

Quality Management of Statistical Programs at the National Agricultural Statistics Service

Session: 23

Date: 2 June, 2016

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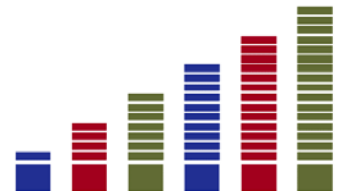
National Agricultural Statistics Service

U.S. Department of Agriculture

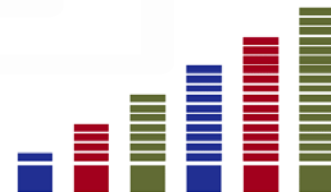
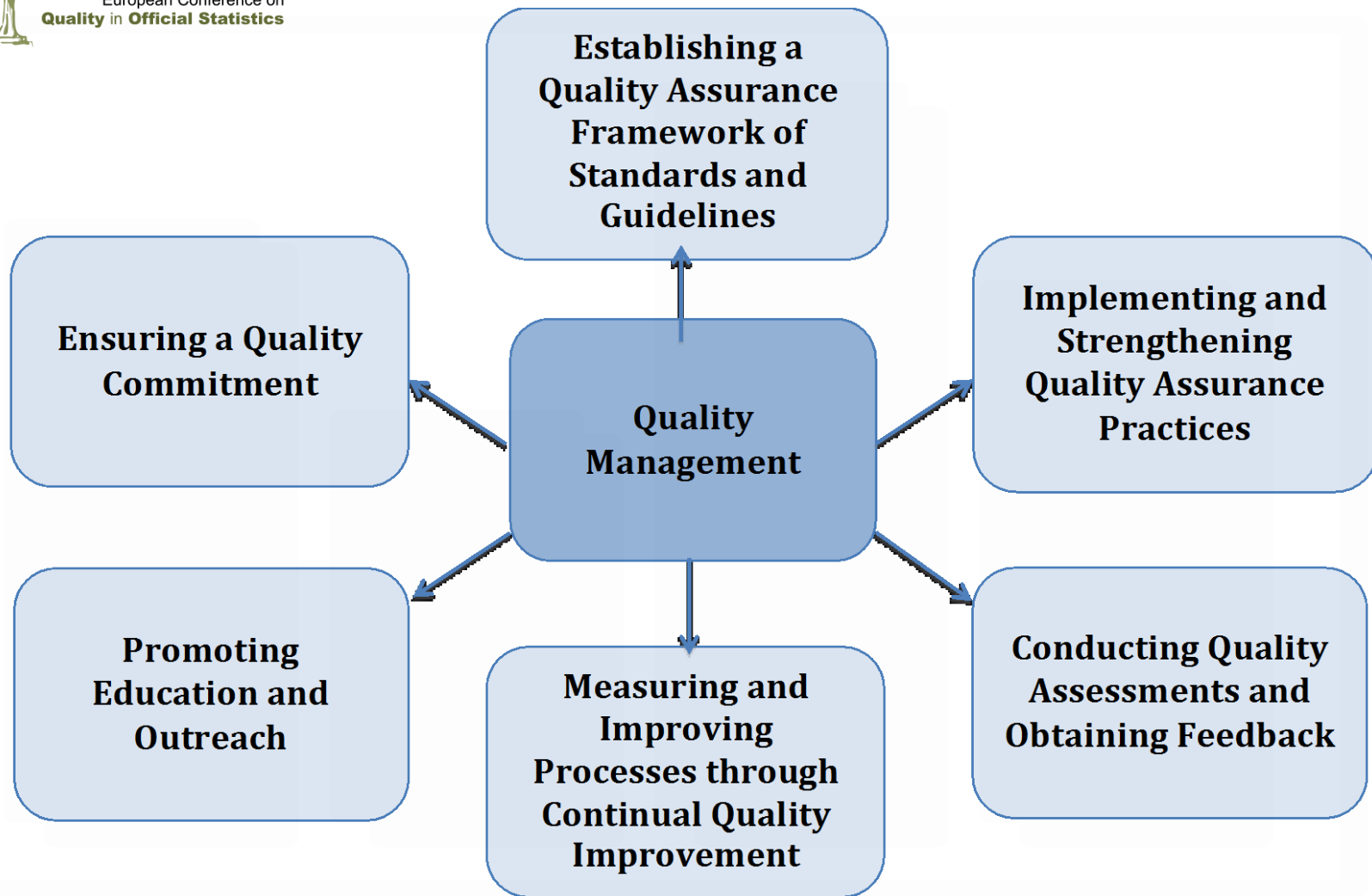
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Background

