

**Patterns of Service Use among CalWORKs Adults,
Report 1:**

Data Match Results across Five County Agencies over Five Years

Chief Executive Office
Service Integration Branch
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Overview

This study is the product of a long-standing relationship in Los Angeles County between the Department of Public Social Services (DPSS) and the Chief Executive Office's Service Integration Branch (CEO/SIB). CEO/SIB's Research and Evaluation Services unit (RES) was originally formed as the CalWORKs Evaluation Team (CET) specifically to comply with State-mandated provisions in the 1997 Welfare-to-Work Act (AB 1542), which required counties to monitor the impact of welfare reform on children and families. CET/RES released its first CalWORKs study in 1999 and has since then worked with DPSS on an expanded basis to provide data-driven program analysis and evaluation.¹

DPSS and CEO/SIB are currently assessing how to more effectively leverage the value of the Enterprise Linkages Project (ELP), an Integrated Data System through which eight County agencies *legally* share routinely-updated service records on a common platform. Since 2009, ELP has been a central component in RES's work with DPSS, serving as an indispensable tool for analysis of service utilization patterns across multiple County agencies. However, General Relief (GR) is to date the only DPSS program for which data are integrated into the system. This report was prepared to demonstrate the scope of information that would be available with the addition of CalWORKs records to the data warehouse. The findings are based on a comprehensive set of analyses showing how CalWORKs parents engaged with five County agencies over five years.

CalWORKs Parents and their Patterns of Service Use across Five County Agencies

This report examines parents who received cash benefits through CalWORKs for the first time in 2012 (n=78,191), a year in which the program provided aid to roughly 250,000 families in Los Angeles County. The study population is roughly 70% female, 50% Hispanic, and its median age in 2012 was 28, with 70% under the age of 37. These clients were parents to roughly 115,000 children when they began receiving benefits. The study group is examined in terms of client engagement with the departments of Health Services (DHS), Mental Health (DMH), Public Health (DPH), Children and Family Services (DCFS), and the Sheriff. The analysis captures services consumed from 2010 through 2014, a time frame that affords a comparative examination of utilization patterns before and after the initiation of CalWORKs aid

The Services CalWORKs Parents Use: Study Period

Utilization through Five Los Angeles County Agencies Over Five Years



¹Moreno, Manuel, *et al.* *From Welfare to Work and Economic Self-Sufficiency: A Baseline Evaluation of the Los Angeles County CalWORKs Program*. County of Los Angeles; Chief Administrative Office; Urban Research Unit; CalWORKs Evaluation Team: January, 1999.

The study's results were produced through a series of matches linking CalWORKs administrative data in DPSS's LEADER system to service records in the ELP data warehouse. Findings are presented for the study population as a whole, but also by subgroups that were defined by whether the observed parents experienced homelessness or were Transition Age Youth (TAY, 19-26 years of age) at the time they started receiving benefits. Client use of services across the five agencies is similarly examined in individual years and for the total five-year study period.

Three Guiding Research Questions

The analyses of service use summarized in this report was guided by three general research questions:²

1. What County services do CalWORKs parents use before, during and after they initiate receipt of cash assistance through the program?
2. Do patterns of service use change with the initiation of cash benefits through CalWORKs?
3. Do CalWORKs parents who are either Transition Age Youth (TAY), homeless, or both (homeless TAY) use services in ways that are distinct from other types of CalWORKs parents?

The Observed Results

From 2010 through 2014, 28,558 unique clients within the CalWORKs study population (36.5%) engaged at least once with one of the five agencies considered in this report. These clients used a total of 259,378 services, a utilization rate of 9.1 services per service user over five years. Slightly more than 1 of every five study group clients (21.6%) used DHS services during this period, 1 of every 13 (7.5%) used DMH services, and 1 of every 27 (3.7%) used DPH services. Additionally, 1 of every 15 (6.5%) had children involved in DCFS cases, and 1 of every 10 (10.3%) were arrested by the Sheriff's Department.

Health-Related Services

More than 90% of the services utilized over five years were provided by DHS, DMH, and DPH, with DHS alone accounting for 46%. Most of the services consumed through these three agencies were provided on an outpatient basis. Receipt of cash benefits does not appear to have affected use of these health-related services. Health care legislation may have already had a significant impact on the availability of treatment and care by the time the study group started receiving aid in 2012, particularly with respect to mental health and substance abuse services. Sharp increases in the annual numbers of study group patients using DMH and DPH services occurred from 2010 through 2013, but this growth was accompanied by flat to declining annual utilization rates (services used per patient). While more analysis of the effects of health care reform is needed, the patterns established for the CalWORKs study group

² The authors wish to thank Michael Bono and Jenny Zogg at DPSS for their help in clarifying the research questions that oriented the examination of service use patterns performed for this report.

provide support to an expanding body of literature arguing that health care reform legislation mandates at the County, State, and Federal levels may be compelling health providers to expand access to services by providing treatment to patients on an increasingly efficient basis.

Arrests and Jail Stays

The five-year arrest rate for the overall CalWORKs study group is 0.12, meaning that the Sheriff's Department made one arrest for every 8.5 clients observed. More than four out of every five of these arrests led to jail stays, and roughly one re-arrest took place for every five clients arrested. Significantly larger proportions of homeless clients, including homeless TAY, were arrested, re-arrested and jailed.

The annual number of study group clients arrested decreased by one-third over five years, most of which occurred in 2012. This coincides with the year clients began receiving cash aid, but an even steeper decline in both arrests and arrested clients is observed in the same year for the County as a whole, suggesting that the study group and larger countywide pattern may reflect implementation of AB 109, *Public Safety Realignment*, in 2011.

Involvement in DCFS Child-Protective Cases

An average of 1,954 DCFS cases involving study group parents were opened per year. These cases comprise 8.6% of the cases opened countywide from 2010 through 2014. In terms of the total number of study group cases open during this time - inclusive of the 12.5% DCFS opened prior to 2010 - a total of 5,107 parents (6.5% of the study group) had 10,065 children involved in 11,099 DCFS cases. These cases account for 4.7% of the parents and 7.4% of the children involved countywide in DCFS cases over five years.

While the number of cases opened annually remained essentially flat in the County as a whole, those involving study group parents increased by 35%, from 1,448 in 2010 to 1,949 in 2014, peaking at 2,387 in 2013. The distribution by (approximate) age of the children involved in these cases, and specifically the small fraction of children and non-minor dependents who were 18 years of age or older, appears to rule out passage and implementation of AB 12, the *California Fostering Connections to Success Act*, as a significant factor in the annual increases.

Homeless parents constituted 24% of the overall CalWORKs study group and accounted for 44% of the cases DCFS opened involving study group parents over five years. In proportional terms, almost twice as many homeless parents (11.7%) had children in DCFS cases during this time, and their cases took about four months longer than average to resolve. Most strikingly, however, while the annual number of newly-opened cases involving these homeless clients increased by 72% between 2010 and 2013, those involving parents in the TAY subgroup grew by 157% over the same period, including a 128% increase in cases involving *homeless* TAY.

Non-Utilization

A key factor motivating the development of ELP was that the system would give DPSS and other County agencies a greater capacity to re-direct chronically-homeless GR recipients away from inefficient use of expensive services, and towards more cost-effective forms of outpatient treatment and counseling. However, CalWORKs parents are generally younger than GR recipients, a significantly smaller proportion

is homeless, and their aggregate service histories indicate that they are healthier. High-volume use of costly services consequently does not stand out as a defining characteristic in the patterns established for the CalWORKs study group. Less than 10% of these clients, including 12% of the homeless subgroup, used DHS *emergency* services over five years, and less than 3% were hospitalized in a DHS facility. The proportions using such services within individual years are naturally much smaller.

Almost 65% of the CalWORKs study group used no County services beyond those provided through DPSS during the observation period. In terms of health-related services, 70% did not receive any treatment from DHS, DMH or DPH, and overall rates of non-use did not change appreciably after clients began receiving cash benefits in spite of their automatic eligibility for Medi-Cal. While it is important to note that significant numbers of CalWORKs parents are likely enrolled through Medi-Cal with non-County managed health care providers, the findings presented in this report also suggest that ELP could be used to help ensure CalWORKs families are able to access needed health care, whether they receive their services through Medi-Cal or other providers.

Next Steps

The process of matching CalWORKs data in DPSS's LEADER system to service records in the ELP data warehouse took place without technical complications. As of this writing, DPSS has commenced implementation of the LEADER Replacement System (LRS). The availability of DPSS data in the ELP warehousing system will therefore require compatibility between the respective architectures of LRS and ELP. Once a technical solution is developed, and assuming the migration from LEADER to LRS preserves the required data elements, the integration of CalWORKs data into ELP would not be difficult. Allocation of resources to this end will depend in part on whether the consensus within DPSS and the CEO is that the patterns shown in this report and a planned follow-up study merit the costs involved.

ELP contains records on 2.1 million unique clients who used health-related services in the County between 2010 and 2013, and historical health data in the warehouse date back to 2006. However, the system does not contain systematically inclusive records of services provided to children. Among this report's key recommendations is that a review be conducted to learn the extent to which such records could be added to ELP. Obtaining these data would coalesce with the priority the Board of Supervisors has given to child safety and health, and would increase the returns yielded in integrating CalWORKs into ELP, both because the policy emphasis in CalWORKs is largely focused on the well-being of children, and because the range of potential users of the warehouse would expand and create new opportunities to share the system's costs.

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I. Background

This report summarizes findings from the first of two planned studies examining how adult parents aided through the California Work Opportunity and Responsibility to Kids (CalWORKs) program engage with five Los Angeles County agencies. The analyses discussed in what follows were conducted at the direction of the Department of Public Social Services (DPSS) and reflect the department's growing interest in the extent to which its clients use services provided through agencies other than DPSS. The findings establish patterns of service utilization over a five-year period, looking specifically at the volume of clients who used services provided by each agency, the intensity of this use, and the types of services consumed. The second report, scheduled for completion in 2016, will build on the patterns shown here and investigate the costs the County incurs in providing CalWORKs adults with health, child-protective, and law-enforcement services, and will also provide analyses of changes in service costs after clients initiate their engagement with CalWORKs. Both studies are intended to inform programming decisions targeted towards particular segments of the CalWORKs client population, and to more broadly assist DPSS in deepening its use of integrated data for policymaking and case management purposes.

The Population and County Agencies Examined in this Report

A total of 247,118 families in Los Angeles County were aided through CalWORKs in 2012.ⁱ This report focuses on 78,191 parents within these families who received cash benefits for the first time in 2012. Examination of these clients affords an analysis of service use before and after the initiation of cash assistance through CalWORKs. The study population is 71% female, more than 50% Hispanic, and their median age (as of January 1, 2012) was 28, with 70% under the age of 37. These adults were responsible for 114,607 children, approximately 80% of which were aided through CalWORKs.ⁱⁱ

Using data integration and matching procedures available through the Enterprise Linkages Project (ELP), the study group's CalWORKs records in DPSS's Los Angeles Eligibility Determination, Evaluation and Reporting (LEADER) system were encrypted and assigned anonymous client identification numbers. The encrypted study group was then linked to similarly-encrypted records of County services, arrests, and child protective cases in the ELP data warehouse. The five agencies included in the data matches conducted for this report are the departments of Health Services (DHS), Mental Health (DMH), Public Health (DPH), Children and Family Services (DCFS), and the Sheriff. Uniform encryption and identification number algorithms applied to all agency files enabled the linkages across agencies to be established in a manner consistent with privacy and confidentiality statutes.

The study population is examined in general and also parsed into four subgroups based on whether clients were homeless and/or were Transition Age Youth (TAY, 19 to 26 years of age) in 2012. The more granular focus on these segments of the CalWORKs adult population reflects the growing significance of these populations within DPSS and in the County at large. The subgroups overlap with each other to varying degrees and are shown in Table 1, along with client counts and the number of children associated with each group in 2012.ⁱⁱⁱ

Table 1. 2012 CalWORKs Study Population and Subgroups

Study Group		Parents	Children*	
			Aided+	Total
Study Group	Parents Receiving Aid for the First Time in 2012:	78,191	91,533	114,607
Subgroup 1	Homeless Adults:	18,853	21,064	28,339
Subgroup 2	Non-Homeless Adults (at least 27 years of age):	35,109	44,537	52,744
Subgroup 3	CalWORKs TAY (19 to 26 years of age)	30,037	32,076	41,939
Subgroup 4	Homeless CalWORKs TAY	9,025	9,120	12,604
*These counts are based on the client at the initial entry into CalWORKs in 2012.				
+These are counts of children who were aided for at least one month in 2012.				

Source: DPSS LEADER

The Study Population’s Involvement with CalWORKs

Table 2 provides information on the study population’s engagement with CalWORKs during the year in which the clients began receiving benefits. The data show that slightly more than half the overall study group was referred to a work-readiness component grouped under the Greater Avenues to Independence (GAIN) program, and roughly 10% utilized CalWORKs Stage 1 child care services, including 12% of those referred to GAIN.^{iv} However, the fixed study period combined with lags between the establishment of eligibility for CalWORKs benefits and the subsequent date of referral to welfare-to-work activities likely mean that the proportion referred to GAIN was larger. Relatedly, DPSS has pointed to significant variability in CalWORKs Stage 1 Childcare utilization from one month to the next, and the department has noted that fluctuation in use of these services limits the inferences that can be made from calculation of an annual utilization rate.^v

A total of 9,129 sanctions for noncompliance with program requirements were imposed on just over 10% of the overall study group. More specifically, 8,271 sanctions were imposed on 18% of *those referred to GAIN*. Approximately, one sanction was imposed for every 8.2 study group clients in general, and one was imposed for every five referred to GAIN. Most clients sanctioned had these penalties imposed on them only once during the year.

Table 2. The Study Group and CalWORKs in the Year Receipt of Aid Began (2012)

	N=	% Study Group	# Referred To GAIN	% Referred to GAIN
Overall Study Population:	78,191			
# Clients Referred to a GAIN Component:	39,906	51.04%		
# Clients Utilizing CalWORKs Stage 1 Childcare Services:	7,702	9.85%	4,869	12.2%
# Clients Sanctioned One Time or More:			7,245	18.16%

Source: DPSS LEADER, GEARS

II. Match Rates and Utilization Rates

The objective guiding this study was to establish proportional measures of the study population’s engagement with five County agencies and to capture the frequency with which study group clients utilized the services these agencies provided, both in individual years and over five years as a whole. Table 3 shows the CalWORKs study population’s 2010 through 2014 *match rates* and *utilization rates* with respect to each of the agencies included in the data matches. While the match rates are the proportion of unique study group clients using services provided by the departments over the full five-year observation period, the utilization rates are the number services consumed *per client using a given agency’s services*. Clients under the age of 18 in 2010 and 2011, as well as the services they used in those years, were removed from the data in producing the rates shown.^{vi}

Table 3. CalWORKs Study Group: Agency Match and Utilization Rates, 2010-2014

County Agency	Unique Count of Overlapping Clients	Total Services Used	Five-Year Match Rate	Five-Year Utilization Rate
DHS	16,878	120,538	21.6%	7.1
DMH	5,872	114,766	7.5%	19.5
DPH	2,910	3,557	3.7%	1.2
*DCFS	5,,107	11,099	6.5%	2.2
**Sheriff	8,051	9,618	10.3%	+1.2
*These counts are tallies of unique adults who had children in child protective cases that were open during the five-year period, and the number of cases open during the study period.				
**These counts are tallies of unique arrestees and arrests over the five-year period.				
+This is different than the <i>arrest rate</i> , which is derived by dividing the number of arrests by the total count of clients in the group. The arrest rate for the overall study group (9,618 arrests / 78,191 clients in the group) is 0.12.				

