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State of Louisiana

Department of Health and Hospitals
Office of Aging and Adult Services

Annual Mortality Report Fiscal Year 2011

March 2013

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EXECUTIVE SUMMARY

The primary purpose of the Mortality Review Committee in the Office of Aging and Adult Services (OAAS) is to monitor and analyze deaths of OAAS waiver participants and to identify issues and concerns that may have compromised the health care or services provided to individuals by OAAS providers.

The 2011 analysis found that mortality increases with age regardless of living arrangement or long term care service choice. Findings also show mortality differs based on service setting and individual long term care program. For instance, mortality rates in nursing homes are higher than in waiver programs among every age group.

ACKNOWLEDGEMENTS

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Variation in mortality rates is found across administrative regions of the state. The Monroe area (Region 8) had the highest mortality rate (97.1) for the home and community based programs while the Central Louisiana/Alexandria area (Region 6) had the lowest (57.7). Further research is needed in order to understand the root cause of the differences.

Heart disease and cancer are the two leading causes of death across all of the United States and within each subgroup defined in the report (Louisiana, Home and Community Based Programs, and Nursing Homes). Diabetes ranks third at 6.6% of deaths for Home and Community Based Services (HCBS) participants compared to 7th nationally. Alzheimer's disease and dementia related deaths combined make up over 14% of deaths in nursing homes. Nationally, Alzheimer's disease ranks 6th among leading causes of death compared to 4th in nursing homes. These findings highlight the unique health challenges for those receiving long term care services.

TABLE OF CONTENTS

INTRODUCTION

The Office of Aging and Adult Services (OAAS) administers Medicaid home and community-based service (HCBS) programs for aging adults and persons with adult-onset disabilities. These include the Elderly and Disabled Adults (EDA) waiver (which was replaced by the Community Choices Waiver (CCW) in October, 2011), Adult Day Health Care (ADHC) waiver, Long Term Personal Care Services (LTPCS) program and the Program for All-Inclusive Care for the Elderly (PACE).This is the third report published by the Department of Health and Hospitals (DHH) on mortality in Medicaid HCBS programs serving the aged and persons with adult-onset disabilities. The initial report was released in April, 2010 and analyzed deaths between January 1, 2009 and June 30, 2009. This represented one of several major initiatives implemented to create a data-driven approach to improve the quality of Medicaid-funded supports and services for older people who are living in Louisiana's communities. This report will present data for dates between July 1, 2010 and June 30, 2011, or state fiscal year 2011.

OAAS DEFINES THE MORTALITY REVIEW COMMITTEE'S PURPOSE, COMPOSITION, AND PROTOCOL

The OAAS Mortality Review Committee is charged to monitor and analyze deaths of OAAS waiver participants. Overall, the mortality review process is designed to identify issues and concerns that may have compromised the health care or services provided to individuals by OAAS providers. Specifically, the mortality review process is designed to: (1) identify remediation activities associated with provider individual cases; (2) generate recommendations for system level quality improvement; and (3) reduce future risk.

During state fiscal year 2011, the OAAS Mortality Review Committee worked to develop the "OAAS Mortality Review Committee Protocol." This protocol provides a structured foundation for the committee to implement its functions. It includes specific and pertinent information on: (1) the purpose, composition, and functions of the committee; and (2) procedures for conducting audits of Critical Incident Reports; (3) procedures for individual case provider remediation; and (4) procedures for analysis of aggregate data and recommending system-level quality improvement interventions.

In addition, the OAAS Mortality Review Committee collaborated to develop the Mortality Review Committee referral process and corresponding referral form for the regional offices to notify OAAS state office of cases which may need further scrutiny. The committee also established referral criteria guidance for the regional offices to determine which reports should be sent to the committee for review. The criteria include cases when death occurs by means other than natural causes. Referrals to the Mortality Review Committee began in fiscal year 2012, so findings and remediation from individual case reviews are not included in this report.

Adult Protective Services/Elderly Protective Services (APS/EPS) is a division within OAAS and an APS/EPS staff member is included in the Mortality Review Committee. This representation and proximity facilitates communication and collaboration in cases of suspected abuse, neglect, or exploitation, which leads to more efficient and timely investigations, interventions, and protections in these types of cases.

