

2008

# NEEDS AND ASSETS REPORT



FIRST THINGS FIRST

**Central Maricopa**

Regional Partnership Council



## Central Maricopa

### Regional Partnership Council

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#### 2008 Needs and Assets Report

Submitted in accordance with ARS 8-1161. Each regional partnership council shall submit a report detailing assets, coordination opportunities and unmet needs to the board biannually. The regional partnership council's needs and assets assessment shall be forwarded to the board for final approval no later than September 1 of each even-numbered year, beginning in 2008. The board shall have discretion to approve or reject a council's assessment in whole or in part or to require revisions. The board shall act on all needs and assets assessments no later than October 1 of each even-numbered year, beginning in 2008.

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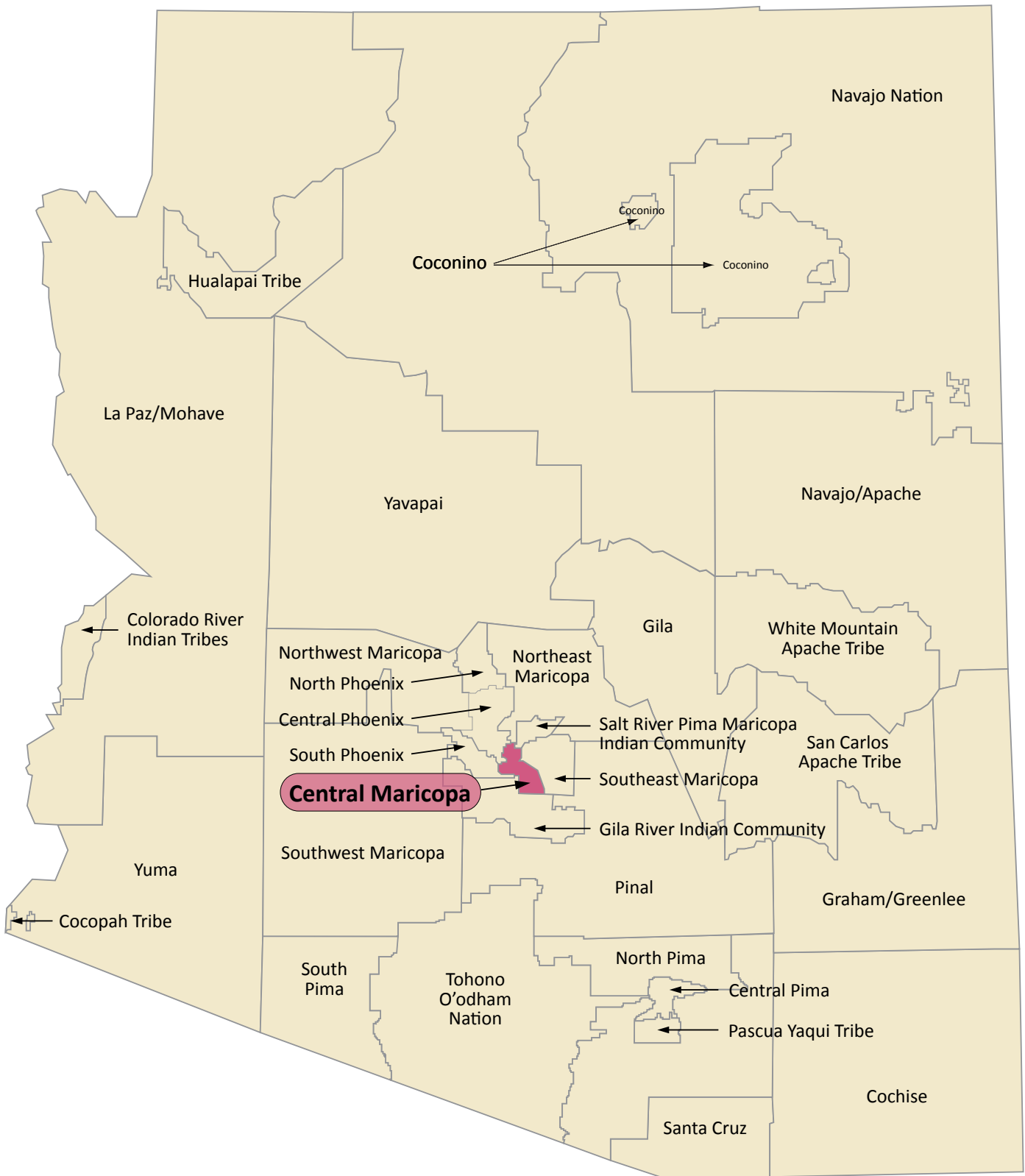
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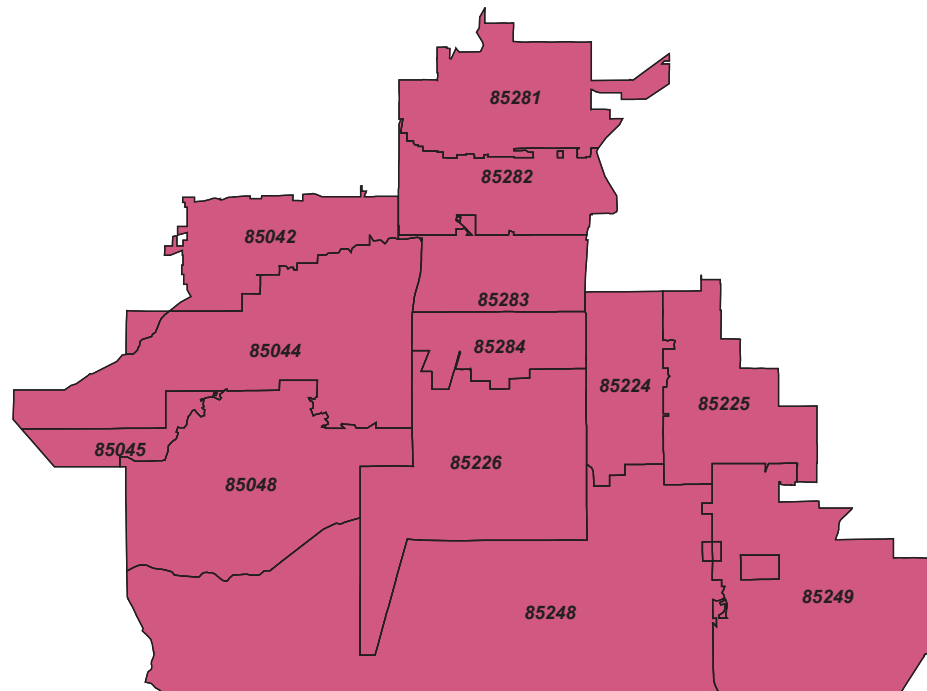


# Regional Child and Family Indicators – Young Children and Families in the Central Maricopa Region

## Overview

The Central Maricopa Region of Chandler, Guadalupe, Tempe and Ahwatukee embody both dense, urban, ethnically-diverse neighborhoods and new and growing suburban communities. Demographic differences exist among the population centers, with pockets of high poverty (such as in North Tempe and Guadalupe) and more affluent sections of the region (such as portions of Chandler and Ahwatukee). In 2003, Tempe's 18 percent rate of poverty was nearly twice that of Chandler (10 percent). Guadalupe, which is predominantly Hispanic (73 percent of total population), and with 48 percent Pascua Yaqui Indian tribe affiliation, experiences a 40 percent rate of poverty. The median household income for Chandler, the largest community in the region, is \$60,007, much higher than state and national rates. Tempe at \$42,325 and Guadalupe at \$30,089, however, fall below the state and national median household incomes of \$47,265 and \$48,451 respectively.

The population growth in Central Maricopa from 2000 to 2006 was 26 percent, similar to Arizona's growth rate of 22 percent from 2000 to 2006. Within a state that is the third fastest growing in the nation, this is well above the national population growth rate of 9 percent. The region's population growth rate for children birth through age five is 34 percent, which is eight percentage points higher than Arizona's



rate and 26 percentage points higher than the national rate.

Rapid population growth can lead to greater demand for social services. Data cited in the 2005 Tempe District Number Three Safe School Healthy Student Initiative grant proposal indicated that minority students are more than half of the total enrollment (mostly Hispanic), and that 63 percent of students received free lunches. For the same population, the grant proposal references an annual language survey showing more than 25 percent of students as being Limited English Proficient and that 67 languages are spoken in the homes of these students.<sup>1</sup> State and Maricopa County level data indicate that up to 32 percent of Arizonans ages 18 years or younger may use a language other than English as their primary language spoken at home<sup>2</sup> and 12 percent of Maricopa County families with young children speak primarily Spanish at home.<sup>3</sup>

Chandler has also experienced rapid population growth. Newcomers are typically highly educated and more prosperous; they also have more young children (7 percent of children were four and under in 2003, nearly equal to Guadalupe (8 percent) and higher than the 5 percent Tempe rate).

The “*Steps Toward Caring Communities*” Maricopa County Regional assets report identifies a mix of resources, from all sectors of early childhood care, available to families in the region. However, data also suggests that additional resources, programs, and system coordination may be required to address the disparities and gaps that exist across the communities.

The Central Maricopa regional child and family indicators included in this section are similar to indicators highlighted in the *Building Bright Futures* report:

- **Early childhood population** – Race, ethnicity, language, and family composition
- **Economic status of families** – Employment, income, poverty and parents’ educational attainment
- **Trends in births**
- **Health insurance coverage and utilization**
- **Child safety** – Abuse and neglect and child deaths
- **Educational achievement** – elementary school performance and high school graduation

It is assumed that county data is closely reflective of the region as a whole. Information, comparing regional child and family indicators to data for the state, is provided for all indicators where valid information was identified. While every attempt was made to collect data for each year at each level of reporting (regional through national), there are some items for which no reliable or comparable data currently exists.

As the *Building Bright Futures* report duly noted, infrastructure for sharing, collecting, and assessing early childhood data in Arizona is a gap that the First Things First Initiative seeks to address systematically. These biennial community-level assessments are one part of the process that will be used to close this gap over time.

<sup>1</sup> Tempe Safe Schools Healthy Student Initiative grant proposal, April 2005

<sup>2</sup> This estimate includes an error rate of +/- 15% (American Community Survey, Annie Casey Foundation 2008).

<sup>3</sup> U.S. Census (2000) and American Community Survey (2006)



## Regional Population

As noted in the chart below, Chandler, Tempe and Guadalupe experienced a 27 percent increase in population, compared to 22 percent for the state. In the birth through age five group, there was a 34 percent increase in Central Maricopa region's population during this same period of time. If the region's population continues to grow at this pace, there will be many more children five years and under in the years ahead.

### Population Growth (All Ages)

	2000	2006	% Change
<b>Central Maricopa*</b>	434,889	552,309	+27%
<b>Arizona</b>	5,020,782	6,116,318	+22%
<b>U.S.</b>	273,643,273	299,238,484	+9%

Source: U.S. Census 2000, Census PEP Estimates

### Population Growth for Children Birth through Age Five Years

	2000	2007	% Change
<b>Central Maricopa</b>	31,757	41,284	+34%
<b>Arizona</b>	381,833	480,491	+26%
<b>U.S.</b>	19,137,974	20,724,125	+8%

Sources: U.S. Census (2000) and Census PEP Estimates

## Regional Race, Ethnicity and Language

Central Maricopa County families are primarily Latino and White, although the breakdown by city reveals sharp differences between areas. For example, in the Guadalupe area the Native American population is 44 percent, with members of the Pascua Yaqui tribe residing in that area. In the Tempe area, there is a wide range of ethnicities present, including a 7 percent Asian population. Throughout the Central Maricopa region, the Latino demographic is a larger percentage of the region's population than other areas in Arizona.

The following table shows that the highest percent of births in 2006 were to White, Non-Hispanic mothers, at 49 percent. Thirty-four percent of the births were to Hispanic or Latino mothers.

### Births by Mother's Race/Ethnic Group, 2006

	White Non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander	Unknown
<b>Central Maricopa</b>	49% (3,061)	34% (2,100)	5% (283)	4% (266)	8% (504)	1% (39)

\* This includes the cities of Chandler, Guadalupe, and Tempe. Source: Arizona Department of Health Services (ADHS) Vital Statistics, 2006.

## Immigration Status

Data reveals that the immigration status of Maricopa County residents mirrors that of the rest of Arizona. Although the number of children born to immigrant families is unknown in the Central Maricopa region, children born to immigrant families are likely to be citizens. Citizenship status allows children to qualify for public benefits such as AHCCCS and KidsCare (publicly financed health insurance for low-income children) that are generally unavailable to non-citizens. Nonetheless, citizenship status does not *guarantee* that young children are able to access services. Even though young children from immigrant families in the region are likely to be citizens, the citizenship status of their parents may affect their access to services. National studies suggest that many eligible “citizen children” with non-citizen parents do not participate in public programs due to lack of awareness or fear of the repercussions of parental legal or citizenship status.<sup>4</sup>

### Regional Immigration Characteristics (2006)

	U.S.-Born Citizens	Foreign Born Naturalized Citizens	Non-U.S. Citizens	Foreign-Born
<b>Maricopa County*</b>	(83%) 3,111,817	(5%) 177,801	(13%) 478,505	(17%) 656,306
<b>Arizona</b>	(85%) 5,237,235	(4%) 273,700	(11%) 655,383	(15%) 929,083
<b>U.S.</b>	(87%) 261,850,696	(5%) 15,767,731	(7%) 21,780,050	(12%) 37,547,789

\* Census data not available at the sub-county level. Only county level is provided. Source: American Community Survey (2006)

### Children in Immigrant Families (2006)

Phoenix	Arizona	U.S.
<b>46%</b>	<b>30%</b>	<b>22%</b>

Source: Annie E. Casey Foundation. Kids Count. Children in Immigrant Families, Phoenix, AZ. As determined by the 2000 and 2001

Supplementary Survey and the 2002 through 2006 American Community Survey (ACS). Data is not available at a regional level.

Despite the large numbers of immigrants to the state, Arizona does not rank in the top ten for naturalizing citizens or providing permanent legal residency to individuals, leading some to speculate that many of the immigrants living in Arizona do not have legal status in the state. As a result, many individuals of foreign origin may not seek the services they need for themselves or their children for fear of having their status questioned, even if they do have legal status. Consequently, finding data to accurately describe the ethnic and language characteristics of these families is very difficult in the Central Maricopa region, as well as the United States as a whole.

<sup>4</sup> Capps, R., Hagan, J. and Rodriguez, N. “Border Residents Manage the U.S. Immigration and Welfare Reforms.” In *Immigrants, Welfare Reform, and the Poverty of Policy*. Westport, CT: Praeger, 2004.

The Annie E. Casey Foundation estimated in 2004 that Arizona ranked fifth in the nation for births to foreign-born mothers, at 32 percent. Two years later, in 2006, the National Center for Children in Poverty projected that 78 percent of Arizona children born to low-income families had immigrant parents, consistent with recent surges in immigration trends from Mexico being reported by federal agencies.

Many immigrants entering the region work at low-paying jobs that lack benefits and are, therefore, overrepresented among individuals living in poverty (below 100 percent of the Federal Poverty Level).