Source: DPSS LEADER, ELP.

Key Findings

- Slightly more than one of every five adults in the 2012 CalWORKs study group (21.6%) was a DHS patient between 2010 and 2014. These patients consumed 120,538 DHS services, an average of seven services per patient over five years.
- Roughly one of every 13 was a DMH patient (7.5%), consuming a total of 114,766 services, an average of about 20 services per patient.
- Approximately one of every 27 was a DPH Substance Abuse Prevention and Control (SAPC) patient (3.7%), consuming 3,557 services, slightly more than one per patient.
- One of every 15 (6.5%) had children involved in DCFS child-protective cases. A total of 5,107 parents in the overall study group had 10,065 children involved in 11,099 of these cases, an average of roughly 2 children per parent.
- One of every 10 study group clients was arrested by the Sheriff’s Department (10.3%), and these arrestees accounted for a total of 9,618 arrests (1.2 per arrestee) and 7,800 jail stays (0.96 per arrestee).

III. Utilization of Health-Related Services

Most services consumed through DHS, DMH and DPH were provided to the study group on an *outpatient* basis. In the case of DMH, as noted above, outpatient services account for virtually all of the services used, though this is primarily because complete data on DMH inpatient, residential and crisis stabilization services are currently unavailable in ELP.^{vii}

- Approximately 9% of the overall CalWORKs study group used DHS *emergency* services between 2010 and 2014. Use of these services accounted for almost 11% of the DHS services used by the study group. A larger-than-average proportion of homeless clients used such services. In each subgroup, patients with emergency episodes consumed an average of about two of these services over five years.
- While 7.5% of the overall study group used DMH outpatient services over four years (5,872 of 78,191), close to 11% of the homeless subgroup used these services during the same period (1,992 of 18,853). Moreover, since only 7.4% of the homeless TAY subgroup, which is included in the larger homeless subgroup, used DMH outpatient services over four years, the above-average proportion of homeless study group clients using these services was driven by those who were 27 years of age or older.^{viii}
- Roughly half the DPH/SAPC services consumed by the study group were used by homeless adults (n=1,714 services), and 42% were used by TAY (n=1,407 services), including homeless TAY, whose service episodes are also included in the count of those consumed by homeless adults.

Five-Year Match and Utilization Rates for All Health-Related Services Combined

Client engagement with County agencies was examined separately by agency, but also together to obtain a broader picture of service use patterns among study group clients. Table 4 combines the DHS, DMH and DPH data match results to produce *overall health services match and utilization rates* for the five-year study period. It should be noted in this context that the degree of DHS, DMH and DPH utilization does not represent a complete picture of health care services use by the study group since significant numbers of CalWORKs families are likely enrolled with non-County managed care providers. The significance of this will be discussed in more detail in the sections of this report that look specifically at utilization rates before and after the initiation of cash assistance in 2012.

Table 4 CalWORKs Study Group: Health Services Match and Utilization Rates, 2010 – 2014

	Patients Using Any DHS, DMH and DPH Services*	Total Services Used	Five-Year Match Rate	Five-Year Utilization Rate
Overall Study Group	22,155	238,661	28.3%	10.8
Homeless CalWORKs Adults	6,659	67,397	35.3%	10.1
Non-Homeless CalWORKs Adults	10,756	136,928	30.6%	12.7
CalWORKs TAY	7,199	53,283	24.0%	7.4
Homeless CalWORKs TAY	2,784	20,898	30.8%	7.5

*These are unique counts of patients *within* the row category/subgroup

Source: DPSS LEADER, ELP.

Key Findings

- Close to 30% of the CalWORKs study group overall used Health-related services through the County from 2010 through 2014.^{ix} Again, it is important to note that the degree of DHS utilization does not capture the significant numbers of CalWORKs families likely enrolled with non-County managed care providers.
- Looking at the four years for which there are complete data on health-related services provided through the County, an average of 11.1% of the overall study group, or about 1 in 9 patients overall, received treatment per year.^x
- Study group clients used just fewer than 11 services per patient over five years, an average of 2.15 services per patient, per year.
- Non-homeless CalWORKs adults (over the age of 26), who comprise 44% of the overall study group, accounted for 57% of the total health services used. DHS, DMH and DPH patients within this group of clients used about 13 services each over five years, or slightly more than 2.5 services annually per patient, which is 2 services more than the average for the full study period.
- Clients in the TAY subgroup used about three services less per patient than average over five years.

IV. Arrests and Jail Stays

Table 5 shows the five-year arrest and recidivism rates for the full study population. The arrest rate measures *the ratio of arrests to the size of the study population* and the recidivism rate measures *the ratio of re-arrests to arrested clients*.

Table 5. Five-Year Arrest and Recidivism Rates for the Full Study Population (2010-2014)

Overall Study Group, n=78,191	Arrests 9,618	Arrest Rate* 0.12
Total Arrested Clients, n=8,051	Re-Arrests 1,567	Recidivism Rate 0.19

*This rate is based on the total number of arrests, which includes re-arrests.

Source: DPSS LEADER, ELP.

- The 0.12 arrest rate over the five-year study period means roughly 1 arrest took place for every 8.5 persons in the overall study group over five years.^{xi}
- The 0.19 recidivism rate indicates that roughly one re-arrest took place for every five arrested clients.
- A total of 8,051 clients in the study group were arrested 9,618 times over five years, an average of 1.2 arrests per arrested client. Just over 17% of these arrested clients (1,384 of 8,051) were re-arrested, and these repeat arrests accounted for 16.3% of the total arrests observed for the study group.

V. Involvement in Child-Protective Cases

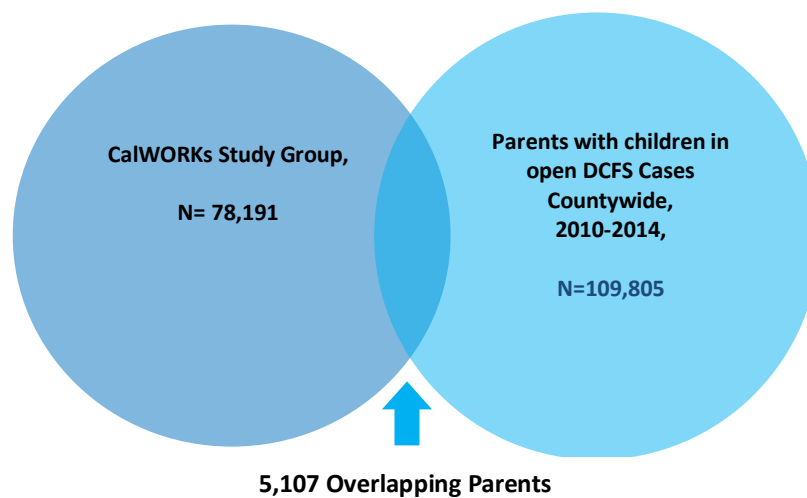
The overlap between CalWORKs and DCFS is of particular interest to DPSS. The two departments are each charged with distinct but intersecting responsibilities in the area of child well-being in Los Angeles County, and a number of DCFS program components for children are based on benefits paid through CalWORKs. Additionally, with the release of a final report from the Blue Ribbon Commission on Child Protection and the formation of the Office of Child Protection within the CEO, issues of child safety and well-being have taken on increased priority for the Los Angeles County Board of Supervisors. For these reasons, although CalWORKs adults are the primary focus of this report, the data match linking the study population to DCFS case records provided a valuable opportunity to produce aggregated information on the children involved in these cases as well.

It is important to note that while five years of DCFS cases are examined in this report, parents were included in the CalWORKs study group if they initiated cash aid for the first time in 2012 alone. The study group was tracked over at least two years prior to when they initiated receipt of aid (2010 through 2011), and for a maximum of three years after they initiated receipt of aid (2012 through 2014). Since other CalWORKs parents were involved with DCFS over the five year study period – and particularly given the importance of the relationship between the County’s Foster Care programs and CalWORKs - it must be re-emphasized that, although many CalWORKs families receive aid in multiple years after they first establish their eligibility for benefits, the analysis summarized here is not an exhaustive account of the CalWORKs-DCFS overlap but rather is limited to parents and children who all began their receipt of CalWORKs in the same year.

Overlapping Parents

Figure 1 shows the overlap between the CalWORKs study group and parents with children in DCFS cases countywide over five years.

Figure 1. The Study Group and Parents Involved in DCFS Cases

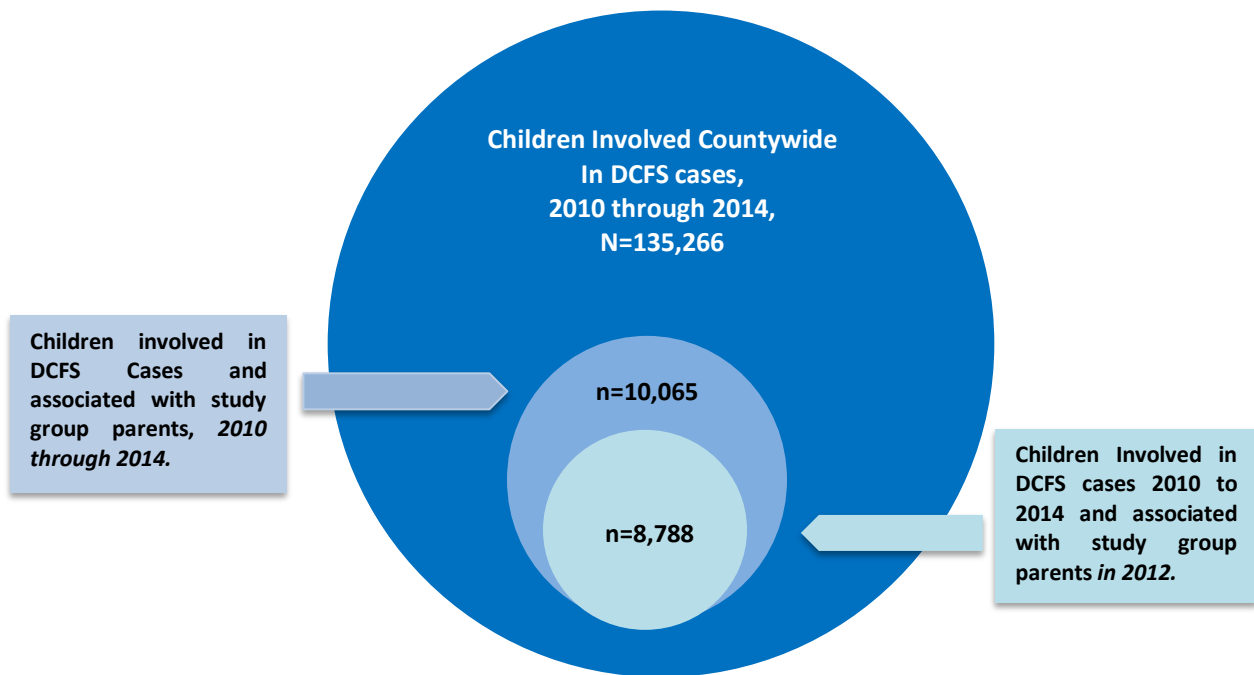


- A total of 5,107 of the parents in the overall CalWORKs study group (6.53%) were involved in 11,099 DCFS cases between 2010 and 2014. Roughly 12% of these cases were open prior to 2010.
- These CalWORKs clients accounted for 4.7% of the total number of parents in the County with children involved in DCFS cases over this period (n=109,805).

Overlapping Children

Figure 2 diagrams children involved countywide in newly-opened DCFS cases from 2010 through 2014 and the proportion of these children who were associated with parents in the CalWORKs study group. The diagram shows both the children associated with study group parents between 2010 and 2014 and the smaller point-in-time ‘snapshot’ of children associated with CalWORKs parents *in 2012*, who are a subset of the 114,607 children associated with study group parents in the year they began receiving cash benefits.

Figure 2. Children Involved in DCFS Cases, 2010 - 2014*



*The cases observed to produce these counts include those opened prior to 2010 but that remained open during all or part of the study period.

- The 10,065 study group children involved in DCFS cases between 2010 and 2014 comprise 7.4% of the 135,266 unique children in DCFS cases opened countywide over this period.
- Among these 10,065 children, 8,788 (87.3%) were *associated with the overall study group in 2012*. This more narrowly-defined group of children constitutes 6.5% of the children in DCFS cases opened countywide over five years, and they comprise 7.7% of children associated with the CalWORKs study group in 2012.

Table 6 parses these parents, children and cases down by the more specific subgroups within the CalWORKs study population and shows that a significantly larger-than-average proportion of homeless clients had children involved in open DCFS cases.

Table 6. CalWORKs Study Group and DCFS Cases Opened From 2010 through 2014

	# Parents Involved in Open DCFS Cases	% Group Involved in Open DCFS Cases	DCFS Cases		# Children involved in Open DCFS Cases	Average # Children per Parent*
			Newly Opened 2010- 2014	Total Open 2010- 2014		
Overall Study Group (n=78,191)	5,107	6.53%	9,769	11,099	10,065	2.0
Homeless Adults (n=18,853)	2,204	11.69%	4,294	4,867	4,412	2.0
Non-Homeless Adults (n 35,109)	1,678	4.78%	3,483	4,080	3,652	2.2
TAY (n=30,037)	2,127	7.08%	3,788	4,149	3,844	1.8
Homeless TAY (n=9,025)	1,015	11.25%	1,863	2,058	1,906	1.9

*This is the average number of children per parent involved in an open case.

Source: DPSS LEADER, ELP.

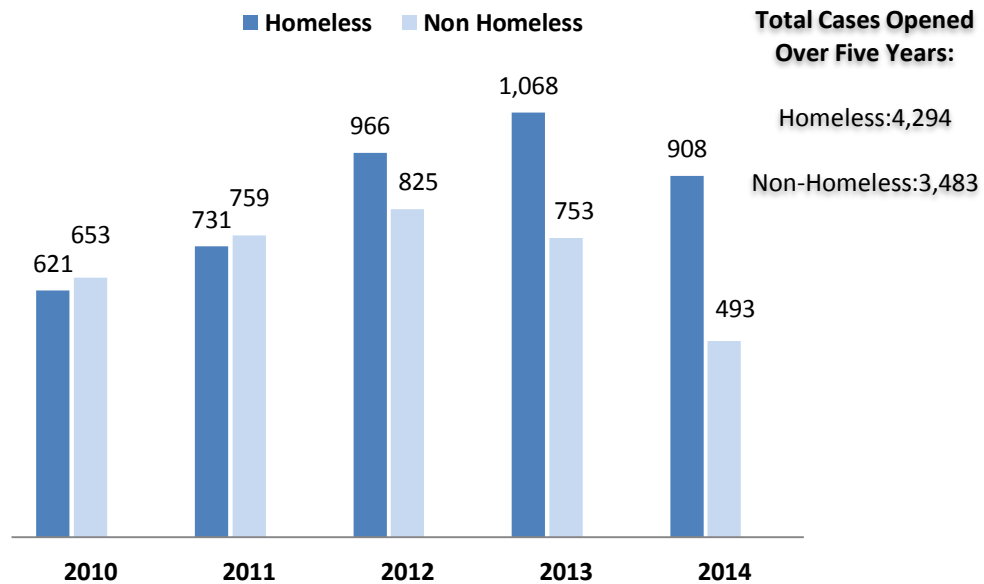
VI. Homeless CalWORKs Parents

One of the key research questions guiding the analyses conducted for this report is whether homeless CalWORKs parents have *distinct* patterns of service use. Almost one in four of the adults examined for this report experienced homelessness in 2012. The median age of these clients is three years younger than the overall study group, with 55% under the age of 27. A smaller-than-average percentage are Hispanic (38.6%), while African-Americans comprise a proportion (36%) that is twice what they comprise in the more general study population.

