



Annual Mortality Report

Fiscal Year 2008

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Executive Summary

This report examines enrollee mortality for Fiscal Year 2008 (FY08) July 1, 2007 through June 30, 2008.

Mortality data is presented in two sections: Section I provides system-wide data and Section II examines breakdown by geographic General Service Area (GSA) and Tribal/Regional Behavioral Health Authority (T/RBHA).

Rate of mortality (mortality per population) is calculated using enrollment figures from the last month of the fiscal year, as this most accurately reflects fiscal year enrollment. Alternative mortality rates may be calculated by using enrollment figures from the first month of the fiscal year, or a middle month of the fiscal year, or by averaging all months of the fiscal year. Enrollment figures are available on-line at http://www.azdhs.gov/bhs/enroll_pen.htm. Alternative mortality rates also can be calculated using census figures to reflect total population rather than enrolled population. Detailed population and demographic information for Arizona may be found on the U.S. Census Bureau website, <http://www.census.gov>.

Executive Summary of Section I: System-Wide Mortality

- **897** enrolled members died in FY08.
- Adjusted for enrolled population, **system-wide rate of mortality** was **5.99** deaths per 1,000 enrolled members.
- **Children and Adolescents** had the lowest rate of mortality at **0.32** deaths per 1,000 enrolled children and adolescents.
- Individuals in the **Serious Mental Illness (SMI)** program had the highest rate of mortality at **9.60** deaths per 1,000 SMI members.
- Individuals treated in **General Mental Health (GMH) /Substance Abuse (SA)** programs suffered **5.42** deaths per 1,000 GMH/SA members.
- **57%** of all deaths of enrolled members during FY08 occurred due to **Natural** causes.
- **27%** of all deaths of enrolled members during FY08 occurred due to **Accidental** causes, including accidental overdose.
- **10%** of all deaths of enrolled members during FY08 occurred due to **Suicide**.

- **5%** of all deaths of enrolled members during FY08 occurred due to **Unknown/Other** causes.
- **2%** of all deaths of enrolled members during FY08 occurred due to **Homicide**.

Executive Summary of Section II: Mortality by Geographic Service Area

- Adjusted for enrolled population, GSAs with **lowest** rates of mortality were Cenpatico-4 at **4.67** deaths per 1,000 enrolled members, followed by Magellan/VO at **4.78** deaths per 1,000 enrolled members.
- Adjusted for enrolled population, GSAs with **highest** rates of mortality were CPSA-3 at **10.82** deaths per 1,000 enrolled members, followed by NARBHA at **8.28** deaths per 1,000 enrolled members.
- GSAs with **lowest** rates of mortality due to **Natural** causes were Cenpatico-2 at **2.44** mortalities per 1,000 enrolled members, followed by Magellan/VO at **2.67** mortalities per 1,000 enrolled members.
- GSAs with **highest** rates of mortality due to **Natural** causes were CPSA-3 at **5.93** mortalities per 1,000 enrolled members, followed by NARBHA at **4.87** mortalities per 1,000 enrolled members.
- GSAs with **lowest** rates of mortality due to **Accidental** Causes were Cenpatico-4 at **1.04** mortalities per 1,000 enrolled members, followed by Magellan/VO at **1.36** mortalities per 1,000 enrolled members.
- GSAs with **highest** rates of mortality due to **Accidental** Causes were CPSA-3 at **3.31** mortalities per 1,000 enrolled members, followed by Cenpatico-2 at **2.78** mortalities per 1,000 enrolled members.
- GSAs with **lowest** rates of mortality due to **Suicide** were Magellan/VO at **0.45** mortalities per 1,000 enrolled members, followed by Cenpatico-4 at **0.52** mortalities per 1,000 enrolled members.
- GSAs with **highest** rates of mortality due to **Suicide** were NARBHA at **1.10** mortalities per 1,000 enrolled members, followed by CPSA-3 at **0.87** mortalities per 1,000 enrolled members.
- GSAs with **lowest** rates of mortality due to **Unknown/Other** causes were Cenpatico-4 at **0.10** mortalities per 1,000 enrolled members, followed by Cenpatico-2 at **0.17** mortalities per 1,000 enrolled members.
- GSAs with **highest** rates of mortality due to **Unknown/Other** causes were CPSA-5 at **0.56** mortalities per 1,000 enrolled members, followed by NARBHA at **0.43** mortalities per 1,000 enrolled members.