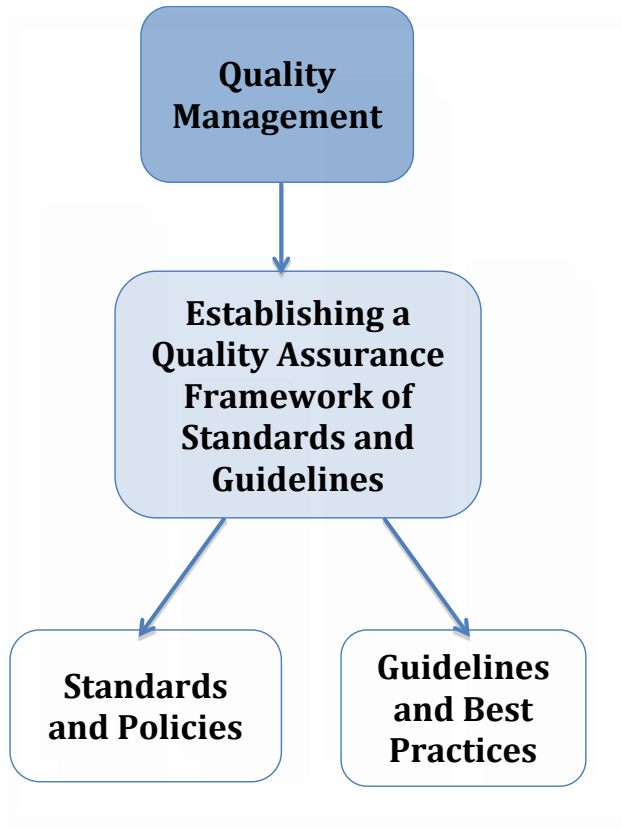
- Conducts Agricultural Census every five years and hundreds of agricultural surveys
- Data collection:
 - 5 Data Collection Centers (DCCs)
 - 12 Regional Field Offices (RFOs)
- Strategic Objective: “Strengthen quality management across agency”



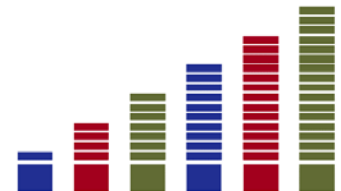
Quality Management Model



Element 1: Establishing a Quality Assurance Framework of Standards and Guidelines



1. Establish an explicit set of statistical standards and guidelines using a uniform template
2. Align with the Office of Management and Budget (OMB) Statistical Standards and Guidelines
3. Work with subject-matter staff to develop quality assurance framework



Quality Assurance Framework

NASS Statistical Standards and Guidelines cover:

Development of Concepts, Methods, and Design

- Survey planning, survey and questionnaire design, pretesting

Data Collection

- Sampling frames, methodology, interviewer training

Data Processing and Editing

- Data capture, data editing

Production of Estimates and Projection

- Establishing estimates, use of admin. data

Data Analysis and Reporting

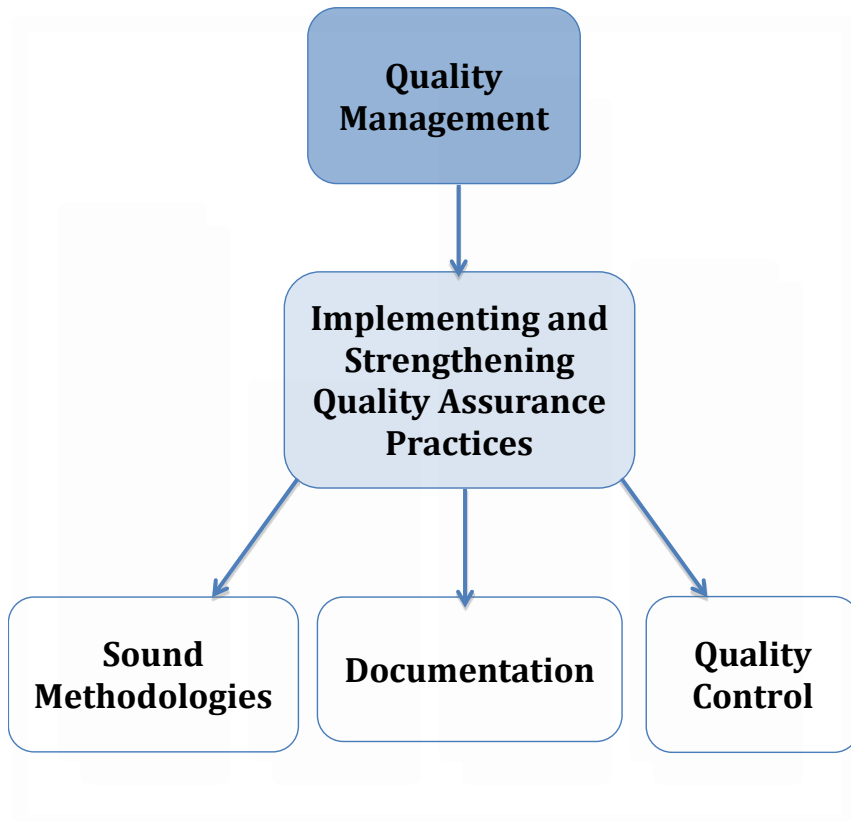
- Publication standards, making inferences, quality metrics