- Consistent with research literature on use of public services among homeless adults, larger-than-average proportions of the homeless subgroup, including homeless TAY, used DHS, DMH, and DPH services between 2010 and 2013.^{xii}
- An increase of 145% in the number of homeless clients using DPH substance abuse services is observed over the period from 2010 through 2013. As will be discussed below, this increase may reflect an increase in access to substance abuse services created through health care reform legislation.

- Larger-than-average proportions of clients in the homeless subgroup, including homeless TAY, were arrested, re-arrested, jailed and had children in child protective cases.
- Almost 12% of the homeless subgroup was involved in open DCFS cases over five years, as compared to 6.5% of the overall study group and 4.8% of the non-homeless subgroup, and the homeless subgroup accounted for 44% of the newly-opened study group cases during this time.
- Between 2010 and 2013, the number of newly-opened DCFS cases per year involving parents in the homeless subgroup increased by 72% (from 621 to 1,068). Clients in the homeless TAY subgroup accounted for 72% of this increase (Figure 3).^{xiii}

Figure 3. DCFS Cases Opened Annually Involving the Homeless and Non-Homeless Subgroups



	DCFS Cases Opened Annually					
	2010	2011	2012	2013	2014	5-yr total*
Overall Study Group	1,448	1,802	2,183	2,387	1,949	11,099
Homeless TAY	209	254	394	530	476	2,058

*These totals include cases opened prior to 2010.

Source: DPSS LEADER, ELP

- Homeless TAY accounted for 42.3% of the larger homeless subgroup’s DCFS cases open during five years (2,058 of 4,867 cases).
- In 2014, the number of newly-opened DCFS cases involving the homeless subgroup decreased by 15% (908 cases opened, down from 1,068 in 2013). Even with this

decrease, however, the number of cases involving these parents in 2014 was 46% higher than the count in 2010.

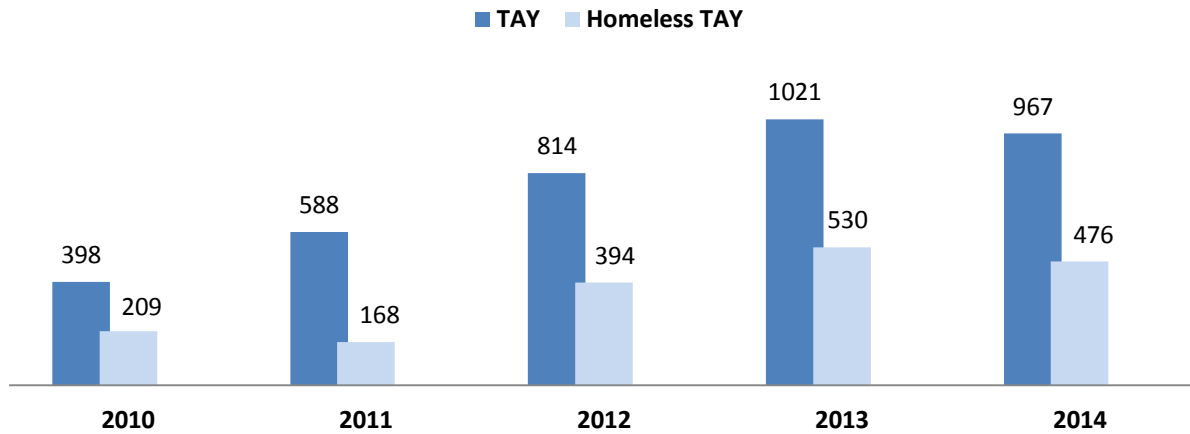
- By comparison, DCFS opened 753 cases involving parents in the non-homeless subgroup in 2013, which was 15% higher than the 653 opened in 2010. In 2014, however, newly-opened cases involving these non-homeless parents dropped by 35% to 493, a count that was also almost 25% lower than the number of cases involving the subgroup in 2010.

VII. CalWORKs TAY

A second CalWORKs subpopulation of particular interest to DPSS is Transition Age Youth (TAY). Similarly to homeless parents, the question of whether the TAY parents in the study population utilize County services in distinct patterns was a central issue framing the research conducted for this report. The TAY subgroup (n=30,037) comprises 38.4% of the 2012 study group and is inclusive of the homeless TAY subgroup (n=9,025). The proportion of women in the TAY subgroup is 7.4% larger than the proportion in the CalWORKs study group as a whole.

- While average- to below-average proportions of clients in the TAY subgroup used DHS and DMH services in individual years, the proportion of *homeless* TAY clients who used DPH substance abuse services for the full-five year period combined was double the proportion using these services in the overall study population.
- The TAY subgroup accounted for 38.8% of the study group's newly-opened DCFS cases from 2010 through 2014 (3,788 of 9,769), and 37.4% of the *total study group cases open* during these years.
- As shown in Figure 4, the number of DCFS cases newly-opened per year and involving parents in the TAY subgroup grew by 157% between 2010 and 2014 (from 398 to 1,021), and by 143% for the full study period.
- DCFS cases that were open during the five-year study period and that involved parents in the homeless TAY subgroup accounted for half of the open cases involving parents in the more general TAY subgroup (2,058 of 4,149).

Figure 4. DCFS Cases Opened Annually Involving Parents in the TAY Subgroups



VIII. Utilization Patterns Over Time

The 2010 through 2014 study period covered in the CalWORKs-ELP data matches was intended to capture periods before and after client receipt of cash benefits started in 2012. As shown in Table 7, this five-year period also spans over a number of legislative events at the County, State and Federal levels that must be taken into account in interpreting the match results. Please note that in figures showing trends over time, the final year of the observation period is not shown because a full year of 2014 data was not available at the time this report was being prepared and inclusion of partial data in an analysis of trends would be inappropriate.

The Impact of Health Care Reform

Trends observed in the DMH and DPH match results may reflect the effects of passage of the *Affordable Care Act* in 2010 at the Federal level, after which most California counties implemented *Low-Income Health Programs* (LIHPs) as part of an effort to meet the Federal legislation’s benchmarks for expanding Medicaid.^{xiv}

- The number of unique persons *countywide* using outpatient services provided through DMH rose from 119,644 in 2010 to 144,601 in 2011, an increase of 21%, before falling to 130,039 by 2013. As shown in Figure 5, the number of patients annually using DMH outpatient services *in the CalWORKs study group* increased more than 11 times faster than average, rising over this period from 893 in 2010 to 3,008 in 2013, an increase of 237%. Within this trend, patients using DMH services doubled over 2010 and 2011, and then grew by another 57% between 2011 and 2012, followed by an additional 9% between 2012 and 2013.

Table 7. Timetable of Legislative Events within the Five-Year Study Period.

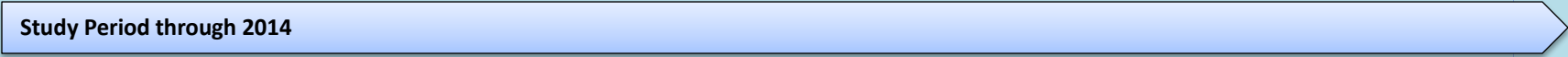
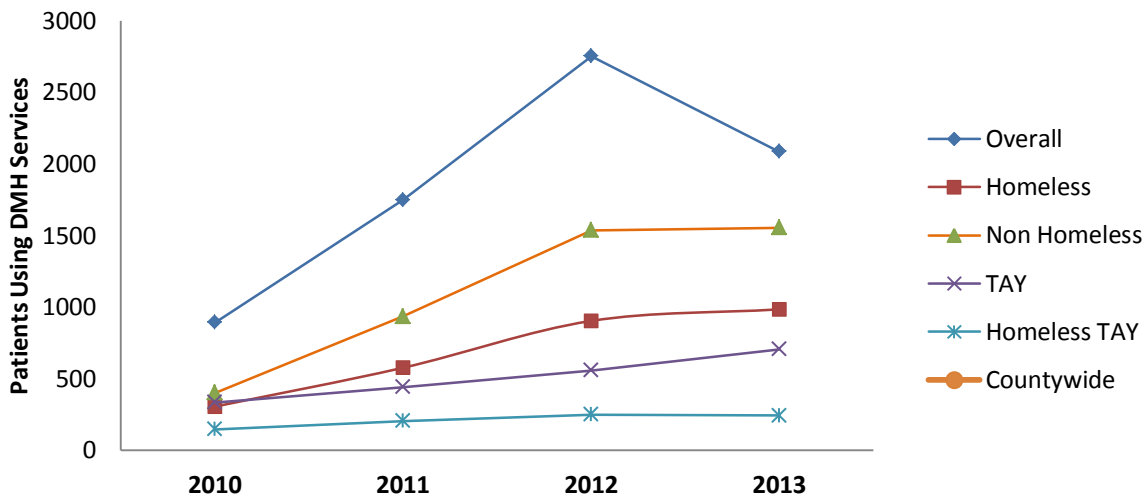
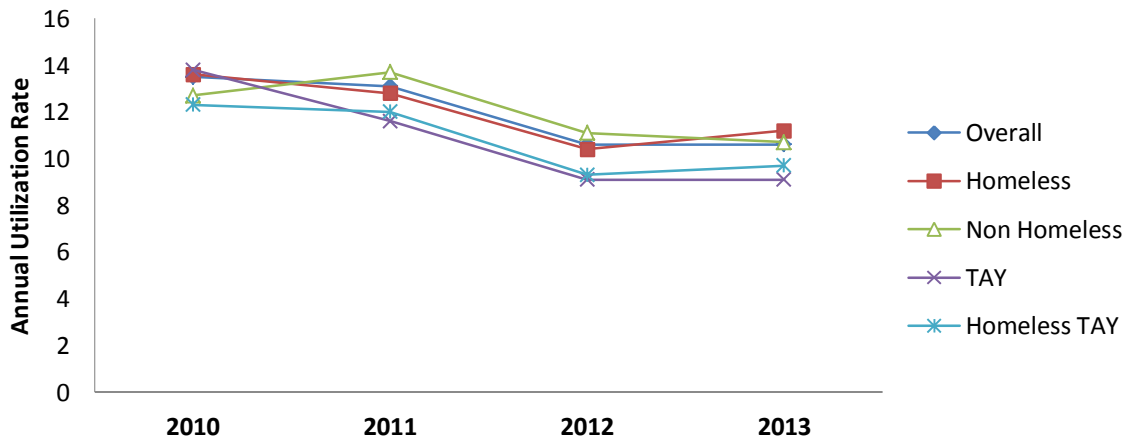
2010		2011				2012		2013	2014
									
Start of the Study Period	Passage of the Affordable Care Act	AB 12 passed in California	SB 72 passed and implemented in California	AB 109 passed and implemented in California	LIHPs implemented in California Counties in connection with Health Reform.	Cash Assistance Begins for the CalWORKs Study Group	AB 12 implemented in California	Los Angeles County approves and pilots Family Solution Centers in 2013.	Implementation of the Homeless Family Solution System in 2014.

Figure 5. CalWORKs Study Group Clients Using DMH Services Annually, 2010 – 2013



- However, while sharp increases in the number of study group clients using DMH services translated into 164% growth in the absolute number of services used per year between 2010 and 2013, a decrease is observed in the annual utilization rate (i.e. the number of services used per patient), from 13.5 in 2010 to 10.6 in 2013 (Figure 6).

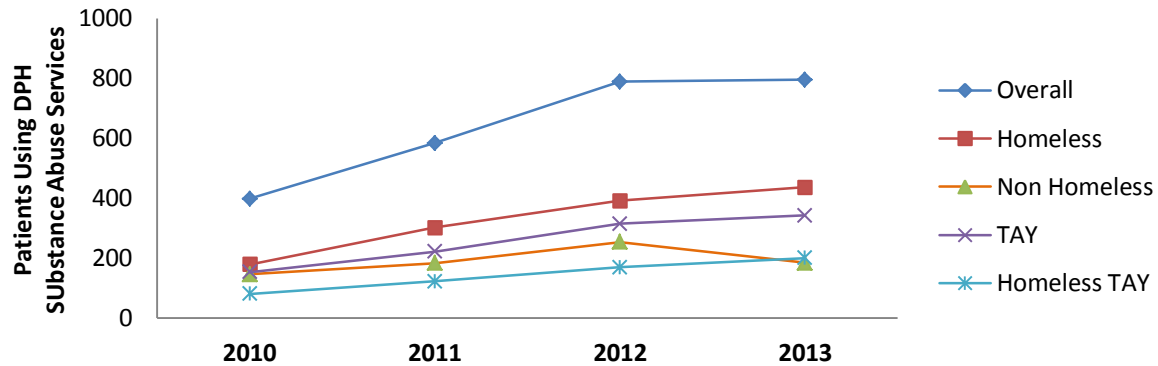
Figure 6. Annual DMH Utilization Rates Over Four Years



Source: DPSS LEADER, ELP

- In the case of DPH, the number of services used by the study group doubled between 2010 and 2013 (see Figure 7), but the annual utilization rate remained fixed at 1.1 over this period.

Figure 7. Study Group Clients Using DPH/SAPC Services Over Four Years



*The annual utilization rate among all groups over this period remained constant at 1.1 services per patient.

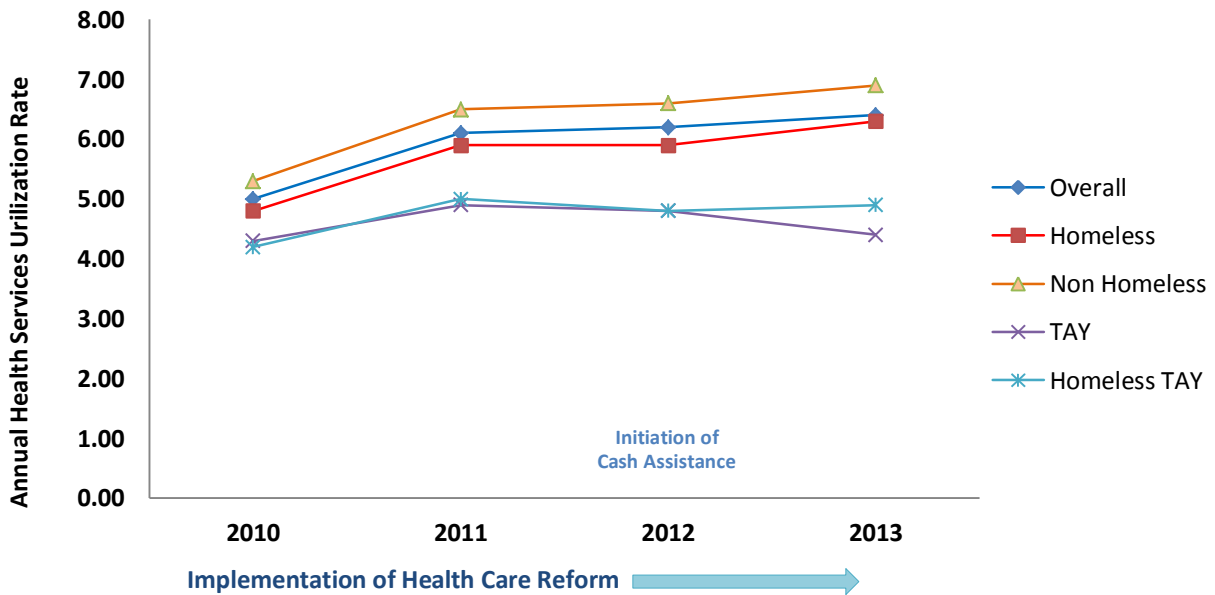
Although more analysis is needed before these trends can be interpreted definitively, they can be provisionally considered in relation to the growing body of research arguing that health legislation at the State and/or Federal levels is compelling health agencies to broaden the availability of substance abuse and mental health services to disadvantaged populations by providing treatment on a more efficient basis.^{xv} In the case of the CalWORKs study group, more clients used services over time, but the intensity of this use per client declined or remained flat.^{xvi}

Health Services and Cash Aid

Although CalWORKs clients are eligible for Medi-Cal, the available evidence shows that use of health services among study group client did not change significantly after they began receiving aid. Part of the reason for this - since the momentum driving the most noteworthy patterns had already begun when these clients began receiving aid - may be that the initial impact of health reform took place prior to 2012. In the cases of both DMH and DPH, growth in the number of study group patients using services lost momentum in 2013. In the case of DHS, patients and services increased sharply between 2011 and 2012 but then declined over 2012 and 2013.