- GSAs with **lowest** rates of mortality due to **Homicide** were Cenpatico-4 at and CPSA-5, both at **0.10** mortalities per 1,000 enrolled members.
- GSAs with **highest** rates of mortality due to **Homicide** were CPSA-3 at **0.35** mortalities per 1,000 enrolled members, followed by Cenpatico-2 at **0.17** mortalities per 1,000 enrolled members.

Executive Summary: Discussion

Comparing previous mortality analyses with this FY08 report, consistency in cause of mortality is noted:

- Over half of mortality is due to natural causes
- Approximately one quarter of mortality is due to accidental death, including accidental overdose
- Approximately 10% of mortality is due to intentional suicide.

Efforts for prevention of mortality due to natural causes include:

- Monitoring and addressing substance abuse at any age
- Encouragement of healthy lifestyle (exercise, diet, don't smoke) at any age
- Increased monitoring for weight gain and metabolic syndrome when under psychiatric treatment
- Increased communication with primary caregivers.

Mortality due to unintentional overdose is not a local phenomenon, but rather has been remarked upon in many locales and nationally as a growing problem. Many of these involve medications given concurrently by our psychiatric system and the primary care system.

Efforts for prevention of mortality due to accidental causes include:

- Efforts to combat polypharmacy
- Increased awareness of prescription drug abuse
- Increased communication with primary caregivers.

The Arizona Department of Health Services Division of Behavioral Health Services (ADHS/DBHS) is designing technical assistance and education around prescription drug abuse.

The ADHS/DBHS Office of the Chief Medical Officer is implementing quarterly health initiatives at the provider level to increase the awareness of obesity, health life styles, diabetes, cancer and hypertension.

ADHS/DBHS is working with the physical health plans to increase the quality of coordination of care. Pilot sites have started to increase the availability of electronic medical records to behavioral health providers.

Section I: System-Wide Mortality

System-wide T/RBHA enrollment in June, 2008 was 151,703 individuals, of which 40,478 were children or adolescents, 36,357 were individuals meeting criteria for SMI, and 73,027 were non-SMI adults. In addition there were 1,841 Navajo Nation enrollees.

Enrollment as of June, 2008				
	Child	SMI	Non-SMI	Total Enrollment
T/RBHA Enrollment	40478	36357	73027	149862
NAVN Enrollment				1,841
Total				151,703

There were 897 deaths system-wide in FY 08. Of these, 13 were children or adolescents, 396 were GMH/SA, 349 were SMI, and 139 were not specified or other.

Mortality

	Child	GMH/SA	SMI	Not Specified / Other	Total
# Deaths	13	396	349	139	897
Percent of Total	1.45%	44.15%	38.91%	15.50%	100.00%

Adjusted for enrolled population, system-wide rate of mortality was 5.99 deaths per 1,000 enrolled members. Children and Adolescents had the lowest rate of mortality at 0.32 deaths per 1,000 enrolled children and adolescents. Individuals meeting criteria for SMI program had the highest rate of mortality at 9.60 deaths per 1,000 SMI members. Individuals treated in General Mental Health (GMH) /Substance Abuse (SA) programs suffered 5.42 deaths per 1,000 GMH/SA members.

Mortality Rates Per 1000 by Program Type

	Child	GMH/SA	SMI	Not Specified / Other	Total
Deaths per 1,000 Enrolled	0.32	5.42	9.6	1.9	5.99

508 enrollees died of natural causes, 238 died by accident including accidental overdose, 89 died from completed suicide, 19 were victims of homicide, and 43 had deaths due to unknown or other causes.

56.63% of all deaths occurred due to natural causes, 26.53% occurred due to accidental causes, 9.92% occurred due to suicide, 4.79% occurred due to unknown or other causes, and 2.12% of all deaths occurred due to homicide.

Mortality by Cause of Death

	Accident	Homicide	Natural	Suicide	Not Specified / Other	Total
# Deaths	238	19	508	89	43	897
Percent of Total	26.53%	2.12%	56.63%	9.92%	4.79%	100.00%

The following table breaks down cause of death by program type system-wide:

Mortality by Program and Cause of Death

	Accident	Homicide	Natural	Suicide	Not Specified / Other	Total
Child	2	4	4	3	0	13
GMH/SA	105	8	221	40	22	396
Not Specified	36	2	80	15	6	139
SMI	95	5	203	31	15	349
Total	238	19	508	89	43	897

Section II: Mortality by GSA

The following table shows enrollees in each population by GSA or T/RBHA in June, 2008. Enrollees of Magellan were approximately 54% of all enrollees, CPSA-5 approximately 19%, NARBHA approximately 11%, Cenpatico-4 approximately 6%, Cenpatico-2 approximately 4%, and CPSA-3 approximately 4%.