Review and Dissemination Information Products

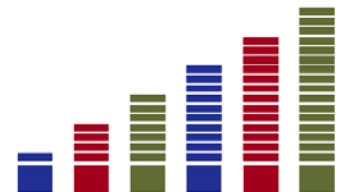
- Content/supervisory review, data protection, survey documentation



Element 2: Implementing and Strengthening Quality Assurance Practices



1. Develop and document sound plans, procedures, methodologies, and training to implement the quality assurance framework
2. Build quality in to our processes
3. Develop and maintain quality control programs and tools to monitor and improve process and product quality

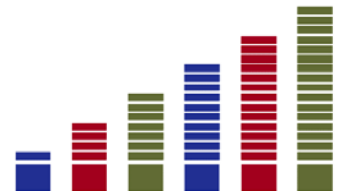


Example: Quality Control for CATI Automated Evaluation Tool

Telephone interviewers are monitored for quality control purposes

How?

- Conduct live, remote monitoring
- Supervisor or coach listens in on the call and views screen
- Document results using an automated Blaise instrument (previously paper)



Example: Quality Control for CATI Opportunities and Challenges

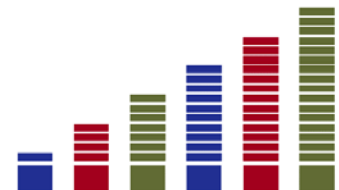
Opportunities

Allows call center supervisors to:

- See all the data entered during the monitoring session
- Review evaluations across interviewers to determine who needs to be monitored
- Review evaluations across monitors to ensure consistency in scoring
- Get involved and strengthen understanding of QA

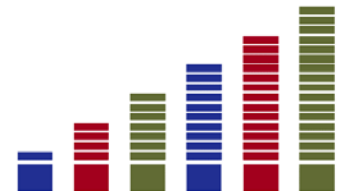
Challenges

- Developing standardized quality control procedures across centers
- Training staff on how to use the automated systems