Children of immigrants face challenges that children of native-born parents do not. Educational attainment of immigrant parents is often quite limited. Nationally, 40 percent of children in immigrant families live with a mother or father who has not graduated from high school, compared to 12 percent of children in non-immigrant families. Parents who have completed fewer years of schooling may be less able to help their children learn to read. In addition, children of immigrants may be less prepared than their counterparts to start kindergarten. Nationally, three- and four-year old children in immigrant families are less likely to participate in nursery school or preschool programs than their peers.<sup>5</sup>

## Language Characteristics

Language characteristics, in terms of language primacy or fluency, are generally not measured in children until they reach their fifth year. As a result, data on these characteristics are usually limited to children over the age of five. Data from the most recent Kids Count and American Community Survey estimate that up to 32 percent of Arizona children ages five to 18 speak a language other than English. An examination of Maricopa County data shows that 12 percent of families with young children speak primarily Spanish. Many of the children who reside in linguistically isolated families enter school with limited English proficiency.

### Language Use among Individuals (\*Ages Five and Older) Living in Maricopa County

Maricopa County	Speak Only English	Speak English Less Than Well	Speak Primarily Other Languages
2000	76%	12%	10%
2006	72%	12%	14%

Sources: U.S. Census (2000); American Community Survey (2006) \*\*Children defined as five years and over

## Refugee Population

Additional information regarding refugee resettlement in the Central Maricopa Region was obtained from the International Rescue Committee in Phoenix.

5 (Children's Action Alliance. "Going Beyond the Immigration Hype: Children and Our Shared Destiny" Fact Sheet, 2006).

**Number of Refugees Resettling in the Central Maricopa Region**

<b>85042</b>	Seven Clients, Two Minors, One Preschool Age
<b>85044</b>	Ten Clients, Four Minors, Zero Preschool Age
<b>85048</b>	Two Clients, Zero Minors
<b>85224</b>	Five Clients, Two Minors, One Preschool Age
<b>85225</b>	26 Clients, Ten Minors, One Preschool Age
<b>85226</b>	Three Clients, Two Minors, Zero Preschool Age
<b>85244</b>	Zero Clients
<b>85248</b>	Four Clients, Two Minors, Zero Preschool Age
<b>85249</b>	Two Clients, Zero Minors
<b>85281</b>	12 Clients, Zero Minors
<b>85282</b>	41 Clients, Eight Minors, Zero Preschool Age
<b>85283</b>	Eight Clients, Zero Minors
<b>85284</b>	One Client, Zero Minors
<b>Total</b>	121 Clients, 30 Minors, Three Preschool Age

Source: International Rescue Committee-Phoenix, 2008

## Family Composition

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Although there is no specific data for the Central Maricopa Region, in Maricopa County, the majority of children live in households with two parents. Maricopa County has about the same percentage of single parent families that is reported for state and national averages.



**Makeup of Households with Children Birth to 18 Years of Age for Selected Arizona Cities**

City	Married Couple Households	Male Headed Household without Wife	Female Headed Household without Husband
Avondale	64%	2%	34%
Chandler	71%	9%	19%
Gilbert	74%	7%	17%
Glendale	61%	10%	27%
Mesa	70%	8%	22%
Peoria	71%	11%	18%
Phoenix	63%	10%	26%
Scottsdale	68%	9%	22%
Surprise	82%	3%	15%
Tempe	65%	9%	25%
Tucson	55%	10%	33%
Yuma	70%	3%	27%
Arizona	65%	9%	24%
County	Married Couple Households	Male Headed Household without Wife	Female Headed Household without Husband
Apache	63%	5%	31%
Cochise	65%	8%	26%
Coconino	61%	4%	34%
Maricopa	67%	9%	23%
Mohave	55%	15%	27%
Navajo	57%	13%	27%
Pima	62%	10%	27%
Pinal	63%	12%	23%
Yavapai	63%	8%	25%
Yuma	66%	6%	28%

Source: American Community Survey (2006)

Since the year 2000, approximately one out of every three family households in Arizona has been headed by a single parent. Estimates indicate that many of these households are led by mothers-only, while a few are led by fathers-only. While this number of single-parent households might seem high, Arizona is actually right at the national average for this statistic and better than many states where single parent households can approach the 50 percent mark (i.e., Washington, D.C. and Mississippi).<sup>6</sup> One of the more reliable predictors of a child receiving early education and care services is whether or not the child's mother is both a single parent and needs to work to support the family. Nationally, in 1991, 85 percent of working mothers of four-year olds used early childhood education and care programs, with that figure jumping to 91 percent in 1999.

6 Hernandez, D. (2006). Young Children in the U.S.: a Demographic Portrait Based on the Census 2000. Report to the National Task Force on Early Childhood Education for Hispanics, Tempe, Arizona State University.

## Teen Parent Households

The Central Maricopa region is three to four points below the state average as far as births to teenage parents is concerned, with about one out of 11 children being born to parents aged 19 years or younger in any given year since 2002. It should be noted that there is a wide range of teen pregnancy rates in the Central Maricopa region, from a low rate of 7.5 percent in Chandler to a much higher rate of 19.4 percent in the town of Guadalupe.

### Percentage of Children Born to Teen\* Mothers

	2002	2003	2004	2005	2006
<b>Central Maricopa***</b>	9%	8%	9%	8%	9%
<b>Arizona</b>	13%	12%	12%	12%	12%
<b>U.S.</b>	11%	10%	10%	10%	10**

\*Teen defined as 19 years and under. Sources: American Community Survey, National Center for Health Statistics, ADHS Vital Statistics \*\*Preliminary Data for 2006, 12/5/2006.

\*\*\*Includes data from Chandler, Guadalupe, and Tempe, (data not available on Ahwatukee)

Babies born to teen mothers are more likely than other children to be born at a low birth weight, experience health problems and developmental delays, experience abuse or neglect and perform poorly in school. As they grow older, these children are more likely to drop out of school, get into trouble, and end up as teen parents themselves.<sup>7</sup>

The state average for teenage births has remained relatively constant at around 12 percent for more than five years, but little progress has been made in reducing the prevalence of Arizona teen mothers giving birth to a second child. In 2008, Arizona ranked 41<sup>st</sup> out of the 50 states for the highest high school drop-out rates, so many teen mothers are also challenged in the workforce to provide for their children because they lack a high school diploma. Ironically, dropout prevention studies consistently identify the need for high-quality early childhood education to *prevent* the high school drop-out problem, which in turn is cited in the early childhood literature as one reason why children of teenage mothers often have poor early childhood outcomes themselves.

## Grandparent Households:

In the Central Maricopa region grandparents raising grandchildren make up 1 percent of the total number of households with children under age 18.

County	Percent of Households with Children under 18 Led by Grandparents
Apache	4
Cochise	3
Coconino	4
Maricopa	1
Mohave	2
Navajo	5
Pima	2
Pinal	3
Yavapai	<1
Yuma	2

Source: American Community Survey (2006)

It is critical to note that grandparent caregivers are more likely to be poor in comparison with parent-maintained families. Furthermore, many grandparent caregivers have functional limitations that affect their ability to respond to the needs of grandchildren.<sup>8</sup>

## Employment, Income, and Poverty

For the most recent 12 month reporting period, unemployment in Arizona has mirrored the national trend where an economic downturn has led to higher joblessness rates. In Maricopa County, the economic indicators for unemployment are less than the state average, with the May 2008 estimates reaching a rate of 3.5 percent unemployment in the region. Even Arizona parents who are employed, however, may be struggling to “make ends meet,” as some research indicates that almost two-thirds of these working families are living at or below the federal poverty line and are considered to be “low-income” families.

Joblessness for a family impacts the home and family environment. In Arizona, recent unemployment rates have ranged from a high of 6 percent in 2002 to a low of 3.6 percent in May of 2007. In growth-prone areas of Arizona such as Phoenix, unemployment rates have been slower to creep up toward the state and national averages. Rates across Maricopa County have been similar, though with some areas of higher unemployment, such as Guadalupe (6.3 percent in May 2008).

### Average Unemployment Rates

	May 2007	April 2008	May 2008
<b>Maricopa County*</b>	2.7%	3.1%	3.4%
<b>Tempe</b>	2.3%	2.7%	3.0%
<b>Chandler</b>	2.0%	2.4%	2.6%
<b>Guadalupe</b>	4.9%	5.8%	6.3%
<b>Arizona</b>	3.6%	3.9%	4.4%
<b>U.S.</b>	4.5%	5.0%	5.5%

\*Includes all of Maricopa County

Source: Arizona Department of Commerce, Research Administration (June, 2008) seasonally adjusted.

### Annual Income

The Central Maricopa region has a wide variation in median income. For example, in Guadalupe the median income is \$30,089 whereas for Chandler the median income is \$68,007. Overall, as the chart below shows, the median income in this region for 2006 is higher than the statewide average. The areas with median incomes below the state average include Tempe and Guadalupe. In Arizona, during 2006, the median household income was reported at just over \$47,000 per year, very close to the national average of \$48,000 per year.



**Median<sup>9</sup> Annual Income (Per Year- Pretax)**

	2002	2003	2004	2005	2006
<b>Maricopa County *</b>	\$45,776	\$44,901	\$46,111	\$48,711	\$52,521
<b>Arizona</b>	\$41,172	\$40,762	\$41,995	\$44,282	\$47,265
<b>U.S.</b>	\$43,057	\$43,564	\$44,618	\$46,242	\$48,451

\*Data includes all of Maricopa County; Source: American Community Survey; Arizona Department of Commerce, Research Administration; [zipcodestats.com](http://zipcodestats.com)

**Families in Poverty**

In the Central Maricopa region, many areas contain households where the median annual income is at or below federal poverty guidelines, while other areas of the region are well above these poverty guidelines. For a family of four, the Federal Poverty level is \$21,200 a year (for the 48 contiguous states and D.C.).<sup>10</sup> As the following charts show, Chandler, the largest city in the Central Region, has 5 percent of its families living at or below the 100 percent of the Federal Poverty Level while Tempe has 8 percent and Arizona has 10 percent.

**Families Living at or Below the Federal Poverty Level (2006)**

	Percent of Households Living At or Below 100 Percent of the Federal Poverty Level
<b>Chandler*</b>	5%**
<b>Tempe</b>	8%**
<b>Arizona</b>	10%
<b>U.S.</b>	10%

\*Data available for Tempe and Chandler at the city levels. Source: U.S. Census, American Community Survey.

\*\*Two percent and 3 percent, respectively, of these families are single headed households with children under 18 years of age.

The chart below shows the numbers of food stamp and Children WIC recipients for the major cities in the Central Maricopa region.

**Welfare Benefits—Central Maricopa Region**

Benefits For Region	Chandler	Guadalupe	Tempe
<b>Food Stamps</b>	8,583	1,405	7,843
<b>Children WIC Recipients</b>	3,815	342	2,872
<b>Women WIC Recipients</b>	1,679	151	1,338

Source: Arizona Department of Health Services, Community Health Profile, 2003.  
No information available for Ahwatukee or Sun Lakes.

As can be seen in the chart below, the Town of Guadalupe has a large percentage of children living below the Federal Poverty levels.

<sup>9</sup> The median, or mid-point, is used to measure income rather than taking the average, because the high income households would skew the average income and artificially inflate the estimate. Instead, the median is used to identify income in the middle of the range, where there are an equal number of incomes above and below that point so the entire range can be represented more reliably.

<sup>10</sup> Federal Register, Volume 73, No. 15, January 23, 2008, pp. 3971-3972.



### Children Living At or Below the Federal Poverty Level—by City (2003) Central Maricopa Region

Federal Poverty Level (FPL)	Chandler	Guadalupe	Tempe
100% FPL	6.7%	26.7%	14.3%
200% FPL	18.6%	66.1%	30%

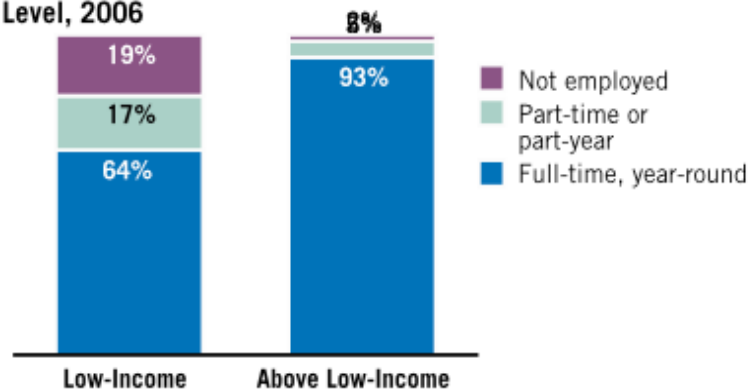
Arizona Department of Health Services, Community Health Profile, 2003.  
No information available for Ahwatukee or Sun Lakes.

The federal poverty level does not adequately reflect the true cost of supporting a family. Research has shown, that across the country, families typically need an income of at least twice the official poverty level (\$42,400 for a family of four) to meet basic needs. This is the amount of money needed for a family to cover their basic living expenses – enough to get by but not enough to get ahead.

The following graph shows the relationship between employment levels and categorization as “low income” or “above low income.”

When considering what defines a livable wage and the required income it takes to meet a family’s basic needs, many systems use the 200 percent of the Federal Poverty Level as a significant marker. The Quality Counts State Report Cards discuss 200 percent of poverty as the point in which a child’s chances for success in school and life become improved.

### Parents' Employment Status in Arizona, by Income Level, 2006



© National Center for Children in Poverty (nccp.org)  
Arizona Demographic Profiles

## Parent Educational Attainment

Parent education can potentially impact child outcomes by providing an enhanced home environment that reinforces cognitive stimulation and increased use of language.<sup>11</sup> Research has demonstrated an intergenerational effect of parental educational attainment on a child’s own educational success later in life. Some studies have surmised that up to 17 percent of a child’s future earnings may be linked (through their

<sup>11</sup> Hoff, E., Laursen, B., & Tardiff, T. (2002). Socioeconomic Status and Parenting. In M.H. Bornstein (Eds.), *Handbook of Parenting, Volume II: Ecology & Biology of Parenting* (pp.161-188). Mahwah, NJ: Lawrence Erlbaum Associates.

own educational achievement) to whether or not their parents or primary caregivers also had successful educational outcomes.

In Arizona, almost 30 percent of mothers that gave birth had less than a high school diploma. In Maricopa County, that percentage is much higher than the national average of 22 percent. According to data reported from 2002 to 2006, almost 30 percent of mothers who gave birth in Maricopa County had less than a high school diploma, which is almost 10 percent higher than the state average over the same period of time. The state rate for births to mothers with no high school degree has remained fixed at 20 percent for the past three years.

#### Percentage of Live Births by Educational Attainment of Mother

		2002	2003	2004	2005	2006
<b>Maricopa County</b>	No High School Diploma	30%	31%	31%	30%	30%
	High School Diploma	27%	26%	29%	27%	28%
	One to Four Years of College	33%	33%	33%	34%	34%
<b>Arizona</b>	No High School Diploma	20%	21%	20%	20%	20%
	High School Diploma	29%	29%	29%	29%	30%
	One to Four Years of College	32%	32%	32%	33%	33%
<b>U.S.</b>	No High School Diploma	15%	22%	22%	Data not available	Data not available
	High School Diploma	31%	Data not available	Data not available	Data not available	Data not available
	One to Four Years of College	21%	27%	27%	27%	27%

Arizona Department of Health Services, Vital Statistics, American Community Survey  
Numbers do not add to 100% since any education beyond 17 years and unknowns were excluded.

