

September 25, 2015

Thomas J. Betlach M.P.A., Director  
Arizona Health Care Cost Containment System  
801 E. Jefferson St., MD 4100  
Phoenix, AZ 850

RE: Section 1115 Waiver Renewal

Dear Director Betlach,

On behalf of the University of Arizona Center for Population Science and Discovery, a division of the Arizona Health Sciences Center, we are grateful to have the opportunity to comment on the Arizona Health Care Cost Containment System (AHCCCS) 1115 waiver proposal. We reviewed the current literature to determine how existing empirical evidence may help us anticipate the prospective impacts of the various components of the AHCCCS proposal. Based on this investigation we are very impressed with the overall innovative nature of this proposal, and believe that many aspects of it will go a long way towards meeting the needs of patients, providers, health care systems, and AHCCCS.

Accordingly, we have prepared a summary of the peer-reviewed literature on a number of prominent components included in the waiver application. In our review, we found encouraging evidence for some aspects (copays for non-emergency use of the emergency department and for brand name prescription drugs) while for others (health savings accounts, copays for opioids, and AHCCCS Care accounts) we either were unable to identify relevant evidence or found a lack of substantive consensus regarding potential impacts. In all cases, we encourage rigorous monitoring and evaluation of the waiver implementation, as it presents Arizona with a unique opportunity to contribute to our specific and general understanding of public health policy and the needs of our state's diverse population. In these efforts, our Center would be happy to work with AHCCCS on any evaluation needs identified by the agency. Our immediate team includes economists, health services researchers, public health leaders, epidemiologists, and public health evaluation researchers and we maintain collaborations across many other disciplines both within and outside the University.

The waiver represents an important opportunity to help researchers and policy makers at the state and national levels learn from the Arizona experience. With respect to age, race, ethnicity, and socioeconomic status, Arizona has a truly unique population and geography. As a result, tracking and evaluating the implemented components has the potential to impact healthcare policy nationwide and further cement our state's position as one of the country's leading laboratories for Medicaid policy.

In summary, we are happy to have this opportunity to provide the current "state of the science" regarding the objectives and interventions proposed in the waiver. We hope that as this waiver moves forward, AHCCCS commits to rigorous evaluations in order to enhance your ability to implement effective policy. Furthermore, as opportunities arise we are eager to collaborate on measuring and analyzing the impact of the components of the new waiver.

Sincerely,



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Executive Director, Center for Population Science & Discovery  
Professor, Mel and Enid Zuckerman College of Public Health  
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## Copays

Any increase in copayments is likely to cause utilization declines for both preventive and emergency visits (Machledt and Perkins, 2014). In general, cost sharing shifts costs from the state to low income enrollees (Keeler, 1992). Cost sharing has been shown to disproportionately negatively impact the poor and sick populations (Newhouse, 2004), populations that tend to rely on Medicaid coverage. Halpern et al. (2014) find that copays reduce the likelihood of cancer screening for Medicaid beneficiaries. Wallace et al. (2008) report that copays did not provide the expected savings and total expenditures per person remained unchanged in Oregon. However, in most of the studies we reviewed, copayments or increases in copayments were bundled with premiums and/or informational interventions, making it difficult to isolate the impact of a rise in copays by itself.

### *Copays and non-emergency use of the emergency department*

Several studies indicated that higher copays for unnecessary ED use resulted in reduced ED visits and costs when implemented.<sup>1</sup> A copay increase from \$100 to \$200 and an informational brochure reduced ED utilization for conditions that could have been treated outside of the ED (DeVries, Chia-Hsuan, and Oza, 2013). This study also indicated that those liable for a higher copayment were nearly five times more likely to choose retail health clinics over ED visits for non-emergency care (ibid). Additional studies noted a 4% decrease in ED visits for Medicaid beneficiaries with a copay between \$20 and \$50, compared to a group with no copay (Hsu, Price, Brand et al., 2006). Selby, Fireman, and Swain (1996) found a reduction in ED visits by 15% with a copay between \$25 and \$35. In a study on the implementation of premiums, informational brochures, and \$50 copayments for unnecessary ED use, ED visits were reduced by 18% (Lowe, Fu, and Gallia, 2010). Finally, in a commercial insurance marketplace, subjects with cost sharing had expenditures 14% lower than subjects with free care (O'Grady, Manning, Newhouse et al., 1985). These results were consistent across subgroups. Hospitalization rates and ICU admissions among low SES groups declined with higher ED copayments (Hsu, Price, Brand et al., 2006).

