder a disproportionate proportion of the state's potential Medicaid expansion population. By creating a ratio of the low-income uninsured population to the total non-elderly population we find that the North East Central, Eastern Central, and West Central regions are likely to have the heaviest share in relation to their overall population size. While these areas have a fair representation of primary care physicians based on their population, it is of particular concern that some of these areas may be characterized as having shortages of psychiatrists or other specialists.

Our research hints that some of the future Medicaid enrollees may be childless adults that struggle with chronic conditions, possibly mental health and substance abuse problems, which make it unlikely that they could reach a level of employment to secure job-based insurance. This, in turn, may create a demand for mental health or substance abuse treatment services among the new Medicaid expansion population.

In an era when government policy is looking for strategies to broaden health insurance coverage and improve quality of health care while controlling costs, it is particularly important to understand the unmet needs and health patterns of Ohio's potential Medicaid expansion population.

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Appendix A. Key demographic and socioeconomic characteristics of low-income Ohio's non-elderly (19 to 64) population by insurance type, Ohio Family Health Survey 2010.

	INSURANCE TYPE																	
	Dual (Medicaid & Medicare)			Medicaid Only			Medicare Only			Job-based			Directly Purchased, Other Type, and Unknown Type			Uninsured		
	Population Estimate	Sample Size	%	Population Estimate	Sample Size	%	Population Estimate	Sample Size	%	Population Estimate	Sample Size	%	Population Estimate	Sample Size	%	Population Estimate	Sample Size	%
Total	127,429	152	100%	534,767	433	100%	150,851	135	100%	481,888	333	100%	244,663	184	100%	758,514	470	100%
Age Groups																		
19 to 44	153,358	47	67%	372,259	256	70%	33,548	25	22%	248,085	143	51%	125,698	68	51%	465,655	227	61%
45 to 64	74,071	105	33%	162,508	177	30%	117,303	110	78%	233,803	190	49%	118,965	116	49%	292,859	243	39%
Parental Status																		
Childless	91,699	121	72%	190,354	185	36%	127,358	117	84%	290,850	211	60%	189,382	143	77%	538,808	342	71%
Parent	35,730	31	28%	344,413	248	64%	23,493	18	16%	191,038	122	40%	55,281	41	23%	219,706	128	29%
Gender																		
Female	73,602	98	58%	397,210	336	74%	81,507	82	54%	248,062	199	51%	128,014	111	52%	397,626	282	52%
Male	53,827	54	42%	137,556	97	26%	69,344	53	46%	233,826	134	49%	116,649	73	48%	360,888	188	48%
Race[a]																		
Black/Hispanic/Asian	40,871	45	32%	168,811	141	32%	50,852	45	34%	73,802	60	15%	60,084	46	25%	233,881	141	31%
White/Other	86,558	107	68%	365,956	292	68%	99,999	90	66%	408,086	273	85%	184,579	138	75%	524,633	329	69%
Educational Attainment																		
No HS degree	39,287	32	29%	171,710	103	30%	44,637	26	27%	52,998	29	11%	47,853	26	17%	205,384	95	26%
High School	55,851	69	41%	214,241	185	37%	62,547	58	38%	216,811	146	44%	80,533	61	28%	305,557	192	38%
Some college	33,146	50	25%	173,305	164	30%	50,687	50	31%	144,727	96	29%	112,468	84	40%	228,021	172	29%
College graduate	6,913	13	5%	16,158	16	3%	5,985	10	4%	82,539	65	17%	41,929	37	15%	60,549	39	8%
Disabled[b]																		
No	0	0	0%	353,946	258	66%	0	0	0%	424,659	288	88%	174,893	129	71%	548,308	335	72%
Yes	127,429	152	100%	180,820	175	34%	150,851	135	100%	57,230	45	12%	69,770	55	29%	210,206	135	28%
Region																		
Appalachian	22,828	26	18%	91,237	81	17%	23,812	22	16%	79,796	52	17%	53,320	36	22%	139,841	91	18%
Metropolitan	80,864	88	63%	307,964	239	58%	92,905	80	62%	240,792	157	50%	142,231	106	58%	459,211	262	61%
Rural Non-Appalachian	15,527	26	12%	63,191	57	12%	14,270	16	9%	72,455	56	15%	26,455	26	11%	73,426	62	10%
Suburban	8,210	12	6%	72,375	56	14%	19,865	17	13%	88,846	68	18%	22,657	16	9%	86,035	55	11%
Household Income (%FPL)																		
Less than 63%	64,428	63	51%	273,484	215	51%	52,445	44	35%	158,173	104	33%	103,541	76	42%	300,405	182	40%
63 to 100	47,996	66	38%	185,553	159	35%	52,639	48	35%	147,314	104	31%	77,500	57	32%	233,219	144	31%
100 to 138	15,005	23	12%	75,730	59	14%	45,767	43	30%	176,402	125	37%	63,621	51	26%	224,890	144	30%
Employment Status																		
Not Employed	106,109	136	83%	379,463	314	71%	138,151	120	92%	125,182	96	26%	145,650	120	60%	445,650	279	59%
Employed	21,320	16	17%	154,394	117	29%	12,701	15	8%	356,287	236	74%	96,033	62	39%	310,681	189	41%
Union Status																		
Married/Cohabiting	21,165	21	17%	205,576	126	38%	44,325	30	30%	283,185	188	59%	92,214	62	39%	266,163	151	35%
Formerly Married	49,958	68	39%	134,407	156	25%	74,041	74	50%	88,055	78	18%	65,979	60	28%	205,614	156	27%
Never Married	55,439	61	44%	194,443	150	36%	31,007	30	21%	105,109	61	22%	81,120	56	34%	281,184	160	37%

