

Monitoring Data Quality in the National Fatality Review-Case Reporting System

Appendix A

<https://www.ncfrp.org/data/data-quality-initiative/>

Percent change in missing/unknown for all priority variables

| NFR-CRS Data Quality Priority Variables | | All States 2014 | | All States 2018 | | % Change |
|--|--|-------------------|------|-------------------|------|----------|
| | | Missing & Unknown | | Missing & Unknown | | |
| | | N | % | N | % | |
| Variables highlighted in ORANGE are designated CORE variables | | | | | | |
| Section A: Child Information | | | | | | |
| A4 | Child's age | 27 | 0.2 | 16 | 0.2 | 0.0% |
| A5 | Child's race | 617 | 4.9 | 547 | 4.8 | -2.0% |
| A6 | Hispanic or Latino origin | 1148 | 9.2 | 997 | 8.7 | -5.4% |
| A7 | Child's sex | 126 | 1.0 | 87 | 0.8 | -20.0% |
| A13 | Child had disability or chronic illness | 4913 | 39.2 | 3009 | 26.3 | -32.9% |
| A15 | Child’s health insurance | 7565 | 60.4 | 6200 | 54.0 | -10.6% |
| Child ever left hospital | | | | | | |
| A22 | Child had history of maltreatment as victim | 6374 | 50.8 | 3751 | 40.0 | -21.3% |
| A23 | Was there an open CPS case with child at time of death | 4404 | 35.2 | 2783 | 29.7 | -15.6% |
| Non-infant, ever left the hospital | | | | | | |
| A30 | Child's mental health: Had received services | 3110 | 24.9 | 2499 | 44.9 | 80.3% |
| A31 | Child's mental health: Was receiving services | 3174 | 25.3 | 2609 | 46.9 | 85.4% |
| A32 | Child's mental health: On meds for MH issue | 3200 | 25.6 | 2649 | 47.6 | 85.9% |
| A35 | Child's mental health: Issues prevented rcv srvc | 3396 | 27.1 | 2881 | 51.8 | 91.1% |
| Infants | | | | | | |
| A43 | Gestational age | 1182 | 17.0 | 1079 | 18.3 | 7.6% |
| A44 | Birth weight | 1520 | 21.8 | 1461 | 24.8 | 13.8% |
| A45 | Multiple birth | 1415 | 20.3 | 941 | 15.9 | -21.7% |
| A49 | Prenatal care provided during pregnancy of deceased infant | 2277 | 32.6 | 1625 | 27.5 | -15.6% |
| A61 | Did mother smoke at any time during pregnancy | 2751 | 39.4 | 1963 | 33.2 | -15.7% |
| Section C: Primary Caregiver Information | | | | | | |
| All | | | | | | |
| C1 | Primary caregiver (CG) 1 (relationship to decedent) | 2314 | 18.5 | 1579 | 13.8 | -25.4% |
| C2 | CG1 age in years | 4642 | 37.0 | 4194 | 36.5 | -1.4% |
| C3 | CG1 sex | 2755 | 22.0 | 1712 | 14.9 | -32.3% |

| NFR-CRS Data Quality Priority Variables | | All States 2014 | | All States 2018 | | % Change |
|---|--|-------------------|------|-------------------|------|----------|
| | | Missing & Unknown | | Missing & Unknown | | |
| | | N | % | N | % | |
| Variables highlighted in ORANGE are designated CORE variables | | | | | | |
| Section D: Supervisor Information | | | | | | |
| Child ever left hospital | | | | | | |
| D1 | Did child have supervision at time of incident | 2899 | 23.1 | 1742 | 18.6 | -19.5% |
| Child supervised not equal "no" and ever left hospital | | | | | | |
| D4 | Person responsible for supervision, relationship to decedent | 2962 | 28.4 | 1692 | 23.4 | -17.6% |
| Child ever left hospital and not hospital or institutional staff | | | | | | |
| D5 | Supervisor age in years | 6536 | 62.7 | 2988 | 44.4 | -29.2% |
| D6 | Supervisor sex | 5585 | 53.7 | 1751 | 26.1 | -51.4% |
| Child ever left hospital and not hospital or institutional staff (v5) | | | | | | |
| D15 | At time of incident was supervisor asleep (v5/v5.1 only) | NA | NA | 2033 | 32.4 | NA |
| Child ever left hospital and not hospital or institutional staff | | | | | | |
| D16 | Was supervisor impaired at time of incident | 4577 | 43.9 | 3024 | 45.0 | 2.5% |
| Child ever left hospital | | | | | | |
| Section E: Incident Information | | | | | | |
| E3 | Place of incident | 2488 | 19.9 | 1136 | 12.1 | -39.2% |
| E11 | Had child used drugs or alcohol | 3928 | 31.4 | 2428 | 25.9 | -17.5% |
| Section F: Investigation Information | | | | | | |
| Death investigation performed | | | | | | |
| F1 | Was a death scene investigation performed | 4160 | 33.2 | 857 | 13.5 | -59.3% |
| All | | | | | | |
| F3 | Death referred to ME/C | 2192 | 17.5 | 1436 | 12.5 | -28.6% |
| F5 | Autopsy Performed | 2326 | 18.6 | 817 | 7.1 | -61.8% |
| F13 | CPS record check conducted | 4556 | 36.4 | 3259 | 28.4 | -21.9% |
| F15 | CPS action taken | 4452 | 35.5 | 3410 | 29.8 | -16.1% |
| Section G: Official Manner and Primary Cause of Death | | | | | | |
| G5 | Official manner of death from death certificate | 493 | 3.9 | 276 | 2.5 | -35.9% |
| G6 | Primary cause of death | 864 | 6.9 | 951 | 8.2 | 18.8% |
| Section H: Detailed Information by Cause of Death | | | | | | |
| H1: Motor Vehicle and Other Transport | | | | | | |
| H1a | Child's vehicle type | 178 | 14.8 | 93 | 8.9 | -39.9% |
| H1b | Position of child | 105 | 8.8 | 58 | 5.5 | -37.5% |