Other authors have found no effect or a negative effect for ED copays. For example, using data from the Medical Expenditure Panel Survey data across nine states, Mortenson (2010) determined that non-emergency copays did not decrease ED use by Medicaid enrollees. Similarly, Siddiqui, Roberts, and Pollack (2015) found that granting states permission to collect copayments for non-urgent visits did not significantly change ED or outpatient medical provider use among Medicaid beneficiaries.

This conflicting evidence suggests that increasing copays for non-emergency ED visits may or may not result in cost savings and reductions in ED visits. If this waiver component is approved and implemented we recommend monitoring the impact on ED visits and costs. Additionally, we recommend investigating how these copays may differentially impact different racial, ethnic, geographic, and socioeconomic subgroups in Arizona. Understanding the reasons for these differences could lead to a significant contribution to policy and the general understanding of the incentives behind ED use.

### *Copays and use of opioids*

To our knowledge nothing specific to opioids has been published in the literature. There is evidence to suggest that prescription cost-sharing leads to decreased utilization. In a meta-analysis 85% of studies of cost sharing and medication adherence showed a negative correlations (Eaddy, Cook, O'Day et al., 2012). Anis et al. (2005) find that prescription co-payments led to fewer prescriptions filled per month. Ku, Deschamps, and Jilman (2004) report that Utah's \$2 prescription copays for Medicaid enrollees reduced

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<sup>1</sup> The definition of an "unnecessary" ED visit varies across studies.

utilization by 8 percent. Bae et al. (2008) estimate that raising copays by \$1.50 for Massachusetts Medicaid adults increased the rate of nonadherence amongst adult asthmatics by 10%. Gatwood et al. (2014) calculate the price elasticity for 8 categories of medication including Opioids. Opioids were nearly perfectly price inelastic; in other words, utilization did not respond to the increase in price. This last study suggests that the nominal copays proposed in the AHCCCS waiver are unlikely to impact utilization. If this waiver component is approved and implemented, a rigorous evaluation provides an important opportunity for informing similar future policies.

#### *Copays and missed appointments*

There is evidence that individuals on Medicaid often miss more appointments than those on commercial insurance (Majeroni, Cowan, Osborne et al., 1996; Lamberth, Rothstein, Hipp et al., 2002). Bech (2005) reviews the literature on the impact of fines for non-attendance and concludes that they are effective in reducing the number of missed appointments. However, other evidence suggests that instituting copays for missed appointments will have a disproportionately negative impact on minorities and low income individuals (Parker, Moffet, Schillinger et al., 2012).

#### *Copays and use of brand name over available generic drugs*

In general the existing literature fails to find evidence that requiring a copayment for brand name drugs yields significant cost savings. In one study, larger cost-sharing differentials between generic and brand name drugs were associated with higher rates of generic drug use but were not associated with lower expenditure rates (Hong and Shepherd, 1996). Plan design can facilitate use of less costly drugs (Thomas, Wallack, Lee et al., 2002). This was shown in a study by Rector, Finch, Danzon et al. (2003), where tiered prescription copayments were associated with a significant shift from non-preferred to preferred brand medications. However, this shift in preference was also not shown to lead to a significant cost savings for the individuals or for the plans.

#### **Accessing specialist services without a referral from a PCP**

There is little evidence that suggests this initiative will significantly impact total expenditures. One study indicated that the gate-keeper model did not show significant savings (Kapur, Joyce, Van Vorst et al., 2000). Total physician expenditures were 4 percent higher in the gatekeeper HMO than in the point of service plan when copayments were \$0. When the copayments for PCP-referred specialist visits were \$10, total physician expenditures ranged from equal to 7 percent higher in the gatekeeper HMO (Kapur et al., 2000). Due to this limited evidence an evaluation of this waiver component (if approved) would represent a significant contribution to our cost containment policy understanding.

