



2-8-2019

Proposed Work Requirements in Pennsylvania Medicaid: Characterizing Eligible Beneficiaries

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Abstract

Using information from all 2.9 million Pennsylvania Medicaid enrollees as of April 1, 2016, we identified the 815,763 working-age adults (ages 21-64) and assessed their likely exemption and working status over the course of the subsequent year. More than half would likely be exempt from work requirements because of their caregiver status (38%) or disability status (14%). Thirty-one percent would be nonexempt but considered working, with at least one month of work; this group had either part-time or full time work 95% of the time they were enrolled in Medicaid. This snapshot suggests that more than 80% of working-age adults were already working or disabled or potential caregivers and thus, while still subject to compliance verification that the Department will need to administer and enforce, are unlikely to substantially benefit from work requirements. Our results, as visualized below, show that 11% (90,194) of working-age enrollees (815,763) subject to administration and verification of the work requirement program would be found to be nonexempt, not working and on Medicaid for at least a year. This group, representing just 3% of the 2.9 million Medicaid enrollees, would have the greatest potential to change their work status as a result of the program. The burden and cost of implementation to the 815,763 would have to be weighed against the benefit to the 90,194 to determine whether, among current beneficiaries, the benefits of such a program outweigh the costs.

Keywords

Medicaid, work requirements, Pennsylvania

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Proposed Work Requirements in Pennsylvania Medicaid

Characterizing Eligible Beneficiaries

A report submitted to the
Pennsylvania Department
of Human Services

By
The University of Pennsylvania's
Leonard Davis Institute of Health Economics

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Executive Summary

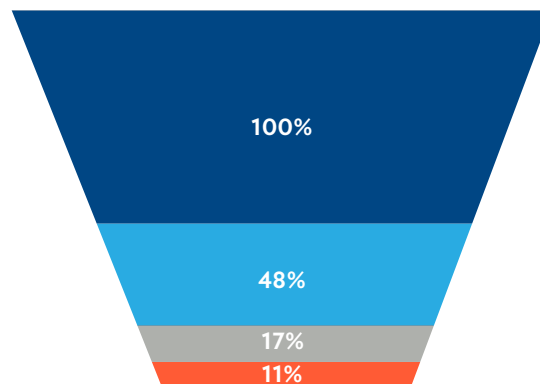
To help the Pennsylvania Department of Human Services understand the likely impact of a proposed Medicaid work requirement, we analyzed the demographic, economic and health characteristics of working-age, non-disabled adults who receive Medicaid, and any issues or barriers this population may face in obtaining and maintaining employment.

Using information from all 2.9 million Medicaid enrollees as of April 1, 2016, we identified the 815,763 working-age adults (ages 21-64) and assessed their likely exemption and working status over the course of the subsequent year. More than half would likely be exempt from work requirements because of their caregiver status (38%) or disability status (14%). Thirty-one percent would be nonexempt but considered working, with at least one month of work; this group had either part-time or full time work 95% of the time they were enrolled in Medicaid. This snapshot suggests that more than 80% of working-age adults were already working or disabled or potential caregivers and thus, while still subject to compliance verification that the Department will need to administer and enforce, are unlikely to substantially benefit from work requirements.

Our results, as visualized below, show that 11% (90,194) of working-age enrollees (815,763) subject to administration and verification of the work requirement program would be found to be nonexempt, not working and on Medicaid for at least a year. This group, representing just 3% of the 2.9 million Medicaid enrollees, would have the greatest potential to change their work status as a result of the program. The burden and cost of implementation to the 815,763 would have to be weighed against the benefit to the 90,194 to determine whether, among current beneficiaries, the benefits of such a program outweigh the costs.

Chart. Work Requirement Program would be administered to 100% of the 815,000 working-age enrollees to primarily target the 11% who are not exempt, not working, and enrolled in Medicaid for at least a year.

- Working-Age Adults: 815,763
- And Not Exempt: 390,633
- And Not Working: 135,588
- And on Medicaid > 1 year: 90,194



To help the Department understand this target population of most likely program beneficiaries, we analyzed how demographic and health characteristics differ between working and nonworking enrollees. We find that many nonexempt, nonworking enrollees have characteristics that may pose barriers to finding and keeping a job. Forty-five percent of these nonworkers are over the age of 40; 25% are over 50. More than one-quarter of them have at least one chronic condition—not including substance use disorders. More than 20% have a substance use disorder. Compared to working enrollees, nonworking enrollees are more often older, male, in metro counties, and in single-person households. Nonworkers who stay on Medicaid for at least one year tend to be older and sicker than nonworkers with shorter stays on Medicaid. And a third of the nonworkers who are on Medicaid for a year leave the program in the subsequent year. Thus, this snapshot provides a glimpse into the characteristics of the likely target population that the Department would need to consider when first implementing a work requirement across all existing Medicaid enrollees.

1

Of the 815,763 adults (21 to 64) on Medicaid, only 17% of them are not working and not exempt from the proposed work requirements

2

Of 17% who are not working and not exempt, 45% of them are over the age of 40. In addition, one quarter of these individuals have at least one chronic health condition, and 20% have a substance use disorder.

3

Only 11% of adults (21 to 64) on Medicaid are not working, not exempt from Medicaid work requirements, and stay on Medicaid more than one year. Put another way, just 3% (90,194) of 2.9 million Medicaid recipients are the most likely targets of the intended incentive of a work requirement.

In addition to the Medicaid eligibility data over time, we had access to labor files for these individuals listing all employment spells during their period of Medicaid eligibility. We also obtained their demographic file, household and household member file, clinical claims, and pharmacy claims.

ANALYSIS COHORTS

Our primary analysis cohort consisted of all Medicaid enrollees between the ages of 21 and 64 with eligibility codes 90, 91, or 27 in the program as of April 1, 2016. We call this our “snapshot” cohort because it provides a point-in-time perspective on the eligible Medicaid population in which work requirements would be implemented. We identified 815,763 unique, working-age adults.

Because Medicaid is characterized by substantial churn of short-stayers and a steady group of those who stay in the program for a long duration, a cross-sectional snapshot may obscure the characteristics of heterogeneous groups within Medicaid at any point in time. How might work requirements affect Medicaid enrollees as they enter the Medicaid program? How might work requirements affect Medicaid enrollees that have been in the program for some time? To provide more nuance to our analysis, we created two alternative cohorts of enrollees: “newly enrolled” and “long stayers.” The “newly enrolled” cohort entered Medicaid between July 1, 2016 and December 31, 2016, but were not previously enrolled in our lookback period (April 1, 2016 to June 30, 2016). We identified 194,924 members in the “newly enrolled” cohort. In contrast, the “long stayers” cohort include enrollees who were continuously enrolled from the first three months of 2015 to the last day of 2017. We identified 51,499 members as “long stayers.”

We use data for a year following April 1, 2016 for the snapshot cohort, for the 12 months following enrollment for the “newly enrolled” cohort, and for the entire period from January 2015 through December 2017 for the “long stayers.”

IDENTIFYING EXEMPTION GROUPS: THOSE POTENTIALLY EXEMPT BASED ON DISABILITY AND CAREGIVER STATUS

The waiver’s work requirements would exempt enrollees in certain Medicaid categories who meet specific guidelines based on disability and caregiver status.

Disability: We used recipients’ SNAP Disability/Incapacitation code for purposes of determining SNAP

assistance to define disability. An enrollee is defined as “disabled” if they have any disability during their Medicaid enrollment period.

Caregiver: We defined informal caregivers as anyone in any eligibility category who has a child under 7, a disabled household member, or an elderly individual in the household.