| NFR-CRS Data Quality Priority Variables | | All States 2014 | | All States 2018 | | % Change |
|--|---|-------------------|------|-------------------|------|----------|
| | | Missing & Unknown | | Missing & Unknown | | |
| | | N | % | N | % | |
| Variables highlighted in ORANGE are designated CORE variables | | | | | | |
| H1c | Causes of incident | 236 | 19.7 | 167 | 15.9 | -19.3% |
| Motor Vehicle and Other Transport - child as driver | | | | | | |
| H1g | Driver age and circumstances (child as driver) | 50 | 17.4 | 28 | 10.8 | -37.9% |
| Motor Vehicle and Other Transport | | | | | | |
| H1i | Protective measures for child (any check in column 1-5) | 569 | 47.6 | 495 | 47.1 | -1.1% |
| H2: Fire, Burn or Electrocution | | | | | | |
| H2a | (F/B/E) Source | 70 | 38.7 | 70 | 37.8 | -2.3% |
| H2b | Type of incident | 12 | 6.6 | 3 | 1.6 | -75.8% |
| Fire, Burn or Electrocution - number of fire deaths | | | | | | |
| H2p | Smoke alarms present (fire deaths only) | 74 | 50.0 | 73 | 43.2 | -13.6% |
| Fire, Burn or Electrocution - number of electrocution deaths | | | | | | |
| H2s | Electrocution cause | 0 | 0.0 | 2 | 28.6 | NA |
| H3: Drowning | | | | | | |
| H3d | Drowning location | 41 | 8.7 | 17 | 3.5 | -59.8% |
| Drawing location = Open water | | | | | | |
| H3e | Open water place | 2 | 1.3 | 2 | 1.4 | 7.7% |
| Drowning location = Pool | | | | | | |
| H3i | Pool type | 33 | 16.8 | 27 | 11.5 | -31.5% |
| Drowning location = Open water or pool | | | | | | |
| H3m | Floatation device used | 44 | 12.7 | 51 | 13.6 | 7.1% |
| Drowning location = various locations | | | | | | |
| H3n | What barriers existed | 82 | 21.5 | 105 | 25.8 | 20.0% |
| H3t | Local ordinance | 189 | 49.4 | 192 | 47.0 | -4.9% |
| H3v | Child able to swim | 110 | 28.8 | 118 | 28.9 | 0.3% |
| Drowning location = all locations except toilet | | | | | | |
| H3x | Warning sign posted | 212 | 45.1 | 182 | 37.0 | -18.0% |
| H4: Unintentional Asphyxia | | | | | | |
| H4a | Type of event | 61 | 4.7 | 19 | 1.9 | -59.6% |
| Type of event = suffocation | | | | | | |
| H4b | Action causing suffocation | 4 | 0.5 | 3 | 0.4 | -20.0% |
| Type of event = strangulation | | | | | | |

