APCD Management:
Best Practices in Data Quality Assurance

Presented by Nitesh Patel and Adrien Ndikumwami

Social & Scientific Systems

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Background

- SSS is a leading public health research organization with a mission to improve public health worldwide

- We provide data processing, analytic, and technology services to Federal and State clients

- 17 years of experience supporting Maryland APCD

- 35+ years of experience with Health Care Data

Accessing Data Quality

Relevant, Complete, Accurate, Accessible, Timely Data…

- Lack of common data specifications
- Claims Administration vs. Research Use
- Inadequate systems for ensuring that data are accurate
- Lack of SME knowledge to interpret quality issues
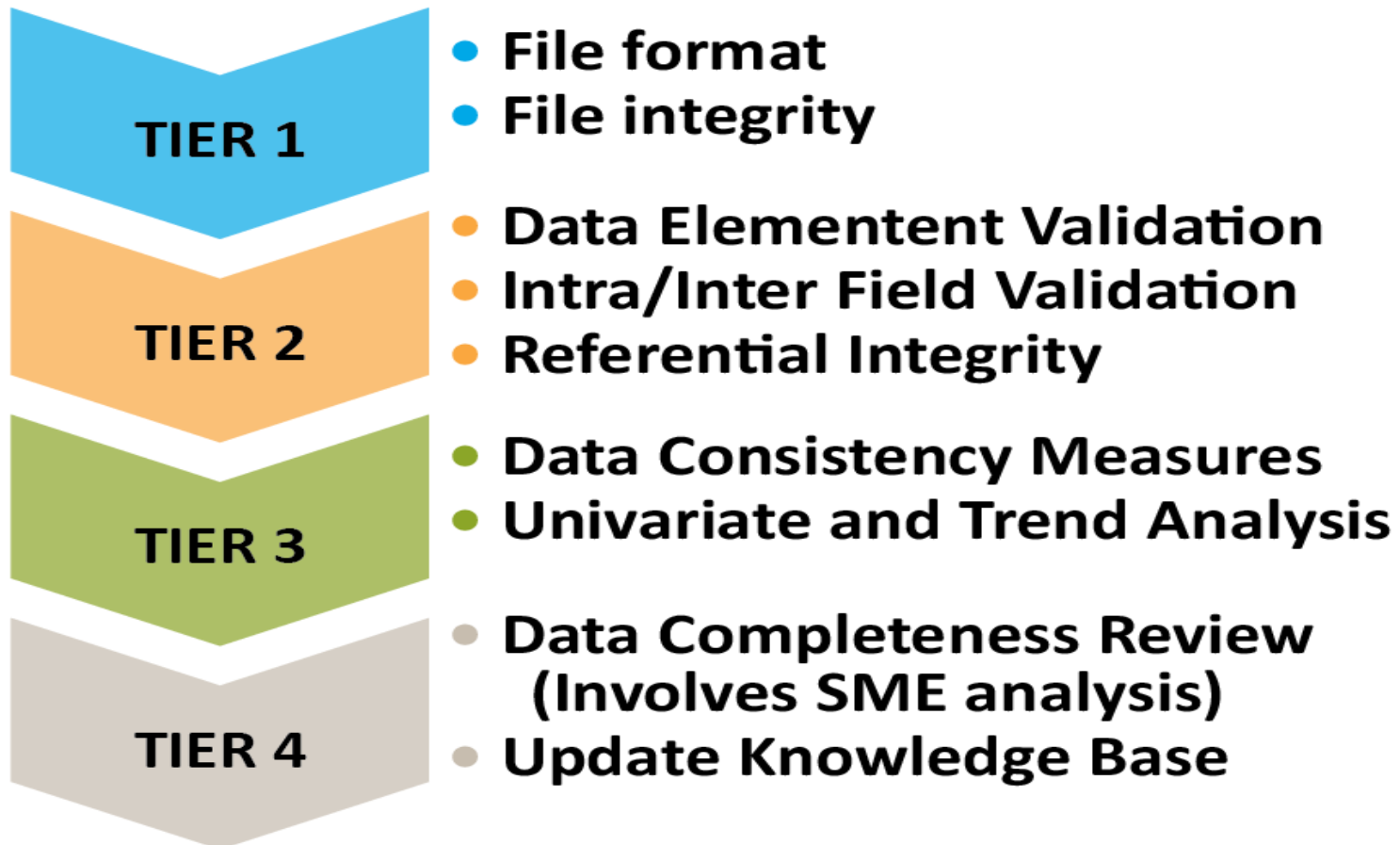- Delays between data compilation and dissemination

Source of Data Quality Issues

Tackling Data Quality From The Source

- Unclear data specifications

- Misinterpretation or understanding of the data specifications

- Data merged from multiple source systems

- Incorrect mapping of fields

- Programming errors

Approach

Data Quality Assessment Approach

TIER 1
- File format
- File integrity

TIER 2
- Data Elementent Validation
- Intra/Inter Field Validation
- Referential Integrity

TIER 3
- Data Consistency Measures
- Univariate and Trend Analysis

TIER 4
- Data Completeness Review (Involves SME analysis)
- Update Knowledge Base

Solutions

Mechanisms to Improve Data Quality

Solutions

Mechanisms To Improve Data Quality

- **Introduce new technologies**
  - Automated Submission & Feedback
  - Data Warehouse & ETL Platforms
  - Data Visualization Tools

- **Promote a culture of data use**
  - Go beyond standard reporting
  - Augment with new sources

- **Make data more accessible**
  - Present data in ways appropriate to different users
  - Data sharing approaches to uncover trends via linking

Contact Information

Nitesh Patel – npatel@s-3.com

http://www.s-3.com