The ambiguity in defining exemption groups is an important limitation of our analysis. We use recipients’ disability code for purposes of determining SNAP assistance, an eligibility category that includes receipt of federal or state disability payments or other disability determination. It is unknown whether this would match the disability exemption in a work requirement. The definition of caregiver used in this analysis does not match the actual definition for caregiver in HB 2138, but the data needed to apply the actual definition was not available. Also, we did not have any information on enrollees who are in school or pregnant, so we could not apply this exemption status to our analysis.

EMPLOYMENT

We defined employment status based on the employment data obtained from the Department of Human Services. About 70% of the enrollees in the program as of April 2016 (our snapshot cohort) had employment records. We assumed that those without a record of employment were unemployed.

For every enrollee, we defined their employment status in every month of Medicaid enrollment based on their employment status on the 15th of the month. (For those who exit in that month we use the first of the month and for those who enter we use the last day of the month.) The data allow for categorizing employment as “full-time,” “part-time” (usually 20 hours per week or less), “in training,” and “unemployed.” We assume those with gaps in employment data are “unemployed” during the gap. There are often overlapping spells of employment, which would result in conflicting definitions of employment. We resolve conflicts by assigning the most optimistic characterization of employment. For example, if one job is listed as part-time but another is listed as full-time, we characterize employment status as “full-time.” We conducted sensitivity analysis of this simplification of the data, by alternatively using the most pessimistic assessment of employment status and we found little change in overall findings if the pessimistic alternative was used.

An enrollee is defined as “working” if they have employment status of full-time or part-time during any single month of

their Medicaid eligibility period. For all “working” enrollees, we also capture the fraction of months during their time on Medicaid where they are “full-time,” “part-time,” “in training,” or “unemployed.”

CHRONIC DISEASE STATUS

To identify enrollees with diagnosis codes that suggested they were disabled or had chronic diseases, we used the Chronic Illness and Disability Payment System (CDPS), a diagnosis-based risk adjustment model licensed by University of California San Diego. We used all primary and secondary diagnoses from the claims file, except for diagnoses from laboratory or radiology claims. The model assigns these diagnoses to one of 56 risk categories, which in turn are aggregated to 19 main groups, ordered by related costs/expenses. The 19 main groups are based on body systems, and are hierarchical (i.e., a Medicaid enrollee could only be attributed once to each of the 19 groups).

We also used the Medicaid Rx (MRX) model, a pharmacy-based model that classifies National Drug Codes into 15 diagnostic categories. The resulting 15 MRX categories were then used with CDPS categories in a combined model (CDPS+Rx). The CDPS+Rx categories for our three cohorts are available online and from the authors.

Please also note that due to privacy regulations, we did not receive any claims related to substance use disorders. To get this information, we sent our primary analysis cohort to the Department to have it scanned for any claims of substance use disorders. The Department provided counts of substance use disorders from January 1, 2016 to October 4, 2018 for our “snapshot” cohort and its subgroups based on employment status and duration of Medicaid coverage.

ANALYSIS

The primary goal of our analysis is to examine the characteristics of the group targeted for the work requirements (working-age adults within eligibility categories who are not exempt). Given that requirements are unlikely to change the working behavior of those already working, we focus on how those defined as not working are different from those defined as working.

We start by estimating how many enrollees meet exemption criteria and how many are working if not exempt. We explore the differences in key variables between those working and not working within our primary snapshot cohort. We use

both bivariate analysis and multinomial logistic regression to describe these differences. We explore how our findings differ for our “newly enrolled” and “long stayers” cohorts.

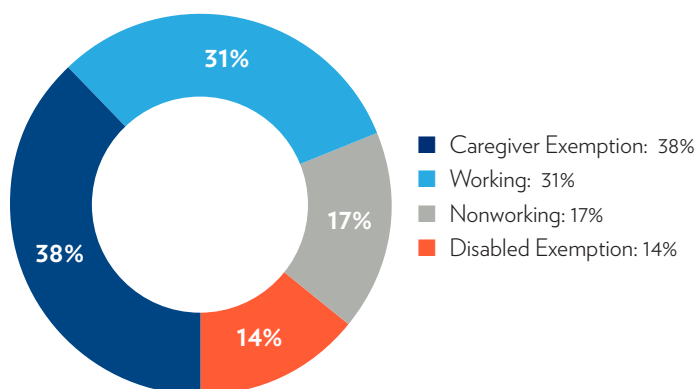
We provide additional analysis to describe who in the cohort “churns,” that is, who has multiple enrollment periods within a single year. We also describe geographic variation in eligibility and working status.

What We Found

EXEMPTION AND EMPLOYMENT STATUS OF ENROLLEES IN SNAPSHOT COHORT

In our snapshot cohort of more than 800,000 working-age adult enrollees, we found that more than half would likely be exempt from work requirements because of their caregiver status (38%) or disability status (14%). Thirty-one percent of the cohort had at least one month in which they were considered working (over the course of the subsequent year), while 17% were nonworking during their time on Medicaid (Figure 1). Thus, among those unlikely to be exempt from work requirements, 65% work at some point during their time on Medicaid. This snapshot suggests that more than 80% of the cohort were already working or disabled or potential caregivers and thus, unlikely to benefit from work requirements. However, many will be subject to compliance verification that the Department will need to administer and enforce.

Figure 1. Exemption and employment status of nonelderly adult Medicaid enrollees in program as of April 1, 2016 (Snapshot Cohort)
N = 815,763



The group we defined as “working,” (i.e., those with at least one month of reported employment), could have periods of unemployment or part-time employment while on Medicaid. To understand more about the work status of this population, we looked at the proportion of time on Medicaid that this group spent working part-time, full-time, in training, or unemployed. Overall, they spent 50% of their time on Medicaid in full-time employment, 45% of their time in part-time employment, and 5% of their time unemployed (Figure 2). While we cannot match these categories precisely to those in proposed work requirements, the vast majority of the “working” population in this cohort were already working enough to meet the requirements.

To provide some data on the geographic distribution of enrollees exempt from work requirements, as well as enrollees most likely to be affected by work requirements (nonexempt nonworkers) we mapped these groups by county. We used the USDA’s nine rural-urban continuum codes to classify these counties as “metro” (codes 1-3) or “nonmetro” (codes 4-9) by degree of urbanization and adjacency to metropolitan areas. The highest percentages of exempt enrollees are in nonmetro areas (Figure 3), while the highest percentages of nonworking enrollees as a percentage of eligible enrollees are in metro counties (Figure 4).

CHARACTERISTICS OF WORKING AND NONWORKING ENROLLEES WHO ARE NONEXEMPT

We compare selected characteristics of the more than 390,000 nonexempt enrollees to understand differences between the working and nonworking groups. About 65% of nonexempt enrollees are working. The age distribution, duration of Medicaid coverage, and prevalence of chronic conditions of eligible workers and nonworkers is presented in Figures 5, 6, and 7.

As shown in Table 1, compared to the working group, nonworkers are more often older, male, in metro counties, and in a single person household. Forty-five percent of nonworkers are over the age of 40 and 25% are over 50. Eligible nonworkers have longer lengths of coverage and fewer periods of discontinuous enrollment (i.e., less likely to churn) than eligible workers. Nonworkers are more likely to have had an inpatient claim, any chronic condition, and multiple chronic conditions.