#### **Premiums**

There is strong evidence that even small premiums reduce new enrollment, lower renewal rates, shorten the length, and lower the likelihood of continuous enrollment. Morrissey, Blackburn, Sen et al. (2012) find that a \$50 increase in premiums led to a 6-8% reduction in renewal rates among Alabama's Children Health Insurance (CHIP) members. Ku and Coughlin (1999) find that raising premiums from 1 to 3% of income in Hawaii, Minnesota, Tennessee, and Washington reduced enrollment from 57 to 35%. Abdus et al. (2014) find that a \$10 increase in monthly premiums is associated with a 6.7 percentage point reduction in Medicaid enrollment for children in families within 101-150% FPL range (a 3.3 percent point increase in having no insurance). Marton (2007) finds that a \$20 monthly premium reduces the length of enrollment. Dague (2014) finds that the first premium dollars (i.e. going from \$0 to \$10) are the most

likely to reduce enrollment. She finds that an increase from \$0 to \$10 reduces the probability of continuous enrollment over a 12 month period by 12 percentage points.

### **AHCCCS CARE Account**

Very little peer-reviewed literature addresses the effectiveness of financial incentive programs for healthy behaviors among Medicaid enrollees. A few articles, although not specific to the AHCCCS CARE Account may provide insight should this component of the waiver be approved and implemented. The three themes surrounding incentive programs are 1) incentives to promote healthy behaviors must be developed so that all members have a clear understanding of the program (Blumenthal, Saulsgiver, Norton et al., 2013; Hall, Lemak, Landry et al., 2013), 2) incentive programs must be developed to be accessible to the populations in need, and 3) providers must be engaged in providing the preventive services to members (Hall et al., 2013). Blumenthal et al. (2013) indicate that incentive programs should clearly identify how much of a potential payment was earned and use simple communication materials. Additionally, incentive programs should be designed for ease of understanding by the enrollees and quick turnaround by “delivering incentives with little delay after a beneficiary completes a task or reaches a goal” (Hall et al., 2013).

West Virginia’s experience of implementing an “Enhanced Health Plan” failed in part due to a lack of education for members. Specific implementation tactics were not developed “to address the novelty of the choice members were facing” (Walsh, Plein, Fitzgerald et al., 2014). Hall et al. (2013) also suggests that, even within a state, interventions need to be tailored to specific populations and locations in order to succeed.

There was some evidence that preventive services are not provided to patients equally based on insured status (McMorrow, Long, Fogel, 2015). A Florida study investigating the impact of incentives on participating in health-related activities concluded that “initial engagement in such a program can prove challenging as different groups are not equally likely to be aware of or participate in an approved activity or redeem a credit” (Hall, et al, 2013). Furthermore, they state that “Physicians may play important roles in encouraging participation in programs to incentivize healthy behaviors”.

### **Health Savings Accounts (HSAs)**

Although CMS has granted waivers allowing the implementation of Medicaid health savings accounts (HSAs)<sup>2</sup>, their impact on the utilization of services and health outcomes in a Medicaid setting are unknown. There is evidence that HSAs reduce utilization in commercially-insured populations. Lo Sasso, Shah, and Frogner (2010) find that HSA enrollees spend 5-7 percent less than non-HSA enrollees with the greatest impact on services where utilization was driven by consumer choices rather than providers. Charlton et al. (2011) also find that HSA enrollees spend significantly less (17%) but also that decreased spending reduces the rate at which enrollees follow through with recommended preventive care. Fronstin and Roebuck (2013) report the five year experience of a single large employer that adopted a high deductible HSA plan. The authors find that the largest reduction from the adoption of an HSA plan occurred in the first year and then eroded over time. Furthermore, HSAs had limited impact on high utilizers. Ultimately, caution should be taken when projecting the commercial results onto a Medicaid population because the commercial HSAs were paired with high deductible health plans.

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<sup>2</sup> See Wishner et al. (2015) for a review of 1115 waivers to implement Medicaid expansion under the ACA.

## Work Requirement

We are not aware of any past or present requirement tying labor-force engagement directly to Medicaid eligibility. The Temporary Assistance for Needy Families (TANF) work requirement is the most similar social program to what is proposed in the AHCCCS waiver. As a result, the following is a brief background on TANF, its work requirement, current work participation rates, literature related to the efficacy, and the impact of TANF's work requirement. Following this is a description of the current work status of Arizonans in the 100-138% range of the federal poverty level (FPL). In brief, welfare work requirements were successful "on average" in reducing welfare caseloads and increasing employment, however a large portion of both TANF and unemployed potential Medicaid beneficiaries experience significant barriers to employment such as less than a high school level of education, chronic illness, and young children. The majority, approximately 70 percent, of Arizonan households in the 100-138% FPL have a full- or part-time working adult. Two thirds of Arizonans who are not employed report health or family obligations as being the main reason for their work status.