## Healthy Births

A healthy pregnancy leading to a healthy birth sets the stage for a healthy infancy during which time a baby develops physically, mentally, and emotionally into a curious and energetic child. An unhealthy birth can be a major barrier in a baby's life, often delaying development and leading to life-long challenges.

### Prenatal Care

Adequate prenatal care is vital in ensuring the best pregnancy outcome. In many communities, prenatal care is far below what it could be to ensure this healthy beginning. Some barriers to prenatal care in communities and neighborhoods include the large number of pregnant adolescents, the high number of non-English speaking

residents, and the prevalence of inadequate literacy skills.<sup>12</sup> In addition, cultural ideas about health care practices may be contradictory and difficult to overcome, so that even when health care is available, pregnant women may not understand the need for early and regular prenatal care.<sup>13</sup>

Late or no prenatal care is associated with many negative outcomes for mother and child, including postpartum complications for mothers, a 40 percent increase in the risk of neonatal death overall, low birth weight babies, and future health complications for infants and children.

In most of the Central Maricopa cities, approximately 85 percent of the mothers received prenatal care. Guadalupe had significantly lower rates of prenatal care (67.4 percent). There are fewer women in this region who are reported as receiving *no* prenatal care. Overall, pregnant women across Arizona often fail to receive *early* prenatal care. According to national statistics, 83 percent of pregnant women receive prenatal care in their first trimester, compared to 77 percent in Arizona.<sup>14</sup>

One prominent indicator of whether prenatal care is obtained in the first trimester is ethnicity. In Arizona, Native American women are least likely to start prenatal care in the first trimester. According to 2005 data, 32 percent of Native American women did not start prenatal care in the first trimester, followed by Hispanic women at 30 percent, Black women at 24 percent and White women at 12 percent.<sup>15</sup> Any effort to increase prenatal care should consider these large ethnic differences. There are many barriers to the use of early prenatal care, including: lack of general health care, transportation, poverty, teenage motherhood, stress and domestic violence.<sup>16</sup>

### Selected Characteristics of Newborns and Mothers, Central Maricopa (2006)

Community	Total	Teen Mother 19 Years or Younger)	Prenatal Care First Trimester	No Prenatal Care	Public \$	Low Birth Weight Under 2500 Grams	Unwed Mothers
Tempe	2,057	232	1,600	58	1,050	153	981
Chandler	4,067	307	3,600	49	1,096	268	1,170
Guadalupe	129	25	87	1	106	9	89
Ahwatukee	NO SPECIFIC DATA AVAILABLE						
Sun Lakes	1	0	1	0	1	0	1
<b>TOTAL</b>	<b>6,254</b>	<b>564</b>	<b>5,288</b>	<b>108</b>	<b>2,253</b>	<b>430</b>	<b>2,241</b>

Source: Arizona Department of Health Services/Division of Public Health Services, Arizona Vital Statistics

### Low Birth-Weight Babies (Less than 5 lbs, 8 oz. (2,500 Grams))

Low birth weight (less than five pounds, eight ounces) and very low birth weight (defined as less than three pounds, four ounces or 1500 grams) are leading causes of infant health problems and death. Many factors contribute to low birth weight. Among the most prominent are: drug use during pregnancy, smoking during pregnancy, poor health and nutrition, and multiple births. The Central Maricopa Region has low birth weight rates that average about 7 percent (range from 6.6 percent to 7.4 percent).

<sup>12</sup> Ashford, J., LeCroy, C. W., & Lortie, K. (2006). *Human Behavior in the Social Environment*. Belmont, CA: Thompson Brooks/Cole.

<sup>13</sup> LeCroy & Milligan Associates (2000). *Why Hispanic Women Fail to Seek Prenatal Care*. Tucson, AZ.

<sup>14</sup> Child Health USA 2003, U. S. Department of Health and Human Services, Health Research and Services Administration.

<sup>15</sup> Arizona Department of Health Services, Health Disparities Report, 2005.

<sup>16</sup> <http://www.cdc.gov/reproductivehealth/products&pubs/dataaction/pdf/rhow8.pdf>

## Pre-Term Births

Overall, the rates of premature births have been rising in the U.S. over the past 20 years, with some studies pointing to advances in neonatal care capabilities, as well as a higher incidence of caesarian sections that are not medically necessary, as contributing to these rates. The rate of pre-term births in the United States has increased 30 percent in the past two decades.<sup>17</sup> One-half of all pre-term births have no known cause. One factor to consider is that, since 1996, the caesarean section rate has risen to 30 percent, with the latest studies showing that 92 percent of babies delivered by C-section from 1996 to 2004 were judged after birth to be “late pre-term,” meaning they were born after 34 to 37 weeks of pregnancy as opposed to the typical 38 to 42 weeks.<sup>18</sup>

## Births to Teen Mothers

About 10 percent of American teen girls between the ages of 15 and 19 become pregnant each year. It is startling to consider that one in five 14-year-old girls become pregnant before reaching the age of 18.<sup>19</sup> In spite of a declining teen birth rate, teenage parenthood is a significant social issue in this country. Teen parents face significant obstacles in being able to rear healthy children. Teen parents are generally unprepared for the financial responsibilities and the emotional and psychological challenges of rearing children.

In the Central Maricopa region, a greater percentage of mothers in Guadalupe are 19 years old or younger, have a lower percentage of prenatal care in the First trimester, and more births are paid for by public funds than larger communities in the region (82 percent compared to only 27 percent in Chandler and 51 percent in Tempe).

## Health Insurance Coverage and Utilization

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### Uninsured Children

Health insurance significantly improves children’s access to health care services and reduces the risk that illness or injury will go untreated or create economic hardships for families. Having a regular provider of health care promotes children’s engagement with appropriate care as needed. Research shows that children receiving health care insurance<sup>20</sup>:

- Are more likely to have well-child visits and childhood vaccinations than uninsured children
- Are less likely to receive their care in the emergency room
- Do better in school

When parents cannot access health care services for preventive care such as immunizations, there may be delayed diagnosis of health problems, failure to prevent

<sup>17</sup> Mayo Clinic. Premature births, November, 2006.

<sup>18</sup> Preliminary births for 2005: Infant and Maternal Health National Center for Health Statistics.

<sup>19</sup> Centers for Disease Control, Fact Sheet, 2001.

<sup>20</sup> Johnson, W. & Rimaz, M. Reducing the SCHIP coverage: Saving Money or Shifting Costs. Unpublished Paper, 2005. Dubay, L., & Kennedy, G. M., Health Care Access and Use Among Low-Income Children: Who Fares Best? *Health Affairs*, 20, 2001, 112-121. Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau’s March 2006 and 2007 Current Population Survey. Arizona Department of Health Services, Community Health Profile, Phoenix, 2003.

health problems, or the worsening of existing conditions.<sup>21</sup> Furthermore, good health promotes the academic and social development of children because healthy children engage in the learning process more effectively.<sup>22</sup>

From 2001 to 2005, Arizona had a higher percentage of children without health insurance coverage compared to the nation. One reason that Arizona children may be less likely than their national counterparts to be insured is that they may be less likely to be covered by health insurance through their families' employer. In Arizona, 48 percent of children (birth to age 18) receive employer-based coverage, compared to 56 percent of children nationally.<sup>23</sup>

#### Percent of Children (Birth through Five Years) Without Health Insurance Coverage

	2001	2002	2003	2004	2005	2006
<b>Arizona</b>	14%	14%	14%	13%	15%	15%
<b>U.S.</b>	10%	10%	10%	10%	10%	11%

Source: Kids Count.

The chart below shows children enrolled in AHCCCS or KidsCare – Arizona's publicly funded low cost health insurance programs for children in low income families. As the chart shows, 66,791 children (birth through age five) were enrolled in AHCCCS or KidsCare in Maricopa County in 2007.

#### Children Under Six Enrolled in KidsCare or AHCCCS Health Coverage (2004-2007)

	AHCCCS				KidsCare				Total Children Under Six Enrolled In AHCCCS or KidsCare			
	'04	'05	'06	'07	'04	'05	'06	'07	'04	'05	'06	'07
<b>Maricopa County</b>	54,083	63,590	59,097	59,850	3,996	4,963	6,016	6,941	58,079	68,553	65,113	66,791
<b>Arizona</b>	87,751	102,379	95,776	96,600	6,029	7,397	8,699	9,794	93,780	109,776	104,475	106,394

Source: AHCCCS, Enrollment data is for calendar year, representing children enrolled at any time during the calendar year in AHCCCS or KidsCare. The child is counted under the last program in which the child was enrolled.

While many children in Maricopa County receive public health coverage, many others who likely qualify, do not. In 2002, the Urban Institute's National Survey of America's Families estimated that one-half of uninsured children in the United States are eligible for publicly funded health insurance programs (like AHCCCS or KidsCare in Arizona), but are not enrolled.<sup>24</sup> Indeed, the large percent of families who fall below 200 percent of the Federal Poverty Level in the region suggest that many children are likely to qualify for public coverage. National studies suggest that these same children are unlikely to live in families who have access to employer-based coverage.<sup>25</sup>

21 Chen, E., Matthews, K. A., & Boyce, W. T., Socioeconomic Differences in Children's Health: How and Why do These Relationships Change with Age? *Psychological Bulletin*, 128, 2002, 295-329.

22 National Education Goals Panel. *Reconsidering Children's Early Developmental and Learning: Toward Common Views and Vocabulary*. Washington DC.

23 Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2006 and 2007 Current Population Survey. Arizona Department of Health Services, Community Health Profile, Phoenix, 2003.

24 Genevieve Kenney, et al, "Snapshots of America's Families, Children's Insurance Coverage and Service Use Improve," Urban Institute, July 31, 2003.

25 Long, Sharon K and John A. Graves. "What Happens When Public Coverage is No Longer Available?" Kaiser Commission on Medicaid and the Uninsured, January 2006.

## Access to Medical Care

While a variety of factors ultimately influence access to health care, health coverage does play an important role in ensuring that children get routine access to a doctor or dentist's office. For example, the chart below shows that for children under age five enrolled continuously in AHCCCS in Maricopa County, 78 percent received at least one visit to a primary care practitioner (such as a family practice physician, a general pediatrician, a physician's assistant, or a nurse practitioner) during the year in 2007. Many families who do not have health insurance coverage do not have an established relationship with a primary care physician or a medical home.

### Percent of Children (Ages 12 Months to Five Years) Continuously Enrolled in AHCCCS Receiving One or More Visits to a Primary Care Practitioner

	Maricopa County*	Arizona
<b>2005</b>	77%	78%
<b>2006</b>	78%	78%
<b>2007</b>	78%	78%

\*Data only available at the county level. Source: AHCCCS. Note: Continuously enrolled refers to children enrolled with an AHCCCS health plan (acute or ALTCS) 11 months or more during the federal fiscal years 2005, 2006, 2007

Health coverage is not the only factor that affects whether or not children receive the care that they need to grow up healthy. Other factors include: the scope and availability of services that are privately or publicly funded; the number of health care providers including primary care providers and specialists; the geographic proximity of needed services; and the linguistic and cultural accessibility of services.

For the Central Maricopa Region, this last factor may potentially play a large role, given the number of immigrant and linguistically isolated households in the region. While no specific evidence exists for the region, such evidence does exist statewide. For example, 37 percent of 788 AHCCCS providers surveyed in 2005 (representing 98 percent of all AHCCCS providers) had *no means* of understanding their Spanish-speaking patients unless the patient's family member could translate for their relative and the medical provider. Similarly, a 2007 Commonwealth Fund study found low rates of patient satisfaction among Arizonans, who cited lack of cultural competency as one contributing factor.<sup>26</sup>

Lack of health coverage and other factors combine to limit children's access to health services. For example, according to a 2007 report by the Commonwealth Fund, only 36 percent of Arizona children under the age of 17 had a regular doctor and at least one well check visit in the last year. According to the same study, only 55 percent of children who needed behavioral health services received some type of mental health care in 2003.<sup>27</sup>

## Oral Health Access and Utilization

In many communities in the Central Maricopa Region, young children are likely to have untreated tooth decay and are more likely to face urgent dental needs. Access

<sup>26</sup> Commonwealth Fund. State Scorecard on Health Care System Performance, 2007.

<sup>27</sup> Commonwealth Fund. State Scorecard on Health Care System Performance, 2007.

to dental care is also limited for young children in both the state and the region. As the chart below shows, in 2003, oral health varies among Central Maricopa cities. For example, a widespread problem with untreated tooth decay among six to eight year olds ranges from 39 percent in Tempe to 49 percent in Guadalupe.

#### Oral Health—Central Maricopa—Children Six to Eight Years Old

Central Maricopa Communities (2003)	Untreated Tooth Decay	Tooth Decay Experience	Urgent Treatment Needs	Sealants Present
Chandler	44%	65%	12%	29%
Guadalupe	49%	77%	14%	32%
Tempe	39%	62%	9%	23%
Arizona	40%	62%	9%	28%

Source: Arizona Department of Health Services, Community Health Profile 2003.

An Arizona Department of Health Services 1999 - 2003 Arizona School Dental Survey showed considerable disparity in oral health across population and income variables. Hispanic and other minority children often have more untreated tooth decay (49 percent and 38 percent respectively) than non-Hispanic White children, as do children from families with lower levels of income.

Access to oral health care is even more challenging for families with special needs children. According to a statewide Health Provider Survey report released in 2007, a large majority (78 percent) of Arizona dental providers surveyed in 2006 (N=729 or 98 percent of all AHCCCS providers) said they did not provide dental services to special needs children because they did not have adequate training (40 percent), did not feel it was compatible with the environment of their practices (38 percent), or did not receive enough reimbursement to treat these patients (19 percent). The Health Provider Survey report recommended more training for providers to work with Special Needs Plans (SNP), collaborating with the Arizona Dental Association (ADA) and Arizona Department of Health Services (ADHS) to increase the number of providers who accept young children.

## Child Safety

All children deserve to grow up in a safe environment. Unfortunately, not all children are born into a home where they are well-nurtured and free from parental harm. Additionally, some children are exposed to conditions that can lead to preventable injury or death, such as excessive drug/alcohol use by a family member, accessible firearms, or unfenced pools.

### Child Abuse and Neglect

Child abuse and neglect can result in both short-term and long-term negative outcomes. A wide variety of difficulties have been documented for victims of abuse and neglect, including mental health difficulties such as depression, aggression, and stress. Direct negative academic outcomes (such as low academic achievement; lower grades, lower test scores, learning difficulties, language deficits, poor schoolwork, and impaired verbal and motor skills) have also been documented. Furthermore, child abuse and neglect have a direct relationship to physical outcomes such as ill health,



injuries, failure to thrive, and somatic complaints.<sup>28</sup>

The following data illustrates the problem of abuse and neglect in Arizona and the significant number of children that are placed at greater risk for poor school performance, frequent grade retention, juvenile delinquency and teenage pregnancy, as child abuse and neglect are strongly linked with these negative outcomes for children. The data provided in this report includes state and county level data for children under age 18.

It is important to note that the child abuse report is not an indicator of risk and is not tied to the removal of a child. There are many cases where the specific allegation in the report cannot be proven but it is nonetheless determined that the child is at imminent risk of harm and services and supports are put in place to keep the child safely at home, or the child is removed. The numbers of reports that are considered substantiated are a subset of the total number of reports that were received, investigated, and closed during the reporting period.

The chart below provides a history of child abuse reports received and the outcome for Maricopa County.