Figure 2. Among “working” enrollees in program as of April 1, 2016, proportion of time on Medicaid by activity

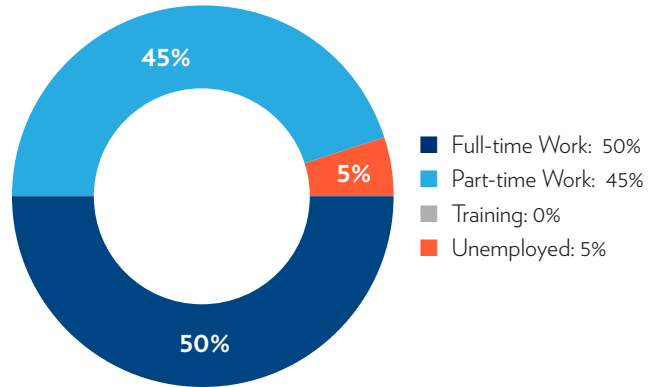


Figure 3. Number of exempt enrollees as a percentage of nonelderly adults in Medicaid as of April 1, 2016, by county

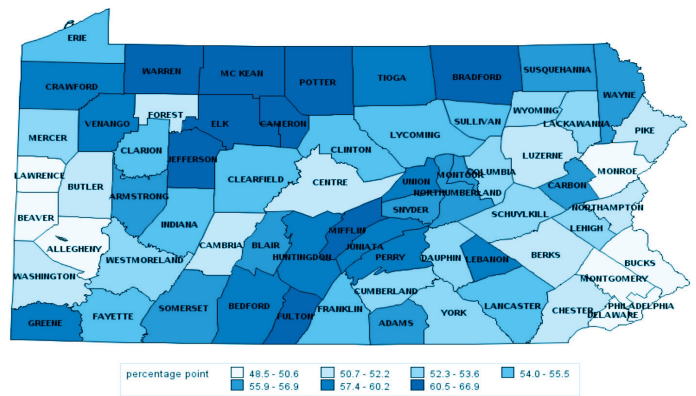


Figure 4. Number of nonworking enrollees as a percentage of nonexempt enrollees in Medicaid as of April 1, 2016, by county

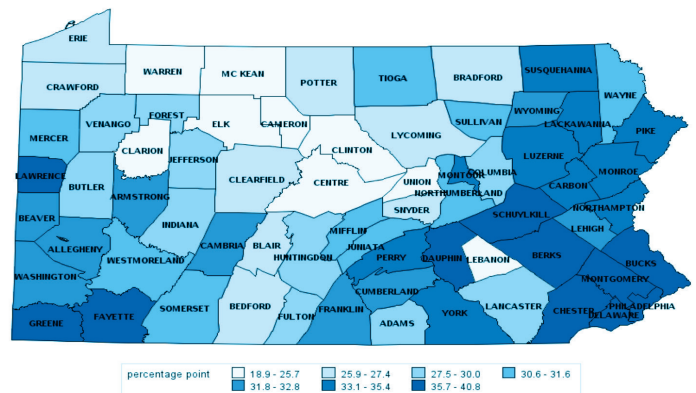


Figure 5. Age distribution of nonexempt, nonelderly adult Medicaid enrollees in program as of April 1, 2016, by employment status

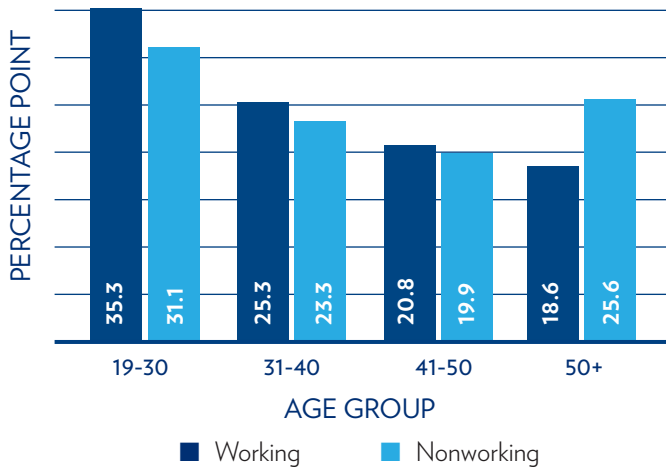


Figure 6. Coverage length of nonexempt, nonelderly adult Medicaid enrollees in program as of April 1, 2016, by employment status

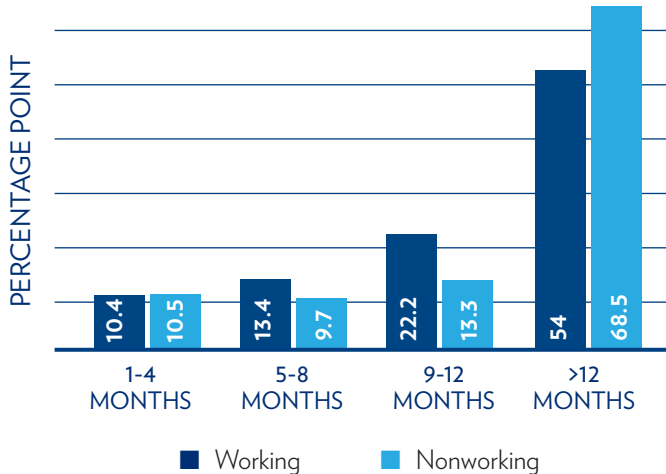
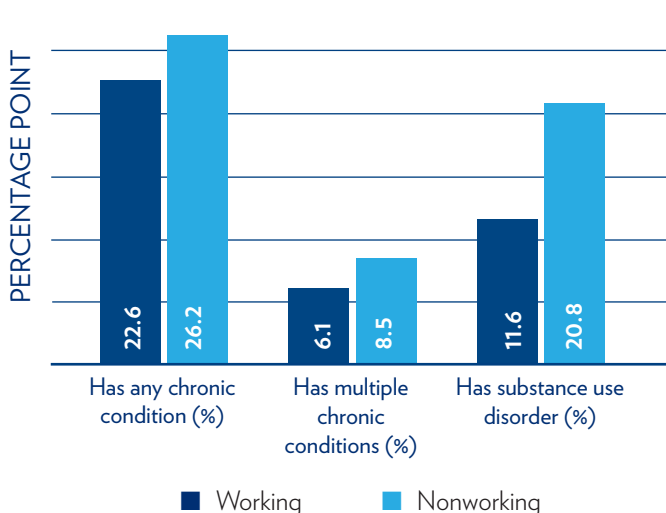


Figure 7. Chronic conditions of nonexempt, nonelderly adult Medicaid enrollees in program as of April 1, 2016 by employment status



We also compared the characteristics of nonworkers who stay on Medicaid at least one year with nonworkers with shorter stays. Those on Medicaid for at least one year are more often female and non-Hispanic, and tend to be older and sicker (with at least one chronic condition, or multiple chronic conditions) (Table 1).

We conducted a multivariate analysis to identify the characteristics that predict whether an enrollee is working or nonworking (after taking all other characteristics into account). This analysis confirms that, compared with workers, nonworkers were more likely to be older, male, in metro areas, and have at least one chronic condition. Enrollees over 50 were 50% more likely to be nonworking than enrollees ages 19-30. They were more likely to have Medicaid coverage shorter than four months or longer than 12 months, and less likely to have discontinuous Medicaid enrollment. The full results of this analysis appear in Appendix Table 1.

CYCLING IN AND OUT OF MEDICAID: CHURN AMONG NONEXEMPT ENROLLEES

Cycling in and out of Medicaid is a common occurrence among low-income populations and has an impact on the extent to which work requirements can be practically applied. As we noted above, we found that nonworking enrollees are less likely to churn than working enrollees. In the multivariate analysis, we look more closely at the full set of characteristics that are associated with the likelihood of churning. We define enrollees who churn as those who have multiple discontinuous episodes of Medicaid enrollment during a 12-month period.

