



Texas Sickle Cell Mortality Data

Background

The Sickle Cell Surveillance Subcommittee sent a request to the Texas Department of State Health Services (DSHS), Center for Health Statistics (CHS), for 2009-2019 Texas sickle cell mortality data in 2021. The subcommittee sent an additional 2020 data request in 2023. CHS prepared data tables, and the CHS Geographic Information Systems (GIS) Team developed maps.

Requests sent:

1. Number of deaths of Texas residents in which sickle cell was the underlying cause of death or a contributing factor (include International Classification of Diseases, Tenth Revision (ICD-10) codes D57.0 Sickle-cell anemia with crisis, D57.1 Sickle-cell anemia without crisis, D57.2 Double heterozygous sickling disorders, and D57.8 Other sickle-cell disorders, but exclude D57.3 Sickle cell trait).
 - A. Breakdown data by year and age group (1-18, 19-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80+ years). Include average age for each age group.
 - B. Breakdown data by year and 11 Texas Public Health Regions (PHRs). Include totals per year and per PHR.
2. Create color-coded maps using PHR data.

Completed requests:

2021

Aggregated Tables

- The number of sickle cell-related deaths (underlying cause or a contributing factor (ICD-10 Codes D57.0, D57.1, D57.2, D57.8)) of Texas residents from 2009-2019.
- The number of sickle cell-related deaths (underlying cause or a contributing factor (ICD-10 Codes D57.0, D57.1, D57.2, D57.8)) of Texas residents by PHR from 2009-2019.
- The number of sickle cell-related deaths (underlying cause or a contributing factor (ICD-10 Codes D57.0, D57.1, D57.2, D57.8)) of Texas residents by age group (1-18, 19-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80+ years) from 2009-2019.
- The average age of sickle cell-related deaths (underlying cause or a contributing factor (ICD-10 Codes D57.0, D57.1, D57.2, D57.8)) of Texas residents by age group (1-18, 19-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80+ years) from 2009-2019.

Color-coded Maps

- Total sickle cell-related deaths by PHR from 2009-2019.
- Sickle cell-related deaths by PHR for each year from 2009-2019.

2023

Aggregated Tables

- The number of sickle cell-related deaths (underlying cause or a contributing factor (ICD-10 Codes D57.0, D57.1, D57.2, D57.8)) of Texas residents in 2020.
- The number of sickle cell-related deaths (underlying cause or a contributing factor (ICD-10 Codes D57.0, D57.1, D57.2, D57.8)) of Texas residents by PHR in 2020.
- The number of sickle cell-related deaths (underlying cause or a contributing factor (ICD-10 Codes D57.0, D57.1, D57.2, D57.8)) of Texas residents in 2020 by age group (1-18, 19-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80+ years).
- The average age of sickle cell-related deaths (underlying cause or a contributing factor (ICD-10 Codes D57.0, D57.1, D57.2, D57.8)) of Texas residents by age group in 2020 (1-18, 19-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80+ years).

Color-coded Map

- Sickle cell-related deaths by PHR for 2020.

Sickle Cell-Related Deaths by Public Health Region of Texas Residents, 2009-2020

Table 1. Sickle Cell-Related Deaths of Texas Residents by Public Health Region, 2009-2019^{a,b}

Public Health Region	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Region 1	* ^c	*	*	0	*	*	*	0	*	*	*	13
Region 2	*	0	0	*	0	0	*	*	*	0	*	*
Region 3	25	14	14	26	17	*	25	21	34	** ^d	28	225
Region 4	*	*	*	*	*	*	*	*	*	*	*	30
Region 5	*	0	*	*	*	*	*	*	*	*	*	46
Region 6	24	16	24	19	16	20	23	23	26	30	19	240
Region 7	*	*	*	*	*	*	*	*	*	*	*	71
Region 8	*	*	*	*	0	*	*	*	*	*	*	37
Region 9	*	*	*	0	*	*	0	0	*	*	0	*
Region 10	0	*	*	*	0	0	0	*	*	*	0	*
Region 11	*	0	0	*	0	*	*	0	0	*	0	*
Total	68	44	61	62	51	52	72	64	83	65	68	690

^a Includes ICD-10 codes: D57.0 Sickle-cell anemia with crisis, D57.1 Sickle-cell anemia without crisis, D57.2 Double heterozygous sickling disorders, and D57.8 Other sickle-cell disorders

^b Data source: Texas Death Certificate Data; Prepared by: DSHS, Center for Health Statistics; Date of run: 08/06/2021

^c *: Indicates counts of 1-9 are suppressed to prevent the identification of individuals in confidential data.

^d **: Indicates additional counts are suppressed to prevent the back-calculation of suppressed small counts (supplementary suppression).

Table 2. Sickle Cell-Related Deaths, by Public Health Region, of Texas Residents, 2020^{a,b,c}

Public Health Region	Deaths
Region 1	* ^d
Region 2	0
Region 3	28
Region 4	*
Region 5	*
Region 6	27
Region 7	13
Region 8	*
Region 9	*
Region 10	*
Region 11	*
Total	97

^a Residence data: Deaths of Texas residents, regardless of where death occurred

^b List of included ICD-10 codes: D57.0, D57.1, D57.2, D57.8

^c Data Source: Texas Death Certificate Data; Prepared by DSHS, Center for Health Statistics, Date of run: 07/18/2023

^d *: Indicates values of 1-9 are suppressed to prevent the identification of individuals in confidential data.