| NFR-CRS Data Quality Priority Variables | | All States 2014 | | All States 2018 | | % Change |
|--|---|-------------------|------|-------------------|------|----------|
| | | Missing & Unknown | | Missing & Unknown | | |
| | | N | % | N | % | |
| Variables highlighted in ORANGE are designated CORE variables | | | | | | |
| H4c | Object causing strangulation event | 24 | 7.5 | 0 | 0.0 | -100.0% |
| Type of event = choking | | | | | | |
| H4d | Object causing choking event | 1 | 2.6 | 0 | 0.0 | -100.0% |
| Type of event = all | | | | | | |
| H4f | Choking game | 155 | 11.8 | 58 | 5.9 | -50.1% |
| H5: Assault, Weapon, Including Person's Body Part | | | | | | |
| H5a | Type of weapon | 67 | 7.3 | 79 | 5.5 | -24.7% |
| Type of weapon = gun | | | | | | |
| H5b | Firearm type | 111 | 17.5 | 180 | 20.4 | 16.6% |
| Type of weapon = all | | | | | | |
| H5o | Persons handling weapon | 238 | 26.2 | 309 | 21.5 | -17.8% |
| H5q | Use of weapon | 223 | 24.5 | 300 | 20.9 | -14.7% |
| H6: Fall or Crush | | | | | | |
| H6a | Type (fall/crush) | 3 | 2.9 | 2 | 2.9 | 0.0% |
| H7: Poisoning, Overdose, or Acute Intoxication | | | | | | |
| H7a | Type of substance | 17 | 6.9 | 16 | 6.5 | -5.8% |
| H7f | Incident result of | 56 | 22.9 | 42 | 17.3 | -24.5% |
| H8: Medical condition | | | | | | |
| H8b | Death expected as a result of this condition | 2804 | 47.6 | 1747 | 38.2 | -19.7% |
| H8c | Receiving care for condition | 2149 | 36.5 | 1158 | 25.3 | -30.7% |
| Section I: Other Circumstances of Incident | | | | | | |
| 12: Death Related to Sleeping or Sleeping Environment | | | | | | |
| I2 | Was death related to sleeping/sleep environ (< 5yo) | 1927 | 22.5 | 1025 | 13.9 | -38.2% |
| Sleep-Related Death | | | | | | |
| I2a | Incident sleep place (Sleep env=yes) | 49 | 2.4 | 56 | 2.7 | 12.5% |
| I2b | Put to sleep on | 439 | 20.9 | 384 | 18.5 | -11.5% |
| I2c | Child found | 437 | 20.8 | 374 | 18.1 | -13.0% |
| I2d | Usual sleep place | 762 | 36.2 | 652 | 31.4 | -13.3% |
| I2e | Usual sleep position | 983 | 46.7 | 850 | 41.0 | -12.2% |
| I2f | Bassinette/port-a-crib in home | 618 | 29.4 | 565 | 27.3 | -7.1% |
| I2h | Pacifier | 881 | 41.8 | 650 | 31.3 | -25.1% |

| NFR-CRS Data Quality Priority Variables | | All States 2014 | | All States 2018 | | % Change |
|--|---|-------------------|------|-------------------|------|----------|
| | | Missing & Unknown | | Missing & Unknown | | |
| | | N | % | N | % | |
| Variables highlighted in ORANGE are designated CORE variables | | | | | | |
| I2i | Swaddled | 661 | 31.4 | 564 | 27.2 | -13.4% |
| I2k | Child exposed to 2nd hand smoke | 966 | 45.9 | 742 | 35.8 | -22.0% |
| I2l | Child face when found | 646 | 30.7 | 594 | 28.7 | -6.5% |
| I2o | Objects in the child's sleep environment | 117 | 5.6 | 124 | 6.0 | 7.1% |
| I2q | CG fell asleep while feeding child | 272 | 12.9 | 201 | 9.7 | -24.8% |
| I2r | Child sleeping in same room with CG | 243 | 11.5 | 199 | 9.6 | -16.5% |
| I2s | Child sleeping on same surface with person(s) or animal(s) | 171 | 8.2 | 133 | 6.4 | -22.0% |
| Section I5: Child Abuse, Neglect, Poor Supervision and Exposure to Hazards | | | | | | |
| I5a | Did abuse, neglect, poor supervision, expos to hazards cause/contribute to death*** | 3744 | 29.9 | 2355 | 20.5 | -31.4% |
| CAN section marked Yes | | | | | | |
| I5a | What act caused/contributed (yes/probable) | 97 | 2.7 | 18 | 0.6 | -77.8% |
| CAN section marked Child Abuse | | | | | | |
| I5b | Child abuse type | 3 | 1.1 | 18 | 5.8 | 427.3% |
| Type of abuse = Abusive head trauma | | | | | | |
| I5d | Was child shaken | 78 | 48.8 | 94 | 54.6 | 11.9% |
| CAN section marked Child Neglect | | | | | | |
| I5f | Child neglect, type | 12 | 3.2 | 8 | 1.9 | -40.6% |
| Section J: Person Responsible | | | | | | |
| J1 | Did a person cause or contribute to child's death | NA | NA | 2425 | 21.2 | NA |
| J5 | Person responsible: Relationship to child | 719 | 20.2 | 672 | 18.4 | -8.9% |
| J6 | Person responsible: Age | 1187 | 33.3 | 1127 | 30.8 | -7.5% |
| J7 | Person responsible: Sex | 763 | 21.5 | 685 | 18.7 | -13.0% |
| Section L: Findings Identified During the Review | | | | | | |
| All | | | | | | |
| L5 | Could death have been prevented | 3160 | 25.2 | 2334 | 20.3 | -19.4% |
| Section M: The Review Process | | | | | | |
| M3 | Is CDR complete | 3007 | 24.0 | 1681 | 14.6 | -39.2% |
| Section P: Form Completed | | | | | | |
| P | Data entry completed for this case | 2902 | 23.2 | 1539 | 13.4 | -42.2% |
| P | Data Quality Assurance completed by state | 10143 | 81.0 | 8417 | 73.3 | -9.5% |