#### Child Abuse Reports, Substantiations, Removals, and Placements for Maricopa County\*

	Oct 2003 through Mar 2004	Apr 2004 through Sep 2004	Oct 2004 through Mar 2005	Apr 2005 through Sep 2005	Oct 2005 through Mar 2006	Apr 2006 through Sep 2006	Oct 2006 through Mar 2007	Apr 2007 through Sep 2007
<b>Number of Reports Received</b>	11,877	11,303	10,823	10,576	10,019	9,622	9,573	10,284
<b>Number of Reports Substantiated</b>	NA	NA	NA	NA	536	573	641	448
<b>Substantiation Rate</b>	NA	NA	NA	NA	5%	6%	7%	4%
<b>Number of New Removals</b>	1,847	1,947	1,888	2,080	1,954	2,013	2,013	1,988

\*All data taken from Arizona Department of Economic Security Child Welfare Reports. Discrete data for "number of reports substantiated" not available in reports prior to October 2005 through March 2006. Child Welfare Reports do not provide county-level data for number of child in out-of-home care on the last day of reporting period. Data for number of reports received drawn from Child Welfare Report tables labeled "Number of Reports Responded to by Type of Maltreatment and County."

The table below provides a breakdown of reports received by each county in Arizona. Over half (57 percent) of the reports received were in Maricopa County. Of those reports made in Maricopa County, 6,098 were reports of neglect, followed by 3,424 reports of physical abuse, 645 reports of sexual abuse, and 117 reports of emotional abuse. Of the total reports, between 4 and 7 percent resulted in substantiation.

<sup>28</sup> References for this section: Augoustios, M. Developmental Effects of Child Abuse: A Number of Recent Findings. *Child Abuse and Neglect*, 11, 15-27; Eckenrode, J., Laird, M., & Doris, J. *Maltreatment and Social Adjustment of School Children*. Washington DC, U. S. Department of Health and Human Services; English, D. J. The Extent and Consequences of Child Maltreatment. *The Future of Children, Protecting Children from Abuse and Neglect*, 8, 39-53.; Lindsey, D. *The Welfare of Children*, New York, Oxford University Press, 2004; National Research Council, *Understanding Child Abuse and Neglect*. Washington DC: National Academy Press; Osofsky, J. D. The Impact of Violence on Children. *The Future of Children*, 9, 33-49.



**Number of Reports Received by Type of Maltreatment and County,  
April 1, 2007 - September 30, 2007**

County	Emotional Abuse	Neglect	Physical Abuse	Sexual Abuse	Total	% of Total
Apache	1	47	33	6	87	0.5%
Cochise	6	312	154	22	494	2.7%
Coconino	3	248	124	27	402	2.2%
Gila	2	148	59	14	223	1.2%
Graham	1	61	36	12	110	0.6%
Greenlee	0	16	8	2	26	0.1%
La Paz	2	35	17	8	62	0.3%
Maricopa	117	6,098	3,424	645	10,284	57.0%
Mohave	4	417	197	34	652	3.6%
Navajo	3	234	101	9	347	1.9%
Pima	50	1,924	1,045	181	3,200	17.7%
Pinal	14	648	315	80	1,057	5.9%
Santa Cruz	2	63	38	5	108	0.6%
Yavapai	4	381	181	35	601	3.3%
Yuma	3	290	104	28	425	2.4%
<b>Statewide</b>	<b>212</b>	<b>10,922</b>	<b>5,836</b>	<b>1,108</b>	<b>18,078</b>	<b>100.0%</b>
<b>% of Total</b>	<b>1.2%</b>	<b>60.4%</b>	<b>32.3%</b>	<b>6.1%</b>	<b>100.0%</b>	

\*All data taken from Arizona Department of Economic Security Child Welfare Reports, April 1, 2007 through September 30, 2007.

Most child welfare experts believe the actual incidence of child abuse and neglect is almost three times greater than the cases reported. Further, experience suggests that many child abuse reports are unsubstantiated due to limitations faced by the child welfare system, such as a lack of resources to investigate all cases thoroughly; lack of training for Child Protective Services' staff, where employee turnover rates remain high; and the strained capacity of the foster care system. The youngest children suffer from the highest rates of neglect and abuse, as shown below:

- Birth to one year 24 incidents for every 1,000 children
- One to three years 14 incidents for every 1,000 children
- Four to seven years 14 incidents for every 1,000 children
- Eight to 11 years 11 incidents for every 1,000 children

According to overall child well-being indicators, in 2005 Arizona ranked 36<sup>th</sup> out of the 50 states, with child abuse and neglect a leading reason for the state's poor ranking. In the following year, Arizona's Child Fatality Review Board issued its annual report for 2005, which showed that 50 Arizona children died from abuse or neglect. Contributing factors in these deaths included caretaker drug/alcohol use (31 percent), lack of parenting skills (31 percent), lack of supervision (27 percent), a history of maltreatment (20 percent) and domestic violence (15 percent). Only 11 percent of the children who died had previous Child Protective Services involvement.

## Foster Care Placements

Foster care placement is used for children whose parents are perceived as unable to properly care for them. Foster care has increasingly become an important aspect of the child welfare system. The extent to which foster care is being used in different communities reflects the resources available to provide needed care to vulnerable children. In Maricopa County there were 4,454 child placements in 2004 and that number increased to almost 5,000 in 2005 (see chart below).

Problems with the foster care system have led to efforts at reform. Efforts have included new methods for keeping children safe in their own homes, provision of kinship care, and family foster care.<sup>29</sup> The Arizona Department of Economic Security is working to embed the Casey Foundation's Family to Family Initiative into Arizona's child welfare practice. This is a nationwide child welfare initiative, and one of the core strategies in the recruitment, development and support of resource families that focuses on finding and maintaining kinship and foster families who can support children and families in their own neighborhoods.

### Child Placements in Foster Care

	2002	2003	2004	2005	2006
<b>Maricopa County</b>	2004 Maricopa County: 4,454* 2005 Maricopa County: 4,939*				
<b>Arizona</b>	5,049**	6,208**	7,173**	7,546**	7,388**
<b>U.S.</b>	29%*** (154,000)	30%*** (155,000)	31%*** (158,000)	32%*** (164,000)	44%*** (131,000)

\*All children in out-of-home care (such as foster care)

\*\*Includes all children under the age of 18 years

\*\*\*Based on total number of children removed from the home birth through age five years

Sources: Kids Count (data provided by Children's Action Alliance);

The AFCARS Report; Children's Bureau, Arizona Department of Economic Security

## Child Mortality

The infant mortality rate can be an important indicator of the health of communities. Infant mortality is higher for children whose mothers began prenatal care late or had none at all, those who did not complete high school, those who were unmarried, those who smoked during pregnancy, and those who were teenagers.<sup>30</sup> Furthermore, children living in poverty are more likely to die in the first year of life. For example, children living in poverty are more likely to die from health conditions such as asthma, cancer, congenital anomalies, and heart disease.<sup>31</sup> In Arizona as well as the rest of the nation, many factors that lead to a young child's death are related to health

29 Family to Family Tools for Rebuilding Foster Care, A Project of the Annie E. Casey Foundation July 2001.

30 Mathews, T. J., MacDorman, M. F., & Menacker, F. Infant Mortality Statistics from the 1999 Period Linked Birth/Infant Death Data Set. In *National Vital Statistics Report* (Vol. 50), National Center for Health Statistics.

31 Chen, E., Matthews, K. A., & Boyce, W. T. Socioeconomic Differences in Children's Health: How and Why do these Relationships Change with Age? *Psychological Bulletin*, 129, 2002, 29-329; Petridou, E., Kosmidis, H., Haidas, S., Tong, D., Revinthi, K., & Flytzani, V. Survival from Childhood Leukemia Depending on Socioeconomic Status in Athens. *Oncology*, 51, 1994, 391-395; Vagero, D., & Ostberg, V. Mortality Among Children and Young Persons in Sweden in Relation to Childhood Socioeconomic Group. *Journal of Epidemiology and Community Health*, 43, 1989, 280-284; Weiss, K. B., Gergen, P. J., Wagener, D. K., Breathing Better or Wheezing Worse? The Changing Epidemiology of Asthma Morbidity and Mortality. *Annual Review of Public Health*, 1993, 491-513.

status, such as a pre-existing health condition, inadequate prenatal care, or even the lifestyle choices of the parent. Another area of concern includes factors such as injury – unfortunately, in many circumstances, preventable injury.

The table below provides information on the total number of child deaths in the Central Maricopa Region, followed by the leading causes of death for infants (less than one year old) in Maricopa County in 2006.

#### Child Deaths\*\*

	2003	2004	2005	2006
<b>Central Maricopa*</b>	3% (46)	2% (42)	3% (48)	3% (54)
<b>Arizona*</b>	2% (872)	2% (870)	2% (938)	2% (920)
<b>U.S.</b>	1% (32,721)	Not available	1% (33,196)	Not available

\*Data includes Chandler, Guadalupe, and Tempe. Ahwatukee data not available.

\*\*Data only available for children birth to 14 years Sources: CDC; Arizona Department of Health Services

#### Leading Causes of Death Among Infants Less than One Year (n = 406) in Maricopa County During 2006

1. Natural causes in the first 30 days following the birth (203 deaths - 50 percent)
2. Congenital Malformations (89 deaths - 22 percent)
3. Pre-term and Low birth-weight (64 deaths - 16 percent)
4. Sudden Infant Death Syndrome (21 deaths - 5 percent)
5. Homicide (four deaths – 1 percent)

## Children's Educational Attainment

### School Readiness

Early childhood programs can promote successful school readiness especially for children in low-income families. Research studies on early intervention programs for low income children have found that participation in educational programs prior to kindergarten is related to improved school performance in the early years.<sup>32</sup> Furthermore, research indicates that when children are involved in early childhood programs over a long period of time, with additional intervention in the early school years, better outcomes can emerge.<sup>33</sup> Long-term studies have documented early childhood programs with positive impact evident in the adolescent and adult years.<sup>34</sup> Lastly,

32 Lee, V. E., Brooks-Gunn, J., Shnur, E., & Liaw, F. R. Are Head Start Effects Sustained? A Longitudinal Follow-Up Comparison of Disadvantaged Children Attending Head Start, No Preschool, and Other Preschool Programs. *Child Development*, 61, 1990, 495-507; National Research Council and Institute Medicine, *From Neurons to Neighborhoods: The Science of Early Childhood Development*; Reynolds, A. J. Effects of a Preschool Plus Follow Up Intervention for Children at Risk. *Developmental Psychology*, 30, 1994, 787-804.

33 Reynolds, A. J. Effects of a Preschool Plus Follow Up Intervention for Children at Risk. *Developmental Psychology*, 30, 1994, 787-804.

34 Campbell, F. A., Pungello, E. P., Miller-Johnson, S., Burchinal, M., & Ramey, C. T. The Development of Cognitive and Academic Abilities: Growth Curves from an Early Childhood Educational Experiment. *Developmental Psychology*, 37, 2001, 231-242

research has confirmed that early childhood education enhances young children's social developmental outcomes such as peer relationships.<sup>35</sup>

Generally, child development experts agree that school readiness encompasses more than acquiring a set of simple skills such as counting to ten by memory or identifying the letters of the alphabet. Preparedness for school includes the ability to problem-solve, self confidence, and willingness to persist at a task. While experts identify such skills as being essential to school readiness, the difficulty comes in attempting to quantify and measure these more comprehensive ideas of school readiness. Currently no instrument exists that sufficiently identifies a child's readiness for school entry. Although Arizona has a set of Early Learning Standards (an agreed upon set of concepts and skills that children can and should be ready to do at the start of kindergarten), current assessment of those learning standards have not been validated nor have the standards been applied consistently throughout the state.

One component of children's readiness for school consists of their language and literacy development. Alphabet knowledge, phonological awareness, vocabulary development, and awareness that words have meaning in print are all pieces of children's knowledge related to language and literacy. One assessment that is used frequently across Arizona schools is the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). The DIBELS is used to identify children's reading skills upon entry to school and to measure their reading progress throughout the year. The DIBELS often tests only a small set of skills around letter knowledge without assessing other areas of children's language and literacy development such as vocabulary or print awareness.

The results of the DIBELS assessment should not be used to assess children's full range of skills and understanding in the area of language and literacy. Instead, it provides a snapshot of children's learning as they enter and exit kindergarten. Since all schools do not administer the assessment in the same manner, comparisons across communities cannot be made. In the specific area of language and literacy development assessed, the data in the following chart indicate that only a small percentage of children entering kindergarten were meeting the benchmark standard but at the end of the year significant progress was made.

### Basic Early Literacy as Measured by DIBELS

SFY 2006-2007 Kindergarten DIBELS Arizona Reading First Schools		
	Beginning of the Year % Benchmark	End of the Year % Benchmark
Arizona Reading First Schools	13%	78%
Central Maricopa*		
Tempe School District	20%	95%
Kyrene School District	19%	64%
Chandler School District	19%	60%

\*From the DIBELS assessments available

35 Peisner-Feinberg, E. S., Burchinal, M. R., Clifford, R. M., Culkin, M. L., Howes, C., Kagan, S. L., et al *The Children of the Cost, Quality, and Outcomes Study Go to School: Technical Report*, 2000, University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Center.

## Elementary Education

Children who cannot read well by fourth grade are more likely to miss school, experience behavior problems, and perform poorly on standardized tests. The performance of Arizona's children on standardized tests continually lags behind that of the nation. Only 56 percent of Arizona's fourth graders scored "at basic" or better on the 2007 NAEP Reading Assessment, compared with a national average rate of 67 percent. The percentage of Arizona fourth graders achieving "at basic" or better on the NAEP Math Assessment increased dramatically from 57 percent in 2000 to 74 percent in 2007, but Arizona's fourth graders still score 8 percent below the national rate of 82 percent.

The NAEP is a standardized means for measuring educational progress in the core subject areas beginning in the fourth grade. It is one of the earliest comprehensive assessments used with students all over the United States and it can provide helpful insights into how well students are progressing through the core subject areas and where groups of students (gender, ethnicity, income, geographic regions) may be systematically experiencing delays in their progress. The NAEP is administered to a sample of fourth grade students and data at the regional level was not available to include at the time of printing this report.

Data is available for the Central Maricopa Region on the Arizona's Instrument to Measure Standards Dual Purpose Assessment (AIMS DPA). The AIMS DPA is used to test Arizona students in third through eighth grades. This assessment measures the student's level of proficiency in Writing, Reading, and Mathematics and provides each student's national percentile rankings in Reading/Language and Mathematics.<sup>36</sup> The chart below shows a complex picture of how each school district in the Central Maricopa Region performs. For example, Kyrene Elementary School reports 12 percent of students falling below the standard in Mathematics but only 6 percent falling below the standard in writing.

The table below shows the total numbers of students in third grade who exceed, meet, approach, or are far below the standards in reading, writing and math in the elementary school districts that fall within the Central Maricopa Region.