The OAAS Mortality Review Committee will continue to meet every six months to perform strategic reviews, evaluation, and trend analysis on cases meeting the criteria, commensurate with a continuous quality improvement approach. Future reports will include a summary of remediation activities

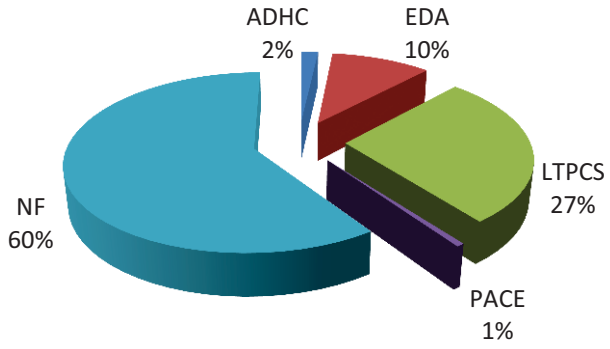
(including those based on individual case reviews), recommendations for systemic quality improvement, and activities to reduce future risk.

METHODOLOGY

Multiple data sources were required to produce this report. The primary source was Medicaid administrative claims and eligibility records. All individuals enrolled in the OAAS programs during state fiscal year 2011 were identified. If they moved between programs within the year, the last program of enrollment was used for reporting purposes. The administrative data was matched with vital records to identify deaths and collect information regarding the cause of death. The Department of Health and Hospitals also manages a critical incident reporting database that tracks deaths as well as other critical incidents involving HCBS waiver participants. Information from this database was analyzed to assess any trends in co-occurring events prior to death. The HCBS mortality rates were compared to that of the US, Louisiana, and nursing home services when possible.

POPULATION SERVED

During state fiscal year 2011 the OAAS/Medicaid long term supports and services system provided services to 47,959 participants. This includes services provided in nursing facilities, the EDA waiver, the ADHC waiver, LTPCS, and the PACE program. Combined, the HCBS programs provide services to 40% of the participants.



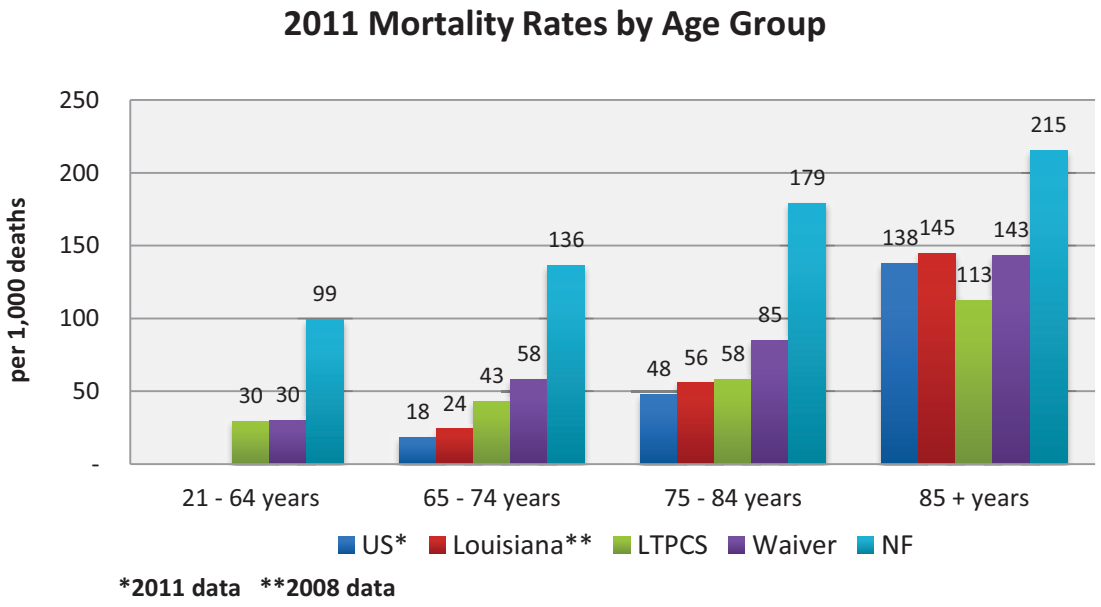
The table below provides a general overview of the OAAS services population. The average age of a Medicaid resident in a nursing home is 76.2 years old, while the average age of an HCBS participant is 65.6 years. This does vary among HCBS programs. The youngest group is the LTPCS state plan program (62.6) and the oldest group is the PACE program (79.1). The majority (74%) of participants in HCBS programs are female. Mortality rates vary greatly among programs, from 58 per 1,000 in LTPCS up to 202.4 per 1,000 in nursing facilities. This variation will be explored further in the report.