| NFR-CRS Data Quality Priority Variables | All States 2014 | | All States 2018 | | % Change |
|---|-------------------|---|-------------------|---|----------|
| | Missing & Unknown | | Missing & Unknown | | |
| | N | % | N | % | |
| Variables highlighted in ORANGE are designated CORE variables | | | | | |
| * Data download date = 22 July 2020; deaths only (casetype=1) Reflects Version 5.1 question numbering/order ***2014 was not an exact crosswalk NOTE: Data on eight suicide priority variables are not reported above due to reporting changes in Version 5.1 | | | | | |

Monitoring Data Quality in the National Fatality Review-Case Reporting System

Appendix B

<https://www.ncfrp.org/data/data-quality-initiative/>

Percent Change for CORE Priority Variables and Number of States Meeting Each Benchmark

| 48 CORE variables | | Proportion of Missing/Unknown Responses | | | Number of States Meeting Benchmark* | | | Benchmark |
|-------------------|--|---|------|--------|-------------------------------------|-------|------------|-------------------|
| | | 2014 | 2018 | % Chg | 2014 | 2018 | Difference | % Missing Unknown |
| | | % | % | | Count | Count | | |
| A4 | Child's age | 0.2 | 0.2 | 0.0% | 35 | 30 | -5 | 10 |
| A5 | Child's race | 4.9 | 4.8 | -2.0% | 33 | 33 | 0 | 10 |
| A7 | Child's sex | 1.0 | 0.8 | -20.0% | 34 | 29 | -5 | 10 |
| A15 | Child's health insurance | 60.4 | 54.0 | -10.6% | 5 | 21 | 16 | 25 |
| A22 | Child had history of maltreatment as victim | 50.8 | 40.0 | -21.3% | 11 | 24 | 13 | 25 |
| A23 | Was there an open CPS case with child at time of death | 35.2 | 29.7 | -15.6% | 18 | 19 | 1 | 25 |
| A49 | Prenatal care provided during pregnancy | 32.6 | 27.5 | -15.6% | 15 | 22 | 7 | 25 |
| C1 | Primary caregiver (CG) 1 (relationship to decedent) | 18.5 | 13.8 | -25.4% | 22 | 24 | 2 | 10 |
| C2 | CG1 age in years | 37.0 | 36.5 | -1.4% | 16 | 11 | -5 | 25 |
| C3 | CG1 sex | 22.0 | 14.9 | -32.3% | 20 | 21 | 1 | 10 |
| D1 | Did child have supervision at time of incident | 23.1 | 18.6 | -19.5% | 18 | 18 | 0 | 10 |
| D5 | Supervisor age in years | 62.7 | 44.4 | -29.2% | 10 | 13 | 3 | 25 |
| D6 | Supervisor sex | 53.7 | 26.1 | -51.4% | 14 | 28 | 14 | 25 |
| D15 | At time of incident was supervisor asleep (v5/v5.1 only) | NA | 32.4 | NA | NA | 24 | NA | 25 |
| D16 | Was supervisor impaired at time of incident | 43.9 | 45.0 | 2.5% | 12 | 10 | -2 | 25 |
| E3 | Place of incident | 19.9 | 12.1 | -39.2% | 20 | 27 | 7 | 10 |
| F1 | Was a death scene investigation performed | 33.2 | 13.5 | -59.3% | 20 | 30 | 10 | 10 |
| F5 | Autopsy Performed | 18.6 | 7.1 | -61.8% | 20 | 27 | 7 | 10 |
| F15 | CPS action taken | 35.5 | 29.8 | -16.1% | 20 | 22 | 2 | 25 |
| H1a | Child's vehicle type | 14.8 | 8.9 | -39.9% | 17 | 27 | 10 | 10 |
| H1b | Position of child | 8.8 | 5.5 | -37.5% | 29 | 30 | 1 | 10 |
| H1c | Causes of incident | 19.7 | 15.9 | -19.3% | 15 | 20 | 5 | 10 |
| H1i | Protective measures for child (any check in column 1-5) | 47.6 | 47.1 | -1.1% | 8 | 7 | -1 | 25 |
| H2a | (F/B/E) Source | 38.7 | 37.8 | -2.3% | 19 | 21 | 2 | 25 |
| H2b | Type of incident | 6.6 | 1.6 | -75.8% | 28 | 33 | 5 | 10 |

