

Best Practices

**For Want of a Nail the Kingdom was Lost
Mother Goose was Right:
Profit by Best (Data Quality) Practices**

*By
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Like the missing horseshoe nail that cost a kingdom in the old Mother Goose nursery rhyme, faulty data can produce devastating bottom line consequences in the property / casualty insurance business.

Consider how incomplete or miscoded data can produce cascading miscalculations in underwriting, risk selection, coverage and pricing. Data is at the heart of customer service and support functions. Claims data — from both internal and external sources — support decisions and planning for claims settlement. Past claims experience help companies identify emerging claim trends. The quality of data can lead to either profitably helpful or dangerously misleading predictions for future claims-adjustment and settlement costs.

Insurers use data to manage litigation, detect fraudulent claims and limit financial exposure to claims through reinsurance, but this practice works only when the data is credible. It is no overstatement that sound, profitable property / casualty operations begin – and end – with quality data.

But what is quality data and how can companies attain and sustain that quality?

Our firm, whose expertise in data aggregation and management is widely recognized by the insurance industry, has developed best practices and standards to ensure the quality of our statistical data. We maintain one of the largest private databases in the world, with 10.6 billion records at any given time. Although we have developed these principles for the insurance business, the elements and principles that follow are equally applicable to all organizations.

We define quality data as data fit for its intended use. The five key characteristics of quality data are:

- **Accuracy:** information in the database represents exactly what it is supposed to capture.
- **Validity:** the value of a data element in the database is identified as an allowable value.
- **Reasonability:** data is consistent with prior data or other available information.
- **Completeness:** every recorded transaction contains all necessary information, and all pertinent transactions are being recorded and reported.
- **Timeliness:** transactions are consistently recorded, processed and changed within established and prescribed timeframes.

With the above characteristics of data quality in mind, here are the key principles we recommend as guidelines to organizations for managing data quality.

Data stewardship

- maintain a corporate program with senior management oversight
- understand roles and responsibilities in data ownership, acquisition, quality assurance, storage and distribution
- make each functional area with data responsibility accountable for their own performance and data management

Data and data quality standards

- develop internal standards and, where appropriate, seek useful external standards
- harmonize multiple standards and promote consistent operations across multiple systems and platforms

Organizational issues

- establish an in-house unit to create and assess data acquisition across the organization
- tap into external resources where appropriate

Operations and processes

- develop processes to maximize data quality and use new technologies to manage data
- monitor regulatory requirements that may affect data and data quality

Data element development and specification

- design and maintain data, system, and reporting mechanisms for sound data management and quality for end-user service
- review the current level of data detail and assess whether or not historical or retrospective data are necessary for developing system or reporting specifications
- define data element and design data-reporting specifications to enable convenient modifications and updates

9 Areas of Best Practices

1. *Data stewardship*
2. *Data and data quality standards*
3. *Organizational issues*
4. *Operations and processes*
5. *Data element development and specification*
6. *Data management and data quality tools*
7. *Measurement*
8. *Individual Support*
9. *Privacy*

Data management and data quality tools

- develop tools such as a corporate data dictionary, edits and business rules, data-flow documentation, process model and mapping, and data-translation criteria by data source and recipient
- leverage technology resources like the Internet, predictive and data-visualization tools, and new data exchange standards for improved data management and quality

Measurement

- develop performance metrics to measure poor data quality, such as costs for correcting errors and reports, investigating and preventing errors, fines and regulatory scrutiny.
- benchmark results for each data source

Individual support

- institute support for data management and data quality on both individual and organizational levels

Privacy

- educate users about privacy issues, policies and compliance with privacy regulations
- control access to, and use of, non-public data
- promote best practices in data privacy

Just as organizations protect their financial, physical and intellectual property assets, so should organizations ensure that their data assets are accurate, reliable and protected from unauthorized access. As businesses in various industries “go global,” the value of data quality for informed business decisions, financial success, and market reputation will also grow exponentially.

About the Authors



Virginia Prevosto and **Peter Marotta** are principals in the Consulting and Research Department of ISO (iso.com). ISO, based in Jersey City, N.J., maintains one of the largest private databases in the world by obtaining roughly 2 billion detailed records of insurance premiums collected and losses paid each year.



ISO’s professional staff members analyze insurer data and turn it into meaningful information. ISO provides data, analytics and decision-support solutions to professionals in many fields, including insurance, finance, real estate, health services, government and human resources.

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