OAAS Client Characteristics FY-11						
	ADHC	**EDA**	**LTPCS**	**PACE**	**HCBS Overall**	**NF**
Total Recipients	839	4,919	13,181	295	19,234	28,541
Mean Age	70.4	72	62.6	79.1	65.6	76.2
Gender						
Male	267 (32%)	1,321 (27%)	3,342 (25%)	69 (23%)	4,999 (26%)	10,475 (24%)
Female	572 (68%)	3,598 (73%)	9,839 (75%)	226 (77%)	14,235 (74%)	32,461 (76%)
Deaths	41	526	765	29	1,361	5,777
Mortality Rate (per 1,000)	48.9	106.9	58	98.3	70.8	202.4
Age Groups						
21 - 64	32.4%	30.6%	53.9%	10.5%	46.3%	20.9%
65 - 74	20.0%	15.8%	19.3%	20.7%	18.5%	17.7%
75 - 84	26.8%	26.6%	15.6%	31.5%	19.1%	26.6%
85 and over	20.7%	27.1%	11.2%	37.3%	16.1%	34.8%
Race						
White	16.0%	32.0%	14.5%	19.7%	19.1%	56.1%
Black	69.5%	58.1%	76.3%	68.1%	71.2%	29.5%
Other	14.5%	9.9%	9.2%	12.2%	9.6%	14.3%
Region						
1	21.8%	9.1%	14.0%	55.3%	13.7%	12.7%
2	27.4%	13.9%	13.4%	44.4%	14.6%	12.2%
3	1.1%	6.1%	4.0%	N/A	4.4%	7.1%
4	27.8%	16.5%	23.3%	N/A	21.4%	14.7%
5	0.4%	5.4%	3.1%	N/A	3.5%	6.9%
6	2.6%	11.5%	7.3%	N/A	8.1%	9.8%
7	8.9%	10.4%	12.5%	N/A	11.6%	16.9%
8	2.6%	14.8%	14.9%	N/A	14.1%	11.4%
9	7.4%	12.2%	7.4%	N/A	8.5%	8.3%

ANALYSIS OF MORTALITY IN LOUISIANA LONG TERM SUPPORTS AND SERVICES

MORTALITY INCREASES WITH AGE

Mortality rates increase as individuals get older. This can be seen in state and national statistics as well as the Medicaid services results. The chart below displays the mortality rates by age group for the general US population[1], Louisiana[2], the LTPCS program, the EDA and ADHC waivers combined, and Medicaid nursing facility residents. Across age groups, mortality rates follow a similar pattern where the US population has the lowest mortality rate and nursing facility residents have the highest.



Age Group	US*	Louisiana**	LTPCS	Waiver	NF
21 - 64 years	-	-	29.5	29.8	99.0
65 - 74 years	18.45	24.07	42.8	58.3	136.3
75 - 84 years	47.50	55.71	57.9	84.9	179.2
85 + years	137.67	144.65	112.5	143.3	215.2

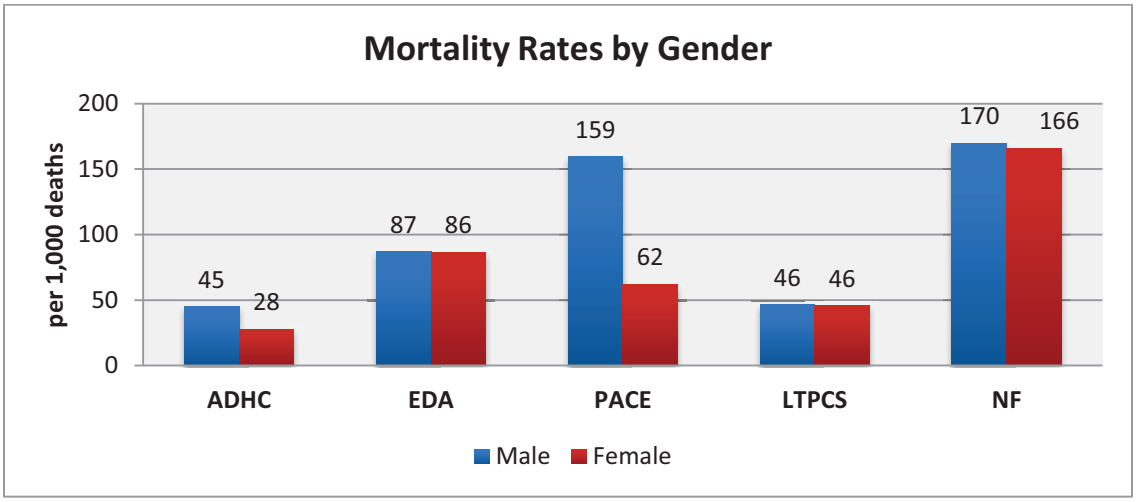
**2011 data* ***2008 data (latest available)*