As noted earlier, CalWORKs parents who receive health services through Medi-Cal may be enrolled with non-County managed care providers. Since a portion of the study group is likely to have become eligible for Medi-Cal only after they began their engagement with CalWORKs in 2012, one might expect to observe a drop off in the proportion of study group parents using County health services to the extent that some would presumably switch to non-County providers after previously using the County service delivery systems of last resort. The data are inconclusive with respect to this hypothesis. A decline of less than 2% in the proportion of study group parents using DHS services is observed from 2011 through 2013, and study group use of DMH and DPH services over this period remained essentially unchanged.

Figure 8. Annual Health Services Utilization Rates, 2010 - 2013



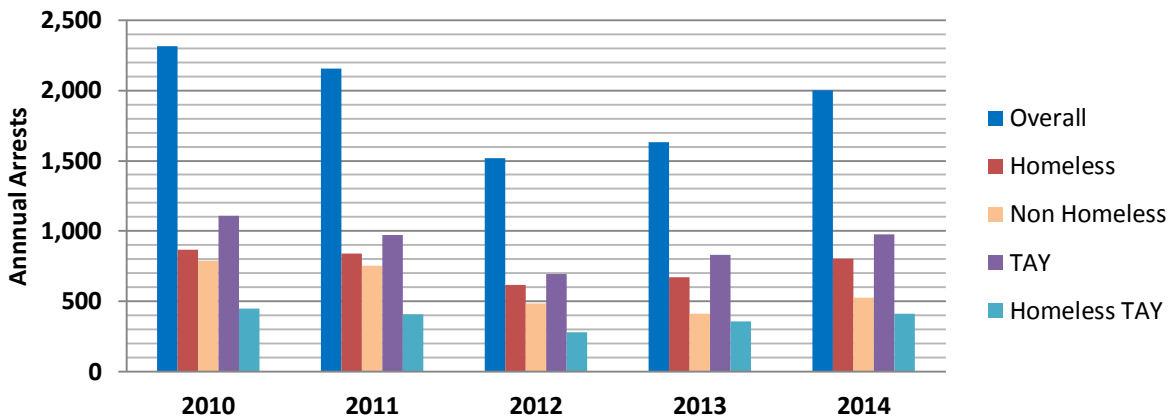
Source: DPSS LEADER, ELP

Explaining Trends in Arrests

The number of study group clients arrested per year decreased by a third between 2010 and 2014. Most of this decrease took place in 2012. Thereafter, the number of arrested clients began to inch upwards, increasing by 22% over 2013 and 2014.

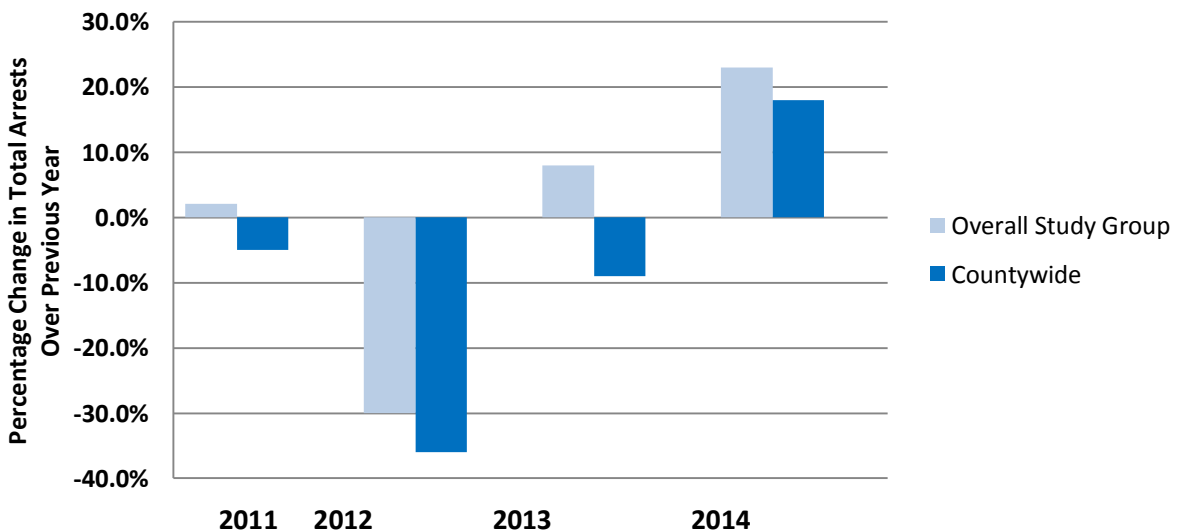
- In 2012, the number of study group clients arrested decreased by almost 30% from the previous year. Among homeless study group clients - who the data suggest are the most likely to be arrested - 2012 arrests were down by close to 27% from 2011 (Figure 9). However, in 2013 the number of study group clients arrested and the total number of arrests moved upwards again, increasing by 27% and 32% respectively, though the arrest rate over these years did not return to the 2011 level.
- Although the sharp decline in study group arrests coincides with the initiation of cash assistance, Figures 10 shows that an even more dramatic decrease took place over the same period in the County more generally, which makes inferences more difficult in terms of gauging the impact of cash receipt on the likelihood of a client arrest

Figure 9. CalWORKs Study Group Annual Arrests, 2010 – 2014, by Group.



The State Legislature’s passage and implementation in 2011 of AB 109, *Public Safety Realignment*, provides a more plausible explanation for these trends. The intent of the law is to decrease prison overcrowding by transferring oversight of a significant proportion of non-violent, non-sexual felons from the State to the counties. In connection with this transition, supervision of 60,000 persons involved in Post-Release Community Supervision was also transferred from the State to county probation agencies.^{xvii} While further research would be needed to establish more than correlation, much of the pattern at the study group level tracks the larger County pattern over five years.^{xviii}

Figure 10. Percentage Change in Total Annual Arrests By Comparison with Previous Year



-AB 109 Implemented 2011
 -Study Group Cash Aid Initiated 2012

DCFS Cases over time and their Duration

An average of 1,954 DCFS cases involving parents in the CalWORKs study group were newly opened per year from 2010 through 2014. These cases comprised 8.6% of the cases opened countywide over this period (9,769 of 113,468). If the analytic parameters are broadened to count all cases *open* during the study period, which include cases started prior to 2010 but that remained open during the study period, which would capture cases opened prior to 2010 but that continued during the study period, as well as cases that were re-opened and given a new case number after an initial closure – then cases involving study group parents constituted 7.5% of the cases open in Los Angeles County over five years.

The CalWORKs-DCFS data match results show that 81.4% of the study group cases newly-opened in 2010 were closed five years later (1,178 of 1,448). The average duration of these closed cases was 21.35 months, or one year, 9 months and almost 11 days. Inversely, almost 82% of the study group cases with a one-year observation window – i.e. 1,597 of the 1,949 cases opened in 2014 – remained open at the end of the year. More than half the study group cases with a two-year observation window (1,272 of 2,387, 53.3%) were closed after the two years.

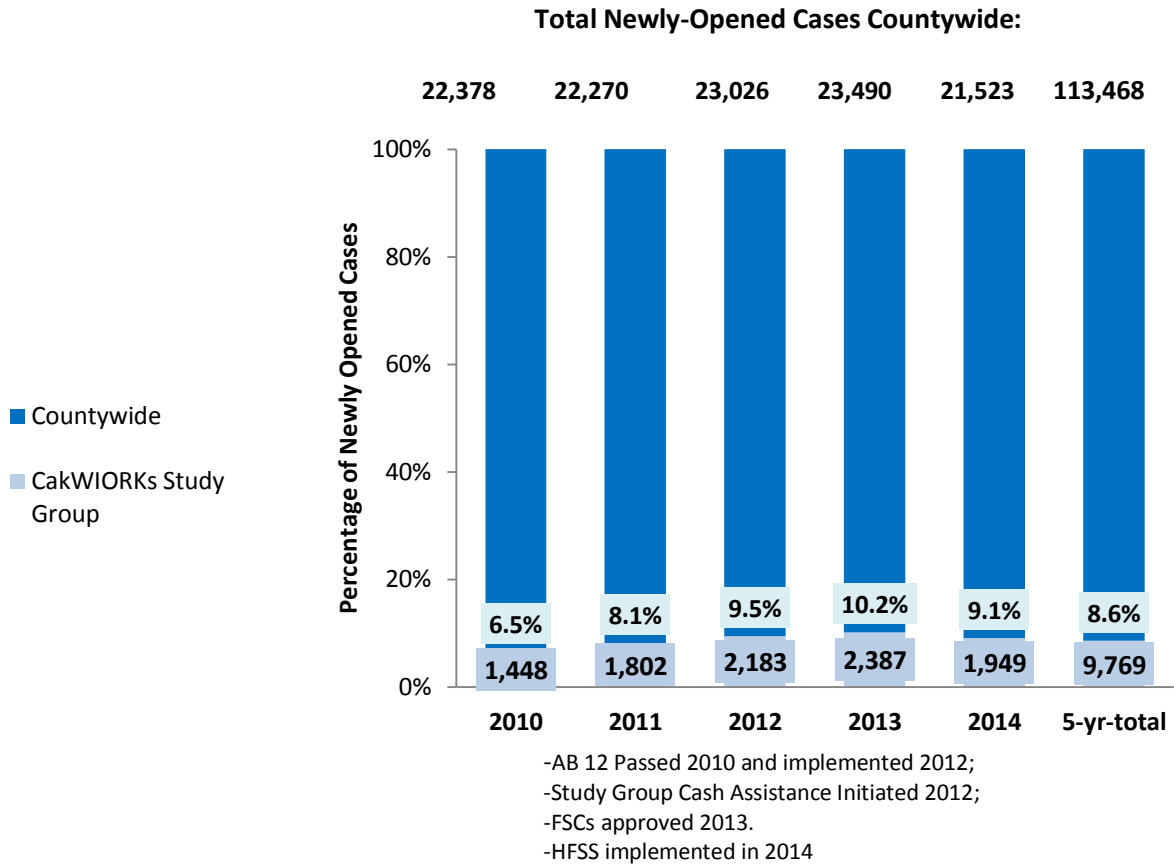
However, these findings do not control for the varied points in time at which cases are started. A survival analysis was therefore conducted to produce more robust information on the duration of DCFS cases involving study group parents.^{xix}

- The survival curve produced for study group DCFS cases indicates that 25% of these cases close after 10 months. At 17 months, half the cases close. After 31 months, 75% of the cases close.
- Cases involving homeless parents took between three and four months longer to close. However, the reasons for this are not immediately clear insofar DCFS is legally prevented from assuming custody of children of homeless parents. Additionally, cases involving TAY parents took about one month longer to close.

AB 12, HFSS and Cash Aid

The survival analysis conducted on the CalWORKs-DCFS match results also shows that cases opened between 2012 and 2014 were resolved in significantly less time than cases opened over 2010 and 2011.^{xx} This is one of several noteworthy results that, at least in terms of timing, could have logically been the result of either (a) the initiation of cash assistance among study group clients in 2012, (b) a ‘ramping up’ for AB 12 after its passage in 2010, followed by the bill’s eventual implementation in 2012, and/or (c) the approval of Family Solution Centers in 2013, which was followed by implementation of Homeless Family Solution System in 2014.

Figure 11. DCFS Cases Opened Annually, Study Group and Countywide, 2010-2014

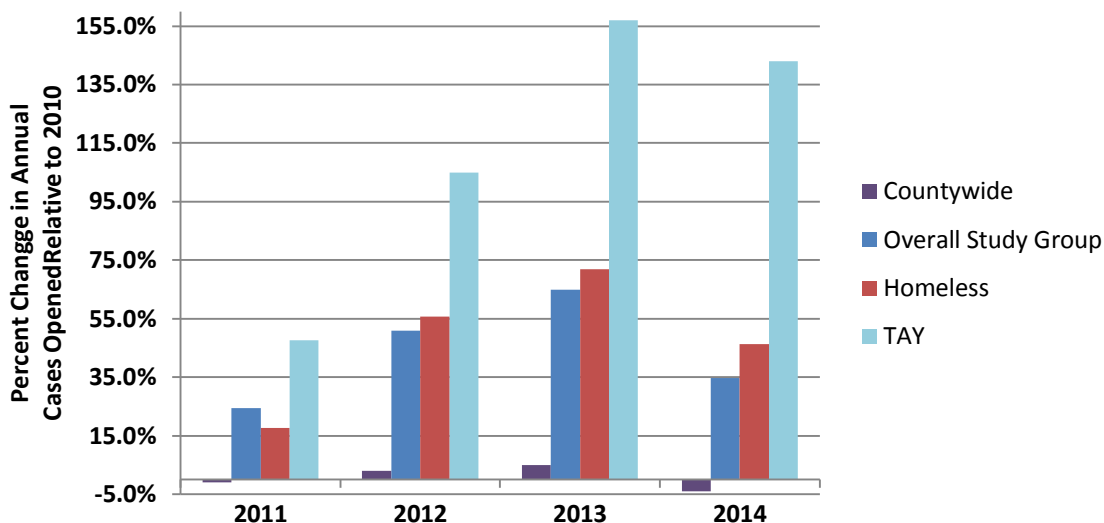


- With the caveat that smaller numbers are more volatile, Figure 11 shows that, while the countywide number of newly-opened cases remained fairly stable annually over the observation period, those involving study group parents increased by approximately 65% between 2010 and 2013 (from 1,448 to 2,387), and by 35% over the full observation period.^{xxi}
- In 2010 - the year in the study period with the least number of newly-opened study group cases – these cases constituted 6.5% of the countywide total (1,448 of 22,378 cases). In 2013 – the year in the study period with the most number of newly-opened study group cases - these cases comprised roughly 10% of the countywide total (2,387 of 23,490 cases)

Figure 12 looks at the rates of change, *relative to 2010*, in the annual numbers of newly-opened DCFS cases, comparing the countywide rates to those of the study group and its subgroups.

Figure 12. Rates of Change in DCFS Cases Opened Annually Relative to 2010

0% = Cases opened in 2010



-AB 12 Passed 2010 and implemented 2012;
 -Study Group Cash Assistance Initiated 2012;
 -HFSS approved 2013.