For this analysis, we identified a subset of the snapshot cohort who were nonexempt and had less than 365 days of coverage (N=162,727). That is, we remove those with continuous enrollment over the full 12-month period so that we can compare those with multiple episodes to those with an episode that ends. Our multivariate analysis shows that enrollee characteristics associated with churn include being male, 31-50 years old, having multiple MG eligibility codes and more months of enrollment in Medicaid, having any chronic condition, having an inpatient or outpatient claim, and not surprisingly, working at least one month. Other significant characteristics associated with churn appear in Appendix Table 2.

Table 1. Selected Characteristics of Nonexempt Nonelderly Adult Medicaid MG 27/90/91 Enrollees by Employment Status

Snapshot Cohort (04/01/2016)*	Nonexempt	Working	Nonworking	p-value	Nonworking (stay >= 365 days)	Nonworking (stay < 365 days)	p-value
N	390633	255045	135588		90194	45394	
Male (%)	48.1	41.9	59.9	<0.001	58.8	62	<0.001
Age category (%)				<0.001			<0.001
19-30	33.8	35.3	31.1		29.1	34.9	
31-40	24.6	25.3	23.3		23.1	23.8	
41-50	20.5	20.8	19.9		20.7	18.4	
50+	21.1	18.6	25.6		27	22.9	
Race/Ethnicity (%)				<0.001			<0.001
Non-Hispanic White	57.8	58.2	57.1		56.3	58.7	
Non-Hispanic Black	24.2	23.9	24.7		25.8	22.3	
Hispanic	9.7	9.7	9.6		9	11	
Non-Hispanic other	8.3	8.2	8.6		8.9	8	
Marital Status (%)				<0.001			<0.001
Married	19.2	20.1	17.4		16.1	19.9	
Never Married	69.9	68.9	71.9		73	69.9	
Divorced/Widow/Widower	10.8	10.9	10.5		10.8	10	
# Months on Medicaid (%)				<0.001			<0.001
1-4 months	10.4	10.4	10.5		0	31.2	
5-8 months	12.1	13.4	9.7		0	29.1	
9-12 months	19.1	22.2	13.3		0	39.7	
> 12 months	58.3	54	66.5		100	0	
Has Discontinuous Eligibility Periods (%)	12.3	14.6	7.9	<0.001	0	23.7	<0.001
Urban (metro) location (%)	89.3	88.6	90.7	<0.001	91.1	89.7	<0.001
Has multiple household member (%)	43.2	48.7	32.7	<0.001	33.2	31.8	<0.001
Has inpatient claim (%)	1.3	1	1.7	<0.001	1.5	2	<0.001
Has inpatient/outpatient claim (%)	15.8	15.6	16.1	<0.001	17.4	13.6	<0.001
Has pharmacy claim (%)	31.9	32.3	31.3	<0.001	35	24.1	<0.001
Has any chronic condition (%)	23.8	22.6	26.2	<0.001	28.6	21.3	<0.001
Has multiple chronic conditions (%)	6.9	6.1	8.5	<0.001	9.3	7	<0.001
Has substance use disorder (%)	14.8	11.6	20.8	<0.001	21	20.3	<0.001

*Snapshot Cohort (04/01/2016): defined as MG27/90/91 enrollees who were eligible on 04/01/16.

SENSITIVITY ANALYSIS: THE “NEWLY ENROLLED” COHORT

To implement a work requirement program, it would be necessary to not only apply the program to all existing enrollees, but to set up a process so that all newly enrolled individuals can be systematically entered into the program on an ongoing basis. Thus, an important consideration is the extent to which newly enrolled individuals are similar to, or differ from, the snapshot of Medicaid enrollees at one point in time. In a cohort of more than 190,000 new, nonelderly enrollees from July-December 2016, we found striking similarities with main analysis group (everyone enrolled in the program as of April 2016) in terms of employment and exemption status. New enrollees (Figure 8) were slightly less likely to be exempt, and slightly more likely to be nonexempt and nonworking, than enrollees in the snapshot cohort as described in Figure 1. Compared to the snapshot cohort in Figure 2, new enrollees who were considered working (Figure 9) spent a smaller

proportion of time on Medicaid in part-time employment (39% vs. 45%) and a larger proportion of time on Medicaid as unemployed (10% vs. 5%) We provide selected characteristics and chronic disease status of these newly enrolled individuals, by employment status, in Appendix Table 3.

SENSITIVITY ANALYSIS: THE “LONG STAYER” COHORT

To provide nuance to our “snapshot cohort” findings, we identify and describe the subgroup of “long stayers”, those who had continuous Medicaid enrollment from 2015-2017. Sixty percent of long stayers would likely be exempt from work requirements; nonexempt enrollees were less likely to be working than those in the snapshot cohort (19% vs. 31%) (Figure 10). Those in the working category spent a much greater proportion of their time on Medicaid being unemployed than those in the snapshot cohort (17% vs. 5%) (Figure 11).

Figure 8. Employment and exemption status of new nonelderly adult medicaid enrollees, July-December 2016 (N = 194,924)

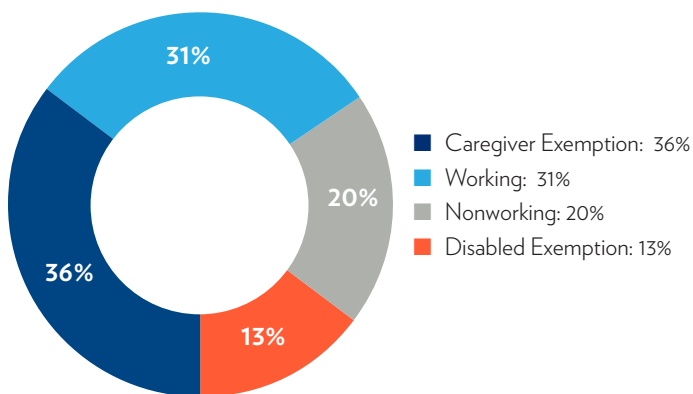


Figure 10. Employment and exemption status of nonelderly adult Medicaid enrollees who are long stayers, 2015-2017 (N = 51,499)

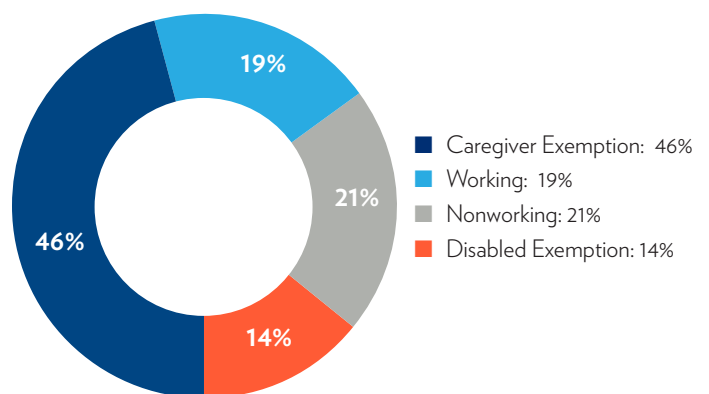


Figure 9. Among new nonelderly adult enrollees who are “working,” proportion of time on Medicaid, by activity