Rates per 1,000 population in specified group

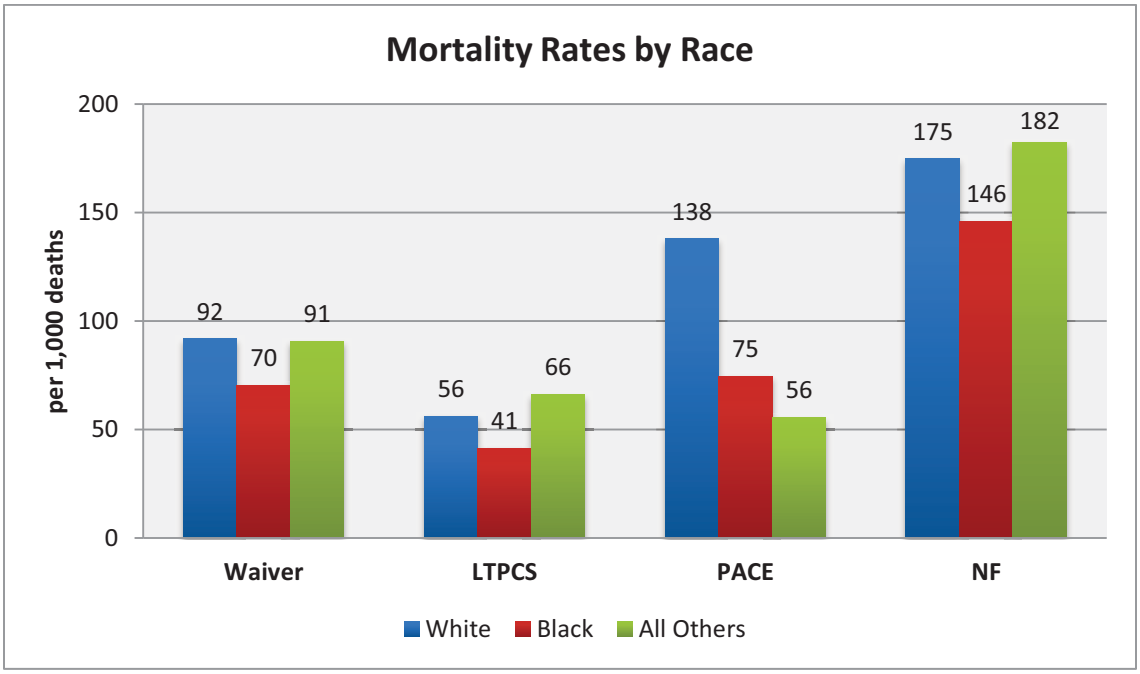
The mean age at death for individuals participating in the HCBS programs was 75.5 years, with a median age of 78.7. For the US, life expectancy in 2011 was 78.7 years[1]. Life expectancy is a summary measure of the overall health of a population. In the US, improvements in health have resulted in increased life expectancy and contributed to the growth of the older population over the past century[3].

MORTALITY BY GENDER AND RACE

For the US, the age-adjusted mortality rate for females in 2011 was 6.3 deaths per 1,000 and 8.7 for males[1]. The crude death rates by gender are presented below for each program. Mortality rates among males and females in Nursing Facility, EDA, and LTPCS groups were similar whereas ADHC and PACE rates indicated higher mortality among male participants. This variation could be due to the smaller size of these programs or the age-gender composition within the program itself.



