Q 2016
European Conference on Quality in Official Statistics

Assessing Quality Control: Evaluating the Quality Audit

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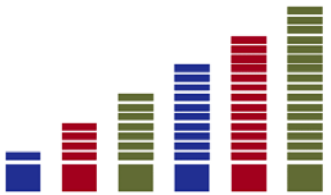
Outline

- History of the Quality Audit Program (QAP)
- Scope
- Overview of the Current Audit Process
- Results of QAP Five-Year Audit Cycles
- Quality Control Integration
- Future Steps



History

2001:

Office of Management and Budget (OMB) Quality Guidelines

2004:

Establishment of Economic Directorate's quality management program

2006:

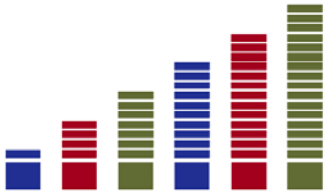
OMB Standards and Guidelines for Statistical Surveys

2010:

U.S. Census Bureau finalizes Statistical Quality Standards to meet OMB guidelines

2011:

Economic Directorate adjustment of quality audits to meet OMB and Census guidelines



Scope

- There are 60 programs in the Economic Directorate that are subject to QAP
- Each program has undergone an audit every five years
- QAP must average 12 audits per year to meet this goal

Overview of the Current Audit Process

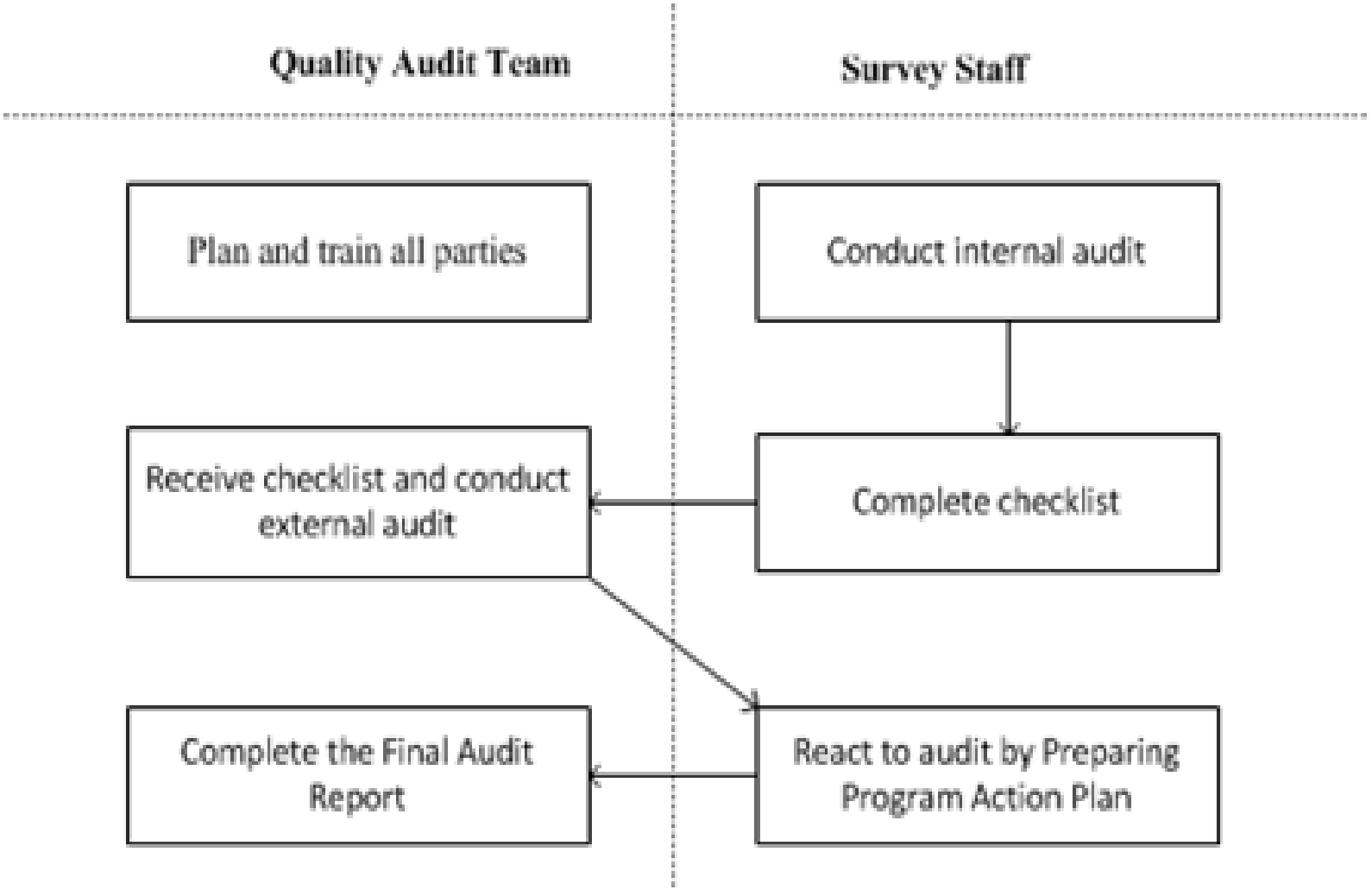
Pre-Audit
- Plan and train all parties

Internal Audit
- Complete the formal audit checklist

External Audit
- Assess program documents against OMB standards

Program Action Plan
- Complete proposal to accomplish audit recommendations

Team Responsibilities



Results of Current QAP Five-Year Cycle

- **60** Programs originally scheduled
- **53** Programs audited
- **6** Programs not audited due to major survey redesign
- **1** Program is not yet completed

