

Medicaid Enrollment Analysis on Maternal Mortality Cases

Introduction

The Michigan Maternal Mortality Surveillance System reviews pregnancy-associated deaths to better understand the medical and nonmedical causes of death; identify gaps in health services; and make recommendations to prevent future deaths and take appropriate action.

This analysis is to determine the extent to which maternal mortality deaths are associated with a state administered insurance program and if an administrative claims analysis using the Michigan Medicaid Data Warehouse is worth further consideration.

Methods

The Division for Vital Records and Health Statistics prepares the Michigan Maternal Mortality File by identifying cases in four ways: (1) death certificates with pregnancy-related Internal Classification of Disease codes [ICD-10: A34, O00-O95, O98-O99]; (2) death certificates with the pregnancy checkbox indicated; (3) death certificates for women who were also identified as having been pregnant in year prior to death through linkages to the Michigan Resident Live Birth and the Michigan Resident Fetal Death Files; and (4) voluntary reporting by a health professional.

The Michigan Maternal Mortality File contains 322 cases from 2008 to 2010. First name, last name, social security number, date of birth, date of death, and/or address were used to link these cases to a state issued insurance number stored in the Michigan Medicaid Data Warehouse.

Enrollment Assessment

Among the 322 maternal mortality deaths under review:

- **78%** (252/322) had a state issued insurance number for at least one month between 2001 and 2011;
- **68%** (218/322) were enrolled in a state administered insurance program for at least one month during the year prior to death;
- **60%** (191/322) were enrolled at time of death.
- **57%** (185/322) had full coverage at time of death.
- **46%** (148/322) had full coverage at time of death, and complete or nearly complete enrollment for the year prior to death.

322
Maternal Mortality Deaths

252
Ever Had a State Issued Insurance Number

218
Enrolled at Least One Month During
Year Prior to Death

191
Enrolled at Time of Death

185
Full Medical and Drug
Coverage

6
Limited Coverage;
Emergency Services;
Plan First; Medicare

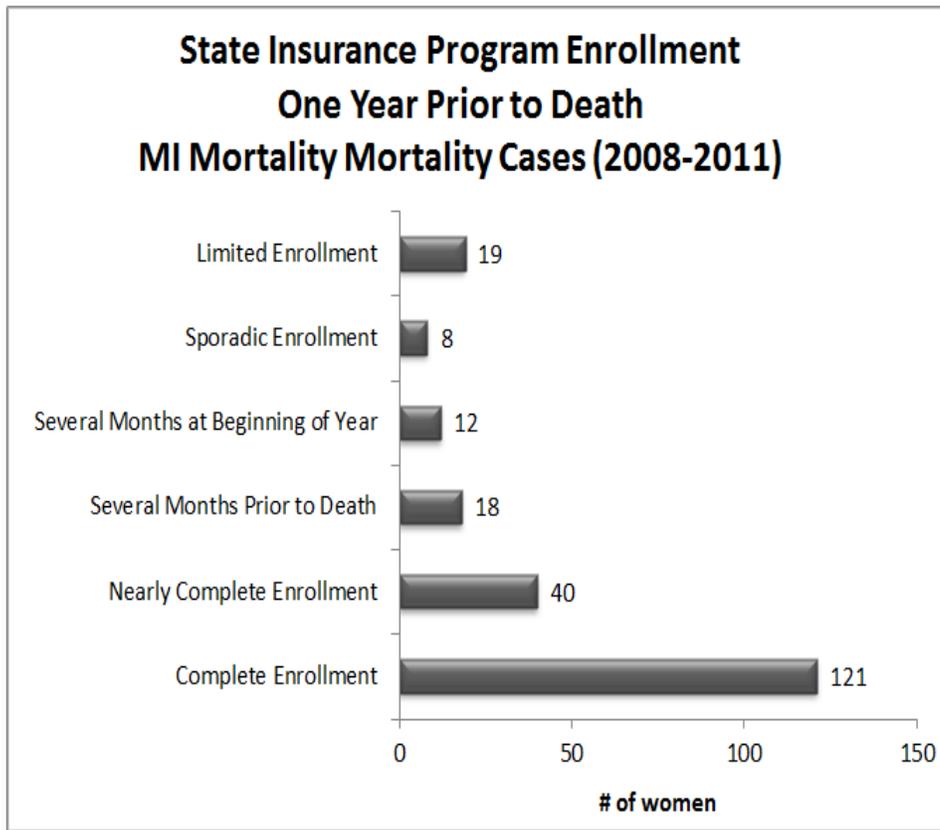
148
Complete or Nearly
Complete Enrollment
for Year Prior to
Death

18
Enrollment for
Only Several
Months Prior to
Death

19
Sporadic or
Limited Monthly
Enrollment for
Year Prior to Death

Enrollment Patterns

A monthly enrollment analysis was conducted for the 218 cases with at least one month of enrollment during the year prior to death. Of these cases, 74% (161/218) had complete or nearly complete monthly enrollment in a state administered insurance program one year prior to death. Black women and women of other races were more likely to have a complete or nearly complete enrollment profile one year prior to death when compared to maternal mortality cases involving white women. The available of complete or nearly complete enrollment increased with age.