The age-adjusted mortality rate for whites in the US for 2011 was 7.4 per 1,000 and 8.8 for African Americans[1]. The crude death rates by race are presented below for each program.

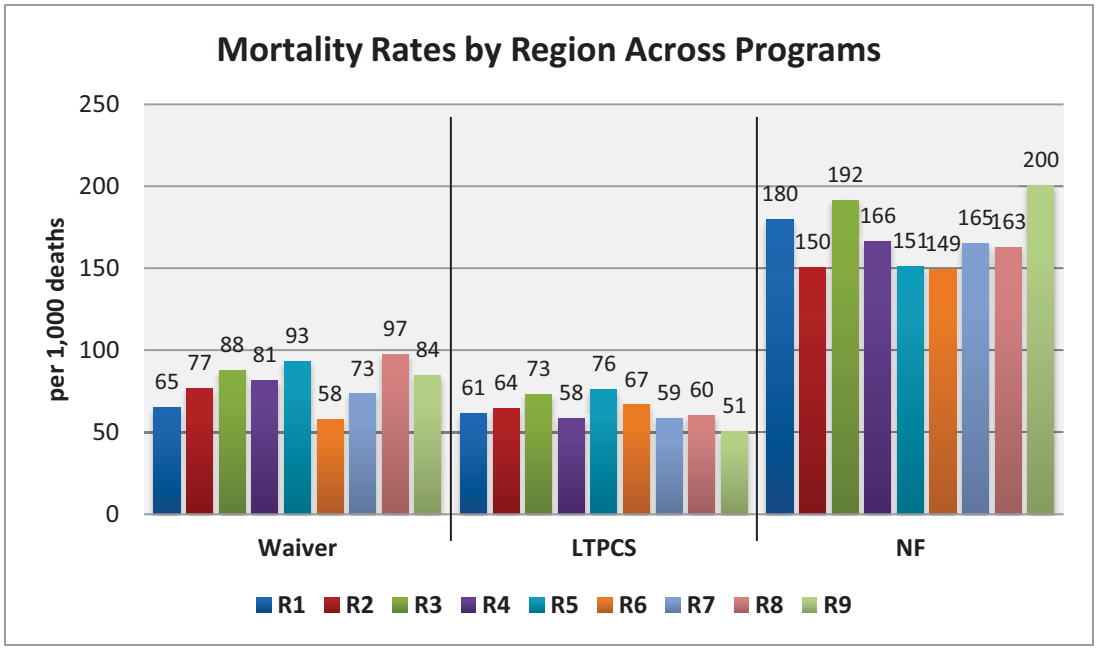


REGIONAL VARIANCE IN MORTALITY WARRANTS FURTHER ANALYSIS

Mortality rates do vary across the different regions of the state. However, there is not a consistent trend across programs. For example, the lowest mortality rate among waiver participants was in Region 6 (57.7 per 1,000) while in the LTPCS program, Region 9 had the lowest rate (41.0 per 1,000). Region 8 had the highest mortality rate among waiver participants (97.1) and Region 5 (55.7) the highest among LTPCS. Variance across regions could be due to differences in age distributions or other unmeasured factors such as access to preventive or emergency care.

WAIVER									
Region	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Participants	630	915	308	1,044	269	589	587	752	664
Percent of Participants	10.9%	15.9%	5.3%	18.1%	4.7%	10.2%	10.2%	13.1%	11.5%
Number of Deaths	41	70	27	85	25	34	43	73	56
Percent of Deaths	9.0%	15.4%	5.9%	18.7%	5.5%	7.5%	9.5%	16.1%	12.3%
Mortality Rate	65.1	76.5	87.7	81.4	92.9	57.7	73.3	97.1	84.3

LTPCS									
Region	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Participants	1,846	1,770	531	3,071	413	967	1,647	1,961	975
Percent of Participants	14.0%	13.4%	4.0%	23.3%	3.1%	7.3%	12.5%	14.9%	7.4%
Number of Deaths	80	78	23	137	23	49	76	98	40
Percent of Deaths	13.2%	12.9%	3.8%	22.7%	3.8%	8.1%	12.6%	16.2%	6.6%
Mortality Rate	43.3	44.1	43.3	44.6	55.7	50.7	46.1	50.0	41.0