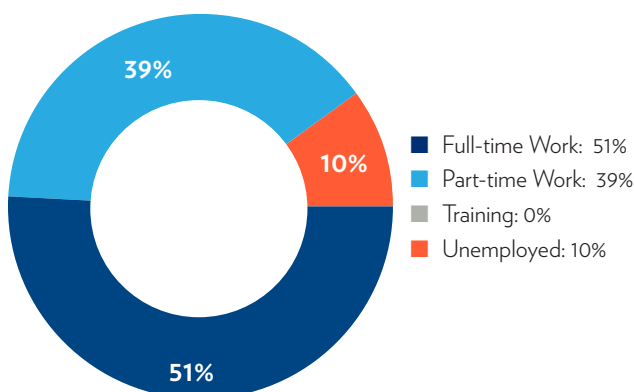
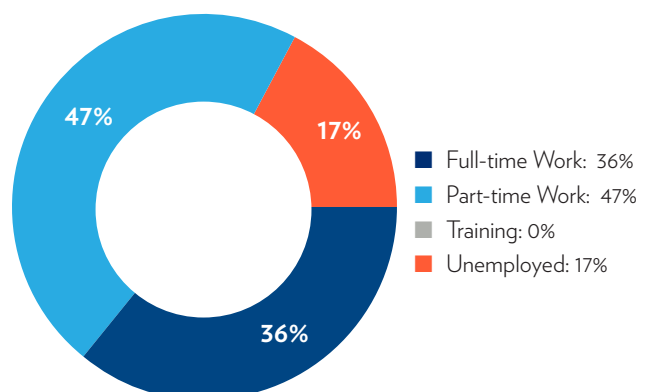


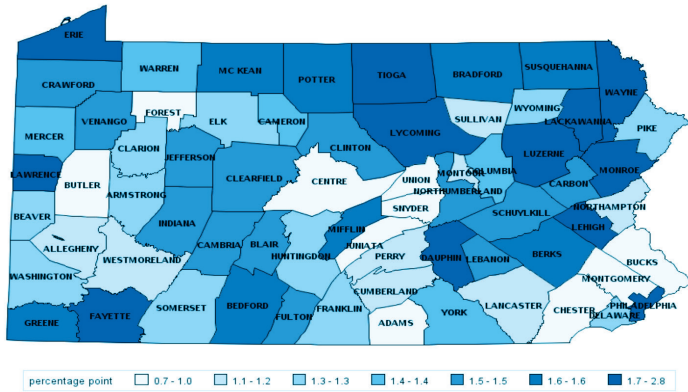
Figure 11. Among nonelderly adult enrollees who are long stayers (2015-2017) and “working,” proportion of time on Medicaid, by activity



We provide selected characteristics and chronic disease status, by employment status, of the nonexempt long stayers in Appendix Table 4. Long stayers are notable for relatively high percentages of at least one pharmacy claim (73%), at least one chronic condition (33%), and multiple chronic conditions (10%).

Figure 12 displays the geographic distribution of these long stayers.

Figure 12. Number of “Long Stayer” Enrollees as Percentage of Population, by County



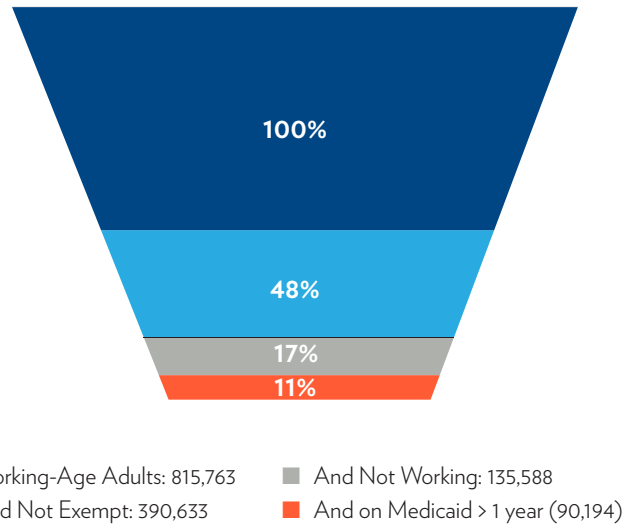
Top Line Results and Policy Implications

The purpose of this report is to quantify, to the extent possible, the likely targets of a Medicaid work requirement, and to describe the characteristics of the population that might benefit from the program’s incentives to work. We take a “snapshot” of the entire Medicaid population enrolled as of April 1, 2016. Our results, show that just 3% of the 2.9 million Medicaid enrollees are likely targets for the program: 90,194 working-age adults who are not exempt, not already working, and stay on Medicaid more than one year. And a third of the nonworkers who are on Medicaid for a year leave the program in the subsequent year.

The administration and verification necessary to implement the work requirement program would be applied to the full cohort of working-age enrollees (815,763). We find that 11%

(90,194) of those who would have to be entered into the administration of the program have the potential to change their work status as a result of the program. The burden and cost of implementation to the 815,763 would have to be weighed against the benefit to the 90,194 to determine whether the benefits of such a program outweigh the costs.

Figure 13. Work Requirement Program would be administered to 100% of the 815,000 working-age enrollees to primarily target the 11% who are not exempt, not working, and enrolled in Medicaid for at least a year.




In addition, we find that many of the nonworking enrollees have characteristics that may pose barriers to finding and keeping a job. Forty-five percent of these nonworkers are over the age of 40; 25% are over 50. Nearly one-quarter of them have at least one chronic condition. A recent [meta-analysis](#)¹ found that after job loss, reemployment takes longer and is less likely to occur among older workers compared with younger workers, particularly when the worker is over 50 years of age.

Even when we turn our attention to a long-staying group of 51,499 enrollees who have been continuously covered by Medicaid from 2015 through 2017, we find that only 21% are nonexempt and nonworking through their enrollment. Their employment options may be limited by their age (53% are over 40) and their health status (34% have a chronic condition, and 11% have multiple chronic conditions).

¹Wanberg, C. R., Kanfer, R., Hamann, D. J., & Zhang, Z. (2016). Age and reemployment success after job loss: An integrative model and meta-analysis. *Psychological Bulletin*, 142(4), 400-426.

appendix



PROPOSED WORK
REQUIREMENTS IN
PENNSYLVANIA MEDICAID:
*Characterizing
Eligible Beneficiaries*

Appendix Table 1. Logistic Regression Analysis of Association Between Enrollee Characteristics and Employment Status

Eligible Cohort (n = 390633)	Adjusted Odds Ratios of nonworking v.s. working	p-value
Male	1.85(1.82, 1.88)	<.0001
Age category		
19-30	Ref	
31-40	1.1(1.08, 1.12)	<.0001
41-50	1.15(1.13, 1.18)	<.0001
50+	1.51(1.48, 1.54)	<.0001
Race/Ethnicity		
Non-Hispanic White	Ref	
Non-Hispanic Black	0.96(0.94, 0.98)	<.0001
Hispanic	1.04(1.02, 1.07)	0.0007
Non-Hispanic other	1.04(1.01, 1.07)	0.003
Marital Status		
Married	Ref	
Never Married	1(0.98, 1.03)	0.6399
Divorced/Widow/Widower	0.92(0.9, 0.95)	<.0001
# Months on Medicaid		
1-4 months	Ref	
5-8 months	0.77(0.75, 0.8)	<.0001
9-12 months	0.66(0.64, 0.68)	<.0001
> 12 months	1.2(1.17, 1.23)	<.0001
Has discontinuous Eligibility Periods	0.81(0.79, 0.83)	<.0001
Urban (metro) location	1.17(1.15, 1.2)	<.0001
Has multiple household member	0.61(0.6, 0.62)	<.0001
Has inpatient/outpatient claim	1.03(1.01, 1.05)	0.0028
Has any chronic condition	1.2(1.18, 1.22)	<.0001

Appendix Table 2. Logistic Regression Analysis of Association Between Enrollee Characteristics and Churn