### Central Maricopa AIMS DPA Third Grade Score Achievement Levels in Mathematics, Reading, and Writing

School District	Mathematics				Reading				Writing			
	FFB	A	M	E	FFB	A	M	E	FFB	A	M	E
Arizona	9	17	54	20	6	23	59	13	5	13	66	16
Chandler Unified	5	11	52	32	3	16	62	19	2	8	61	29
Kyrene Elementary	3	7	46	45	1	10	65	24	2	5	60	32
Tempe Elementary	9	19	53	18	6	25	59	11	3	8	69	20

Arizona Department of Education AIMS Spring 2007 Third Grade Summary

FFB = Falls Far Below the Standard, A = Approaches the Standard, M = Meets the Standard, and E = Exceeds the Standard

## Secondary Education

The completion of high school is a critical juncture in a young adult's life. Students who stay in school and take challenging coursework tend to continue their education,

stay out of jail, and earn significantly higher wages than their non-graduating counterparts.<sup>37</sup> As the chart on schools in the Central Maricopa Region show, high school graduation rates vary by school district and year of graduation. Furthermore, graduation rates are likely to vary according to race and gender. Compared with the state and national data, the schools in the Central Region have higher graduation rates—sometimes by a large amount.

### High School Graduation Rates

#### 2006

Central Maricopa High School Districts	Total Number of Graduates	Total Number in Cohort	Graduation Rate
Chandler Unified (N=Four)	1570	1787	88%
Tempe Union (N=Seven)	2725	3000	91%
Arizona*	50,355	71,691	70%
United States**	N/A	N/A	N/A

#### 2004

Central Maricopa High School Districts	Total Number of Graduates	Total Number in Cohort	Four-Year Graduation Rate
Chandler Unified (N=Four)	1244	1382	90%
Tempe Union (N=Seven)	2639	3016	88%
Arizona*	47,071	61,450	77%
United States**	2,753,438	3,705,838	74%

\* Arizona Department of Education

\*\* National Center for Education Statistics

The average graduation rate for the schools in the Central Maricopa Region is about 90 percent for 2006, well above the state average, however this rate does not include the many alternative and charter high schools in the poorer areas of the region. In these schools, graduation rates can average less than four out of every ten eligible students and length of time to graduation is often five or six years, rather than the four-year cohort used to calculate averages for the entire region.

In addition, many teen mothers do not graduate from high school. Dropout prevention studies consistently identify the need for high-quality early childhood programs for children of teen mothers to improve the high school drop-out problem. Additionally, quality early childhood education programs improve the likelihood that children of teenage mothers will have successful early childhood outcomes themselves.

### High School Graduation Rates\*

	2004	2005	2006
Arizona	77%	74%	70%
U.S.	74%	75%	74%

\*Measured using a four year cohort of students

Source: Arizona Department of Education; National Center for Education Statistics

## Current Regional Early Childhood Development and Health System

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### Overview of Current Regional Early Childhood Development and Health System

There are numerous agencies, programs and professionals operating in the Central Maricopa Region that provide children and their families with the support and services they need to prosper. Despite these assets the region has been challenged by inadequate resources to build a comprehensive early childhood development and health system that ensures that every child has the supports needed to enter school ready to learn. There are too few high quality early care and education programs in the region. For the more than 40,000 children birth through age five years living in the Central Maricopa Region, there are only 25 accredited child care centers (just over 12 percent of all center-based settings). About 16,000 children are in some type of fee-paying care and education program.

The costs of care across group homes, licensed centers, and in-home care are relatively similar, regardless of setting. Additionally, availability of care for infants and toddlers is scarce. Costs for infant care are generally higher than that for toddlers and preschoolers, which is consistent with state and national norms. Arizona Department of Economic Security certified homes are slightly less expensive than licensed child care sites.

With over 40,000 children birth through age five in the region and a growth in that population of 34 percent between 2000 and 2007, a substantial poverty rate for households, a large number of working families, and a small number of children in all types of care and education programs, it appears that there are not enough early care and education programs of any type for working parents and those who want or need a development program for their children.

### Quality

Families use a variety of criteria to make decisions about care for their children. Factors of importance include: cost; proximity to home or work; health and safety; and recommendations from friends, family or acquaintances. Parents may also use personal assessments of the center or home's environment and interaction between themselves, caregivers and children.

Several states have been increasingly concerned about creating high quality early care and education. This concern makes sense for a number of reasons. Child care needs are growing because a majority of children birth to age six years participate in regular, non-parental child care. In one study, 61 percent of young children participated in some form of child care. Further, 34 percent participated in some type of center-based program.<sup>38</sup> Child care is a growing industry. Increasing maternal employment rates and policies from welfare reform have increased demand. Research has found that high quality child care can be associated with many positive outcomes including language development and cognitive school readiness.<sup>39</sup> Quality care is

<sup>38</sup> Federal Interagency Forum on Child and Family Statistics. *America's Children: Key National Indicators of Well-Being, 2002*. Washington DC.

<sup>39</sup> NICHD Early Child Care Research Network, The Relation of Child Care to Cognitive and Language Development, *Child Development*, 2000, 71, 960-980.



often associated with licensed care, and while this isn't always true one study found that the single best indicator of quality care was the provider's regulatory status.<sup>40</sup> It is important to note that just because a center or home is licensed, that does not guarantee *high quality care*.

Currently there is no commonly agreed upon or published set of indicators of quality for Early Care and Education in Arizona. The State Board of First Things First approved funding in March 2008 to develop a Quality Improvement and Rating System (Quality First!). This system, which will take effect in 2010, sets standards of quality for Arizona. This will assist families and community members, as well as providers to identify what high quality child care looks like and which providers offer quality care. This system will be a statewide asset upon which regions can build when addressing quality. Until statewide quality indicators are established, accreditation by various nationally accredited organizations provides the best available information on quality early child care and education. While not all accrediting bodies measure the same indicators of quality in the same way, reviewing accreditation status provided a reflection of the availability of quality care in the area. National accrediting organizations approved by the Arizona State Board of Education include:

- Association Montessori International/USA (AMI),
- American Montessori Society (AMS)
- Association of Christian Schools International (ACSI)
- National Accreditation Commission for Early Care and Education (NAC)
- National Association for the Education of Young Children (NAEYC)
- National Early Childhood Program Accreditation (NECPA).
- National Association for Family Child Care

## Accredited Early Child Care Centers

The tables below present the number of accredited early care and education centers, as well as an example of staff to student ratios recommended in NAEYC accredited centers.

The Central Maricopa Region has 25 accredited early care and education programs. Three Head Start sites and one school district program have earned NAEYC accreditation. One other school district preschool program is accredited by NAC. NECPA has accredited one child care center. A Montessori program has earned AMI recognition. There are a total of 18 Head Start sites in the region.

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<sup>40</sup> Pence, A. R., & Goelman, H. The Relationship of Regulation, Training, and Motivation to Quality Care in Family Day Care. *Child and Youth Care Forum*, 20, 1991, 83-101.



**Central Maricopa County****Number of Accredited Early Care and Education Centers and Head Start Sites**

	AMI/ AMS	ACSI	NAC	NAEYC	NECPA	NAFCC Homes	Head Start
<b>Number of Accredited Centers</b>	1*		1	19+3 Head Start	1		18**

Sources: NAEYC, AMI, AMS, ACSI, NAC, NECPA, NAFCC, lists of accredited providers.

AMI Recognition Schools List <http://www.montessori-ami.org/amiusa/schools.lasso>

AMS Accredited Montessori Schools List <http://www.amshq.org/schoolExtras/accredited.htm>

ADHS Licensed Child Care List <http://www.azdhs.gov/als/childcare/>

ACSI Schools and Accredited Schools <http://www.acsi.org/web2003/default.aspx?ID=1630&>

NAC Accredited Centers <http://www.naccp.org/displaycommon.cfm?an=1&subarticlenbr=78>

[http://www.naeyc.org/academy/search/Search\\_Result.asp](http://www.naeyc.org/academy/search/Search_Result.asp)

NAFCC Accr. Providers <http://nafcc.fmdatabase.com/fmi/iwp/cgi?-db=accreditationsearch.fp7&-loadframes>

NECPA <http://www.necpa.net/AccreditedPrograms.htm>

\*AMI awards recognition, following self-study and visit, rather than accreditation.

\*\*Source: Arizona Department of Health Services. List of Licensed Child Care Centers and local data

The National Association for the Education of Young Children (NAEYC) offers accreditation to centers throughout the U.S., including centers in Arizona. NAEYC is involved in developing position statements around significant early childhood development issues. One area in which NAEYC has published recommendations for the industry is in group size and staff to child ratios. Both factors have been shown to be significant predictors of high quality. As part of the accreditation designation, NAEYC has published standards for staff to child ratios based on the size of the program and according to age group, as reflected in the chart below.<sup>41</sup>

NAEYC Staff to Child Ratio Recommendations	Group Size									
	6	8	10	12	14	16	18	20	22	24
<b>Infants (Birth to 15 Months)</b>	1:3	1:4								
<b>Toddlers (12 to 28 Months)</b>	1:3	1:4	1:4	1:4						
<b>Toddlers (21 to 36 Months)</b>		1:4	1:5	1:6						
<b>Pre-School (Two and a Half to Three Years)</b>				1:6	1:7	1:8	1:9			
<b>Pre-School (Four Years)</b>						1:8	1:9	1:10		
<b>Pre-School (Five Years)</b>								1:10	1:11	1:12

Source: NAEYC Accreditation Criteria

A survey was administered to 19 centers surveyed in the Central Maricopa region to determine enrollment, and staff to child ratios. The average adult to child ratios were one to five for infants, one to five for toddlers ages one to two, one to seven for three year old children, and ratios ranged from one to seven to one to 20 for four and five year old children. According to the NAEYC standards, the staff to child ratios among accredited providers in the Central Maricopa Region does not meet the recommendations for the infant group. For the toddler and preschool age ranges, the local ratios vary and some are within the recommended range depending on group size. Other national accreditation systems vary in the recommended ratios and group sizes.

<sup>41</sup> NAEYC standards here are used to provide a context for high standards. It is not presumed that all centers should become NAEYC accredited

## Access

Determining the accessibility of early care and education services is a complex issue. Availability and access are influenced by, but not limited to factors such as: number of early care and education centers or homes that have the capacity to accommodate young learners; time that families have to wait for an available opening (waiting lists); ease of transportation to the care facility; and the cost of the care. Data related to waiting lists is not currently available but will be a goal for future data acquisition. For the current Needs and Assets report for the Central Maricopa Region, available data include: number of early care and education programs by type, number of children enrolled in early care and education by type, and average cost of early care and education to families by type.

## Number of Early Care and Education Programs

There are numerous types of early care and education centers in the Central Maricopa Region. These numbers indicate that working parents have choices between types of care providers. However, the data does not indicate whether parents in Central Maricopa Region have choices for *high quality* care for their children.

### Number of Early Care and Education Programs by Type for Central Maricopa Region\*

Licensed Centers*	Small Group Homes	Approved Family Child Care Homes	Providers Registered with the Child Care Resource and Referral**
211	26	107	48

Source: Department of Economic Security Child Care Market Rate Survey 2006\*

\*Licensed centers include only DHS licensed program providing fee-paying child care: full-day and part-day child care programs, Head Start centers with wraparound child care programs, and school district fee-based part-and full-day fee-paying care only.

\*\*Providers counted under Child Care Resource and Referral Column consists ONLY of providers not listed under previous columns.

The Department of Economic Security's (DES) 2006 Child Care Market survey provides information on a range of child care settings statewide. For this report, data were analyzed by zip code to identify which early care and education providers were accessible in each First Things First Region. Only providers in the geographical boundaries of the Central Maricopa Region are included. The data does not include all providers that are accessible to families in the Central Maricopa Region.

There are four types of providers designated in the chart above: licensed centers, group homes, approved family child care homes, and providers registered with the Child Care Resource and Referral service. Licensed centers have been granted the ability to operate a safe and healthy child care center by the Arizona Department of Health Services (ADHS). Small group homes are also licensed by the ADHS to operate safe and healthy child care homes. Approved family child care homes are either certified or regulated by DES to provide care, or are approved by agencies to participate in the Arizona Department of Education Child and Adult Care Food Programs (CCAFP).

Licensure or regulation by the Departments of Economic Security or Health Services ensures completion of background checks of all staff or child care providers, and monitors minimum requirements for staff training hours related to early care and education, as well as basic first aid and CPR. Additionally, periodic inspections and

monitoring ensure that facilities conform to basic minimum safety standards. While licensure and regulation by the Departments of Economic Security and Health Services are a critical foundation for the provision of care for young children, these processes do not address curricula, interaction of staff with children, processes for identification of early developmental delays, or professional development of staff beyond minimal requirements. These important factors in quality care and parent decision-making are provided *only* with national accreditation (see discussion in the section on Quality) and will be included in First Things First's forthcoming Quality First!

Information provided by the Child Care Resource and Referral includes, but is not limited to: type of care provider, license or regulation information, total capacity, total vacancies, days of care, and rates for care. Because registration is voluntary, not all care providers report all information.

Central Maricopa Region's fee-paying child care facilities, in 2006, included 211 licensed fee-charging centers, 26 small group homes, 107 approved family child care homes, and 48 otherwise unregulated providers listed with the Resource and Referral agency.

## Children Enrolled in Early Care and Education Programs

The table below represents the number of children enrolled in early care and education programs by type in the Central Maricopa Region. These numbers do not account for children cared for in unregulated care, by kin, utilizing non-fee based care, or who are in need of care but do not have access to it. Identification of methodologies and data sets related to unregulated care and demand for early care and education are a priority for the future.

### Number of Children Enrolled in Early Care and Education Programs by Type for Central Maricopa Region

	Licensed Centers	Groups Homes	Approved Family Child Care Homes	Providers Registered with the Child Care Resource and Referral	Total
<b>Approved Capacity*</b>	26,813	278	561	208	27,860
<b>Average Number Served</b>	15,403	26	482	315	16,422

Source: DES Child Care Market Rate Survey 2006

\*Capacity refers to the total capacity of a physical site and does not necessarily reflect the size of the actual program in that site.

### Capacity of Early Care and Education Programs Licensed by the Arizona Department of Health Services, by Zip Codes in the Central Maricopa Region

Zip Code/s	Child Care Centers/Group Homes Licensed by ADHS	Capacity/Number of Children Served * *Could include children in before and after school care older than five.
<b>85042</b>	21	841
<b>85044, 045, 048</b>	50	7,326
<b>85224, 225, 226</b>	80	9,614
<b>85248, 249</b>	29	2,752
<b>85281, 282, 283, 284, 287</b>	99	10,642

Source: Arizona Department of Health Services \*Capacity refers to the total capacity of a physical site and does not necessarily reflect the size of the actual program in that site.

The following tables show the number of children served in Central Maricopa Head Start. Most centers reported the need to reduce the number of children served in 2008 and 2009 due to funding and space limitations.

#### Head Start Children Served: Maricopa County Head Start Report

City	Total Children Served
Chandler	148
Guadalupe	68
Tempe	200

Source: Maricopa County Head Start

#### Early Head Start: Maricopa County Head Start Report

City	Total Children Served
Guadalupe	8
Tempe	32

Source: Maricopa County Head Start

### Costs of Care

In the Central Maricopa Region, child care rates are most expensive for licensed centers when compared with other settings. Costs for infants show the greatest difference by type, at over \$12.00 more per day for a licensed center compared with group or certified homes.

The table below presents the average cost for families, by type of early care and education. In general, it can be noted that care is more expensive for younger children. Infant care is more costly for parents because ratios of staff to children *should* be lower for very young children and the care of very young children demands care provider skill sets that are unique. As with many other services, cost of early care and education often is directly related to the quality of care. Providers of care and education struggle with the balance of providing a service that families can afford. Increased quality often requires more employees, higher qualifications, increased training and better employee compensation. These are expensive business practices and demand increased compensation to the child care or program provider – costs are typically a heavy burden for families with young children.