DHH Regions

Region 1 – Greater New Orleans
Region 2 – Greater Baton Rouge
Region 3 – Southeastern Coastal/Bayou
Region 4 – Greater Lafayette
Region 5 – Southwestern Coastal/Lake Charles
Region 6 – Central Louisiana/Alexandria
Region 7 – Northwestern Louisiana/Shreveport
Region 8 – Northeastern Louisiana/Monroe
Region 9 -- Northshore

HEART DISEASE IS THE LEADING CAUSE OF DEATH IN THE UNITED STATES, LOUISIANA, AND OAAS PROGRAMS

The leading causes of death for the US and Louisiana are shown below next to the leading causes of death in OAAS HCBS programs and Medicaid funded nursing facility residents. All deaths of individuals who were served between July 1, 2010 and June 30, 2011 were considered for analysis.

For the US and all three sub-groups, heart disease and cancer are the two leading causes of death. The rankings for respiratory disease, stroke, and accidents among the US and Louisiana are slightly different in order, but when looking at the percentages of all deaths these three rank very closely. Between 4% and 6% of deaths are attributed to each of these three causes.

Diabetes is ranked 6th in Louisiana and rises to 3rd for the HCBS population. The age-adjusted percentage of individuals diagnosed with Diabetes in Louisiana is 10.3% compared to the national average of 6.5%. Rates by age group are consistently higher than national averages and highest among ages 65 - 74; 20.7% nationally compared to 26.0% in Louisiana.

In nursing facilities, dementia and Alzheimer's disease are ranked 3rd and 4th. This is due to the characteristics of nursing home residents and living arrangements for those with dementia and Alzheimer's disease. Forty-two percent of individuals with Alzheimer's disease live in nursing homes and, in 2011, 47% of all nursing home residents had a diagnosis of dementia.

Rank	United States (2011)[1]	Louisiana (2008)[2]	HCBS (2011)	Nursing Facility (2011)
1	Heart Disease 23.7%	Heart Disease 25.1%	Heart Disease 27.3%	Heart Disease 23.3%
2	Cancer 22.9%	Cancer 22.3%	Cancer 15.1%	Cancer 9.9%
3	Respiratory Disease 5.7%	Accidents 5.8%	Diabetes 6.6%	Dementia 9.1%
4	Stroke 5.1%	Stroke 5.1%	Kidney Disease 5.7%	Alzheimer's Disease 8.1%
5	Accidents 4.9%	Respiratory Disease 4.6%	Stroke 5.5%	Stroke 7.3%
6	Alzheimer's Disease 3.4%	Diabetes 3.3%	Respiratory Disease 4.8%	Respiratory Disease 5.4%
7	Diabetes 2.9%	Alzheimer's Disease 3.3%	Influenza & Pneumonia 4.2%	Influenza & Pneumonia 4.3%
8	Influenza & Pneumonia 2.1%	Kidney Disease 2.9%	Alzheimer's Disease 3.5%	Diabetes 4%
9	Kidney Disease 1.8%	Influenza & Pneumonia 2.2%	Dementia 3.5%	Kidney Disease 4%
10	Intentional Self-harm 1.5%	Septicemia 2%	Septicemia 3.0%	Septicemia 3.5%

ANALYSIS OF CRITICAL INCIDENTS AND MORTALITY

When critical incidents occur among waiver participants, such as a major illness or a fall, the direct service worker or support coordinator is required to report the event. DHH manages a central database to store each of these critical incident reports. OAAS analyzed critical incident reports submitted from around the state in an effort to examine the issue of risk.

When looking at all critical incidents reported on OAAS waiver participants, there were 639 clients who experienced a fall during fiscal year 2011. Of these, 4.9% were associated with a death within 90 days of the event. Similarly, among major injuries reported (188), 7.4% occurred within 90 days of death.

There were 517 OAAS waiver deaths identified in the CIR database for fiscal year 2011. Among these, 6% had a fall within 90 days prior to death and 2.7% reported a major injury incident. The Mortality Review Committee reviews this data annually to identify trends which might indicate a need for systemic or programmatic changes.

Incident Category	FY 2010	Percentage of Deaths-2010	FY 2011	Percentage of Deaths-2011
Total Deaths Reported	472	--	517	--
Total Falls (w/in 90 days of death)	36	7.6%	31	6%
Total Major Injuries (w/in 90 days of death)	12	2.5%	14	2.7%

LIMITATIONS AND NEXT STEPS

The OAAS Mortality Review Committee will meet every six months to review individual cases referred to the committee, pursue corrective action as needed, review aggregate data to identify trends in statewide, regional or provider-level performance, and recommend system level quality improvement as identified.