Eligible cohort with less than 365 days of coverage (n = 162727)	Adjusted Odds Ratios of having discontinuous episodes	p-value
MG Eligibility Code		
27	Ref	
90	1.44(1.27, 1.64)	<.0001
91	1.02(0.97, 1.07)	0.4485
Multiple Codes	6.43(6.08, 6.81)	<.0001
Male	1.13(1.1, 1.16)	<.0001
Age category		
19-30	Ref	
31-40	1.22(1.19, 1.26)	<.0001
41-50	1.14(1.1, 1.18)	<.0001
50+	0.88(0.85, 0.92)	<.0001
Race/Ethnicity		
Non-Hispanic White	Ref	
Non-Hispanic Black	1.13(1.1, 1.17)	<.0001
Hispanic	1.07(1.03, 1.12)	0.0005
Non-Hispanic other	0.81(0.77, 0.85)	<.0001
Marital Status		
Married	Ref	
Never Married	1.02(0.98, 1.06)	0.2735
Divorced/Widow/Widower	1.01(0.97, 1.06)	0.605
# Months on Medicaid		
1-4 months	Ref	
5-8 months	4.54(4.32, 4.76)	<.0001
9-12 months	9.24(8.83, 9.66)	<.0001
Urban (metro) location	0.88(0.85, 0.92)	<.0001
Has multiple household member	1(0.97, 1.03)	0.9377
Has inpatient/outpatient visit	1.86(1.8, 1.92)	<.0001
Has any chronic disease	1.63(1.58, 1.69)	<.0001
Worked at least one month	1.2(1.17, 1.24)	<.0001

Appendix Table 3. Selected Characteristics of New Nonexempt Nonelderly Adult Medicaid MG 27/90/91 Enrollees by Employment Status

New Enrollees (July - December 2016)*	Nonexempt	Working	Nonworking	p-value	Nonworking (stay >= 365 days)	Nonworking (stay >= 365 days)	p-value
N	99205	60778	38427		22746	15681	
Male (%)	53.6	47.5	63.3	<0.001	63.6	62.9	0.179
Age category (%)				<0.001			<0.001
19-30	33.8	35	31.9		31.7	32.3	
31-40	24	24.8	22.7		21.8	23.9	
41-50	20	20.7	18.9		18.9	18.8	
50+	22.2	19.5	26.5		27.6	25	
Race/Ethnicity (%)				<0.001			<0.001
Non-Hispanic White	55	56.3	53		52.8	53.2	
Non-Hispanic Black	22.6	22.9	22.2		24.4	19	
Hispanic	11.1	10.6	12		9.9	15.1	
Non-Hispanic other	8.9	8.7	9.4		9.5	9.2	
Marital Status (%)				<0.001			<0.001
Married	19.9	21.4	17.6		15.7	20.3	
Never Married	65.8	65.2	66.6		68.5	63.9	
Divorced/Widow/Widower	9.1	9.7	8.2		8.3	8.1	
# Months on Medicaid (%)				<0.001			<0.001
1-4 months	9.1	7	12.4		0	30.4	
5-8 months	11.8	12.2	11.1		0	27.2	
9-12 months	22.2	25.4	17.3		0	42.4	
> 12 months	56.9	55.4	59.2		100	0	
Has Discontinuous Eligibility Periods (%)	9.9	11.1	8	<0.001	0	19.6	<0.001
Urban (metro) location (%)	89.6	88.8	90.8	<0.001	91.8	89.4	<0.001
Has multiple household member (%)	36.2	42.6	26	<0.001	24.4	28.3	<0.001
Has inpatient claim (%)	4.5	3.2	6.4	<0.001	5.1	8.2	<0.001
Has inpatient/outpatient claim (%)	25	23.4	27.6	<0.001	26.7	28.8	<0.001
Has pharmacy claim (%)	34.3	34.6	34	0.055	38.1	28.1	<0.001
Has any chronic condition (%)	29.4	27	33.4	<0.001	34	32.4	0.001
Has multiple chronic conditions (%)	10.3	8.7	13	<0.001	12.9	13.1	0.677

*New Enrollees (July - December 2016): defined as MG27/90/91 enrollees who were newly enrolled during 7/1/2016-12/31/2016.


Appendix Table 4. Selected Characteristics of Nonexempt Nonelderly Adult Medicaid MG 27/90/91 Enrollees Who Are Long Stayers, by Employment Status

Long-Stayers*	Nonexempt	Working	Nonworking	p-value
N	20455	9466	10989	
Male (%)	39.9	38	41.5	<0.001
Age category (%)				<0.001
19-30	19.8	26.6	13.8	
31-40	30	26.5	33.1	
41-50	25.4	21.8	28.6	
50+	24.8	25.1	24.5	
Race/Ethnicity (%)				0.012
Non-Hispanic White	68.8	68.2	69.4	
Non-Hispanic Black	17.7	18	17.4	
Hispanic	7.1	6.9	7.3	
Non-Hispanic other	6.4	6.9	5.9	
Marital Status (%)				
Married	14.9	14.5	15.3	
Never Married	17.1	16.3	17.7	
Divorced/Widow/Widower	67.9	69	66.9	
Urban (metro) location (%)	88.5	88.3	88.7	0.304
Has multiple household member (%)	55.2	51	58.9	<0.001
Has inpatient claim (%)	5.1	4.4	5.6	<0.001
Has inpatient/outpatient claim (%)	38.7	39.7	37.9	0.009
Has pharmacy claim (%)	73.3	73.5	73.1	0.498
Has any chronic condition (%)	33.1	32	34.1	0.002
Has multiple chronic conditions (%)	10.3	9.3	11.1	<0.001

*Long Stayers: defined as individuals who were continuously enrolled from the first three months of 2015 to the last day of 2017.



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Appendix Table 5. CDPS+Rx Categories for Snapshot Cohort

Snapshot Cohort (04/01/2016)*							
	Overall Eligible	Working	Nonworking	p-value	Nonworking (stay >= 365 days)	Nonworking (stay < 365 days)	p-value
N	390633	255045	135588		90194	45394	
Chronic condition based on CDPS categories (%)							
Cancer, high	0.1	0.1	0.2	<0.001	0.1	0.2	0.044
Cancer, low	0.2	0.2	0.2	0.064	0.2	0.1	0.012
Cancer, medium	0.1	0	0.1	0.005	0.1	0.1	0.667
Cancer, very high	0	0	0.1	<0.001	0	0.2	<0.001
Cardiovascular, extra low	2.4	2.2	2.8	<0.001	3.2	2	<0.001
Cardiovascular, low	1	0.9	1.3	<0.001	1.3	1.3	0.671
Cardiovascular, medium	0.3	0.2	0.4	<0.001	0.4	0.5	0.093
Cardiovascular, very high	0	0	0	<0.001	0	0	0.087
Cerebrovascular, low	0	0	0.1	<0.001	0.1	0.1	0.123
Central Nervous System, high	0	0	0	<0.001	0	0.1	<0.001
Central Nervous System, low	0.6	0.4	0.8	<0.001	0.8	0.8	0.983
Central Nervous System, medium	0.1	0.1	0.1	<0.001	0.1	0.1	1
Developmental Disability, low	0	0	0	0.092	0	0	0.108
Developmental Disability, medium	0	0	0	0.224	0	0	1
Diabetes, type 1 high	0	0	0	0.959	0	0	0.919
Diabetes, type 1 medium	0.2	0.2	0.2	0.093	0.2	0.2	0.337
Diabetes, type 2 low	1.2	1.1	1.4	<0.001	1.5	1.1	<0.001
Diabetes, type 2 medium	0.2	0.2	0.3	<0.001	0.4	0.3	0.001
Eye, low	0	0	0.1	0.033	0.1	0	0.012
Eye, very low	0.2	0.2	0.3	<0.001	0.3	0.2	<0.001
Genital, extra low	0.5	0.6	0.4	<0.001	0.4	0.3	0.001
Gastro, high	0.1	0	0.1	<0.001	0.1	0.1	0.283
Gastro, low	1.2	1.2	1.3	0.009	1.5	1	<0.001
Gastro, medium	0.3	0.3	0.4	<0.001	0.4	0.4	0.406
Hematological, extra high	0	0	0	0.978	0	0	1
Hematological, low	0.1	0.1	0.1	<0.001	0.1	0.1	0.095
Hematological, medium	0.1	0.1	0.1	0.416	0.1	0.1	0.815
Hematological, very high	0	0	0	0.999	0	0	0.276
AIDS, high	0	0	0	0.591	0	0	0.219
HIV, medium	0	0	0	0.473	0	0	1
Infectious, high	0	0	0	0.027	0	0	1
Infectious, low	0.3	0.3	0.4	<0.001	0.5	0.4	0.042
Infectious, medium	0.2	0.1	0.3	<0.001	0.2	0.4	<0.001