Results of Current QAP Five-Year Cycle (Cont'd)

Positive Findings

- Over 80% of all audited programs found to be "largely compliant"
- 1 program with no compliance issues and no recommendations for improvement

Negative Findings

- 38 standards found noncompliant across all audited programs

Results of Current QAP Five-Year Cycle (Cont'd)

Negative Findings

- Nonresponse Bias Analysis
- ✓ OMB standard 3.2: 39% noncompliant or recommended for improvement of all audited programs
- Improper document storage
- ✓ OMB standard 7.3: 32% noncompliant or recommended for improvement of all audited programs
- Inadequate planning for the release of data products
- ✓ OMB standard 7.1: 26% noncompliant or recommended for improvement of all audited programs

Results of Current QAP Five-Year Cycle (Cont'd)

Table #1: OMB Standards – A Summary of Noncompliance and Recommendations

OMB Standard Number	Number of Noncompliant Audited Programs	Number of Audit Programs with Recommendation for Improvement	Total Number of Programs with Audit Findings (Noncompliant and Recommendations Combined)
1.1	0	4	4
1.2	4	10	14
1.3	6	10	16
1.4	3	7	10
2.1	2	4	6
2.2	1	3	4
2.3	0	4	4
3.1	2	3	5
3.2	8	5	13
3.3	1	2	3
3.4	0	1	1
3.5	3	7	10
4.1	2	4	6
5.1	2	4	6
5.2	0	1	1
6.1	1	2	3
7.1	1	7	8
7.2	0	1	1
7.3	2	8	10
7.4	0	0	0
TOTAL	**38**	**87**	**125**

Results of Current QAP Five-Year Cycle (Cont'd)

What caused these issues?

- Program areas are not realizing certain activities should be documented
- Lack of accurate and current index of critical program documented led to managers having difficulties finding copies of documents they believe existed
- Document management system software by outside vendor

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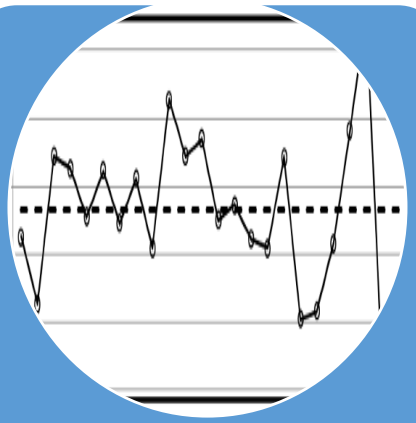
Quality Control Integration



Quality Control Process

Quality Review

Quality Assessment

Quality Control Integration (Cont'd)

Quality Control Process (example)

- Develop a clear understanding of what is needed in the enterprise system

✓ Nonresponse bias analyses: Response rate < 70%

✓ Measure, adjust for, and analyze unit and nonresponse to assess the effect on data quality

- Develop a clear understanding of a quality enterprise assurance system

✓ What reports are to be produced

✓ What quality assurance information should be collected

Quality Control Integration (Cont'd)

Quality Control Reviews (example)

Procedures	*Requirements*
Training of staff involved in data collection and data analysis:	*Objective evidence:*
a. Monitoring and evaluating the quality of data collection operations	All metrics regarding data collection and follow-up are tracked on a daily and monthly basis.
b. Monitoring the quality of edits	Edits must be monitored on a routine basis to ensure that edits are performing as expected and are providing quality output.
c. Analyzing item nonresponse	Imputation response rates are tracked and analyzed over time in an appropriate manner and clearly documented in the tracking report.

Quality Control Integration (Cont'd)

Quality Assessment and Completeness (example)

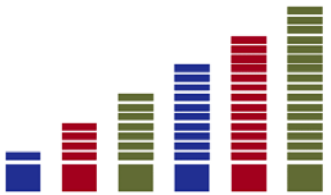
- Survey manager must track and analyze quality results

- Enterprise system improvements must be developed

✓ Improve clerical coding tools

✓ Train staff

✓ Develop product approval system documentation



Future Steps

- Build better decision makers and better problem solvers through the enterprise systems
- Train staff so that the human component will also be focused on quality
- Build self-documenting systems to ensure documentation matches what systems and programs are doing
- Focus on statistical soundness of the methodology that is being used
- Plan for the audits of the future
- Determine quality measures for emerging methodologies

Questions and Contact Information

- Questions

- Contact Information

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