The Personal Responsibility and Work Opportunity and Reconciliation Act (PRWORA) of 1996 replaced Aid to Families with Dependent Children (AFDC) with block grants to the states.<sup>3</sup> As part of welfare reform, TANF recipients are required to engage in work activity (e.g. training, job search, employment). Those who do not meet the minimum work effort can have their benefits reduced or even terminated. Single parents with children less than age 6 are required to engage in 20 hours of work activity per week. Single parents with older children must work at least 30. Two-parent families are required to jointly engage in 35 hours of work activity. For their part, states must have 50 percent of single parents meet their targeted work hours and 90 percent of two-parent families or risk their block grant funds being reduced. Those state-level targets can be lowered with credits for additional state spending or caseload reductions.

In the most recent fiscal year available, Patel (2015) reports that the TANF recipient FY 2012 national average work participation rate was 34.4 percent. Arizona's overall participation rate was 27.1 percent, though it met its state-specific target due to offsetting credits. The relatively low work participation rate can be explained, in part, by the number of barriers that the TANF population faces. Bloom, Loprest, and Zedlewski (2011) review the TANF barriers to employment literature, reporting that 80 percent had at least one barrier (e.g. low educational status, young children, poor health) and 42 percent had two or three.

The TANF welfare work requirement has been credited, along with the earned income tax credit and expanding economy in the late 1990s, with reducing welfare caseloads. Blank (2002) and Moffitt (2008) review a vast literature on the impact of welfare reform including work requirements and time limits. In general, studies show a reduction in welfare caseloads coupled with an increase in employment rates for those on and those leaving welfare. Moffitt (2008) cautions that these findings represent "average" outcomes across a heterogeneous population with differing barriers to employment. Both he and Blank advocate for transition to employment programs to assist welfare recipients facing barriers. The strength of the connection between existing employment support programs to AHCCCS Works described in the waiver narrative and the capacity to handle more beneficiaries will be a key factor for success if the work requirement is approved by CMS.

Turning our focus to the newly eligible Medicaid adult population, the Henry J. Kaiser Family Foundation (2015) uses the March 2014 Current Population Survey (CPS) to estimate the work status of

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<sup>3</sup> This description is based upon Schott (2012).

uninsured adults who would get access to Medicaid if all states expanded eligibility. Three in four households eligible for Medicaid expansion nationally have a full- or part-time worker. Among those not working, nearly half report that an illness/disability or family obligation was the main reason for their work status. Another 18% were going to school and 20% could not find work. The Kaiser report provides a national context to evaluate the degree to which low-income families are engaged in work activity. To our knowledge, no such analysis has been done for the state of Arizona.

We utilized the 2013 American Community Survey (ACS) and March 2014 CPS to evaluate the work status of adults age 19-64 in the 100-138% FPL range, comparing Arizona to regional and national characteristics. Table 1 reports the ACS results for Arizonans only. The ACS has two primary measures for work activity. The first is determined by two questions about the respondent's work activity over the last twelve months. If the respondent worked 50 weeks or more in the previous 12 months and averaged more than 35 hours of work, they are classified as full-time. If the respondent worked 50 weeks or more in the previous 12 months and averaged less than 35 hours of work, they are classified as part-time.<sup>4</sup> Those who worked 49 weeks or less in the previous year are not identified as either full- or part-time. This first definition of work activity (see columns 1 and 3, Table 1) represents the strictest definition of sustained work engagement. Even with this definition, one out of two workers (Panel A) and one out of two households (Panel B) were either full- or part-time. The ACS also asks respondents whether they were employed in the last week. This question does not differentiate between full- and part-time employment but serves as an aggregate measure of work engagement that is more comparable to the CPS (which uses a one week retrospective employment status question). This less strict ACS definition of work engagement (columns 2 and 4, Table 1) is strikingly similar in magnitude to the Kaiser results (72% of households are full- or part-time). There are no significant differences when restricting the analysis to those who are uninsured or covered by Medicaid (columns 3 and 4).