Appendix Table 5 Continued

Metabolic, high	0.1	0.1	0.1	0.757	0.1	0	0.688
Metabolic, medium	0.1	0.1	0.1	<0.001	0.1	0.2	0.042
Metabolic, very low	0.2	0.2	0.2	<0.001	0.2	0.2	0.698
Pregnancy, complete	0.2	0.2	0.1	<0.001	0.1	0.1	0.054
Pregnancy, incomplete	0.2	0.3	0.1	<0.001	0.1	0.3	<0.001
Psychiatric, high	0.2	0.1	0.3	<0.001	0.3	0.3	0.552
Psychiatric, low	0.9	0.8	1	<0.001	1	0.9	0.127
Psychiatric, medium	0.5	0.4	0.6	<0.001	0.6	0.6	0.823
Psychiatric, medium low	2	1.8	2.3	<0.001	2.6	1.8	<0.001
Pulmonary, high	0	0	0	0.259	0	0	0.353
Pulmonary, low	1.7	1.6	1.8	0.005	1.9	1.5	<0.001
Pulmonary, medium	0.2	0.1	0.3	<0.001	0.2	0.5	<0.001
Pulmonary, very high	0	0	0.1	<0.001	0	0.1	<0.001
Renal, extra high	0	0	0	<0.001	0	0	<0.001
Renal, low	0.2	0.1	0.2	0.051	0.2	0.2	1
Renal, medium	0	0	0	0.108	0	0	1
Renal, very high	0.1	0.1	0.1	<0.001	0.1	0.2	0.56
Skeletal, low	0.7	0.6	0.8	<0.001	0.9	0.6	<0.001
Skeletal, medium	0.4	0.3	0.5	<0.001	0.5	0.5	0.179
Skeletal, very low	1.1	1	1.4	<0.001	1.6	1	<0.001
Skin, high	0	0	0	<0.001	0	0.1	<0.001
Skin, low	0.1	0.1	0.1	<0.001	0.1	0.1	0.4
Skin, very low	1	0.9	1.2	<0.001	1.2	1.2	0.467
Substance abuse, low	0	0	0	1	0	0	0.305
Substance abuse, very low	0	0	0	NA	0	0	NA
Chronic condition based on Rx categories (%)							
Anti-coagulants	0.4	0.3	0.5	<0.001	0.6	0.5	0.018
Cardiac	4.6	4.4	5.1	<0.001	5.9	3.6	<0.001
Psychosis/Bipolar/ Depression	6.6	6.4	7.1	<0.001	7.6	6	<0.001
Diabetes	1.5	1.4	1.7	<0.001	1.9	1.2	<0.001
ESRD / Renal	0	0	0	0.157	0	0	1
Hemophilia/von Willebrands	0	0	0	0.578	0	0	1
Hepatitis	0	0	0	<0.001	0.1	0	0.135
HIV	0	0	0	1	0	0	0.748
Infections, high	0.1	0	0.1	0.001	0.1	0.1	0.437
Inflammatory /Autoimmune	0.1	0.1	0.1	0.276	0.1	0.1	0.002
Malignancies	0.1	0.1	0.2	0.263	0.2	0.1	0.001
Multiple Sclerosis / Paralysis	0	0	0	<0.001	0	0	0.286
Parkinsons / Tremor	0.2	0.2	0.3	<0.001	0.3	0.2	0.017
Seizure disorders	0.2	0.2	0.3	<0.001	0.3	0.2	0.007
Tuberculosis	0	0	0	0.677	0	0	0.65

Appendix Table 6. CDPS+Rx Categories of New Enrollees Cohorts

	New Enrollees (July – December 2016)*						
	Overall Eligible	Working	Nonworking	p-value	Nonworking (stay >= 365 days)	Nonworking (stay < 365 days)	p-value
N	99205	60778	38427		22746	15681	
Chronic condition based on CDPS categories (%)							
Cancer, high	0.2	0.1	0.3	<0.001	0.3	0.4	0.024
Cancer, low	0.2	0.2	0.2	0.094	0.3	0.2	0.391
Cancer, medium	0.1	0.1	0.1	0.023	0.1	0.1	1
Cancer, very high	0.1	0.1	0.2	<0.001	0.1	0.4	<0.001
Cardiovascular, extra low	3.3	3.1	3.8	<0.001	4	3.5	0.015
Cardiovascular, low	2	1.6	2.7	<0.001	2.4	3.3	<0.001
Cardiovascular, medium	0.7	0.4	1	<0.001	0.9	1.1	0.028
Cardiovascular, very high	0	0	0.1	0.036	0	0.1	0.005
Cerebrovascular, low	0.1	0.1	0.3	<0.001	0.2	0.4	<0.001
Central Nervous System, high	0	0	0.1	<0.001	0	0.1	<0.001
Central Nervous System, low	0.9	0.7	1.3	<0.001	1.2	1.6	0.002
Central Nervous System, medium	0.1	0.1	0.2	<0.001	0.2	0.2	0.538
Developmental Disability, low	0	0	0	0.041	0.1	0	0.129
Developmental Disability, medium	0	0	0	NA	0	0	NA
Diabetes, type 1 high	0	0	0	0.05	0	0	0.709
Diabetes, type 1 medium	0.2	0.2	0.3	0.103	0.3	0.3	0.819
Diabetes, type 2 low	1.5	1.2	1.9	<0.001	1.8	2	0.289
Diabetes, type 2 medium	0.4	0.3	0.5	<0.001	0.5	0.6	0.023
Eye, low	0.1	0.1	0.1	0.341	0.1	0	0.044
Eye, very low	0.2	0.2	0.3	0.256	0.3	0.2	0.137
Genital, extra low	0.7	0.8	0.5	<0.001	0.5	0.5	0.978
Gastro, high	0.1	0.1	0.1	0.23	0.1	0.1	0.544
Gastro, low	1.9	1.7	2.2	<0.001	2.2	2.1	0.399
Gastro, medium	0.6	0.4	0.8	<0.001	0.7	1.1	<0.001
Hematological, extra high	0	0	0	0.883	0	0	1
Hematological, low	0.1	0.1	0.2	0.092	0.1	0.2	0.004
Hematological, medium	0.1	0.1	0.2	0.001	0.2	0.2	1
Hematological, very high	0	0	0	0.877	0	0	1
AIDS, high	0	0	0	0.151	0	0	1
HIV, medium	0	0	0	0.019	0	0	0.623
Infectious, high	0	0	0	0.001	0	0.1	0.003
Infectious, low	0.4	0.4	0.5	<0.001	0.5	0.5	0.695
Infectious, medium	0.6	0.4	0.9	<0.001	0.6	1.3	<0.001