**Costs of Early Care and Education in Central Maricopa County**

<b>Group Homes</b> <ul style="list-style-type: none"> <li>• Infant</li> <li>• Toddler</li> <li>• Preschooler</li> </ul>	\$27.76 per day \$27.20 per day \$27.20 per day
<b>Licensed Centers</b> <ul style="list-style-type: none"> <li>• Infant</li> <li>• Toddler</li> <li>• Preschooler</li> </ul>	\$38.70 per day \$37.21 per day \$27.20 per day
<b>In-Home Care</b> <ul style="list-style-type: none"> <li>• Infant</li> <li>• Toddler</li> <li>• Preschooler</li> </ul>	\$28.75 per day \$26.25 per day \$24.75 per day
<b>Certified Homes</b> <ul style="list-style-type: none"> <li>• Infant</li> <li>• Toddler</li> <li>• Preschooler</li> </ul>	\$26.66 per day \$24.66 per day \$23.01 per day
<b>Alternately Approved Homes</b> <ul style="list-style-type: none"> <li>• Infant</li> <li>• Toddler</li> <li>• Preschooler</li> </ul>	\$21.63 per day \$20.29 per day \$19.82 per day
<b>Unregulated Homes</b> <ul style="list-style-type: none"> <li>• Infant</li> <li>• Toddler</li> <li>• Preschooler</li> </ul>	\$27.67 per day \$26.31 per day \$25.72 per day

\*\*Assumes full-time enrollment; Sources: 2006 DES Market Rate Study; 2008 rates were obtained from SWI ECE Centers

\* Hourly rates that differ by less than \$.50 have been combined and averaged across all age groups; Sources: 2006 DES Market Rate Study; 2008 Childcare in Arizona (NACCRA)

**Child Care Costs in Reference to Family Income:**

The cost of child care can be a considerable burden for Arizona families. Yearly fees for child care in the State of Arizona range from almost \$8,000 for an infant in a licensed center to about \$5,900 for before and after school care in a family child care home. This represents about 12 percent of the median family income of an Arizona married couple with children under age 18. It represents 22 to 30 percent of the median income of a single parent female headed family in Arizona

Child Care Costs and Family Incomes	Arizona	U.S.
Average, Annual Fees Paid for Full-Time Center Care for an Infant	\$7,974	\$4,542-\$14,591
Average, Annual Fees Paid for Full-Time Center Care for Four-Year-Olds	\$6,390	\$3,380-\$10,787
Average, Annual Fees Paid for Full-Time Care for an Infant in a Family Child-Care Home	\$6,249	\$3,900-\$9,630
Average, Annual Fees Paid for Full-Time Care for a Four-Year-Old in a Family Child-Care Home	\$6,046	\$3,380-\$9,164
Average, Annual Fees Paid for Before and After School Care for a School-Age Child in a Center	\$6,240	\$2,500-\$8,600
Average, Annual Fees Paid for Before and After School Care for a School-Age Child in a Family Child Care Home	\$5,884	\$2,080-\$7,648
Average, Annual Tuition and Fees Paid for Four-Year State College	\$4,960	\$6,185
Median Annual Family Income of Married Couple Families with Children Under 18	\$66,624	\$72,948
Cost of Full-Time Care for an Infant in a Center, as Percent of Median Income for Married Couple Families with Children Under 18	2%	7.5%-16.9%
Median Annual Family Income of Single Parent (Female Headed) Families With Children Under 18	\$26,201	\$23,008
Cost of Full-Time Care for an Infant in a Center, as Percent of Median Income for Single Parent (Female Headed) Families with Children Under 18	30%	25%-57%

Source: NACCRA Fact Sheet: 2008 Child Care in the State of Arizona: <http://www.naccrra.org/randd/data/docs/AZ.pdf>

## Additional Indicators of Interest to Central Maricopa Regional Partnership Council

### Child Care Provider Survey Responses

In an effort to get a snapshot of child care at the local level and to actively engage community members, a telephone survey was conducted with a small sample (n = 33) of accredited and licensed Early Child Education Centers in the Central Maricopa Region. An additional four written surveys, that included the same questions, were received and reported in the survey results. Twenty-nine of the total sample of 37 participated – a surprisingly high result given that many of the centers were closed for summer break. The brief list of questions was focused on additional information requested by Council members. These questions with results are as follows:

- Number of children on a waiting list: Only three of the 19 respondents indicated they had a waiting list; one reported an actual number of children on the list (50); two indicated a wait for one and two year old slots but provided no numbers.
- Number of slots available for infants: 16 of the 29 centers took infants – actual number of slots available was not identified.
- Number of centers providing non-traditional hours of operation: Responses varied, but seven operated between the hours of 6:00 to 6:30 a.m. and 6:00 to 6:30 p.m. The nine school-based preschools operated between 8:00 to 9:00 a.m. and 3:00 to 3:30 p.m. Only two centers reported hours of service beyond traditional work day hours.

- Sixteen of the centers were private; seven were public preschool; and eight received funding from multiple sources including tuition and Arizona Department of Economic Security subsidies.
- 2,532 (2,420 fulltime and 112 part-time) children were enrolled with these 19 providers.

These 19 centers do not necessarily reflect all the child care options in the region. They do, however, suggest some areas for further exploration, such as quality child care options for families needing nontraditional hours of service.

## Health

Children's good health is an essential element that is integrally related to their learning, social adjustment, and safety. Healthy children are ready to engage in the developmental tasks of early childhood and to achieve the physical, mental, intellectual, social and emotional well-being necessary for them to succeed when they reach school age. Children's healthy development benefits from access to preventive, primary, and comprehensive health services that include screening and early identification for developmental milestones, vision, hearing, oral health, nutrition and exercise, and social-emotional health. Previous sections of this report presented data on prenatal care, health insurance coverage, immunizations, and oral health for the Central Maricopa Region. This section focuses on developmental screening.

## Developmental Screening

Early identification of developmental or health delays is crucial to ensuring children's optimal growth and development. The Arizona Chapter of the American Academy of Pediatrics recommends that all children receive a developmental screening at nine, 18, and 24 months with a valid and reliable screening instrument. Providing special needs children with supports and services early in life leads to better health, better outcomes in school, and opportunities for success and self-sufficiency into adulthood. Research has documented that early identification of and early intervention with children who have special needs can lead to enhanced developmental outcomes and reduced developmental problems.<sup>42</sup> For example, children with autism, identified early and enrolled in early intervention programs, show significant improvements in their language, cognitive, social, and motor skills, as well as in their future educational placement.<sup>43</sup>

Parents' access to services is a significant issue, as parents may experience barriers to obtaining referrals for young children with special needs. This can be an issue if, for example, an early child care provider cannot identify children with special needs correctly.<sup>44</sup>

Although recommended by the Arizona Academy of Pediatrics, physicians do not all use a standardized instrument to routinely screen children for developmental

42 Garland, C., Stone, N. W., Swanson, J., & Woodruff, G. (eds.). *Each Intervention for Children with Special Needs and Their Families: Findings and Recommendations*. 1981, Westat Series Paper 11, University of Washington; Maisto, A. A., German, M. L. Variables Related to Progress in a Parent-Infant Training Program for High-Risk Infants. 1979, *Journal of Pediatric Psychology*, 4, 409-419.; Zeanah, C. H. *Handbook of Infant Mental Health*, 2000, New York: The Guildford Press.

43 National Research Council, Committee on Educational Interventions for Children with Autism, Division of Behavioral and Social Sciences and Education. *Educating Children with Autism*. Washington, DC: National Academy Press; 2001.

44 Hendrickson, S., Baldwin, J. H., & Allred, K. W. Factors Perceived by Mothers as Preventing Families from Obtaining Early Intervention Services for Their Children with Special Needs, *Children's Health Care*, 2000, 29, 1-17.



delays, especially considering nearly half of parents nationally have concerns about their young child's behavior (48 percent), speech (45 percent), or social development (42 percent).<sup>45</sup> Parents' access to developmental screening becomes a significant issue when developmental delays go unidentified. Children who do not have access to continuous, ongoing medical care do not receive well child check-ups and therefore, also do not receive early screening. Children most likely to be screened include those that need neonatal intensive care at birth. These babies are all referred for screening and families receive follow-up services through Arizona's High Risk Perinatal Program administered through county health departments. Most parents and early care and education professionals lack the information and skills necessary to recognize the signs of delayed growth and development, which further limits children's access to developmental screening.

Every state is required to have a system in place to find and refer children with developmental delays to intervention and treatment services. The federal Individuals with Disabilities Education Act (IDEA) governs how states and public agencies provide early intervention, special education, and related services. Infants and toddlers with disabilities (birth to age three) and their families receive early intervention services under IDEA Part C. Children and youth (ages three to 21) receive special education and related services under IDEA Part B.

In Arizona, the system that serves infants and toddlers is the Arizona Early Intervention Program (AZEIP). Eligible children have not reached 50 percent of the developmental milestones expected at their chronological age in one or more of the following areas of childhood development: physical, cognitive, language/communication, social/emotional, and adaptive self-help. Identifying the number of children who are currently being served through an early intervention or special education system, indicates what portion of the population is determined to be in need of special services (such as speech or physical therapy). Comparing that number to other states with similar eligibility criteria provides a basis for understanding how effective the child find process is. This is the first task in knowing whether or not a community's child find process, including screening, is working well.

Second, when conducted effectively, screening activities assist in identifying children who may be outside the range of typical development. Based upon screening results, a child may be further referred for an evaluation to determine eligibility for services. Accurate identification through appropriate screening most often leads to a referral of a child who then qualifies to receive early intervention or special education services. One consideration of the effectiveness of screening activities is the percent of children deemed eligible compared to the total number of children referred. The higher the percent of children eligible, the more accurate and appropriate the referral. Effective screening activities are critical to assuring such accuracy.

The following chart shows the number of AZEIP Screenings for children birth to 12 months and for children 13 to 36 months for Maricopa County.

<sup>45</sup> Inkelas, M., Regalado, M., Halfon, N. Strategies for Integrating Developmental Services and Promoting Medical Homes. Building State Early Childhood Comprehensive Systems Series, No. 10. National Center for Infant and Early Childhood Health Policy. July 2005.



**Children Birth through Five Years Receiving Developmental Screenings\***

Service Received According to Age Group	2005	2006
<b>AZEIP Screening Birth through 12 Months</b>	276 (0.46%)	311 (0.49%)
<b>AZEIP Screening 13-36 Months</b>	2,502 (0.39%)	2,810 (0.49%)

\*Includes data on children throughout Maricopa County, not just the Phoenix area

Source: Arizona Early Intervention Program, Arizona Department of Health Services

There are many challenges for Arizona's early intervention program in being able to reach and serve children and parents. Of particular concern are the national shortages in speech and physical therapists, especially those with specific knowledge in service delivery to young children and their families. Families and health care providers are frustrated by the tangle of procedures required by both private insurers and the public system. These problems will require the combined efforts of state and regional stakeholders to arrive at appropriate solutions.

While longer-term solutions to the therapist shortage are developed, parents can be a primary advocate for their children to assure that they receive appropriate and timely developmental screenings according to the schedule recommended by the Academy of Pediatrics. Also, any parent who believes their child has delays can contact the Arizona Early Intervention Program or any school district and request that their child be screened. Outreach, information and education for parents on developmental milestones for their children, how to bring concerns to their health care provider, and the early intervention system and how it works, are parent support services that each region can provide. These measures, while not solving the problem, will give parents some of the resources to increase the odds that their child will receive timely screening, referrals, and services.

**Insurance Coverage**

The following chart compares the percent of children receiving no medical care for those insured all year versus those uninsured all or part of the year. As the chart shows, over 38 percent of children who are uninsured all or part of the year, are not receiving medical care compared to 15 percent of children who are insured throughout the year.

**Percent of Children (Birth to 17) Not Receiving any Medical Care, 2003**

	Insured All Year		Uninsured All or Part of the Year	
	Percent Not Receiving Medical Care	Number Not Receiving Medical Care	Percent Not Receiving Medical Care	Number Not Receiving Medical Care
<b>Arizona</b>	14.8	171,303	38.1	134,259
<b>U.S.</b>	12.3	7,635,605	25.6	2,787,711

Source: Robert Wood Johnson Foundation. Protecting America's Future: A State-By-State Look at SCHIP and Uninsured Kids, August 2007.

While the number of children having access to medical care or well child visits could not be determined for this report, the high rate of uninsured children in the region would suggest that access to medical care and well child visits is limited. As described in the section on Health Coverage and Utilization, children who are enrolled in

AHCCCS are very likely to receive well child visits during the year, as are children who are enrolled in Head Start.

Data on the number of uninsured children birth through age five in the Central Maricopa Region was not available for this report. However, a 2007 report entitled *Health Insurance In Arizona: Residents of Maricopa County* provides estimates of the number of uninsured children living in each zip code area in Maricopa County. The estimates are based on health records contained in a community health data system known as Arizona Health Query (AZHQ). The data system contains health records for one point four million people in Maricopa County, representing 40 percent of county residents. Health records for children are even more complete in the AZHQ database, representing 72 percent of the county's children ages birth to nine. The report estimates that a large number of uninsured children reside in the Central Maricopa Region. In the chart below, the number of children without health insurance is estimated by zip code for 2004. Estimates are based on an estimate of the rate of uninsured children in each zip code area applied to U.S. Census population projections.

#### Uninsured Children (Birth to Age Nine) by Selected Zip Codes in the Central Maricopa Region, 2004

Zip Code	Estimated Number of Uninsured Children
85042	Not available
85044	829
85045	90
85048	526
85281	1,050
85282	928
85283	857
85284	391
85286	Not available
85224	1,428
85225	2,816
85226	1,036
85248	526
85249	Not available

Source: Arizona Health Query, as reported in Johnson, Dr. William G., et al. *Health Insurance in Arizona: Residents of Maricopa County*.

Ira A. Fulton School of Computing and Informatics, Arizona State University, 2007. Note: Counts for smaller enclosed zip codes were added to the counts for larger enclosing zip codes. Data were reported where total AZHQ was  $\geq 500$ .

## Immunizations

Immunization of young children is known to be one of the most cost-effective health services available and is essential to prevent early childhood diseases and protect children from life threatening diseases and disability. A Healthy People 2010 goal for the U.S. is to reach and sustain full immunization of 90 percent of children two years of age.

Although recent data was unavailable for this report, data from 2003 suggest that Chandler and Tempe lag behind the state and nation in percent of immunized two year olds, while Guadalupe is far exceeding the lag in those rates. In 2003, only 37

percent of two year old children in Chandler had received immunizations while 52 percent had in Tempe, and a startling 90 percent or more in Guadalupe. In 2003, only 55.6 percent of Maricopa County two year olds were immunized according to the 4:3:1:3 immunization schedules.

#### Percent of Immunized Two-Year-Olds – Central Maricopa Region

Central Maricopa Region	2003	2007	2008
Chandler	36.9%	Data not available	
Guadalupe	>90.0%		
Tempe	52.3%		
Maricopa County	55.6%		
Arizona	79.8%	78%	81%
U.S.	80.3%	82%	82%

Source: ADHS Community Health Profiles, 2003

### Additional Indicators Included Under This Priority

#### Special Needs Services

In a key informant interview, a retired special needs preschool teacher discussed the ability of schools in the region to work with autistic and other special needs youth. She felt there was considerable coordination across a team of professionals, including speech and other therapists, as well as strong support resources including the Southwest Autism Research and Resource Center (SARRC) and Arizona Autism United (AAU) – a relatively new resource focused on home visits, training for parents, and coordination with local schools and other organizations. She also described other resources, including a Head Start class for the hearing impaired at Getz Elementary School, which serves a large number of children from Guadalupe. Due to time constraints and school closures for summer break, it was infeasible to contact additional experts regarding special needs services in the region.