Source: 2010 Ohio Family Health Survey. Some totals may vary due to missing data.

a. Based on race_4_imp

b. See text for definition of disability status

Appendix B. Health Outcomes by Insurance Coverage among Ohio's Low-Income(FPL<138) Childless Adults (ages 19 to 64), Weighted Means and 95% Confidence Intervals

	Dual (Medicaid & Medicare)		Medicaid Only		Medicare Only		Privately Purchased*		Uninsured	
	Mean	95% CI	Mean	95% CI	Mean	95% CI	Mean	95% CI	Mean	95% CI
Global Unmet Need	0.544	.43 - .65	0.398	.31 - .48	0.476	.37 - .59	0.348	.29 - .41	0.663	.61 - .72
Unmet Need by Type										
Dental	0.351	.25 - .45	0.238	.16 - .31	0.258	.17 - .35	0.167	.12 - .21	0.439	.38 - .50
Vision	0.248	.15 - .34	0.166	.10 - .23	0.261	.17 - .36	0.154	.11 - .20	0.447	.39 - .51
Prescription	0.259	.16 - .36	0.197	.13 - .27	0.234	.15 - .32	0.200	.15 - .25	0.403	.34 - .46
Health Care	0.215	.13 - .30	0.160	.10 - .22	0.277	.18 - .37	0.186	.14 - .23	0.515	.45 - .58
Health Status										
Fair/Poor Health	0.564	.45 - .67	0.614	.53 - .70	0.626	.52 - .73	0.221	.17 - .27	0.385	.33 - .44
Moderate to High Distress	0.463	.35 - .57	0.506	.42 - .60	0.518	.41 - .63	0.194	.15 - .24	0.405	.35 - .46
Health Care Utilization										
Emergency room visit?	0.511	.40 - .62	0.491	.40 - .58	0.388	.28 - .49	0.234	.18 - .29	0.357	.30 - .42
Uncertain Care?	0.310	.20 - .42	0.249	.17 - .33	0.216	.12 - .31	0.245	.19 - .30	0.499	.44 - .56
Dr Visit <2 years?	0.940	.88 - 1.0	0.966	.93 - 1.0	0.973	.93 - 1.0	0.899	.86 - .94	0.665	.61 - .72
Health Risk Behaviors										
Obese	0.588	.48 - .70	0.448	.36 - .54	0.549	.44 - .66	0.280	.22 - .34	0.318	.26 - .38
Binge Drinker	0.061	.02 - .10	0.119	.06 - .18	0.121	.05 - .20	0.222	.17 - .28	0.214	.16 - .26
Current/Past Tobacco	0.431	.32 - .54	0.505	.42 - .59	0.475	.37 - .58	0.281	.23 - .34	0.458	.40 - .52
Unweighted N	121		185		117		354		342	
Population Estimate	91,699		190,354		127,358		480,231		538,808	

*Privately purchased includes job-based, directly purchased, other, unknown insurance types.

Uncertain care is defined here as reporting no usual source of care or reporting the emergency room as usual source of care.