- The annual number of newly-opened study group cases grew each year between 2010 and 2013, a period over which cases opened countywide remained flat. This growth slowed significantly in 2013, the year after both implementation of AB 12 and the start of client receipt of aid. An 18% decrease in newly-opened study group cases is observed in the final year of the observation period.

The evidence available casts doubt on the hypothesis that these trends reflect passage and implementation of AB 12, the *California Fostering Connections to Success Act*, which became effective in 2012. The legislation allows DCFS clients who meet the appropriate eligibility requirements to remain in the Foster Care system after they turn 18, up to their 21st birthday, and to thereby continue receiving CalWORKs benefits as *Non-Minor Dependents* (NMDs). However, an analysis of DCFS cases by the *approximated* age of the client (child) at the time the case started shows that less than 2% of the cases opened countywide from 2012 through 2014 involved clients who were 18 years of age or older.^{xxii} By extension, negligible numbers of children within these cases were associated with the CalWORKs study group.^{xxiii}

Two factors complicating any subsequent examination are that these increases took place within a context where cases opened countywide remained flat, and the rate of increase in newly-opened study group cases begins to decelerate in 2013 before the absolute decrease observed for 2014. As of this writing, the data are insufficient to examine whether the pattern over the final two years of the study

period reflect outcomes related to Los Angeles County’s implementation in of the HFSS, which provides permanent housing for homeless families. The program is a collaborative undertaking between DPSS and the Los Angeles Homeless Services Authority (LAHSA) and was piloted in 2013 (as the Family Solution Center), before a re-designed and more comprehensive HFSS was approved and implemented in 2014.^{xxiv}

Further analysis would also be needed, with input from DPSS and DCFS, to determine whether the loss of momentum and eventual decline in newly-opened study group cases over 2013 and 2014 can be explained by the start of cash aid among study group clients in 2012, which could in turn mean that the trends are a *technical* effect built into the role CalWORKs plays in providing benefits to specific segments of children in the County’s Foster Care system. Such an analysis could also investigate the reasons for the shorter durations of cases opened from 2012 through 2014.

IX. Total Service Use and Overall Utilization Rates

Table 8 provides *overall match and service utilization rates* based on services used through *any of the five agencies included in the data matches combined*. In the case of the Sheriff’s Department, the service count is based on arrests. For DCFS, the annual service count is based on the number of newly-opened cases in the row year, and the count for the five-year total is based on all child protective cases that were open during the full observation period (i.e. the count is inclusive of cases that were open during the study period but that started prior to 2010). For this reason, the sum of services used over the five individual row years is smaller than the five-year total number of services.

Table 8. Any Engagement with DHS, DMH, DPH, DCFS and the Sheriff, 2010-2014

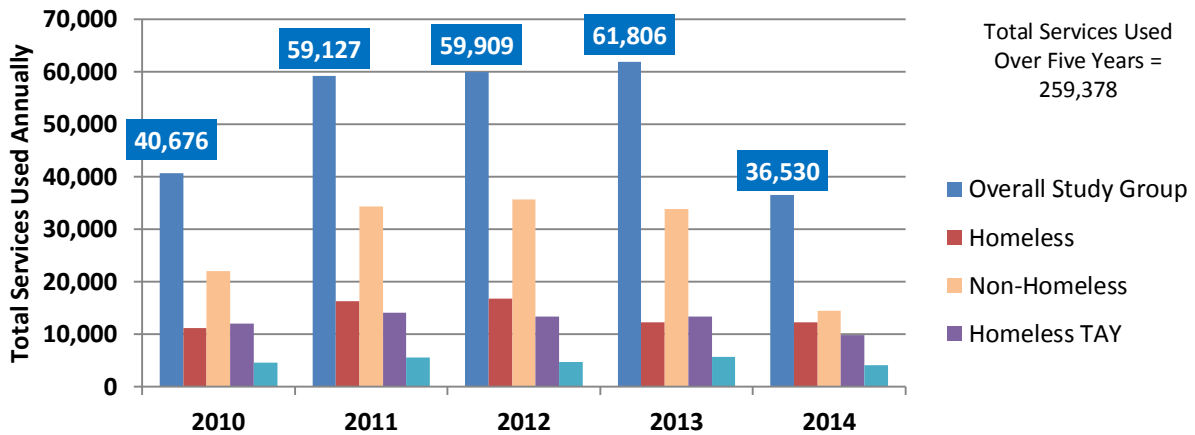
	Clients Using Any Services through the Five Agencies	Total Services Used	Five-Year Match Rate	Five-Year Utilization Rate
Overall Study Group	28,558	259,378	36.5%	9.1
Homeless CalWORKs Adults	8,949	76,068	47.5%	8.5
Non-Homeless CalWORKs Adults	12,844	143,978	36.6%	11.2
CalWORKs TAY	10,247	62,010	34.1%	6.1
Homeless CalWORKs TAY	3,988	24,866	44.2%	6.2

Since clients who are arrested or who have their children placed in DCFS child-protective cases are not qualitatively comparable as consumers of services to clients using services through DHS, DMH and DPH, the overall utilization rates are primarily measures of the intensity with which study group clients using any services *engaged with the County as a whole*:

- The CalWORKs study group used a total of 259,378 services between 2010 and 2014, a utilization rate of 9.1 services per user over five years, based on a total unique service-user count of 28,558.^{xxv}
- Considerably larger proportions of homeless parents used County services over the five-year study period, but non-homeless clients used services more intensively.

- Over the four years for which there are complete health services data (2010 through 2013), the number of services used annually rose from 40,676 to 61,806, an increase of 52%. (Figure 13).

Figure 13 Total Services Used Annually by the study group through all of Five Agencies*



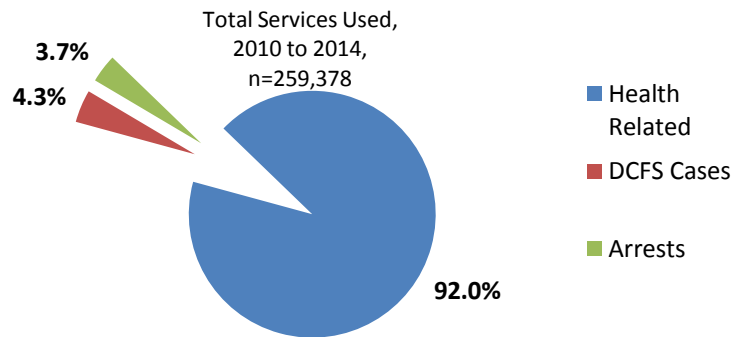
*2014 data from DHS, DMH and DPH covers less than 12 months.

- At the same time, the number of clients using services grew from 9,694 to 11,245 over these four years, an increase of only 15%. The bulk of this increase took place between 2010 and 2011 and then remained flat over the three remaining years. This is reflected in the annual utilization rate trend, which jumps by 1 service per user between 2010 and 2011 and then remains virtually unchanged from 2011 through 2013.
- Over the four years for which there are complete data, an *annual average* of 13.9% of the overall study group, or roughly 1 of every 7.25 clients, engaged at least once with at least one of the five agencies considered for this report.

Total Service Utilization by Service Domain and Subgroup

- Figure 14 shows that more than 90% of the services used by the full study group over five years were health-related (238,661 of 259,378). The balance were arrests (9,618, 3.7%) and child protective cases (11,099, 4.3%). Moreover, 77% of the *service users* in the study group utilized health-related services (22,155 of 28,558), as compared to roughly 18% who had children in DCFS cases (5,107 of 28,558) and 28% who were arrested (8,051 of 28,558).

Figure 14. The Study Group’s Total Utilization, by Service Domain, 2010 – 2014



- Health-related services constituted between 84% and 95% of the services provided to the four subgroups (Figure 15 and Figure 16).^{xxvi} In the case of the non-homeless group, arrests accounted for only slightly more than 2% of the services consumed, and child-protective cases comprised fewer than 3%. By comparison, 16% of the homeless TAY subgroup’s total County engagement over five years was either arrests or child-protective cases.

Figure 15. Total Service Utilization, Homeless and Non-Homeless Subgroups, 2010-2014

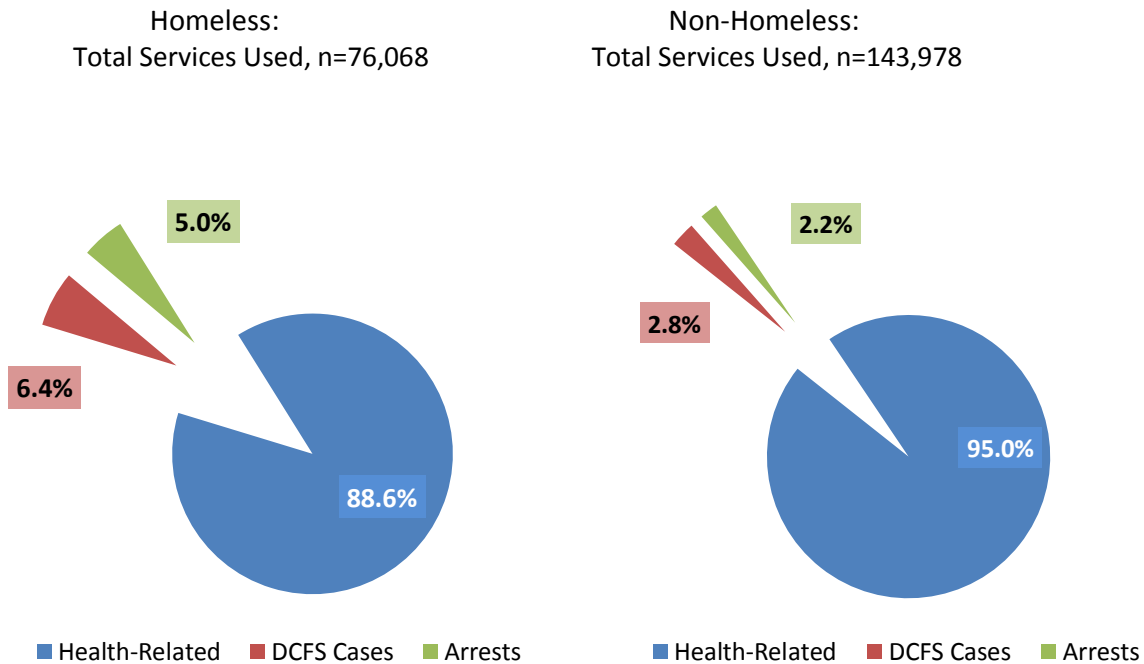
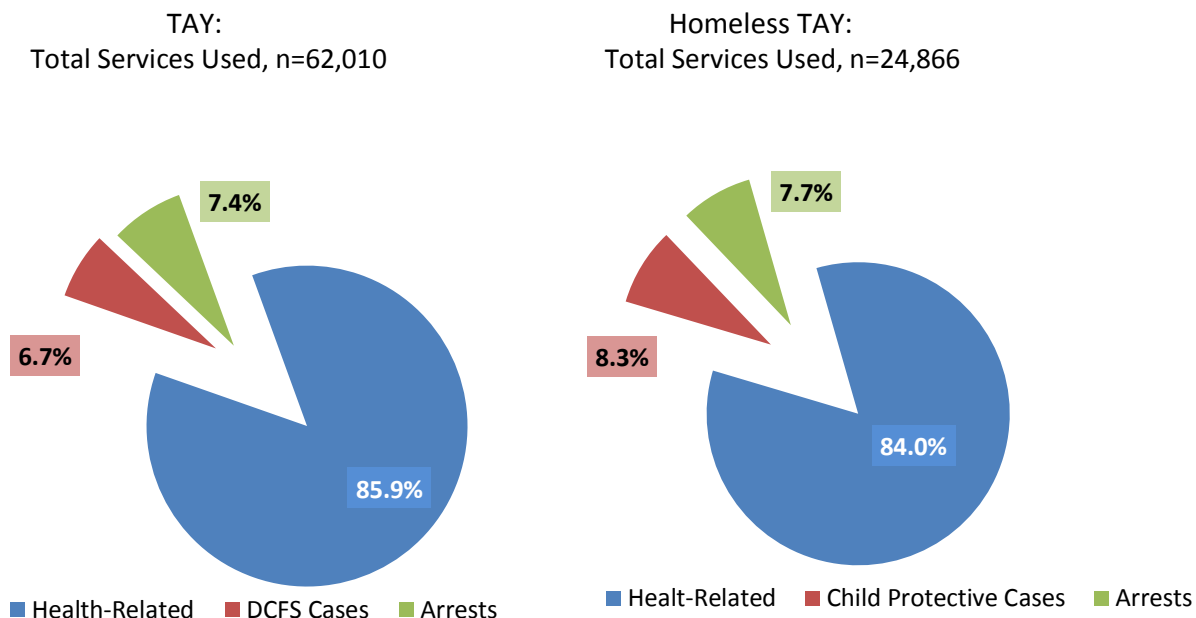


Figure 16. Total Service Utilization, TAY and Homeless TAY, Subgroups, 2010-2014



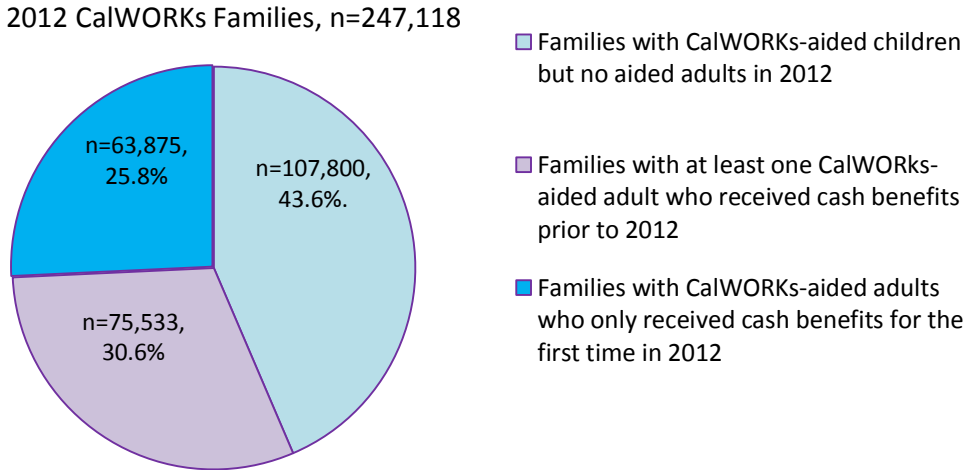
X. Implications

No significant complications were experienced in the process of matching CalWORKs data in LEADER to service records contained in ELP. However, a graduated process of replacing LEADER with the LEADER Replacement System (LRS) will commence in the latter half of 2015. DPSS is currently working jointly with the CEO to determine how to make LRS files compatible with ELP’s data warehousing architecture. The department will continue making *ad hoc* data extracts available for research until LRS is integrated with the data warehousing system. Provided the integration process preserves the elements that were necessary to complete this report, incorporating CalWORKs data into the data warehouse would not be difficult.

Interpreting the Match Results

The question of whether CalWORKs records should be added and routinely updated in the ELP data warehouse hinges less on technical considerations than on the resources that would be involved as measured against the utility of the analyses and programmatic enhancements that could be accomplished with the program’s records in the system. In looking to this report for guidance, it should be emphasized that the data matches were limited to a *segment* of the CalWORKs adult population, one consisting of adult clients who all received cash benefits through the program for the first time within the same 12-month period. The study was structured in this way in order to avoid the potentially distorting effects of comingling clients in different stages of the four possible years of adult eligibility for cash aid. However, roughly three-quarters of the families aided through CalWORKs in 2012 either included at least one aided adult who received cash assistance prior to 2012 or had no aided adults in the household in 2012 (Figure 17). The ramifications of this will be discussed further in the policy recommendations below.