#### Areas Identified for Further Study

The Regional Partnership Council identified areas related to children's health and special needs services that require further study:

- The availability of services for the special needs population
- The entire process of identifying and providing for developmental delays in young children is complex and challenging.
- Engaging pediatricians in the process is sometimes difficult.
- Many parents, early child educators, and doctors require more knowledge of critical age and stage milestones and how to access information regarding them.
- There is a shortage of affordable therapists (speech, occupation, physical, hearing) and psychologists, and too few mental health therapists for children birth to age three.
- Arizona has one of the narrowest definitions for eligibility of early intervention services for children birth to age three, resulting in lower rates of detection and intervention.

## Family Support

Family support is a foundation for enhancing children's positive social and emotional development. Children who experience sensitive, responsive care from a parent perform better academically and emotionally. Beyond the basics of care and parenting skills, children benefit from positive interactions with their parents (e.g. physical touch, early reading experiences, and verbal, visual, and audio communications). Children depend on their parents to ensure they live in safe and stimulating environments where they can explore and learn.

Many research studies have examined the relationship between parent-child interactions, family support, and parenting skills.<sup>46</sup> Much of the literature addresses effective parenting as a result of two broad dimensions: discipline and structure, and warmth and support.<sup>47</sup> Strategies for promoting enhanced development often stress parent-child attachment, especially in infancy, and parenting skills.<sup>48</sup> Parenting behaviors have been shown to impact language stimulation, cognitive stimulation, and promotion of play behaviors—all of which enhance child well being.<sup>49</sup> Parent-child relationships that are secure and emotionally close have been found to promote children's social competence, pro-social behaviors, and empathic communication.<sup>50</sup>

The new economy has brought changes in the workforce and family life. These changes are causing financial, physical, and emotional stresses in families, particularly low-income families. Increasing numbers of new immigrant families are challenged to raise their children in the face of language and cultural barriers. Regardless of home language and cultural perspective, all families should have access to information and services and should fully understand their role as their children's first teachers.

Supporting families is a unique challenge that demands collaboration among parents, service providers, educators and policy makers to promote the health and well being of young children. Every family needs and deserves support and access to resources. Effective family support programs will build upon family assets which are essential to creating self-sufficiency in all families. Family support programming will play a part in strengthening communities so that families benefit from "belonging". Success is dependent on families being solid partners at the table, with access to information and resources. Activities and services must be provided in a way that best meet family needs.

46 Brooks-Gunn, J., Klebanov, P.K., & Liaw, F. R. The Learning, Physical, and Emotional Environment of the Home in the Context of Poverty: The Infant Health and Development Program. *Children and Youth Services Review*, 1994, 17, 251-276; Hair, E., C., Cochran, S. W., & Jager, J. Parent-Child Relationship. In E. Hair, K. Moore, D. Hunter, & J. W. Kaye (Eds.), *Youth Development Outcomes Compendium*. Washington DC, Child Trends; Maccoby, E. E. Parenting and its Effects on Children: On Reading and Misreading Behavior Genetics, 2000, *Annual Review of Psychology*, 51, 1-27.

47 Baumrind, D. Parenting Styles and Adolescent Development. In J. Brooks-Gunn, R., Lerner, & A. C. Peterson (Eds.), *The Encyclopedia of Adolescence* (pp. 749-758). New York: Garland; Maccoby, E. E. Parenting and its Effects on Children: On Reading and Misreading Behavior Genetics, 2000, *Annual Review of Psychology*, 51, 1-27.

48 Sroufe, L. A. *Emotional Development: The Organization of Emotional Life in the Early Years*. Cambridge: Cambridge University Press; Tronick, E. Emotions and Emotional Communication in Infants, 1989, *American Psychologist*, 44, 112-119.

49 Brooks-Gunn, J., Klebanov, P.K., & Liaw, F. R. The Learning, Physical, and Emotional Environment of the Home in the Context of Poverty: The Infant Health and Development Program. *Children and Youth Services Review*, 1994, 17, 251-276; Snow, C. W., Barnes, W. S., Chandler, J., Goodman, I. F., & Hemphill, J., *Unfulfilled Expectations: Home and School Influences on Literacy*. Cambridge, MA: Harvard University Press.

50 ; Hair, E., C., Cochran, S. W., & Jager, J. Parent-Child Relationship. In E. Hair, K. Moore, D. Hunter, & J. W. Kaye (Eds.), *Youth Development Outcomes Compendium*. Washington DC, Child Trends; Sroufe, L. A. *Emotional Development: The Organization of Emotional Life in the Early Years*. Cambridge: Cambridge University Press; Tronick, E. Emotions and Emotional Communication in Infants, 1989, *American Psychologist*, 44, 112-119.

Family support is a holistic approach to improving young children's health and early literacy outcomes. In addition to a list of services like the licensed child care providers, preschool programs, food programs, and recreational programs available to families, Regional Partnership Councils will want to work with their neighborhoods to identify informal networks of people – associations – that families can join and utilize to build a web of social support.

In the Central Maricopa Region, there are a wide array of efforts, initiatives and programs providing support to families. For example, there are state-wide programs such as Healthy Families Arizona and Promoting Safe & Stable Families that provide a variety of support services and parent education. In 2006-2007, Healthy Families Arizona served over 2,300 families throughout 37 communities in Maricopa County (including Chandler, Guadalupe, Phoenix, Sun Lakes, and Tempe) by providing home visitation with families from the prenatal period through age five.

In the Phoenix area, the Valley of the Sun United Way has developed a collection of education materials for families. School and library programs offer resources for parent knowledge and education materials including classes, Web sites, handouts, and brochures. Raising Special Kids, Southwest Autism Research and Resource Center (SAARC), United Cerebral Palsy of Central Arizona, Inc., and Southwest Human Development all provide information and resources for families with children with special needs.

The eight Family Resource Centers in the Tempe schools are an excellent example of support resources for parents in the Region. Sponsored by Communities in Schools, these centers serve to connect parents with community resources and provide classes and other support services. Parents from the populations are hired and trained to serve as resource coordinators. Resource Centers have a dual purpose – to take the school into the community, but also bring the family into the school, thereby facilitating comfortable relationships and more parent involvement. A “Don't Wait to Educate” series of classes are designed to provide parents of children under age five with information and tools for promoting healthy early brain development and also to familiarize them with their local school system. Likewise, the Chandler Care Center at San Marcos Elementary School in Chandler provides free medical treatment, prescriptions, and immunizations to eligible parents.

Preschool programs are also available as well as a unique, home-based preschool program, Giggles Squiggles, and Squirms, designed for parents and family members of three- and four-year old children. No Parent Left Behind University at Marcos de Niza High School in Tempe provides parents with opportunities to network and learn useful parenting strategies in a supportive non-judgmental environment. Parent Kits, which are distributed to new mothers at local hospitals, are also an example of a quality resource available to families in the region.

In addition to describing the work of the “Don't Wait to Educate” series and Family Resource Centers (described above), a key informant interview also identified the Open Horizons Program. The Open Horizons Program is a cooperative program with two local providers that provides quality child care for teen mothers so they can complete their education. They also maintain a scholarship program for up to five mothers who don't qualify for Department of Economic Security (DES) subsidy. When the informant was asked about challenges to family support, her response was lack of time and funding to continue and expand services and to conduct surveys and evaluations.

## Parent Knowledge About Early Education Issues

One issue related to parent education and support in the region is whether parents are aware of the resources that *are* available and how to access them. Southwest Institute for Families' recently conducted a survey of a sample of parents, including parents from the Central Maricopa Region, which provides some indication of parent knowledge. When asked to rate their level of knowledge of early child education and care, 9.1 percent of respondents indicated Great; 27.3 percent - Good; 36.4 percent - Needs Some Information; and 27.3 percent - Needs Lots of Information. When queried about quality child care, 78 percent of parents indicated that licensing is an important factor in choosing child care, but 56 percent were unsure of how to obtain licensing reports. Three quarters of parents surveyed were not aware of the existence of the Arizona Early Learning Standards.

To engage the community in the current assessment process and to collect some initial primary data relative to parent knowledge and child and health care and use of services in the Region, parents attending infant/toddler sessions at two libraries in the Chandler area were asked to complete a Parent Questionnaire. Survey results suggest that parents who attended were primarily stay-at-home mothers who do not currently require child care. Half of the respondents, however, still listed the top three factors they would consider when choosing child care arrangements. Cost, developmentally appropriate, and curriculum were the top factors listed, followed closely by safety and nurturing. Staff credentials and group size did not appear to be a priority for the focus group participants.

When asked how informed they felt about early child development and health issues, three felt very well informed and 14 felt well informed. Only one reported feeling not at all informed. When queried about where they went for advice about their children's health, 17 of them indicated a doctor. Only four identified the internet as a source for health information. Note: This small sample of seemingly well-informed parents attending a library reading program with their toddlers reflects only one population set of the diverse Maricopa Central Region.

## Family Literacy and Daily Reading to Children

Classes and workshops to improve over-all family literacy are offered through libraries and other resource centers throughout the Maricopa Central Region. Initiatives that promote children's literacy also often involve parents in the learning process (e.g. a Family Literacy Program at Tempe Elementary School). Such initiatives help parents better understand that early literacy is a strong predictor of later academic success. Children who lack early literacy skills (i.e. knowing how to hold a book or that one reads from left to right; ability to name the letters of the alphabet and to match verbal sounds with their corresponding letters) don't have the basic building blocks for first grade reading and writing skills.

Programs such as Family Place at the Escalante Center in Tempe, work to provide these kinds of opportunities for children and families in Central Maricopa. Family Place is a center in the library offering family friendly play space for parents and children birth to five, Parent/Child workshops, books/materials collections and other services. Modeling interactive reading and other developmental activities helps parents better understand how to interact with their children in ways that promote literacy.

Another example is the Tempe Early Reading First Partnership (TERP), an inno-



vative effort between the community and Arizona State University to help preschool teachers serving low-income students develop high quality research-based curriculum for enhancing their students' literacy skills. Test scores show that TERF children are "at" or "above" expected benchmarks for kindergarten. Maricopa Central also houses five Reach Out and Read programs at local community health centers.

The amount of time parents spend reading and telling stories to infants and toddlers has been positively correlated with later book appreciation and reading skills. Parents who participated in the Chandler Library parent survey (described above) were asked: How many times in the past week have you or someone in your household done any of the following: Read to your child; Told your child a story; and Taught your child letters, words, or numbers? Responses ranged from a low of three times per week to a high of 21 times per week. Fifty-five percent of the respondents reported reading to their children daily. Forty-five percent of parents also told stories on a daily basis; 35 percent taught letters, words, and numbers daily.

Some important literacy assets in the region include:

- Literacy Volunteers of Maricopa County provides one-to-one tutoring, preparation for the GED exam at the LEARN Center, computer literacy training at the Community Technology Center, Family Literacy (including basic education and parenting for parents of preschool and kindergarten children), and workplace education.
- Libraries and school districts also offer programs to assist families with literacy.
- The Reach Out and Read Program encourages family literacy during a child's visit to the physician/clinic. Children are given a book during each well-child check.
- Channel Eight PBS programming offers many opportunities for children and families to learn together using the internet, television programming, and direct training.
- In the parent training component - Ready to Learn -- families meet with a trainer and are given books and techniques for reading to their children as well as strategies for watching television together.

## Professional Development

The commitment, education, experience and continuity of teachers and caregivers for young children are primary factors affecting children's early learning and their development in math, language, and social skills. Professionals providing early childhood services to young children and their families can improve upon their knowledge and skills through ongoing professional development activities. This may involve taking college credit-level coursework that leads to a CDA (Child Development Associate) credential, a certificate of completion, degree or teacher certification. It may also encompass participation in higher-level training sessions, conferences and workshops.



## Child Care Professionals' Certification and Education

Research on caregiver training has found a relationship between the quality of child care provided and child development outcomes.<sup>51</sup> Furthermore, formal training is related to increased quality care, however, *experience without formal training* has not been found to be related to quality care.<sup>52</sup>

A pressing concern of the Central Maricopa Regional Partnership Council, and for many other areas around the state, is the preparation of its early childhood and elementary school teachers. Professional training and credentialing of professionals appears to be similar in the Central Maricopa Region to Arizona, yet lacking compared to national statistics.

### Child Care Professionals' Educational Background

Degree Type	Central Maricopa 2007		Arizona* 2007		U.S.** 2002	
	Teachers	Assistants	Teachers	Assistants	Teachers	Assistants
No degree	62%	81%	61%	82%	20%	12%
CDA	9%	3%	9%	7%	N/A	N/A
Associates	14%	7%	15%	8%	47%	45%
Bachelors	17%	7%	19%	7%	33%	43%
Masters	6%	1%	6%	<1%		

Source: Compensation and Credentials Report, Center for the Child Care Workforce – Estimating the Size and Components of the U.S. Child Care Workforce and Caregiving Population report, 2002.

\* Arizona figures were determined by using the statewide average from the Compensation and Credentials report.

\*\*U.S. figures had slightly different categories: High school or less was used for no degree, some college was used for Associates degree, and Bachelors degree or more was used for Bachelors and Masters Degree

## Professional Development Opportunities

Professionals providing early childhood services can improve their knowledge and skills through professional education and certification. There are many organizations available in the region that provide classes, coursework, undergraduate and graduate degrees in Early Child Education, Early Child Administration & Management, and Curriculum and Instruction. Local community colleges also offer an Associates of Arts or Applied Science degree in Early Child Education and a Certificate of Completion in Early Childhood Education. Multiple organizations and individuals offer classes and workshops designed to increase early child development knowledge, skills, and classroom practices. Many of these are registered and promoted through the S\*CCEEDS (career registry) Web site and newsletter. Distance learning options are also available. A recent review of trainings and classes promoted through S\*CCEEDS during the period from June 1, 2007 through May 31, 2008 shows a total of 245 offerings in the Central Maricopa Region.

51 NICHD Early Child Care Research Network. The Relation of Child Care to Cognitive and Language Development, 2000, *Child Development*, 71, 960-980.

52 Galinsky, E. C., Howes, S., & Shinn, M. *The Study of Children in Family Care and Relative Care*. 1994, New York: Families and Work Institute; Kagan, S. L., & Newton, J. W. Public Policy Report: For-Profit and Non-Profit Child Care: Similarities and Differences. *Young Children*, 1989, 45, 4-10; Whitebook, M., Howes, C., & Phillips, D. *Who Cares? Child Care Teachers and the Quality of Care in America*, 1989, Oakland, CA: Child Care Employee Project.