| 48 CORE variables | | Proportion of Missing/Unknown Responses | | | Number of States Meeting Benchmark* | | | Benchmark |
|--|--|---|------|---------|-------------------------------------|-------|------------|-------------------|
| | | 2014 | 2018 | % Chg | 2014 | 2018 | Difference | % Missing Unknown |
| | | % | % | | Count | Count | | |
| H2p | Smoke alarms present (fire deaths only) | 50.0 | 43.2 | -13.6% | 19 | 35 | 16 | 25 |
| H3d | Drowning location | 8.7 | 3.5 | -59.8% | 27 | 31 | 4 | 10 |
| H3m | Flootation device used | 12.7 | 13.6 | 7.1% | 20 | 23 | 3 | 10 |
| H3n | What barriers existed | 21.5 | 25.8 | 20.0% | 13 | 17 | 4 | 10 |
| H4a | Type of event | 4.7 | 1.9 | -59.6% | 30 | 33 | 3 | 10 |
| H4b | Action causing suffocation | 0.5 | 0.4 | -20.0% | 35 | 35 | 0 | 10 |
| H4c | Object causing strangulation event | 7.5 | 0.0 | -100.0% | 30 | 35 | 5 | 10 |
| H5a | Type of weapon | 7.3 | 5.5 | -24.7% | 26 | 30 | 4 | 10 |
| H5b | Firearm type | 17.5 | 20.4 | 16.6% | 21 | 20 | -1 | 10 |
| H5o | Persons handling weapon | 26.2 | 21.5 | -17.8% | 14 | 20 | 6 | 10 |
| H5q | Use of weapon | 24.5 | 20.9 | -14.7% | 12 | 14 | 2 | 10 |
| H7a | Type of substance | 6.9 | 6.5 | -5.8% | 28 | 33 | 5 | 10 |
| H8b | Death expected as a result of this condition | 47.6 | 38.2 | -19.7% | 9 | 21 | 12 | 25 |
| I2 | Was death related to sleeping/sleep environ (< 5yo) | 22.5 | 13.9 | -38.2% | 14 | 18 | 4 | 10 |
| I2a | Incident sleep place (Sleep env=yes) | 2.4 | 2.7 | 12.5% | 30 | 34 | 4 | 10 |
| I2f | Bassinette/port-a-crib in home | 29.4 | 27.3 | -7.1% | 16 | 18 | 2 | 25 |
| I2o | Objects in the child's sleep environment | 5.6 | 6.0 | 7.1% | 24 | 29 | 5 | 10 |
| I2s | Child sleeping on same surface with person(s) or animal(s) | 8.2 | 6.4 | -22.0% | 23 | 30 | 7 | 10 |
| I5a | Did abuse, neglect, poor supervision, expos to hazards cause/contribute to death | 29.9 | 20.5 | -31.4% | 8 | 12 | 4 | 10 |
| I5a | What act caused/contributed (yes/probable) | 2.7 | 0.6 | -77.8% | 30 | 34 | 4 | 10 |
| L5 | Could death have been prevented | 25.2 | 20.3 | -19.4% | 23 | 24 | 1 | 10 |
| P | Data entry completed for this case | 23.2 | 13.4 | -42.2% | 13 | 18 | 5 | 10 |
| P | Data Quality Assurance completed by state | 81.0 | 73.3 | -9.5% | 5 | 9 | 4 | 25 |
| Average | | 24.6 | 19.9 | -19.1% | 20 | 24 | 4 | NA |
| *35 states with more than 30 deaths in 2014 and 2018 | | | | | | | | |