Figure 17. Receipt of Cash Aid Among CalWORKs Families, 2012



Source: DPSS LEADER, ELP

The Significance of Non-Utilization

Approximately 64% of the adults observed for this report *used no County services outside DPSS over five years* (Table 9). A larger proportion of homeless clients used services but the combined match rate for the homeless subgroup remains under 50%. The most commonly used agency was DHS, and close to 80% of study group clients did not use DHS services. More than 70% did not use any health-related County services.^{xxvii}

Table 9. Non-Utilization of County Services Among the CalWORKs Study Group, 2010 - 2014

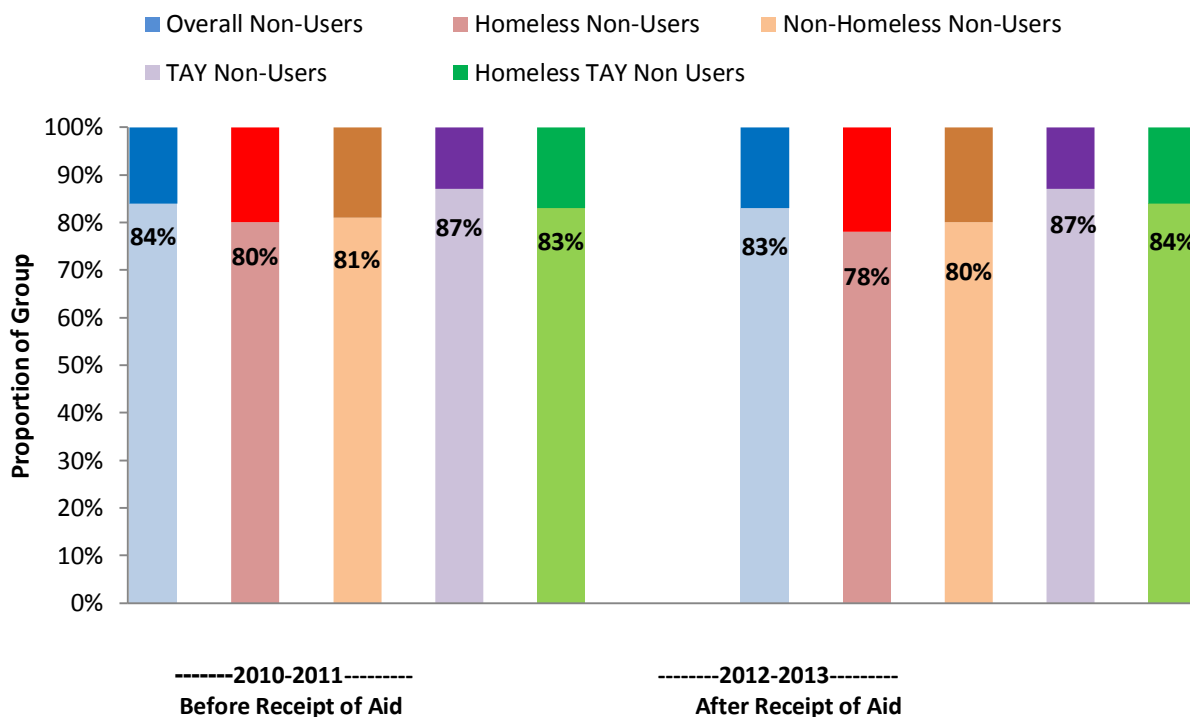
	Non-Users: #	% Study Group
DHS	61,313	78.4%
<i>Emergency Services</i>	71,159	91.0%
<i>Inpatient Hospitalizations</i>	76,085	97.3%
DMH	72,319	92.5%
DPH	75,281	96.3%
Health Services Overall	56,036	71.7%
Sheriff	70,140	89.7%
<i>Jail Stays</i>	71,457	91.4%
DCFS	73,084	93.5%
Any Services	49,633	63.5%

Source: DPSS LEADER, ELP

Figure 18 compares non-utilization of health services in the two years before and after study group clients began receiving cash benefits through CalWORKs.^{xxviii} With the caveat that a portion of the study group is likely to have received health services through non-County providers available to them through Medi-Cal, the data show that more than four-fifths of the overall study group did not use County health services during the two years after they started receiving aid, down by one percentage point from the two years beforehand.^{xxix} Non-use was down slightly for the homeless and non-homeless subgroups after receipt of aid was initiated and unchanged for the TAY subgroup.^{xxx} At the same time, a deeper examination of the patterns of utilization and non-utilization based on unique client counts *by year* shows that 22% of study group patients using services over 2010 and 2011 used them more than once, and the proportion ticks up to 25% for the two years after the start of cash aid.^{xxxi}

From a fiscal point of view, this degree of non-use might suggest that CalWORKs parents are a comparatively inexpensive population for the County in terms of service provision when measured against other populations engaging regularly with DPSS (e.g. GR recipients or homeless single adults more generally), not only in terms of the number of clients using services and the volume of services consumed over time, but also with respect to the types of services used, which include comparatively small numbers of jail stays and costly emergency and inpatient health treatments. The non-utilization observed may therefore additionally mean that CalWORKs serves as a cost avoidance mechanism for the County.^{xxxii} From an advocacy perspective, however, non-utilization may raise questions about the ease with which CalWORKs clients are able to access needed services.

Figure 18 Non-Utilization of Health Services Before and After Receipt of Cash Aid



DPSS and the CEO must address whether the service use patterns and frequencies presented in this report merit the resources required to add CalWORKs records into the data warehouse. The decision-making process at this level will depend on the envisioned purpose(s) of the integrated data. If the data are seen as part of an application and/or set of analyses that would assist DPSS line staff in facilitating client access to health services, then the extent of non-utilization suggests that adding CalWORKs data to the warehouse would address a significant departmental and service quality function.^{xxxiii}

The Need for More Inclusive Data on Services Provided to Children

ELP was initially launched as the *Adult* Linkages Project for the purpose of producing information on indigent single adults receiving cash aid through GR, and particularly those who are heavy utilizers of expensive County services.^{xxxiv} Initial agency-level decisions on the service records to be shared and routinely updated via ELP were made – with the exception of DCFS – based on the elements that would be needed to facilitate this type of analysis. The system’s basic ‘building blocks’ are therefore data on adults.

As shown in Table 10, DMH contributes a comparatively large amount of data on services provided to children, which typically constitute between 18% and 19% of the records the department adds to the data warehouse per year. In the case of DHS, the proportion is smaller, comprising about 12% of the yearly data shared through the ELP data warehouse. The DPH/SAPC data in ELP record substance use disorder services explicitly targeted to adults and episodes involving minors comprise a small fraction of the records the department contributes. For similar reasons, a comparatively small proportion Sheriff’s Department arrest records in the system are data on minors.

Since much of the policy emphasis in CalWORKs is placed on securing the well-being of children in families, and given that roughly 44% of the families aided through CalWORKs in 2012 were cases in which only children in the household were receiving benefits, the integration of the program’s data into ELP will be of greater value and utility if more inclusive data on children can be obtained, not only from County agencies but also from non-County entities providing services such as pediatric and post-natal care, immunizations, and hospital services for children. This is in part a legal question since access to records of services provided to minors is often subject to tighter statutory restrictions. A study of the relevant legal precedents and a review of the likely technical challenges and costs involved will be critical steps.^{xxxv} The willingness, *in principle*, of County – and possibly non-County – agencies to share these data must also be ascertained.

Table 10. Unique Clients with Service Records in ELP, by Agency, 2010 - 2014

	DHS			DMH			DPH			Sheriff		
	Unique Clients	Under 18**		Unique Clients	Under 18**		Unique Clients	Under 18		Unique Clients	Under 18**	
		#	%		#	%		#	%		#	%
2010	755,781	91,705	12.1%	119,644	21,441	17.9%	25,454	n/a		187,764	3,064	1.6%
2011	760,492	94,467	12.4%	144,601	25,443	17.6%	22,972			178,329	3,808	2.1%
2012	665,872	78,168	11.7%	133,568	24,360	18.4%	22,788			113,598	2,621	2.3%
2013	719,436	90,045	12.5%	130,039	25,085	19.3%	20,416			102,967	4,090	4.0%

The year of birth is the only non-encrypted data element retained from the birthdate in these records. The counts of clients under the age of 18 are based on the assumption of a January 1 birthdate in the row year. These counts are therefore *estimates* and not precise tallies.

Since much of the policy emphasis in CalWORKs is placed on securing the well-being of children in families, and given that roughly 44% of the families aided through CalWORKs in 2012 were cases in which only children in the household were receiving benefits, the integration of the program's data into ELP will be of greater value and utility if more inclusive data on children can be obtained, not only from County agencies but also from non-County entities providing services such as pediatric and post-natal care, immunizations, and hospital services for children. This is in part a legal question since access to records of services provided to minors is often subject to tighter statutory restrictions. A study of the relevant legal precedents and a review of the likely technical challenges and costs involved will be critical steps.^{xxxvi} The willingness, *in principle*, of County – and possibly non-County – agencies to share these data must also be ascertained.

XI. Recommendations

The following recommendations are addressed primarily to DPSS and cover program and policy questions, technical and administrative issues with respect to the ELP data warehouse, and suggested topics for further research and evaluation:

- 1. Convene a work group to conduct a review of this report and build consensus on the costs, benefits, and feasibility of integrating CalWORKs data into the ELP data warehouse.**

DPSS has had success in the past in forming work groups to review and clarify research conducted on its programs and clients. A CalWORKs-ELP work group might consist not only of program managers and staff within the DPSS and the CEO, but also stakeholders from other County agencies participating in ELP, for the purpose of building consensus on whether the information provided in this report supports the allocation of resources to addition of CalWORKs records to the service records in the ELP data warehouse.

- 2. Consider conducting a healthcare needs assessment for the CalWORKs adult population and address any barriers in Medi-Cal or elsewhere that restrict client access to health-related services.**

Utilization of County health-related services within the CalWORKs adult population as a whole is not as intensive as the consumption of these services among GR clients, which is consistent with expectations.^{xxxvii} While records in LEADER suggest that about half the monthly GR caseload in December 2014 (45,425 of 89,425) experienced homelessness for at least one month during the year, only one-quarter of the CalWORKs study group was homeless for at least one month in 2012.^{xxxviii} CalWORKs adults in the aggregate are also younger.^{xxxix} Nevertheless, the analyses of County health services utilization conducted for this report raise questions about how and where CalWORKs parents address their basic health needs. Less than one-third of the CalWORKs study group used any DHS, DMH and/or DPH services over a period of five years, and less than one-fifth used these services over the two years after they began receiving aid.

A health services needs assessment for the CalWORKs population, and specifically questions about the accessibility of health services, could be folded into a larger evaluation of the impact of health care reform on both the CalWORKs population and on DPSS operations more generally. Since a portion of the non-utilizers observed in this report likely use non-County Health providers available to them through Medi-Cal, a needs assessment would need to include a data match linking CalWORKs families

to Medi-Cal eligibility records available in LEADER, which would provide more broadly inclusive information on the population's use of health services.

The data match results produced for this report suggest that health legislation since 2010 may have significantly affected the study group's utilization of mental health and substance abuse services, in essence improving *general access* (as observed with the growth in the volume of study group clients using DMH and DPH services per year), but also either decreasing or maintaining the *annual services used per capita* (as observed in the study group's annual DMH and DPH utilization rates over the study period). Understanding whether broadened access to health care is sufficient to meet the health needs of aided CalWORKs parents, and what this widener availability of services means for DPSS in terms of practices, would lend support to the department's planning processes and help enhance supportive services.

3. Evaluate the effects of the transition from five-year to four-year time limits on CalWORKs benefits for adults.

This report's findings on the relationship between receipt of cash benefits and patterns of service use are varied and inconclusive. While the number of study group clients using DMH and DPH services peaked in 2013, the count of those using DHS services in the year they began receiving aid was 15% below the 2011 count. Arrests of study group clients declined dramatically in 2012, but the decline was even sharper for the County as a whole. The number of newly-opened DCFS cases involving study group parents peaked in 2012, but the momentum behind the increase predates the study group's receipt of benefits, and the increases took place within a context where the annual number of newly-opened cases countywide remained stable from one year to the next.

The effects of receiving benefits are all the more difficult to isolate and identify because many of these trends took place amidst legislative developments that may have affected the observed patterns of use and engagement. However, an evaluation of the effects of SB 72 would add useful information in this area. The bill was passed in 2011 and reduced the cumulative time limit on receipt of CalWORKs benefits to 48 months for adults. While all spells of welfare receipt dating back to 1998 count towards the new 48-month limit, first-time clients entering the program when the bill was passed, and who have stayed in the program and remained continuously eligible for benefits since then, are now facing the exhaustion of their eligibility. An examination of these clients – looking in particular at changes in their service use patterns and costs after they reach their time limits – could potentially answer questions left unresolved in this report, and would produce information on whether CalWORKs has hidden benefits as a source of cost avoidance for the County.

4. Work with LAHSA to collect outcomes data on the Homeless Families Solution System and take steps to ensure the program provides effective support to homeless clients at risk of involvement in DCFS cases.

Almost 12% of the homeless CalWORKs subgroup had children involved in DCFS cases from 2010 through 2014. For every case opened involving non-homeless study group clients, three opened involving homeless parents. The survival analysis conducted of DCFS cases additionally indicates that cases involving homeless parents take considerably longer to resolve than those involving non-homeless parents. Moreover, as is evident from the 128%% increase in cases opened annually for the homeless TAY subgroup over five years (from 209 in 2010 to 476 in 2014), these parents are at

especially high risk, accounting for 42% of the larger homeless subgroup's cases that were open during the five-year observation period.

If the HFSS functions as intended, the services provided can be expected to reduce the risk of CalWORKs families becoming involved in DCFS cases and shorten the duration of cases that are opened. DPSS entered into a contract with LAHSA at the beginning of Fiscal Year 2014-15 under which LAHSA is administering a redesigned version of the HFSS. Working with LAHSA to collect systematic data on outcomes for families using services through the HFSS, including matched data linked these families to de-identified DCFS case records, will be critical to assessing the effectiveness of the initiative and could be suggestive of practices to further assist families in crisis.

5. *Work with the Sheriff to determine why arrests declined significantly in 2012 both within the study group and countywide. Relatedly, examine why the trend was reversed over 2013 and 2014.*

While the 2012 decline in arrests coincides with passage and implementation of AB 109, a more rigorous analysis of the legislation's effects will require input from the Sheriff's Department. If AB 109 is the main factor driving the annual decreases observed over 2011 and 2012, then further examination would be required to determine why a reversal took place from 2013 through 2014. In addition to its policy relevance, the volatility seen over the study period necessitates due diligence in ruling out data quality issues.

6. *Consider expanding the population observed for Part 2 of the CalWORKs-ELP project and add more advanced analyses of complex service utilization patterns to the agenda for the follow-up study.*

Close to one-third of CalWORKs families in 2012 included at least one parent who received aid prior to 2012. DPSS would benefit from an additional and separate set of data matches linking these parents to their County service histories over the same five-year period for the purpose of comparing the aggregate service use patterns and costs of the two groups of adults (first-time clients versus longer-term clients). Broadening the types of clients included in the analyses would offer DPSS a more inclusive estimate of the costs involved in providing CalWORKs adults with services, as well information on whether the non-utilization of services extends to clients on aid for longer periods of time.

