Appendix A

2013 Rural-urban Continuum Codes (RUCC)

| Metropolitan Counties | |
|---|---|
| Code | Description |
| 1 | Counties in metro areas of 1 million population or more |
| 2 | Counties in metro areas of 250,000 to 1 million population |
| 3 | Counties in metro areas of fewer than 250,000 population |
| **Nonmetropolitan Counties** | |
| 4 | Urban population of 20,000 or more, adjacent to a metro area |
| 5 | Urban population of 20,000 or more, not adjacent to a metro area |
| 6 | Urban population of 2,500 to 19,999, adjacent to a metro area |
| 7 | Urban population of 2,500 to 19,999, not adjacent to a metro area |
| 8 | Completely rural or less than 2,500 urban population, adjacent to a metro area |
| 9 | Completely rural or less than 2,500 urban population, not adjacent to a metro area |

*Source:* Economic Research Service, US Department of Agriculture.
https://www.ers.usda.gov/data-products/rural-urban-continuum-codes/documentation/

Categorical primary variables in quartiles

| Variable: | 1st quartile | 2nd quartile | 3rd quartile | 4th quartile |
|---|---|---|---|---|
| Active MDs and DOs | 0-2 | 3-6 | 6-18 | 19+ |
| Primary care physicians | 0-1 | 2-4 | 5-9 | 10+ |

Kansas Counties by 2013 RUCC and Rurality Categories Used in this Study
Study code key:
1. Urban
2. Rural
3. Frontier

| Kansas county: | 2013 RUCC: | Rurality Categories: |
|---|---|---|
| Allen | 7 | 3 |
| Anderson | 6 | 2 |
| Atchison | 6 | 2 |
| Barber | 9 | 3 |
| Barton | 7 | 3 |
| Bourbon | 6 | 2 |
| Brown | 6 | 2 |
| Butler | 2 | 1 |
| Chase | 9 | 3 |
| Chautauqua | 8 | 3 |

| | | |
|---|---|---|
| Cherokee | 6 | 2 |
| Cheyenne | 9 | 3 |
| Clark | 9 | 3 |
| Clay | 6 | 2 |
| Cloud | 7 | 3 |
| Coffey | 6 | 2 |
| Comanche | 9 | 3 |
| Cowley | 4 | 2 |
| Crawford | 4 | 2 |
| Decatur | 9 | 3 |
| Dickinson | 7 | 3 |
| Doniphan | 3 | 1 |
| Douglas | 3 | 1 |
| Edwards | 9 | 3 |
| Elk | 8 | 3 |
| Ellis | 5 | 2 |
| Ellsworth | 7 | 3 |
| Finney | 5 | 2 |
| Ford | 5 | 2 |
| Franklin | 6 | 2 |
| Geary | 4 | 2 |
| Gove | 9 | 3 |
| Graham | 9 | 3 |
| Grant | 7 | 3 |
| Gray | 9 | 3 |
| Greeley | 9 | 3 |
| Greenwood | 6 | 2 |
| Hamilton | 9 | 3 |
| Harper | 8 | 3 |
| Harvey | 2 | 1 |
| Haskell | 9 | 3 |
| Hodgeman | 9 | 3 |
| Jackson | 3 | 1 |
| Jefferson | 3 | 1 |
| Jewell | 9 | 3 |
| Johnson | 1 | 1 |
| Kearny | 9 | 3 |
| Kingman | 2 | 1 |
| Kiowa | 9 | 3 |

| | | |
|---|---|---|
| Labette | 7 | 3 |
| Lane | 9 | 3 |
| Leavenworth | 1 | 1 |
| Lincoln | 9 | 3 |
| Linn | 1 | 1 |
| Logan | 9 | 3 |
| Lyon | 4 | 2 |
| Marion | 7 | 3 |
| Marshall | 6 | 2 |
| McPherson | 6 | 2 |
| Meade | 9 | 3 |
| Miami | 1 | 1 |
| Mitchell | 7 | 3 |
| Montgomery | 5 | 2 |
| Morris | 8 | 3 |
| Morton | 9 | 3 |
| Nemaha | 6 | 2 |
| Neosho | 7 | 3 |
| Ness | 9 | 3 |
| Norton | 7 | 3 |
| Osage | 3 | 1 |
| Osborne | 9 | 3 |
| Ottawa | 9 | 3 |
| Pawnee | 7 | 3 |
| Phillips | 7 | 3 |
| Pottawatomie | 3 | 1 |
| Pratt | 7 | 3 |
| Rawlins | 9 | 3 |
| Reno | 4 | 2 |
| Republic | 9 | 3 |
| Rice | 7 | 3 |
| Riley | 3 | 1 |
| Rooks | 9 | 3 |
| Rush | 9 | 3 |
| Russell | 7 | 3 |
| Saline | 5 | 2 |
| Scott | 7 | 3 |
| Sedgwick | 2 | 1 |
| Seward | 5 | 2 |

| | | |
|---|---|---|
| Shawnee | 3 | 1 |
| Sheridan | 9 | 3 |
| Sherman | 7 | 3 |
| Smith | 9 | 3 |
| Stafford | 9 | 3 |
| Stanton | 9 | 3 |
| Stevens | 7 | 3 |
| Sumner | 2 | 1 |
| Thomas | 7 | 3 |
| Trego | 9 | 3 |
| Wabaunsee | 3 | 1 |
| Wallace | 9 | 3 |
| Washington | 9 | 3 |
| Wichita | 9 | 3 |
| Wilson | 7 | 3 |
| Woodson | 9 | 3 |
| Wyandotte | 1 | 1 |