### Available Higher Education and Certification Programs for Child Care Professionals

School	Degree/Certificates
Mesa Community College	• Certificate of Completion – Early Care Specialist
Rio Salado College	• Associate in Applied Science (AAS) for Early Childhood Education
Arizona State University - Polytechnic Campus	• B.A.E. Early Childhood Education (Pre K-3)
Arizona State University - Tempe Campus	• B.A.E. Early Childhood Education
Arizona State University - West	• B.A.E. Early Childhood Teaching and Leadership
Grand Canyon University	• Bachelor of Science in Elementary Education with an Emphasis in Early Childhood Education
Central Arizona College	<ul style="list-style-type: none"> <li>• Early Childhood Education- Associate of Applied Science with Specializations in: Infant/Toddler</li> <li>• Family Child Care</li> <li>• Preschool</li> <li>• Management</li> <li>• School-Age</li> </ul>
Northern Arizona University	• B.S. Ed. in the Early Childhood
Arizona Western College	• Associate in Applied Science (AAS) for Early Childhood Education
Maricopa Community Colleges (campuses in Chandler-Gilbert, Estrella Mountain, Gate Way, Glendale, Mesa, Paradise Valley, Phoenix, Rio Salado, Scottsdale, South Mountain)	<ul style="list-style-type: none"> <li>• Associate in Applied Science (AAS) for Early Childhood Education</li> <li>• Associate in Applied Science (AAS) for Early Childhood Development: Montessori</li> <li>• Associate in Applied Science (AAS) for Early Childhood Administration and Management</li> <li>• Associate in Applied Science (AAS) for Early Care and Education</li> <li>• Associate in Applied Science (AAS) for Early Childhood Development</li> <li>• Certificate of Completion for the following areas: Early Childhood Classroom Management, Early Childhood Education, Early Childhood Education and Administration, Early Care Specialist, Early Childhood Development, and Infant/Toddler Development</li> </ul>

Source: Phone Survey of IHEs conducted by SWI, 2008.

## Employee Retention

Providing families with high quality child care is an important goal for promoting child development. Research has shown that having child care providers who are more qualified and who maintain employee retention is associated with more positive outcomes for children.<sup>53</sup> More specifically, research has shown that child care providers with more job stability are more attentive to children and promote more child engagement in activities.<sup>54</sup>

As the chart below shows, average length of employment has remained low with teachers employed more than five years at 37 percent, and assistant teachers employed more than five years at 14 percent.

<sup>53</sup> Raikes, H. Relationship Duration in Infant Care: Time with a High Ability Teacher and Infant-Teacher Attachment. 1993, *Early Childhood Research Quarterly*, 8, 309-325.

<sup>54</sup> Stremmel, A., Benson, M., & Powell, D. Communication, Satisfaction, and Emotional Exhaustion Among Child Care Center Staff: Directors, Teachers, and Assistant Teachers, 1993, *Early Childhood Research Quarterly*, 8, 221-233; Whitbook, M., Sakai, L., Gerber, E., & Howes, C. *Then and Now: Changes in Child Care Staffing, 1994-2000*. Washington DC: Center for Child Care Workforce.

### Average Length of Employment for Child Care Professionals in Central Maricopa (2007) – Tempe, Chandler, Guadalupe, and Ahwatukee

	Six Months or Less	Seven to 11 Months	One Year	Two Years	Three Years	Four Years	Five Years or More	Not Applicable	“Don’t Know/Refused”
<b>Teachers</b>	6%	4%	10%	11%	15%	10%	40%	0%	4%
<b>Assistant Teachers</b>	11%	6%	23%	23%	12%	2%	11%	13%	1%
<b>Teacher Directors</b>	2%	1%	5%	10%	7%	5%	24%	46%	1%
<b>Administrative Directors</b>	1%	4%	5%	10%	5%	9%	41%	23%	3%

Source: Compensation and Credentials Survey

## Compensation and Benefits

Higher compensation and benefits have been associated with quality child care. Research studies have found that in family care and in child care centers, workers’ salaries are related to quality child care.<sup>55</sup> Furthermore, higher wages have been found to reduce turnover—all of which is associated with better quality child care<sup>56</sup>. Better quality care translates to workers routinely promoting cognitive and verbal abilities in children and social and emotional competencies.<sup>57</sup>

As the chart below shows, small salary increases have been implemented from 2004 to 2007 in Central Maricopa. For assistant teachers the salary increased only 77 cents in the three year period. Overall, there were slight gains in average wages for all types of child care professionals.

### Average Wages for Child Care Professionals in Central Maricopa

	2004	2007
<b>Teacher</b>	\$10.70	\$11.60
<b>Assistant Teacher</b>	\$8.04	\$8.81
<b>Teacher/ Director</b>	\$12.60	\$14.59
<b>Admin/ Director</b>	\$18.28	N/A

Sources: 2004 and 2007 data is from the Compensation and Credentials Survey

## Additional Indicators of Interest to the Central Maricopa Regional Partnership Council

### Disincentives to Continuing Education

Factors other than the number of educational options available influence early care providers’ ability and/or willingness to pursue professional development. To better understand these factors, a key informant interview was conducted with a local

55 Lamb, M. E. Nonparental Child Care: Context, Quality, Correlates. In W. Damon, I. E. Sigel, & K. A. Renninger (Eds.), *Handbook of Child Psychology* (5<sup>th</sup> ed.), 1998, pp. 73-134. New York: Wiley & Sons; National Research Council and Institute of Medicine. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington DC: National Academy Press.

56 Schorr, Lisbeth B. Pathway to Children Ready for School and Succeeding at Third Grade. Project on Effective Interventions at Harvard University, June 2007.

57 Ibid.

professional who has had extensive involvement with the S\*CCEEDS registry. Several disincentives to continuing education were identified during the interview including:

- lack of time;
- transportation and other resources;
- minimum licensing standards and low expectations on the part of directors/administrators;
- negative modeling from directors who do not pursue training options themselves;
- trainings offered at inconvenient times and locations; and
- few monetary rewards.

The informant also noted that there are challenges to accessing and using the S\*CCEEDS system, which details/provides training options. Also, there may not be sufficient clarity around the purpose and value of S\*CCEEDS – it is viewed not as a training program but rather as a vehicle for promoting and tracking professional development activities.

## Public Information and Awareness

Public interest in early childhood is growing. Recent research in early childhood development has increased families' attention on the lasting impact that children's environments have on their development.

Increasingly, families and caregivers are seeking information on how best to care for young children. National studies suggest that more than half of American parents of young children do not receive guidance about important developmental topics, and want more information on how to help their child learn, behave appropriately, and be ready for school. Many of those caring for the neediest children are even less likely to receive appropriate information.<sup>58</sup>

Families and caregivers also seek information on how families can connect with and navigate the myriad of public and private programs that exist in their communities that offer services and support to young children and their families. Few connections exist between such public and private resources, and information that is available on how to access various services and supports can be confusing or intimidating. Information provided to families needs to be understandable, culturally and geographically relevant, and easily accessible.

In the Central Maricopa Region, many organizations currently play a role in providing information on child development and family resources and supports to families. Across each community in Arizona the following resources provide important early childhood services:

- **School Districts** – disseminate information to parents and the community at large through a number of events throughout the school year that include open house nights, Parent Teacher Organization (PTO) monthly meetings, information fairs and parent university weekends. School districts also use federal funding to keep parents

<sup>58</sup> Halfon, Nel, et al. "Building Bridges: A Comprehensive System for Healthy Development and School Readiness." National Center for Infant and Early Childhood Health Policy, January 2004.

aware of important issues such as health care and child nutrition through information campaigns. School districts have also created a network of information for parents through weekly or monthly newsletters, health bulletins, and Web site updates.

- **Public Libraries** –many libraries offer parent workshops to families on how to raise young readers. Many of the libraries offer story times for young children and their caregivers, where best practices in early literacy are modeled. The libraries may also conduct outreach story times at a limited number of child care centers in the region, where they also train child care providers and families on best practices in early literacy.
- **Community Organizations** – A variety of community organizations provide education, social services, education, and other forms of assistance related to early childhood. Each community has unique agencies that can foster the goals of promoting early childhood development.
- **Head Start** – The Central Maricopa Region has 18 Head Start Programs to inform low income families about issues related to child growth and development as well as school readiness, issues around parent involvement, children's health, and available community social services.

Additionally, a number of organizations, hospitals, and businesses collaborate to educate parents on child development by providing resources such as:

- **Learning Kits** – Several organizations in the Central Maricopa Region provide kits to families with information on how to best care for young children.
- **The Virginia G. Piper Charitable Trust** collaborates with the medical community to provide information to parents of newborns through area hospitals. The kits provided include the Arizona Parents Guide, which contains useful tips about child development, health and safety, quality child care, and school readiness. The kit also includes five high quality videos describing the importance of the early years of child development, parenting skills such as positive discipline, quality early care and education settings, and keeping a child well and healthy. A first book for baby is also included in the kit.
- **The Arizona Literacy and Learning Center** provides Readiness kits for parents with young children that includes 18 categories of objects that are appropriate for interactive play with infants and toddlers. *The Play to Learn* activity book included in the kit provides activities that nurture learning through multiple intelligences across four major learning domains. A special emphasis is put on language development and pre-math and pre-reading skills as well as the development of self-confidence, self-image, and imagination.
- **The Valley of the Sun United Way** provides School Readiness Kits to parents and caregivers in Maricopa County. This comprehensive tool (offered in both English and Spanish) is divided into three sections including Early Learning & Development, Nurturing a Positive Attitude and The First Day of School. The kit fosters proper learning and social skill progress for children birth through age– five.
- **Back-to-School Information** – Numerous organizations distribute information to families with young children as they prepare to enter or return to elementary school each year in July or August.

According to recent assessments and surveys conducted in Maricopa County, a majority of community members and parents indicate that there is a need for greater awareness and information regarding early childhood issues. When asked to rate their knowledge of child care quality, nearly 64 percent of parents surveyed in the Eastern Region stated that they needed some or a lot of information. Statewide surveys show that 79 percent of respondents believe that the public has only some awareness of the early childhood development and health issues; 31 percent indicate that they themselves are not well informed about children's issues (*Building Bright Futures*, 2007).

The Central Maricopa Region has a long history of involvement in initiatives and efforts to promote public awareness. In 2002, a dormant East Valley Coalition of educators focused on improved outcomes for children birth through eight years was re-convened to serve as a pilot Communities for Kids (CFK) site in Tempe. Funded by the Arizona Community Foundation, CFK was a school readiness initiative designed to increase awareness and public engagement in strategic efforts for building a cohesive system of support for families of children birth to age five. In 2005, with funding from Arizona Early Education Fund (AEEF), CFK, which initially was Tempe based, again morphed into a more expanded partnership designed to improve conditions for all children in Eastern Maricopa. With Valley of the Sun United Way as the coordinating fiduciary agent, the Eastern Maricopa County Regional School Readiness Partnership has worked together during the past year and a half years to establish an expanded membership that is representative of the community and engages parents. In its recently completed three-year strategic plan, the Partnership has identified increased public awareness as a priority outcome. The Partnership is a strong community asset in support of the Maricopa Central Council's goals and strategies.

Additional efforts focused on increasing public awareness in the region include Valley of the Sun United Way's "You're It" campaign that includes School Readiness and Parent Advocacy toolkits. KAET Channel Eight is also a valuable asset in support of early childhood education efforts.

Public awareness and information efforts also need to go beyond informing parents and caregivers of information needed to raise an individual child or support a family in care giving. Increased public awareness around the needs of children and their families is also needed. Policy leaders need to better understand the link between early childhood efforts and the broader community's future success. Broader public support must be gleaned to build the infrastructure needed to help every Arizona child succeed in school and life. Success in building a comprehensive system of services for young children requires a shift in public perceptions and public will.<sup>59</sup>

## System Coordination

Throughout Arizona, programs and services exist that are aimed at helping young children and their families succeed. However, many such programs and services operate in isolation of one another, compromising their optimal effectiveness. A coordinated and efficient systems-level approach to improving early childhood services and programs is needed.

System coordination can help communities produce higher quality services and obtain better outcomes. For example, one study found that families who were provided

59 Clifford, Dean, PhD. Practical Considerations and Strategies in Building Public Will to Support Early Childhood Services.



enhanced system coordination benefited more from services than did a comparison group that did not receive service coordination.<sup>60</sup> Effective system coordination can promote First Things First's goals and enhance a family's ability to access and use services.

Partnerships are needed across the spectrum of organizations that touch young children and their families. Organizations and individuals must work together to establish a coordinated service network. Improved coordination of public and private human resources and funding could help maximize effective outcomes for young children.

A wide array of opportunities exists for connecting services and programs that touch children and families. Early childhood education providers could be better connected to schools in the region. Services and programs that help families care for their young children could be better connected to enhance service delivery and efficiency. Public programs that help low income families could be better coordinated so that redundancies as well as "gaps" in services are eliminated. Faith-based organizations could increase awareness among families of child development and family resources and services. Connections between early education and health providers could be forged.

## **Parent and Community Awareness of Services, Resources or Support**

*Building Bright Futures*, the 2007 Statewide Assessment, noted that the passage of First Things First by majority vote demonstrates that Arizonans are clearly concerned about the well-being of young children in Arizona. However, when asked "how well informed are you about children's issues in Arizona," more than one in three respondents say they are not informed. A 2007 survey of families conducted for Valley of the Sun United Way indicated that young parents rely heavily on the Internet as well as family and friends for information on resources and support services. Traditional models of the phone book, magazines, governmental or contract agencies were of low utility for parents. In this study, parents reported general satisfaction with their child care provider. However, 20 percent reported that they were looking for alternative providers.

The Central Maricopa Region has multiple partnerships, coalitions, and networking groups that work to increase awareness, coordination, and collaboration. Notable examples include Tempe Communities in Schools which seeks to create strong connections between schools, other social services, and families in an effort to promote parent involvement in the educational system and provide needed social service supports. Others identified in an informant session include networking groups as the East Valley Resources for Youth, the East Valley Resource Coalition, and the previously described East Valley School Readiness and Tempe Early Reading First Partnerships.

Other key informant interviews noted an increase in coordination and sharing of information over the past year, also some preliminary efforts to jointly propose or implement projects. However, some partnerships, coalitions, and collaborative efforts do not sufficiently reflect the racial, ethnic, and social-economic diversity within the communities and may not sufficiently include faith based organizations and local businesses.

60 Gennetian, L. A., & Miller, C. *Reforming Welfare and Rewarding Work: Final Report on the Minnesota Family Investment Program: Effects on Children*, 2000, New York: Manpower Demonstration Research Corporation; Miller, C., Knox, V., Gennetian, L. A., Dodoo, M., Hunter, J. A., & Redcross, C. *Reforming Welfare and Rewarding Work: Final Report on the Minnesota Family Investment Program: Vol. 1: Effects on Adults*, 2000, New York: Manpower Demonstration Research Corporation.



## Conclusion:

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**T**he Central Maricopa Region consists of numerous diverse and vibrant communities with many programs whose goal is to help families and children be successful and ready for school. There is a spirit of collaboration among service providers that allows them to consider how things might be done differently for the benefit of young children and their families. The region is not without its challenges. Without a doubt there have not been enough resources to address the needs associated with building a comprehensive early childhood development system that ensures that all children will have what they need to succeed. There are hurdles to collaboration that require innovation and new methods of working together.

With this report, the Central Maricopa Regional Partnership Council acknowledges all that has been accomplished throughout the region to support families in their important work of raising children. Many professionals have worked hard in the face of daunting challenges. It is now possible to look forward with energy and hope at new opportunities to help families and children. The Regional Council invites service providers, community leaders, business leaders, members of the faith community, parents, children's advocates, parents, grandparents, and friends to join with us in being the voice for Arizona's youngest children. They deserve our best effort!





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