OAAS recognizes there are some limitations and further work that can improve our understanding of mortality among individuals receiving long term care services. The mortality rates provided in this report are crude rates instead of age-adjusted. OAAS plans to improve future reports by calculating age-adjusted mortality rates. This will make comparisons of mortality by sub-groups more meaningful since it will adjust for any differences in age composition. It will also allow for more meaningful comparison to national statistics which are also age-adjusted.

In future reports, OAAS will investigate possible reasons for the higher mortality rate among nursing home recipients. Specifically, the possible movement of HCBS recipients to nursing homes at the end of life and the relative acuity levels across service programs will be examined. Future reports will also include information from individual case reviews that were initiated in 2012.

CONCLUSIONS

In conclusion, trends in mortality among the Medicaid long term supports and services recipients appear to be in line with that of general US and Louisiana population. Rates of mortality are higher among older age groups and within more specialized services such as nursing home and waivers. The top two causes of death, heart disease, and cancer are consistent across the US, Louisiana, and each of the OAAS program subgroups. There were differences in the third leading cause of death between HCBS participants and nursing home residents. Diabetes appeared third among causes of death for HCBS participants while dementia was third for nursing home residents. At the national level, respiratory disease ranks as the third leading cause of death.

REFERENCES

1. Hoyert DL, Xu JQ. Deaths: Preliminary data for 2011. *National Vital Statistics Report;* vol 61 no 6. Hyattsville, MD: National Center for Health Statistics. 2012.

2. 2010 Louisiana Health Report Card: http://new.dhh.louisiana.gov/assets/oph/Center-RS/healthstats/HlthRprtCrd2010.pdf. It should be noted the 2010 report contains data from 2008 which was the latest data available.

3. Federal Interagency Forum on Aging-Related Statistics. Older Americans 2010: Key Indicators of Well-Being. Federal Interagency Forum on Aging-Related Statistics. Washington, DC: U.S. Government Printing Office. July 2010.

4. Centers for Disease Control and Prevention: National Diabetes Surveillance System. Available online at: http://www.cdc.gov/diabetes/statistics. Retrieved 3/5/2013.

5. Centers for Disease Control and Prevention: National Diabetes Surveillance System. Available online at: http://www.cdc.gov/diabetes/statistics. Retrieved 3/5/2013.

6. 2012 Alzheimer's Disease Facts and Figures. http://www.alz.org/downloads/facts_figures_2012.pdf. Retrieved 3/5/2013.

APPENDIX

DEFINITIONS

Adult Day Health Care Waiver (ADHC): The ADHC waiver provides support coordination and day services at an ADHC center. Services provided by the centers include but are not necessarily limited to: assistance with activities of daily living, health and nutrition counseling, health education classes, a hot meal and two snacks, social services, transportation to and from the facility, health and nursing services, and exercise programs.

Elderly and Disabled Adults Waiver (EDA): The EDA waiver provides an array of services for recipients in their homes. Services include: support coordination, transition services for those moving out of an institution into the community, personal emergency response system installation and monitoring, home accessibility modifications, and personal assistance services which include assistance with activities of daily living such as bathing, dressing, and grooming.

Critical Incident Report (CIR): A critical incidents are those involving abuse, neglect, exploitation, extortion, major injury, falls, and major medication incidents. The purpose of the critical incident reporting policy is to establish uniformity and consistency in reporting and responding to critical incidents and ensuring the health, safety, and welfare of elderly and disabled adults. Death is a distinct category of critical incident and must be reported for waiver recipients.

Long Term Personal Care Services (LT-PCS): LT-PCS provides assistance with activities of daily living such as dressing, bathing, toileting, etc. and other activities such as meal preparation, shopping, and help with medical appointments to those who qualify. Most persons receiving ADHC waiver services also receive LT-PCS.

Program for All-Inclusive Care for the Elderly (PACE): PACE operates like a managed care organization where the provider coordinates and provides all needed preventative, primary, acute and long term care services so that older individuals can continue living in the community. This is a relatively new program in Louisiana and currently available in only two regions of the state, the Baton Rouge and New Orleans metro areas.