DPSS would also gain valuable information by structuring parts of the analysis in the second report at the family level, which is distinct from the individual client level at which the data matches in this report were conducted. CalWORKs data in LEADER/LRS provide information on all persons in aided families receiving benefits, including unaided parents and children. Linking the data elements in these records to data in ELP is not difficult and would produce information through a unit of analysis more in step with how DPSS provides benefits and services to CalWORKs families.

For this report, separate 'one-to-one' and 'one-to-many' data matches linked clients engaged with DPSS to five distinct County departments. For Part 2 of the CalWORKs-ELP project, more advanced multivariate analyses showing complex patterns of service use (through 'many-to one' and 'many-to-many' data matches) would deepen the information produced. For instance, the data available in ELP can be used to examine whether significant numbers of homeless CalWORKs parents with children involved in DCFS cases have records of being arrested and jailed and/or of using mental health or

substance abuse services. This type of inquiry will add significant value and enable a more detailed examination of costs and outcomes.^{xi}

Additionally, although this report examines clients over five years, during which they could have received aid for a maximum of three years (2012 through 2014), the construction of the study group does not take account of variable CalWORKs start dates during 2012, nor does it provide information on receipt of aid or exits from CalWORKs in 2013 and 2014. This restricts the inferences that can be drawn on the relationship between CalWORKs and service use. The same types of multivariate time-to-event modeling controls used in the survival analysis of DCFS cases would address this issue and control for variable CalWORKs start and end dates.

7. Make efforts to augment the ELP data warehouse with more systematic records of services provided to children

The addition of more inclusive data on children will increase the value of the ELP data warehouse in general and boost returns on investment in the integration of CalWORKs data. Making systematic information available on how children engage with County and non-County agencies is also consistent with the high priority the Board of Supervisors has given to issues of child welfare and safety. CEO/SIB's research unit has made some initial progress in negotiations over the issue of adding de-identified juvenile justice data to the Probation records included and routinely added to the system. CEO/SIB and DPSS are also working with DCFS to add more de-identified child protective data to the data warehouse and improve the procedures through which these records are updated and retained.

Adding records of health-related County services provided to minors is essential and would create opportunities to share the costs involved in maintaining the data warehouse. In addition to soliciting input from DCFS and the CEO's Office Of Child Protection in terms of how this might be accomplished, an important initial step will be to confer with children's advocacy groups with expertise that extends into the intersection of data, research and the law, such as First Five LA, the Los Angeles Children's Planning Council, the Children's Research Initiative within the National Science Foundation, and the Hilton Foundation's Strategy to Improve Outcomes for Youth Transitioning from Foster Care.

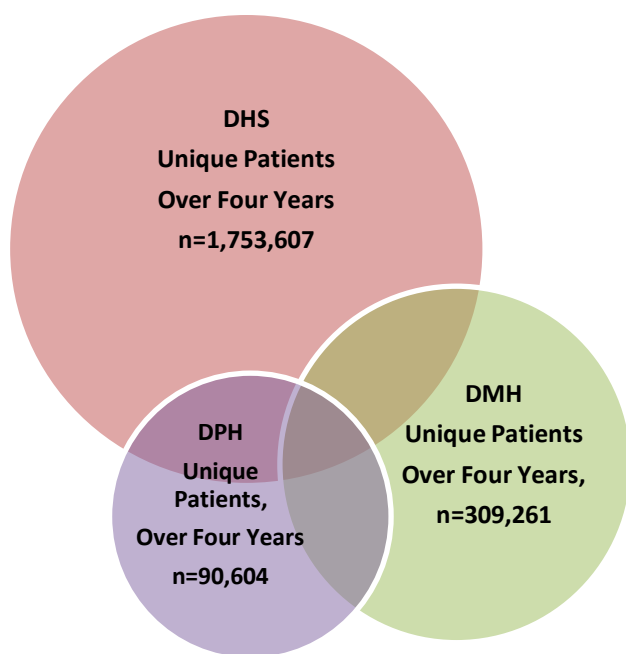
8. Explore whether the impending merger of Los Angeles County's three health agencies presents an opportunity to expand the use of the data warehouse and share the system's costs.

All projects utilizing ELP data have relevance to multiple County agencies by definition. The linked data provide policymakers working in distinct and separate organizational settings with information in common on how their client populations intersect. However, while the system has been periodically used to guide collaborative inter-agency initiatives, DPSS has sponsored the majority of the analytical work that uses the information available in the data warehouse. The department finances four-fifths of the system's annual maintenance costs, with the CEO covering the balance. Other entities inside and outside the County using the system do so through the CEO on a pay-per-project basis, and no agency or set of agencies outside DPSS has used ELP *with regularity* for purposes unrelated to DPSS. Despite this somewhat limited reach, however, ELP has enabled an impressive amount of knowledge production since its inception in 2009, serving as the basis for several dozen policy-driven studies, and the system is additionally used by DPSS for client prioritization and selection purposes in the GR program.

The proposed consolidation of DHS, DMH and DPH into a unified and comprehensive health services agency potentially provides an opportunity to expand the use and impact of the data warehouse. The merger would likely also affect the Sheriff’s Department since plan shifts responsibility for medical services provided in County jail facilities to the newly-merged health services department.

Large-scale data and analysis of shared patients and their treatment histories will be critical to a public agency merger on this scale, and the data warehouse is well positioned to provide a significant piece of the information needed to navigate the process. As shown in Figure 19, the system contains records on approximately 2.1 million unique patients who used services through DHS, DMH and/or DPH from 2010 through 2013, including almost 100,000 clients who consumed services through more than one of these agencies. These records include information on diagnoses, service types, procedures, costs and funding sources. DHS, DMH and DPH each have access to their own service records, but the data warehouse is distinct in its capacity to produce *de-identified* data *integrated* across the three agencies, thereby enabling large-scale matches, complex service-use patterns, and customized queries to be generated and shared *legally* for the purpose of making informed policy and budgetary decisions.

Figure 19. Patients with Records of Receiving Health Services in ELP from 2010 through 2013



Unique DHS + DMH + DPH = Duplicated Total Across Agencies:	2,153,472 Patients
Use of Services through more than One Agency = Overlaps:	99,623 Patients
Duplicated Total - Overlaps = Unduplicated Total:	2,053,849 Patients

Source: ELP

SIB’s research unit is best suited to assume the lead responsibility in efforts to add children’s health service records to the data warehouse and investigate opportunities to position the system as an asset in the County’s proposed health merger. CEO/SIB is organizationally situated in the CEO, where much of the direction and management of the health services merger process will occur, and the research unit is the custodian of records kept in the data warehouse, playing a central role in the maintenance

and administration of the system. Delegating responsibility to the research unit, including responsibility for outreaching to relevant non-County organizations, would simplify the coordination of efforts and increase the likelihood of building a funding mechanism for the system based on a more broadly-distributed cost-sharing arrangement.

Appendix A. The Demographics of the CalWORKs Study Group and its Subgroups.

Table A1. Demographic Profile of Adults Who Received Cash Assistance through CalWORKs for the First time in 2012

	Overall Study Group		Subgroup 1: Homeless CW Adults		Subgroup 2: Non-Homeless CW Adults		Subgroup 3: CW TAY		Subgroup 4: Homeless CW TAY	
Count & % Overall Study Group	#	%	#	%	#	%	#	%	#	%
N=	78,191	100	18,853	24.1	35,109	44.9	30,037	38.4	9,025	11.5
Average Age as of 1/1/12 Median (Mean)	28 (31.7)		25 (28.5)		38 (40.4)		22 (22.1)		22 (21.9)	
Age Ranges	#	% Group	#	% Group	#	% Group	#	% Group	#	% Group
26 or Younger	34,612	44.3	10,383	55.1	N/A		30,037	100	9,025	100
27 - 36	20,422	26.1	4,777	25.3	15,645	44.6	N/A		N/A	
37 – 46	12,631	16.2	2,360	12.5	10,271	29.3				
47 – 56	7,291	9.3	1,099	5.8	6,192	17.6				
Over 56	3,235	4.1	234	1.3	3,001	8.5				
Gender	#	% Group	#	% Group	#	% Group	#	% Group	#	% Group
Male	22,997	29.4	5,249	27.8	12,306	35.1	7,045	23.5	2,188	24.2
Female	55,194	70.6	13,604	72.2	22,803	64.9	22,992	76.5	6,837	75.8
	Overall Study Group		Subgroup 1: Homeless CW Adults		Subgroup 2: Non-Homeless CW Adults		Subgroup 3: CW TAY		Subgroup 4: Homeless CW TAY	
Race/Ethnicity	#	% Group	#	% Group	#	% Group	#	% Group	#	% Group
African American	14,321	18.3	6,787	36.0	4,366	12.4	6,154	20.5	3,374	37.4
White	11,192	14.3	1,589	8.4	7,567	21.6	2,350	7.8	480	5.3
Hispanic	39,793	50.9	7,277	38.6	17,108	48.7	16,745	55.7	3,634	40.3
Asian	3,163	4.1	299	1.6	2,283	6.5	624	2.1	87	>1.0
Other/Unknown	9,722	12.4	2,901	15.4	3,785	10.8	4,164	13.9	1,450	16.1
Language	#	% Group	#	% Group	#	% Group	#	% Group	#	% Group
English	62,896	80.4	17,868	94.8	22,847	65.1	28,089	93.5	8,819	97.7
Spanish	10,394	13.3	873	4.6	7,791	22.2	1,636	5.4	198	2.2
Other/Unknown	4,901	6.3	112	>1.0	4,471	12.7	312	1.1	8	>1.0
Marital Status as of 1/1/12	#	% Group	#	% Group	#	% Group	#	% Group	#	% Group
Married	13,236	16.9	1,329	7.1	10,199	29.0	2,002	6.7	326	3.6
Single	33,724	43.2	9,869	52.3	10,305	29.4	17,210	57.3	5,459	60.5
Other/Unknown	31,231	39.9	7,655	40.6	14,605	41.6	10,825	36.0	3,240	36.0

Appendix B. A Note on Minors in the Match Results

Establishment of match and utilization rates was approached with the objective of capturing service use patterns of clients as *adults*. The parameters defining the study group meant that no clients in the master CalWORKs file created for this report were under the age of 18 as of January 1, 2012. However, clients with records of receiving services in 2010 and 2011 were removed from the match results if they were under 18 on December 31 of each or both of these years. In deleting these clients, the services they used in 2010 and 2011 were deleted as well. Linkages connecting these clients to the five agencies from 2012 through 2014 were retained in the match results for individual years and in the five year totals, but clients were removed from the five-year totals if the only linkages established were in 2010 and/or 2011. These business rules were applied to all the linked data that was analyzed for this report. Table A4 shows the proportional impact of the removal of minors and the services they consumed.

Table B1. Minors Deleted from the CalWORKs-ELP Data Match Results

	Deleted Clients*		Deleted Services**		Five-Year Match Rate with Deleted Clients Retained		Five-Year Utilization Rate with Deleted Services Retained	
	#	% Reduction+	#	% Reduction++	Rate	% Point Difference+++*	Rate	Difference+++*
DHS	1,259	6.9%	5,940	4.7%	23.2%	+1.7	6.97	-0.4
DMH	958	14.0%	40,035	25.9%	8.7%	+1.2	22.7	+3.2
DPH	195	6.7%	214	6.0%	4.0%	+0.3	1.1	-0.2
Sheriff	567	6.5%	627	6.1%	11.0%	+0.7	1.2	0
DCFS	426	7.7%	573	4.9%	7.1%	+0.5	2.1	-0.1
*These are clients deleted from the five-year counts of persons using an agencies services because the only services for which they have records occurred while they were minors in 2011 and/or 2010.								
**These are services deleted from the five-year agency service counts because they were used by clients who were minors in 2010 and/or 2011.								
+This is the proportional impact that the removal of clients who only used services when they were minors had on the five-year count of agency clients.								
++ This is the proportional impact of the removal of services used by minors in 201 and/or 2010 on the five-year count of services used.								
++*This is the difference, in percentage points, that adding the deleted clients has on the five-year match rate.								
++*This is the difference in services per client using an agency's services that the addition of the deleted services has on the five-year utilization rate.								

The deletions removed approximately 7% to 8% of the clients counted in the five-year totals for four of the five agencies included in the matches (DHS, DPH, the Sheriff and DCFS). *These are clients who only had records of using an agency's services when they were under 18.* The resulting reduction in the counts of services used through these four agencies ranges between 5% and 6%. In the case of DMH, the removal of minors reduced the five-year client count by 14% and the five-year service count by close to 26%. The outsized impact of the deletions on the DMH match results – particularly the removal of 40,000 services – is partially a reflection of the ongoing manner in which the department provides counseling services, which are the only DMH services in the data warehouse. In the case of all agencies considered, including DMH, the re-insertion of deleted minors into the data set has negligible effects on match rates. The effect on five-year utilization rates is also small, except in the case of DMH, where adding these services would increase the utilization rate by three services per patient over five years.

Endnotes

ⁱTo validate the 2012 count of families receiving aid through CalWORKs (n=247,118) within a reasonable margin of error, we gauged our total using records available in LEADER against the count of cases produced using CDSS's monthly CalWORKs Cash Grant Caseload Movement reports for 2012. Our method in producing a count based on these reports was to begin with the January 2012 report's 'cases carried forward' (into the next month) number for Los Angeles County (n=166,693), which is derived using the "Part B" and adding columns A through E under the heading "6. Cases Carried Forward." These columns are (a) Two-Parent, (b) Zero-Parent, (c) All Other, (d) TANF Timed Out, and Safety Net. This sum served as a baseline. We then added the "Approved Cases" numbers given for Los Angeles County in the February through December CDSS reports for 2012, which are presented in the applications table ("Part A: Applications for Aid and Requests for Restoration). The sum of these numbers for all of 2012 is 81,574. This number was then added to the baseline number derived from the January 2012 report, producing a total case/family count of 248,267, which is 1,149 more than the number we produced with LEADER data, a difference of less than one half of one percentage point.

ⁱⁱA tabulation of the study population's demographic information is provided in Appendix A (Table 11).

ⁱⁱⁱThe overall study group includes all persons 18 years of age and older who had a record in LEADER of being eligible for cash assistance in any month during 2012. The dataset was pared down to include only those who were eligible for the first time in 2012. Information obtained from DPSS in preparing this report indicates that this counting method will include 18 and 19-year-olds who are still eligible to be aided as *children* until they graduate high school, meaning that our study population number is a slight over-count in the absence of additional filtering. However, the LEADER table that would enable us to remove persons comprising the over-count – and specifically the data field 'AG_IEL_TYPE_CD', which provides information that indicates whether a client is considered an adult (code='AD') and/or whether the client is a parent (code='PR') is not available to us in the LEADER data we receive on the CalWORKs program. It would not be difficult to use a supplemental data extract provided by DPSS to remove persons who are not aided as parents from the study population, but the number of removed persons would be small and have negligible effects on the match results presented in this report. Additionally, clients who were under 18 prior to the year they first began receiving aid were removed from the 2010 and 2011 match results so as not to dilute the findings with non-adults.