The ACS does not provide any detail on barriers to employment. We therefore replicated the Kaiser (2015) results using the March 2014 CPS for Arizona, the four-corner states (AZ, CO, NM, and UT), and the entire USA, restricting the samples to adults age 19-64 in the 100-138% FPL range. The aggregate measure of full- or part-time employment across all three geographic groupings in Table 2 (the third row in Panel A and B) is similar to the ACS measure (cols 2 and 4, Table 1). As the geographic region narrows from the entire USA, to the four-corner states, to Arizona the precision of the estimates declines (reflected in the higher standard errors in column 1). Nonetheless, the results are consistent across all geographic regions within the CPS and with the larger, more precise, ACS Arizona estimate.

Finally, we turn our analysis to the main reason why Arizonans are not employed among the 100-138% FPL in Table 3. Those not employed represent an even smaller subset than those used to generate the results of Table 2 (again, as evidenced by the increasing standard error). At all geographic levels 60-70% report that an illness or family obligation are the main reasons they are not employed. Once more the results are largely consistent with the Kaiser report which found that one out of two individuals had issues related to health or family. This Arizona 100-138% FPL adult population is best characterized as low-income working families with some families facing significant barriers to employment.

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<sup>4</sup> This strict definition follows the U.S. Census definition, accessed September 24, 2015, <https://www.census.gov/hhes/www/laborfor/faq.html>.

## Tables

Table 1: Work status for Arizonans age 19-64 between 100-138% FPL (2013 ACS)

	All respondents		Respondents reporting no health insurance or Medicaid at time of the interview	
	12-month retrospective (1)	One-week retrospective (2)	12-month retrospective (3)	One-week retrospective (4)
<b>Panel A: Person-level work status</b>				
Full-time employment	32.1% (1.0)		32.2% (1.4)	
Part-time employment	17.0% (0.9)		16.4% (1.2)	
Full- or part-time employment		69.1% (1.1)		67.2% (1.5)
<b>Panel B: Household-level work status</b>				
At least one full-time employed	32.0% (1.2)		32.1% (1.6)	
At least one part-time employment	17.6% (1.0)		17.4% (1.4)	
At least one full- or part-time employed		70.5% (1.2)		69.1% (1.7)

*Source:* 2013 American Community Survey. *Notes:* Point estimates were generated using full-sample weights. Successive difference replication standard errors are reported below point estimates in parentheses.

Table 2: Work status for adults age 19-64 between 100-138% FPL (2014 March CPS)

	Arizona only (1)	Four-corner states (2)	USA (3)
<b>Panel A: Person-level work status</b>			
Full-time employment	42.3% (7.4)	44.4% (3.7)	41.9% (0.9)
Part-time employment	26.2% (8.0)	21.9% (4.0)	20.0% (0.7)
Full- or part-time employment	68.5% (4.1)	66.3% (2.2)	62.0% (0.8)
<b>Panel B: Household-level work status</b>			
At least one full-time employed	42.3% (7.1)	44.0% (3.8)	42.0% (0.9)
At least one part-time employment	25.5% (7.9)	24.0% (3.9)	21.7% (0.7)
At least one full- or part-time employed	67.9% (5.1)	68.0% (2.7)	63.7% (0.8)

Source: March 2014 Annual Social and Economic Supplement of the Current Population Survey.

Notes: Point estimates were generated using full-sample weights. Successive difference replication standard errors are reported below point estimates in parentheses. The four-corner states are AZ, CO, NM, and UT.

Table 3: Main reason for not working in the previous calendar year (2014 March CPS)

	Arizona only (1)	Four-corner states (2)	USA (3)
Could not find work	12.2% (6.4)	10.5% (3.4)	6.5% (0.7)
Ill or disabled	20.5% (14.9)	26.9% (6.9)	42.8% (1.6)
Taking care of home/family	41.7% (14.6)	42.4% (7.3)	28.8% (1.4)
Going to school	0% (0)	4.63% (2.1)	7.3% (0.8)
Retired	25.6% (10.1)	14.7% (5.5)	13.7% (1.4)
Other	0% (0)	0.8% (0.9)	0.9% (0.3)

*Source:* March 2014 Annual Social and Economic Supplement of the Current Population Survey.

*Notes:* Point estimates were generated using full-sample weights. Successive difference replication standard errors are reported below point estimates in parentheses. The four-corner states are AZ, CO, NM, and UT.

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