Enrollment as of June, 2008				
	Child	SMI	Non-SMI	Total Enrollment
CPSA-3	1,419	1,032	3,281	5,732
CPSA-5	7,587	8,349	12,786	28,722
CBHS-2	1,562	971	3,213	5,746
GRIC	643	38	303	984
NARBHA	4,297	4,468	7,658	16,423
CBHS-4	3,385	1,454	4,798	9,637
PYTA	310	12	711	1,033
VO / MAGELLAN	21,275	20,033	40,277	81,585
Total	40,478	36,357	73,027	149,862
NAVN				1,841
Total				151,703

VO/Magellan had the greatest absolute number of mortalities, but percentage of VO/Magellan mortality system-wide was below that expected by share of enrollment.

Mortalities by T/RBHA		
T/RBHA	Total	Percent of Total
CPSA-3	62	6.91%
CPSA-5	220	24.53%
CBHS-2	36	4.01%
GRIC	2	0.22%
NARBHA	136	15.16%
CBHS-4	45	5.02%
PYTA	6	0.67%
VO / MAGELLAN	390	43.48%
Statewide	897	100.00%

Mortality rates per GSA or T/RBHA per 1,000 enrollees show wide variation.

Adjusted for enrolled population, GSAs with lowest rates of mortality were Cenpatico-4 at 4.67 deaths per 1,000 enrolled members, followed by Magellan/VO at 4.78 deaths per 1,000 enrolled members.

Adjusted for enrolled population, GSAs with highest rates of mortality were CPSA-3 at 10.82 deaths per 1,000 enrolled members, followed by NARBHA at 8.28 deaths per 1,000 enrolled members.

Mortality Rates Per 1000 Enrollees

CPSA-3	10.82
CPSA-5	7.66
CBHS-2	6.27
GRIC	2.03
NARBHA	8.28
CBHS-4	4.67
PYTA	5.81
VO / MAGELLAN	4.78
STATEWIDE	5.99

RBHAs with lowest rates of mortality due to natural causes were CBHS-2 at 2.44 deaths per 1,000 enrolled members and VO/Magellan at 2.67 deaths per 1,000 enrolled members.

RBHAs with highest rates of mortality due to natural causes were CPSA-3 with 5.93 deaths per 1,000 enrolled members and NARBHA at 4.87 deaths per 1,000 enrolled members.

Natural Deaths per 1,000 enrollees per T/RBHA				
T/RBHA	Natural Deaths	Rate Per 1,000	Total FY08 Deaths	% of Total
CPSA-3	34	5.93	62	54.84%
CPSA-5	131	4.56	220	59.55%
CBHS-2	14	2.44	36	38.89%
GRIC	0	0.00	2	0.00%
NARBHA	80	4.87	136	58.82%
CBHS-4	28	2.91	45	62.22%
PYTA	3	2.90	6	50.00%
VO / MAGELLAN	218	2.67	390	55.90%
Statewide	508	3.39	897	56.63%

RBHAs with lowest rates of mortality due to accidental death, including accidental overdose, were Cenpatico-4 at 1.04 deaths per 1,000 enrolled members and VO/Magellan at 1.36 deaths per 1,000 enrolled members.

RBHAs with highest rates of mortality due to accidental death, including accidental overdose, were CPSA-3 with 3.31 deaths per 1,000 enrolled members and Cenpatico-2 at 2.78 deaths per 1,000 enrolled members.

Accidental Death per 1,000 enrollees per T/RBHA				
T/RBHA	Accident Deaths	Rate Per 1,000	Total FY08 Deaths	% of Total
CPSA-3	19	3.31	62	30.65%
CPSA-5	50	1.74	220	22.73%
CBHS-2	16	2.78	36	44.44%
GRIC	2	2.03	2	100.00%
NARBHA	29	1.77	136	21.32%
CBHS-4	10	1.04	45	22.22%
PYTA	1	0.97	6	16.67%
VO / MAGELLAN	111	1.36	390	28.46%
Statewide	238	1.59	897	26.53%

RBHAs with lowest rates of mortality due to suicide were VO/Magellan at 0.45 deaths per 1,000 enrolled members and Cenpatico-4 at 0.52 deaths per 1,000 enrolled members.

RBHAs with highest rates of mortality due to suicide were NARBHA with 1.10 deaths per 1,000 enrolled members and CPSA-3 at 0.87 deaths per 1,000 enrolled members.