^{iv}The California Department of Social Services funds the CalWORKs Stage 1 Child Care (S1CC) Program, which is administered by DPSS locally through contracts with 10 Resource & Referral/Alternative Payment Program (R&R/APP) agencies. Stage 1 begins with a CalWORKs parent's entry into a County-approved Welfare-to-Work (WtW) activity or employment. Each family may be served in Stage 1 for up to six months or until it is determined that the client's employment and/or WtW status and child care arrangement has stabilized. If the amount of time necessary for the client to achieve stability exceeds six months, S1CC services may be extended. CalWORKs Stage 2 Child Care (S2CC) is funded by the California Department of Education (CDE) with S2CC services locally administered through CDE contracts with Alternative Payment Program agencies. Stage 2 begins when a CalWORKs client's employment and/or WtW situation has stabilized. Families may remain in Stage 2 for up to 24 months after their CalWORKs cash assistance has terminated. CalWORKs Stage 3 Child Care is funded by CDE and locally administered through APPs. Stage 3 provides child care benefits for: 1) former CalWORKs participants who are working, have left cash aid, and who have exhausted their 24-month eligibility for Stage 1 and/or Stage 2 Child Care; and 2) families who receive a CalWORKs diversion payment.

^v A DPSS reviewer of an earlier draft of this report notes the following:

'References to Stage 1 Child Care utilization rates or percentages are misleading since calculations may fluctuate greatly, depending on the numerator/denominator used in the calculation. There are a great many variables that may impact the numerator/denominator of any calculation to derive a rate such as:

-
- Authorized S1CC cases vs paid cases
 - S1CC payments made in a service month vs payments made for a service month
 - CalWORKs global population vs GAIN-registered population
 - GAIN-registered population vs GAIN-registered with age-eligible child population.

As such, provision of a utilization percentage like the “roughly 10%” referenced in the report could be misleading since it may imply this percentage is mirrored in the global CalWORKs and GAIN population (which it’s not). The Child Care Program Section recently provided the Legislative Analysis Office with an analysis of the difficulty in determining a universal S1CC utilization rate due to variances in methodology’.

^{vi} The filtering of clients who were minors from the 2010 and 2011 data match results was based on the client’s age as of December 31 of each year. The impact of the removal of these clients and services is specified in Appendix B.

^{vii} As of this writing RES is working with DMH to expand the mental health services records contributed to the ELP data warehouse. Please note, too, that psychiatric emergency service episodes and hospitalizations taking place at DHS facilities, such as a County hospital, are typically recorded in DHS data and can be distinguished based on the diagnosis (ICD-9) and procedure codes in the service records.

^{viii} However, mostly due to differences in the sizes of the subgroups, non-homeless adults accounted for more than 53% of DMH services utilized by the overall study population over the five-year period. Homeless adults, including homeless TAY, accounted for 34% of this utilization, and TAY, which also includes homeless TAY, accounted for 23%.

^{ix} The removal of minors and from the 2010 and 2011 match results reduced the five-year combined total of patients receiving health-related services by 8.6%, from 24,234 to 22,155. The 2,079 deleted patients used 46,189 health services from 2010 through 2011, 87% of which were DMH services. Inclusion of these clients and services in the overall health services match results would lift the match rate to 31%, an increase of 2.7 percentage points, and would increase the five-year utilization rate by one service per patient.

^x Due to the point in time at which the data matches for DHS, DMH and DPH were conducted, the 2014 match results were for less than 12 months (the DHS match results cover services provided through September 2014; the DMH results cover services provided through October 2014; and the DPH results cover services provided through November 2014).

^{xi} The removal of minors from the 2010 and 2011 match results deleted 627 arrests from the five-year total. Inclusion of these arrests would increase the five-year arrest rate for the CalWORKs study group to 0.13.

^{xii} While the research literature suggests that heavier use of services among homeless populations is a reflection of the health problems and disorders that tend to be associated with homeless, some of this utilization may be the result of homeless service providers encouraging their clients to attend to medical issues and barriers related to mental health and substance use disorders.

^{xiii} In 2013, DCFS opened 1,068 cases involving clients in the *homeless* subgroup, 530 of which involved clients in the *homeless TAY subset*. The 2013 count for the more general homeless subgroup was up by 447 from the 621 cases accounted for by the subgroup in 2010. The homeless TAY subgroup accounted for 321 of these 447 cases, which is the difference between the 530 cases accounted for by these clients in 2013 and the 209 they accounted for in 2010 ($321/447 = 0.718$).

^{xiv}The majority of enrollees in these programs became eligible for Medi-Cal in 2014, which is now available to adults 19 to 64 years of age who meet the program’s broadened eligibility criteria, though this would not be relevant to study group families still receiving aid at that time since eligibility for Medi-Cal is automatic for CalWORKs families.

^{xv} While the operational, budgetary and economic impacts of health care reform in the United States and California are not yet entirely clear, Oxley and MacFarlan’s influential study, *Health Care Reform: Controlling Spending and Increasing Efficiency* (1995) predicted that runaway health care spending in advanced counties of the Organization for Economic Co-Operation and Development would be one of the primary motivating factors driving efforts to reform health care systems. More recently, multiple researchers and journalists have discussed the Affordable Care Act’s potential to promote increased efficiencies in the delivery of health services. The following articles and studies are a sample of the recent literature in this area: Davis, Patricia A. *et al. Medicare Provisions in the Patient Protection and Affordable Care Act*. Congressional Research Service, R41196, 2010; Heysler, Elaine. *Physician Supply and the Affordable Care Act*; Congressional Research Service, R42049, 2013; Nissley, Erin L. “Health Care Reform Provisions Mean Hospitals Must Do More with Less.” *Times-Tribune*, August 9, 2010; Rosenbaum, Sara. “The Patient Protection and Affordable Care Act: Implications for Public Health Policy and Practice.” *Public Health Reports*, 126 (1), 2011. Sminsky, Alina. “Health Care Reform: Reducing Waste and Improving Efficiency in Today’s Medicaid,” *Student Pulse*, 2010, v.2, no.2;

^{xvi} Similar findings over the same period are observed in results produced through a series of data matches the CEO conducted linking data in ELP to clients who received services through the Los Angeles Homeless Services Authority (LAHSA) and the Federal Department of Housing and Urban Development (HUD) Los Angeles County, (Chief Executive Office, Los Angeles Homeless Services Authority and Abt Associates. *Linking Data across the Homeless Management Information System and the Enterprise Linkages Project: Results from an Exploratory Data Match* [October 2015]).

^{xvii} California Department of Corrections and Rehabilitation, Office of Research. 2013. *Realignment Report: An Examination of Offenders Released from State Prison in the First Year of Public Safety Realignment*.

^{xviii} A study published by the Public Policy Institute of California makes the hypothesis explicit in noting the following: “It is not obvious whether realignment will increase or decrease crime rates or whether the effect might vary by county, particularly since counties will differ in how they use the state funds designated for realignment. Crime rates might in fact rise if offenders are incarcerated for shorter periods of time. But crime rates might decline if counties use intervention policies—such as job assistance or drug treatment—that are found to change offender behavior.” (Lofstrom, Magnus, Joan Petersillia and Stephen Raphael. *Evaluating the Effects of California’s Corrections Realignment on Public Safety*. Public Policy Institute of California. August 2012).

^{xix} Analysis of the duration of cases is necessarily time sensitive. A case started in January of a given year has a higher probability of closing by the end of the year than a case that opens in November, and the duration of cases with a maximum observation window of five years – i.e. those opened in 2010 and observed until they close or for five years, whichever comes first – will skew towards longer durations when compared to cases with a maximum observation window of three years, all else being equal. Survival methods apply statistical controls to neutralize the confounding effects of differentiated entry times – in this case the start dates of the observed DCFS cases – thereby providing a more reliable set of estimates for how long the DCFS cases were typically open during the study period, as well as information on the effects of age, homelessness, and the receipt of cash aid on the length of a case. An added advantage of these methods is that they feature procedures that enable the assimilation of cases with blank end dates in the data, which typically appear in data either because the cases are ongoing at the time the data are collected or if there are data quality issues that create either missing values or nonsensical start and end dates (e.g. cases recorded with dates in the future or with end dates that come before the start date).

^{xx} In conducting the analysis of case duration relative to the initiation of cash receipt, we assumed that start dates for receiving aid would be randomly distributed across the 78,191 clients observed overall. However, more analytical precision would be gained if the duration of the DCFS case were linked to the actual mm/dd/yy cash aid start date in LEADER.

^{xxi} The spread between the maximum and minimum number of cases opened countywide over the study period - 2013 and 2014 respectively - is 8% (1,967 cases).

^{xxii} Only the year in a DCFS client's case records is retained in the files made available through ELP data sharing arrangements. The proportional distribution by client age of DCFS cases opened between 2012 and 2014 is therefore an *approximation* derived by subtracting the client *birthdate year* from the *case start date year* in the DCFS data.

^{xxiii} A fraction of 1% of the study group children involved in newly-opened DCFS cases between 2010 and 2014, and between 2012 and 2013 – were 18 years of age or older.

^{xxiv} The redesigned HFSS includes active involvement from DMH and DCFS in the provision of services and combines DPSS' Homeless CalWORKs Families Project and Emergency Services Solutions component with the Family Solutions Centers jointly funded by the County and the City of Los Angeles.

^{xxv} The removal of minors from the 2010 and 2011 match results reduced the five-year total for study group clients using any County services by approximately 8.4%, from 31,165 to 28,558, a difference of 2,607 clients. Removal of the services they used in 2011 and 2012 reduced the total number of services consumed by the study group over five years by 15% from 306,767 to 259,378, a difference of 47,489 services, 97.5% of which are health services and 84.5% of which are outpatient services provided by DMH. If these deleted clients and services are included in the denominators, the five-year overall match rate for the study group increases to 40% and the five-year utilization rate increases to 9.8 services per client over five years.

^{xxvi} The overlap between Homeless TAY and both the larger homeless subgroup and the larger TAY subgroup should be underscored in this context. Homeless TAY clients using services are counted in all three groups.

^{xxvii} If the business rules applied in the data matching process are relaxed to include clients who were minors in 2010 and 2011, the general match rate increases to 40%, but the increase is unevenly distributed as roughly 85% of the services these added clients used over two years were outpatient treatments provided by DMH.

^{xxviii} Please note that the study group is not constructed in a way that reveals whether clients remained on CalWORKs after 2012.

^{xxix} The before and after client counts are unique *within* the two year periods but not unique *across* the two- year periods. A client who uses services before and after initiation of cash aid is counted once in each two-year period.

^{xxx} By virtue of how these non-utilization measurements are defined, capturing two years before and two years after, they will be higher than the proportions for the full four-year period because the measurements capture two years less of possible service use while the denominators remain the same. The two-year rates of non-utilization before and after cash aid are therefore comparable, but these rates are not comparable with the four-year rate.

^{xxxi} In the overall study group, the sum of unique study group patients using services in 2010 and 2011 *counted separately* - i.e., where each patient is counted once in each year of service use - is 16,542 (2010 count=7,427; 2011 count=9115), whereas the total number of unique clients for the *combined* two year period – where each client using services is *only counted once within the two-year period* from 2010 through 2011 - is 12,783. This means that $((16,542-12,783)/16,542=0.227)$. For 2012 and 2013 counted separately, the sum of unique study group patients using health services is 18,209 (2012 count=9,109; 2013 count=9100), while the total number of

unique clients for the *combined* two-year period – is 13,597, meaning that that 25% of those using services over two years used them more than once $((18,209-13,597)/18,209=0.253)$.

^{xxxii} Showing this more definitively would presuppose the availability of data on a comparable control group of parents not engaged with CalWORKs and/or a more nuanced examination of utilization patterns pegged to the CalWORKs entry and exit dates of the observed clients. Several options for analysis at this level are discussed in the concluding sections of this report.

^{xxxiii} One of DPSS's policymaking objectives for the GR program in recent years has been to use integrated data to re-direct the chronically-homeless segment of the program's client population from high-volume use of expensive emergency and inpatient medical services to treatments provided on a more cost-efficient outpatient basis. By contrast, one goal for CalWORKs may be to use integrated data to ensure the program's clients are able to obtain healthcare.

^{xxxiv} Culhane, Dennis P. and Stephen Metraux. *Using Adult Linkages Project Data for Determining Patterns of Service Use by General Relief Recipients in Los Angeles County*. Chief Executive Office, Service Integration Branch, Research and Evaluation Services. July 2009.

^{xxxv} It will be necessary to not only study the legal parameters in place with respect to access to de-identified information on health services provided to minors, but also to review the extent to which County and non-County health records can legally reside on a common platform.

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^{xxxvii} The basis for these expectations is formed, in large part, by the 2009 report accompanying the launch of the Adult Linkages Project, which is the most comprehensive study to date of service use patterns within the County's GR population. Among the subgroups observed in the ALP study is a cohort of the clients who received cash assistance through GR *for the first time* in the first quarter of 2006 (n=7,982). Although the divergent analytical structure of the study and the resulting size of the cohort limit the comparability of its findings with the results reported here, a summary set of contrasts across the two reports is suggestive in a general sense of the differences between the CalWORKs and GR populations. More than 45% of the GR cohort used DHS services over the three years they were observed (2005 through 2007), including 32% who used these services while they were receiving GR within the study's observation period. In the present report, roughly 22% of the overall study group used DHS services over five years, including 8% who used these services during the year in which they began receiving aid. Moreover whereas 19% of the GR cohort used substance abuse services through DPH over three years, including roughly 10% who used these services while they were receiving GR benefits, 4% of the CalWORKs study group used these services over the period they were observed, including 1% who used them in the year they began receiving aid. Finally, 19% of the GR cohort used DMH services in three years, including 14% who used them while they were receiving GR, as compared to 7.5% of the CalWORKs study group who used DMH services over five years, including 2% who used them in the year they began receiving aid. An additional contrast is that 16% of the GR cohort used DHS *emergency* services over three years versus 9% of the CalWORKs study group who used these services over five years, and 16% of the GR cohort experienced an *inpatient* hospitalization versus less than 3% of the CalWORKs study group. A more apt comparison might gauge the group of 'first-time' GR recipients with the homeless CalWORKs subgroup studied here in order to loosely control for the effects of homelessness. Doing so lessens the contrasts between the two populations somewhat, but the net result still shows considerably heavier use of DHS, DMH and DPH services within the GR group and does not modify the aggregated inference that the CalWORKs population is the healthier of the two.

^{xxxviii} Chief Executive Office, Service Integration Branch. *Sanctions and Los Angeles County's General Relief Caseload: The Implications of Recent Policy Changes* (forthcoming).

^{xxix}A comparison of the CalWORKs study group with GR clients who had a 2012 start date ('effective date') in LEADER (n=118,265) shows that the median age of the GR group was 32 as of January 1 2012, and those who were at least 37 years of age comprised 43% of the group, versus a median age of 28 for the CalWORKs group, for which clients who were at least 37 years of age comprised 30% of the group. These contrasts may be skewed somewhat since clients in the CalWORKs study group are limited to persons who received aid for the first time in 2012. However, 2009 ALP report similarly reported that the mean age for a cohort of 'first-time' GR recipients was 37. (Culhane, Dennis P. and Stephen Metraux. *Using Adult Linkages Project Data for Determining Patterns of Service Use by General Relief Recipients in Los Angeles County*. Chief Executive Office, Service Integration Branch, Research and Evaluation Services. July 2009).

^{xi} To conduct many-to-many and many-to-one matches for Part 2 will require a moderate amount of manual data-preparation since ELP's technical integration tools are not currently configured for seamlessly automated performance of such procedures. However, more advanced tools could be added to the Information Technology (IT) specifications for an updated and more state-of-the-art data warehousing platform if DPSS and the CEO determine upon review that the heightened level of analytical sophistication is of sufficient value.