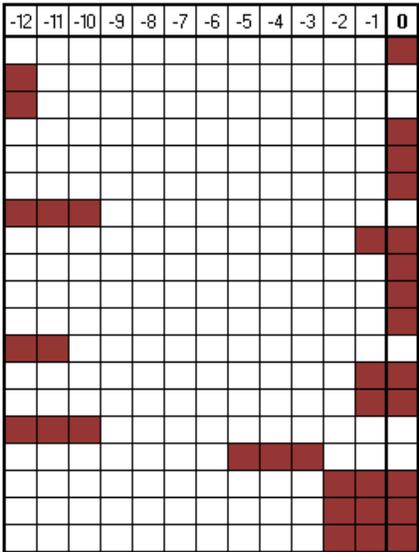


Enrollment Pattern	Race			Age Groups			
	Black	Other	White	<20	20-29	30-39	40+
1.Limited	7%	15%	9%	-	9%	-	-
2.Sporadic	-	0%	6%	-	-	-	-
3.Several Months at Beginning of Year	-	0%	7%	-	6%	-	0%
4.Several Months Prior to Death	9%	-	8%	-	8%	-	9%
5.Nearly Complete Enrollment	17%	15%	19%	-	24%	13%	9%
6.Complete Enrollment	62%	62%	51%	52%	50%	60%	71%

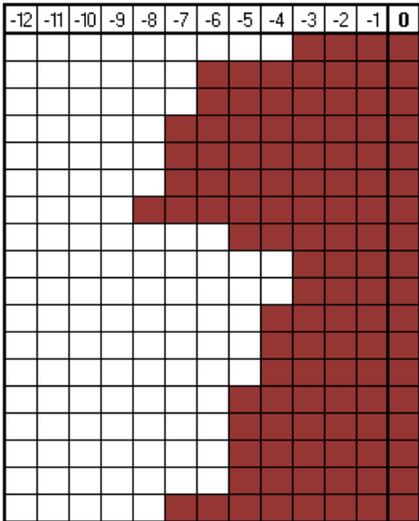
Dash indicates too few cases to generate a reliable estimate.

Enrollment Patterns Visualized

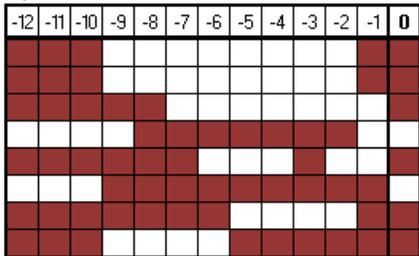
Limited Enrollment



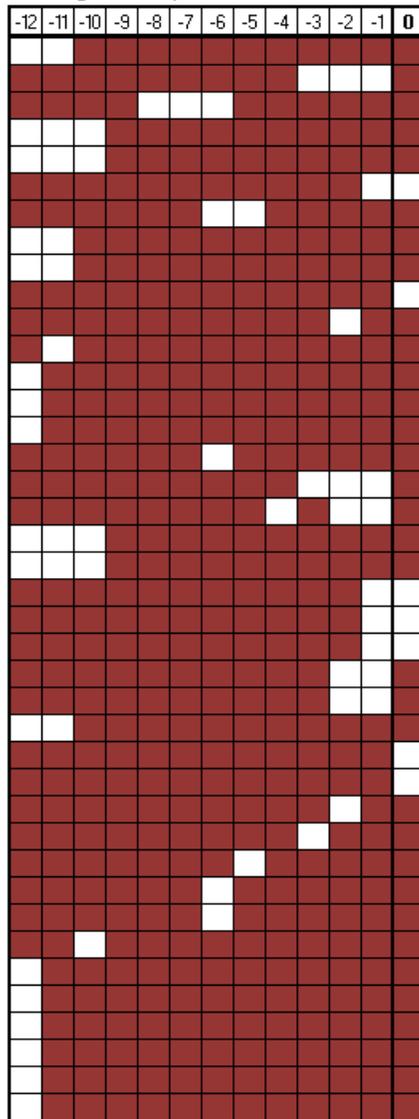
Enrollment Several Months Prior to Death



Sporadic Enrollment



Nearly Complete Enrollment



Enrollment Several Months at Beginning of Year Prior to Death