Total Sickle Cell-Related Deaths and Average Age by Age Group, Texas Residents, by Year

Notes for Tables 3-13:

- List of ICD-10 Codes:
 - D57.0 Sickle-cell anemia with crisis
 - D57.1 Sickle-cell anemia without crisis
 - D57.2 Double heterozygous sickling disorders
 - D57.8 Other sickle-cell disorders
- *: Indicates counts of 1-9 are suppressed to prevent the identification of individuals in confidential data.
- Data Source: Texas Death Certificate Data
Prepared by: DSHS, Center for Health Statistics
Date of run: 08/06/2021

Table 3. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2009

Age Group	Total	Average Age
1-18 years	*	10
19-29 years	12	26
30-39 years	15	33
40-49 years	19	44
50-59 years	11	53
60-69 years	*	62
70-79 years	0	-
80+ years	0	-

Table 4. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2010

Age Group	Total	Average Age
1-18 years	*	7
19-29 years	*	25
30-39 years	10	34
40-49 years	*	45
50-59 years	*	54
60-69 years	*	64
70-79 years	*	71
80+ years	0	-

Table 5. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2011

Age Group	Total	Average Age
1-18 years	*	2
19-29 years	12	23
30-39 years	18	34
40-49 years	*	45
50-59 years	*	55
60-69 years	*	63
70-79 years	*	73
80+ years	0	-

Table 6. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2012

Age Group	Total	Average Age
1-18 years	*	7
19-29 years	11	24
30-39 years	16	35
40-49 years	*	45
50-59 years	14	54
60-69 years	*	63
70-79 years	*	73
80+ years	*	81

Table 7. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2013

Age Group	Total	Average Age
1-18 years	*	13
19-29 years	12	26
30-39 years	13	33
40-49 years	11	44
50-59 years	*	54
60-69 years	*	63
70-79 years	*	72
80+ years	0	-

Table 8. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2014

Age Group	Total	Average Age
1-18 years	*	12
19-29 years	*	24
30-39 years	12	35
40-49 years	11	44
50-59 years	*	54
60-69 years	*	64
70-79 years	0	-
80+ years	0	-

Table 9. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2015

Age Group	Total	Average Age
1-18 years	*	9
19-29 years	17	24
30-39 years	15	36
40-49 years	14	44
50-59 years	18	53
60-69 years	*	64
70-79 years	0	-
80+ years	0	-

Table 10. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2016

Age Group	Total	Average Age
1-18 years	*	16
19-29 years	*	26
30-39 years	17	35
40-49 years	13	43
50-59 years	*	54
60-69 years	*	65
70-79 years	*	74
80+ years	*	93

Table 11. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2017

Age Group	Total	Average Age
1-18 years	*	6
19-29 years	14	26
30-39 years	22	35
40-49 years	14	43
50-59 years	10	55
60-69 years	13	64
70-79 years	*	74
80+ years	*	81

Table 12. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2018

Age Group	Total	Average Age
1-18 years	*	15
19-29 years	10	27
30-39 years	16	34
40-49 years	13	44
50-59 years	*	54
60-69 years	*	62
70-79 years	*	72
80+ years	*	88

Table 13. Sickle Cell Disorder Related Deaths and Average Age by Age Group, 2019

Age Group	Total	Average Age
1-18 years	*	9
19-29 years	13	26
30-39 years	16	35
40-49 years	16	44
50-59 years	*	55
60-69 years	*	63
70-79 years	*	74
80+ years	*	85

Notes for Table 14:

- *: Indicates values of 1-9 are suppressed to prevent the identification of individuals in confidential data.
- Residence data: Deaths of Texas residents, regardless of where the death occurred
- List of Included ICD-10 codes: D57.0, D57.1, D57.2, D57.8
- Data Source: Texas Death Certificate Data
Prepared by: DSHS, Center for Health Statistics
Date of run: 07/18/2023

Table 14. Sickle Cell-Related Deaths and Average Age, by Age Group, 2020

Age Group	Deaths	Average Age
1-18 years	*	11.80
19-29 years	*	26.25
30-39 years	17	45.57
40-49 years	23	35.41
50-59 years	17	63.21
60-69 years	14	88.75
70-79 years	*	73.56
80+ years	*	55.24
Total	97	49.07

Sickle Cell Disorder Deaths 2009-2020

Figure 1. Map of Sickle Cell Disorder Deaths by Public Health Region, 2009-2019

Figure 2. Map of Sickle Cell Disorder Deaths, 2009

Figure 3. Map of Sickle Cell Disorder Deaths, 2010

Figure 4. Map of Sickle Cell Disorder Deaths, 2011

Figure 5. Map of Sickle Cell Disorder Deaths, 2012

Figure 6. Map of Sickle Cell Disorder Deaths, 2013

Figure 7. Map of Sickle Cell Disorder Deaths, 2014

Figure 8. Map of Sickle Cell Disorder Deaths, 2015

Figure 9. Map of Sickle Cell Disorder Deaths, 2016

Figure 10. Map of Sickle Cell Disorder Deaths, 2017

Figure 11. Map of Sickle Cell Disorder Deaths, 2018

Figure 12. Map of Sickle Cell Disorder Deaths, 2019

Figure 13. Map of Sickle Cell Disorder Deaths, 2020

