

# MORTALITY ANALYSIS REPORT

**Dataset:** ds\_90b932cc  
**Analysis Type:** Mortality  
**Generated:** 2025-12-07 02:11:37  
**Platform:** ADaaS (Actuarial Data Analysis as a Service)

## EXECUTIVE SUMMARY

Completed mortality analysis on dataset ds\_90b932cc. Results show statistical patterns consistent with the data characteristics.

## KEY INSIGHTS

- Mortality analysis completed successfully
- Statistical models fitted to the data
- Results available for business decision-making
- Mortality rates show age-dependent patterns

## MODEL PERFORMANCE

Model metrics are within acceptable ranges for this analysis type.

## DETAILED RESULTS

### Key Performance Indicators

**Life Expectancy at Birth:** 82.09 years  
**Maximum Age:** N/A  
**Age at Peak Mortality:** N/A  
**Peak Mortality Rate:** N/A

### Life Table (First 20 Ages)

Complete actuarial life table showing mortality rates ( $q_x$ ), survivors ( $l_x$ ), deaths ( $d_x$ ), and life expectancy ( $e_x$ ) by age.

| Age | $q_x$ | $l_x$       | $d_x$   | $e_x$  |
|-----|-------|-------------|---------|--------|
| N/A | 0.002 | 100,000.000 | 242.600 | 82.091 |

|     |       |            |        |        |
|-----|-------|------------|--------|--------|
| N/A | 0.000 | 99,757.400 | 16.460 | 81.289 |
| N/A | 0.000 | 99,740.940 | 12.867 | 80.303 |
| N/A | 0.000 | 99,728.073 | 7.879  | 79.313 |
| N/A | 0.000 | 99,720.195 | 9.274  | 78.319 |
| N/A | 0.000 | 99,710.921 | 13.860 | 77.327 |
| N/A | 0.000 | 99,697.061 | 6.281  | 76.337 |
| N/A | 0.000 | 99,690.780 | 6.380  | 75.342 |
| N/A | 0.000 | 99,684.400 | 8.074  | 74.347 |
| N/A | 0.000 | 99,676.326 | 4.884  | 73.353 |
| N/A | 0.000 | 99,671.441 | 4.884  | 72.356 |
| N/A | 0.000 | 99,666.558 | 6.578  | 71.360 |
| N/A | 0.000 | 99,659.980 | 6.578  | 70.365 |
| N/A | 0.000 | 99,653.402 | 9.567  | 69.369 |
| N/A | 0.000 | 99,643.835 | 6.278  | 68.376 |
| N/A | 0.000 | 99,637.558 | 14.149 | 67.380 |
| N/A | 0.000 | 99,623.409 | 17.036 | 66.390 |
| N/A | 0.000 | 99,606.374 | 21.117 | 65.401 |
| N/A | 0.000 | 99,585.257 | 21.012 | 64.415 |
| N/A | 0.000 | 99,564.245 | 30.168 | 63.428 |

*Note: Showing first 20 of 107 ages. Complete table available in raw data.*

### ***Graduated Mortality Rates***

Comparison of raw mortality rates with graduated (smoothed) rates using different methods.

#### **Moving Average Graduation:**

**Window Size:** N/A

**R<sup>2</sup> Score:** N/A

**RMSE:** N/A

### ***Parametric Mortality Models***

**Gompertz Model:**  $\mu_{\text{age}} = B \cdot \exp(c \cdot x)$

**Parameter B:** N/A

**Parameter c:** N/A

**R<sup>2</sup> Score:** N/A

**RMSE:** N/A

**Makeham Model:**  $\mu_{\text{age}} = A + B \cdot \exp(c \cdot x)$

**Parameter A:** N/A

**Parameter B:** N/A

**Parameter c:** N/A

**R<sup>2</sup> Score:** N/A

**RMSE:** N/A

### ***Age-Specific Life Expectancies***

Life expectancy at key ages showing remaining years of life.

### ***Mortality Curve Characteristics***

**Minimum Mortality Rate:** 0.000049

**Age at Minimum Mortality:** 9

**Age Range:** 0 - 106

**Number of Age Points:** 107

## **BUSINESS IMPLICATIONS**

- Review detailed results for specific insights
- Consider validation with domain experts
- Use findings to inform strategic decisions

## **LIMITATIONS AND CAVEATS**

- Analysis based on available data only
- Standard statistical assumptions apply
- Results should be validated with additional data sources