Appendix Table 6 Continued

Metabolic, high	0.1	0.1	0.1	0.092	0.1	0.1	0.163
Metabolic, medium	0.2	0.2	0.4	<0.001	0.2	0.5	<0.001
Metabolic, very low	0.4	0.3	0.5	<0.001	0.5	0.6	0.427
Pregnancy, complete	0.2	0.3	0.2	0.088	0.2	0.3	0.027
Pregnancy, incomplete	0.3	0.3	0.2	0.003	0.1	0.4	<0.001
Psychiatric, high	0.3	0.1	0.5	<0.001	0.4	0.6	0.005
Psychiatric, low	1.2	1.2	1.3	0.073	1.3	1.2	0.666
Psychiatric, medium	0.7	0.5	1	<0.001	0.9	1.2	0.009
Psychiatric, medium low	2.4	2.1	3	<0.001	3	3	0.808
Pulmonary, high	0	0	0	0.005	0	0.1	0.024
Pulmonary, low	2.4	2.2	2.7	<0.001	2.7	2.6	0.58
Pulmonary, medium	0.6	0.4	1	<0.001	0.8	1.4	<0.001
Pulmonary, very high	0.1	0	0.2	<0.001	0.1	0.2	0.001
Renal, extra high	0	0	0.1	<0.001	0	0.2	<0.001
Renal, low	0.3	0.2	0.3	<0.001	0.3	0.4	0.64
Renal, medium	0	0	0.1	0.024	0	0.1	0.509
Renal, very high	0.2	0.1	0.2	<0.001	0.2	0.3	0.099
Skeletal, low	0.8	0.7	1	<0.001	1.1	0.9	0.17
Skeletal, medium	0.8	0.6	1.2	<0.001	1.1	1.3	0.168
Skeletal, very low	1.6	1.4	2	<0.001	2.1	1.9	0.317
Skin, high	0.1	0	0.1	<0.001	0	0.2	<0.001
Skin, low	0.2	0.1	0.2	<0.001	0.2	0.3	0.337
Skin, very low	1.7	1.5	2.2	<0.001	2.2	2.1	0.763
Substance abuse, low	0	0	0	0.614	0	0	0.966
Substance abuse, very low	0	0	0	NA	0	0	NA
Chronic condition based on Rx categories (%)							
Anti-coagulants	0.5	0.4	0.7	<0.001	0.7	0.7	0.869
Cardiac	4.8	4.5	5.2	<0.001	5.9	4.1	<0.001
Psychosis/Bipolar/ Depression	7.6	7.2	8.3	<0.001	8.9	7.3	<0.001
Diabetes	1.3	1.4	1.3	0.563	1.5	1	<0.001
ESRD / Renal	0	0	0	0.246	0	0	0.852
Hemophilia/von Willebrands	0	0	0	1	0	0	NA
Hepatitis	0	0	0.1	0.097	0.1	0	0.282
HIV	0	0	0	0.382	0.1	0	0.229
Infections, high	0.1	0	0.1	<0.001	0.1	0.1	0.767
Inflammatory /Autoimmune	0.1	0.1	0.1	0.638	0.2	0.1	0.074
Malignancies	0.2	0.2	0.2	0.916	0.2	0.2	0.652
Multiple Sclerosis / Paralysis	0	0	0	0.504	0	0	0.047
Parkinsons / Tremor	0.3	0.2	0.4	<0.001	0.4	0.4	0.914
Seizure disorders	0.2	0.2	0.3	0.022	0.3	0.3	0.418
Tuberculosis	0	0	0	0.387	0.1	0	0.081

Appendix Table 7. CDPS+Rx Categories of Long Stayer Cohort

	Long Stayer Cohort*			
	Overall Eligible	Working	Nonworking	p-value
N	20455	9466	10989	
Chronic condition based on CDPS categories (%)				
Cancer, high	0.2	0.1	0.2	0.126
Cancer, low	0.2	0.3	0.2	0.273
Cancer, medium	0.1	0.1	0.1	0.249
Cancer, very high	0	0	0	1
Cardiovascular, extra low	2.9	2.7	3	0.273
Cardiovascular, low	1.1	1.1	1.1	0.967
Cardiovascular, medium	0.4	0.3	0.4	0.077
Cardiovascular, very high	0	0	0	0.725
Cerebrovascular, low	0	0	0	0.843
Central Nervous System, high	0	0	0	0.415
Central Nervous System, low	0.7	0.7	0.8	0.419
Central Nervous System, medium	0.1	0.1	0.1	0.406
Developmental Disability, low	0	0	0	1
Developmental Disability, medium	0	0	0	0.546
Diabetes, type 1 high	0	0	0	0.198
Diabetes, type 1 medium	0.3	0.4	0.2	0.175
Diabetes, type 2 low	1.6	1.5	1.7	0.287
Diabetes, type 2 medium	0.4	0.3	0.5	0.279
Eye, low	0.1	0.1	0.1	0.339
Eye, very low	0.3	0.3	0.3	0.572
Genital, extra low	0.7	0.8	0.5	0.007
Gastro, high	0.1	0.1	0.1	0.159
Gastro, low	1.6	1.6	1.7	0.548
Gastro, medium	0.3	0.3	0.4	0.574
Hematological, extra high	0	0	0	0.94
Hematological, low	0.1	0.1	0.1	0.6
Hematological, medium	0.1	0.1	0	0.26
Hematological, very high	0	0	0	0.415
AIDS, high	0	0	0	NA
HIV, medium	0	0	0	NA
Infectious, high	0	0	0	1
Infectious, low	0.5	0.5	0.6	0.645
Infectious, medium	0.2	0.1	0.2	0.642
Metabolic, high	0.1	0.1	0.1	1

Appendix Table 7 Continued

Metabolic, medium	0.1	0.1	0.2	0.276
Metabolic, very low	0.2	0.1	0.3	0.098
Pregnancy, complete	0.1	0.2	0.1	0.017
Pregnancy, incomplete	0.1	0.1	0.1	0.419
Psychiatric, high	0.2	0.2	0.2	0.869
Psychiatric, low	1.1	1	1.2	0.373
Psychiatric, medium	0.6	0.5	0.7	0.133
Psychiatric, medium low	3.2	3	3.3	0.154
Pulmonary, high	0	0	0	0.515
Pulmonary, low	2	2.2	1.9	0.253
Pulmonary, medium	0.2	0.1	0.2	0.081
Pulmonary, very high	0	0	0	0.725
Renal, extra high	0	0	0	0.897
Renal, low	0.3	0.3	0.2	0.337
Renal, medium	0	0	0.1	0.187
Renal, very high	0.2	0.1	0.2	0.333
Skeletal, low	0.9	0.8	1	0.104
Skeletal, medium	0.5	0.4	0.5	0.421
Skeletal, very low	1.6	1.3	1.9	0.001
Skin, high	0	0	0	0.465
Skin, low	0.1	0	0.1	0.162
Skin, very low	1.1	1.1	1.1	0.999
Substance abuse, low	0	0	0	1
Substance abuse, very low	0	0	0	NA
Chronic condition based on Rx categories (%)				
Anti-coagulants	0.6	0.4	0.7	0.006
Cardiac	6.7	6.3	7	0.037
Psychosis/Bipolar/ Depression	11	10.7	11.2	0.228
Diabetes	2.5	2.3	2.8	0.017
ESRD / Renal	0	0	0	1
Hemophilia/von Willebrands	0	0	0	NA
Hepatitis	0	0	0.1	0.187
HIV	0	0	0	0.554
Infections, high	0	0	0.1	0.935
Inflammatory /Autoimmune	0.2	0.1	0.2	0.506
Malignancies	0.2	0.2	0.2	0.668
Multiple Sclerosis / Paralysis	0	0	0	0.465
Parkinsons / Tremor	0.4	0.4	0.4	0.704
Seizure disorders	0.4	0.4	0.5	0.379
Tuberculosis	0	0	0	NA