Suicide per 1,000 enrollees per T/RBHA				
T/RBHA	Suicide Deaths	Rate Per 1,000	Total FY08 Deaths	% of Total
CPSA-3	5	0.87	62	8.06%
CPSA-5	20	0.70	220	9.09%
CBHS-2	4	0.70	36	11.11%
GRIC	0	0.00	2	0.00%
NARBHA	18	1.10	136	13.24%
CBHS-4	5	0.52	45	11.11%
PYTA	0	0.00	6	0.00%
VO / MAGELLAN	37	0.45	390	9.49%
Statewide	89	0.59	897	9.92%

RBHAs with lowest rates of mortality due to homicide were CPSA-5 at 0.10 deaths per 1,000 enrolled members, Cenpatico-4 at 0.10 deaths per 1,000 enrolled members, and VO/Magellan at 0.11 deaths per 1,000 enrolled members.

The RBHA with the highest rate of mortality due to homicide was CPSA-3 at 0.35 deaths per 1,000 enrolled members.

Homicide per 1,000 enrollees per T/RBHA				
T/RBHA	Homicide Deaths	Rate Per 1,000	Total FY08 Deaths	Total FY08 Deaths
CPSA-3	2	0.35	62	3.23%
CPSA-5	3	0.10	220	1.36%
CBHS-2	1	0.17	36	2.78%
GRIC	0	0.00	2	0.00%
NARBHA	2	0.12	136	1.47%
CBHS-4	1	0.10	45	2.22%
PYTA	1	0.97	6	16.67%
VO / MAGELLAN	9	0.11	390	2.31%
Statewide	19	0.13	897	2.12%

RBHAs with lowest rates of mortality due to not specified or unknown causes were Cenpatico-4 at 0.10 deaths per 1,000 enrolled members and Cenpatico-2 at 0.17 deaths per 1,000 enrolled members.

RBHAs with highest rates of mortality due to not specified or unknown causes were CPSA-5 with 0.56 deaths per 1,000 enrolled members and NARBHA at 0.43 deaths per 1,000 enrolled members.

Not Specified/Other Deaths per 1,000 enrollees per T/RBHA				
T/RBHA	Not Specified / Other	Rate Per 1,000	Total FY08 Deaths	% of Total
CPSA-3	2	0.35	62	3.23%
CPSA-5	16	0.56	220	7.27%
CBHS-2	1	0.17	36	2.78%
GRIC	0	0.00	2	0.00%
NARBHA	7	0.43	136	5.15%
CBHS-4	1	0.10	45	2.22%
PYTA	1	0.97	6	16.67%
VO / MAGELLAN	15	0.18	390	3.85%
Statewide	43	0.29	897	4.79%

The last table shows mortality per 1,000 by program type and RBHA. Most RBHAs show higher mortality rates in the GMH/SA population than in the SMI population, but Magellan is the reverse.

Of the RBHAs, Cenpatico-4 had the lowest rate of mortality for SMI members at 2.06 mortalities per 1,000 SMI members, followed by NARBHA at 2.69 mortalities per 1,000 SMI members.

Of the RBHAs, Magellan/VO had the highest rate of mortality for SMI members at 12.78 mortalities per 1,000 SMI members, followed by CPSA-3 at 8.72 mortalities per 1,000 SMI members.

Of the RBHAs, Magellan/VO had the lowest rate of mortality for GMH/SA members at 2.63 mortalities per 1,000 GMH/SA members.

Of the RBHAs, CPSA-3 had the highest rate of mortality for GMH/SA members at 11.28 mortalities per 1,000 GMH/SA members, followed by CPSA-5 at 9.70 mortalities per 1,000 GMH/SA members.

NARBHA had no reported Child/Adolescent mortality.

Of the RBHAs, CPSA-3 had the highest rate of Child/Adolescent mortality at 2.82 mortalities per 1,000 enrolled children.

Mortality Rates Per 1000 by Population

	Child	GMH/SA	SMI	Not Specified / Other	Total
CPSA-3	2.82	11.28	8.72	3.66	10.82
CPSA-5	0.13	9.70	7.67	2.42	7.66
CBHS-2	0.64	8.40	5.15	0.93	6.27
GRIC	1.56	3.30	0.00	0.00	2.03
NARBHA	0.00	7.70	2.69	8.49	8.28
CBHS-4	0.30	7.50	2.06	1.04	4.67
PYTA	0.00	8.44	0.00	0.00	5.81
VO / MAGELLAN	0.24	2.63	12.78	0.57	4.78
STATEWIDE	0.32	5.42	9.60	1.90	5.99