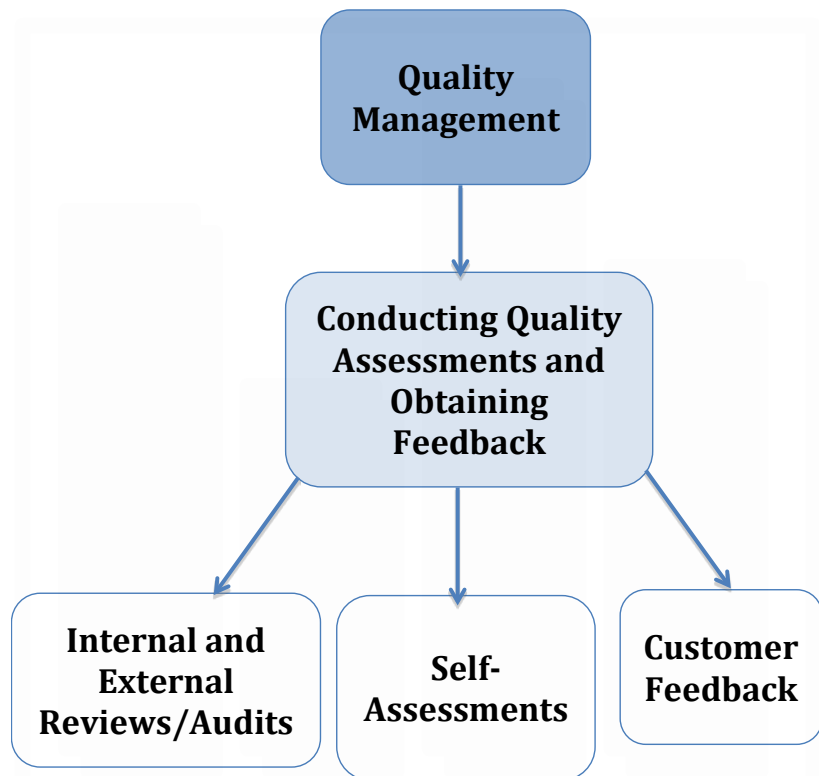


Example: Quality Control for CATI

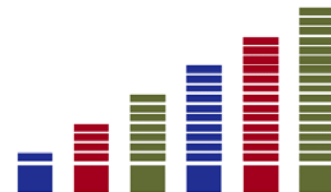
Interviewer Name	Observer Name	Date	Composite Score	Intro Score	Body Score	Closing Score	# of Elements Not Fully Successful
<u>Interviewer 1</u>	<u>Observer 1</u>	05/14/2016	100%	100%	100%	100%	0
<u>Interviewer 2</u>	<u>Observer 2</u>	05/14/2016	85%	100%	93%	33%	3
<u>Interviewer 3</u>	<u>Observer 1</u>	05/15/2016	100%	100%	100%	100%	0
<u>Interviewer 4</u>	<u>Observer 3</u>	05/15/2016	80%	40%	93%	100%	4



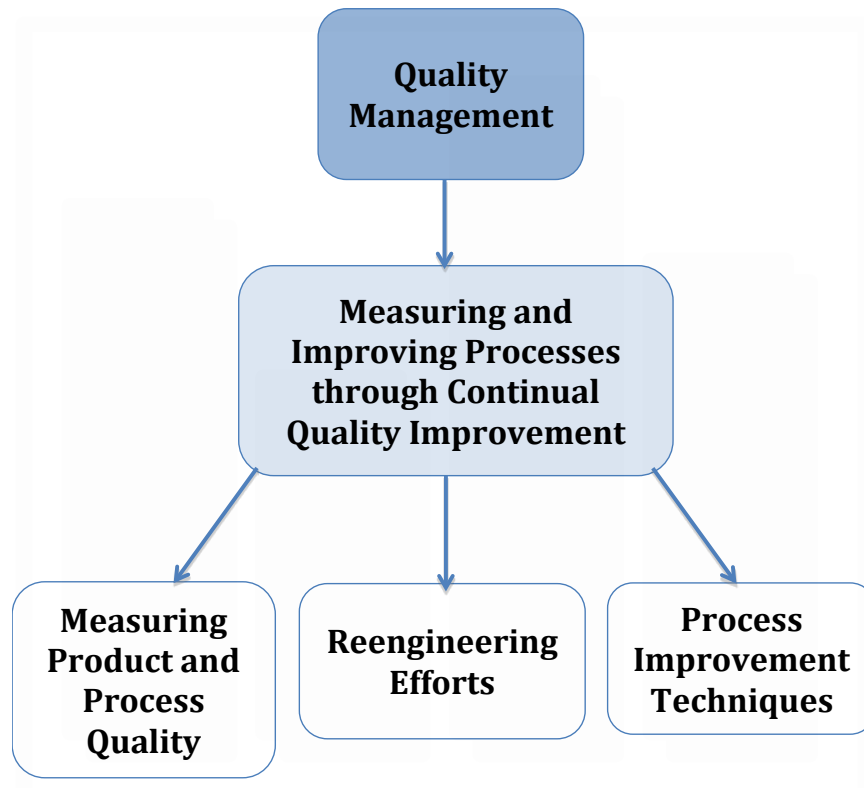
Element 3: Conducting Quality Assessments and Obtaining Feedback



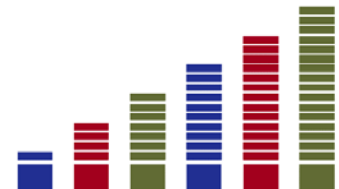
1. Conduct program compliance and performance audits and reviews
2. Conduct self-assessments to evaluate program performance
3. Develop strategies to obtain feedback on program performance from customers and stakeholders



Element 4: Measuring and Improving Processes through Continual Quality Improvement



1. Measurement is the first step that leads to understanding and control and eventually to improvement
2. Use data to manage and improve our processes and products and make informed decisions
3. Use Lean Six Sigma and other process improvement techniques to improve programs



Example: Process Measurement & Improvement Improving Call Efficiencies

Goal: Analyze call history data to identify how best to optimize calling and response rates

Survey: Quarterly Agricultural Survey (2 weeks)

Mode: Mail with telephone follow-up (use a Blaise CATI instrument)

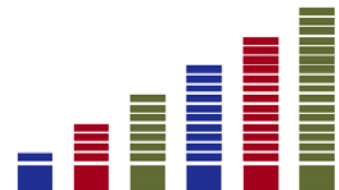
Data: Blaise call history files

Examples of variables:

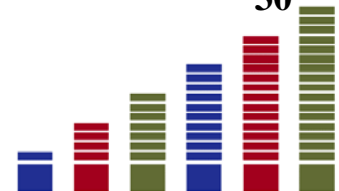
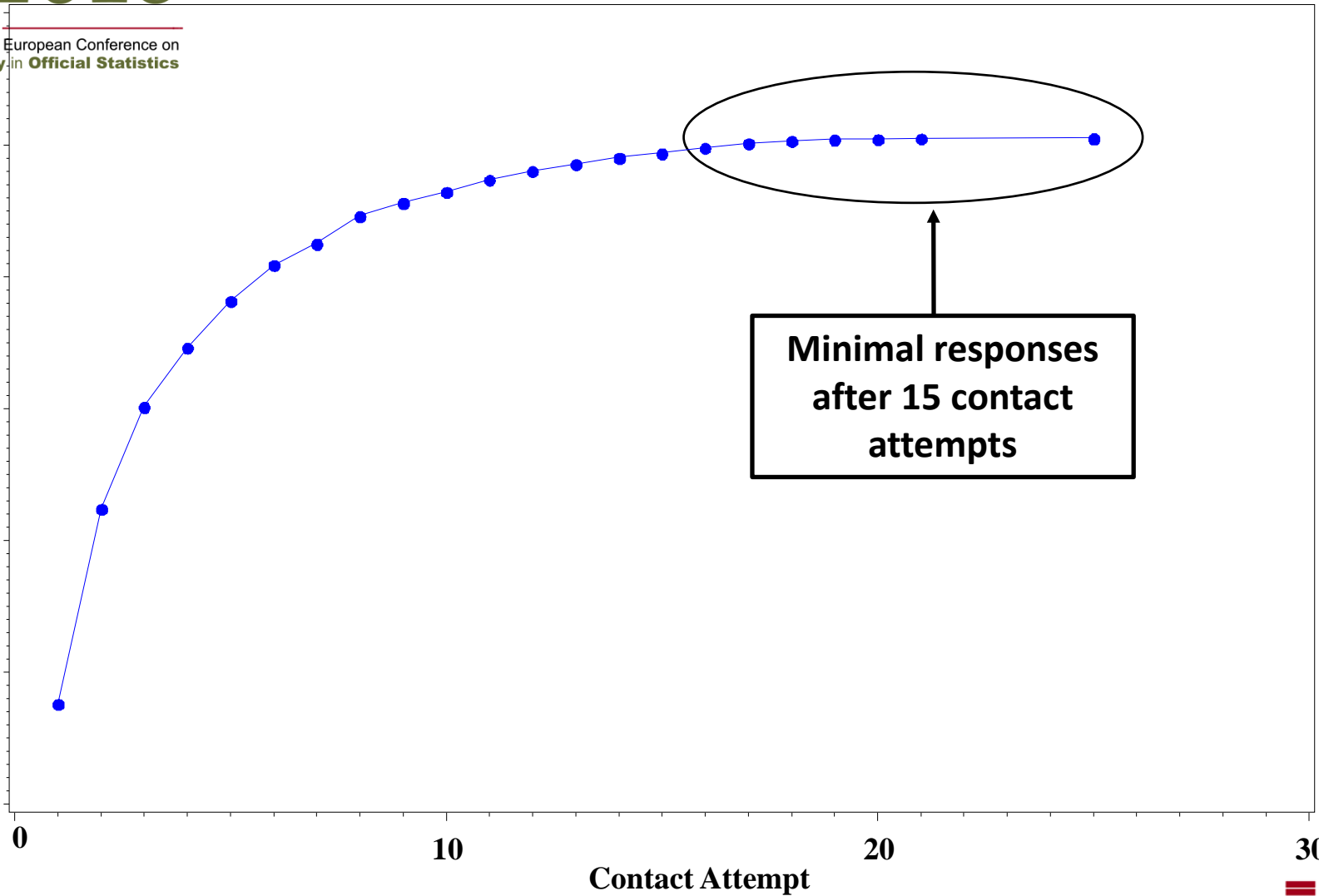
- Case ID number, interviewer ID, call attempts, date and time of call, Appointment type, length of call, call outcome

Some Key Findings:

- Contact attempts in one day can be excessive
- Total contact attempts can be excessive
- Impact of contact attempts on response rates



Cumulative Response Rates Graph



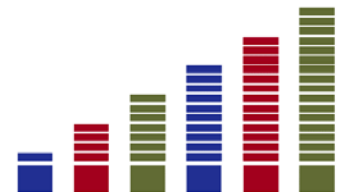
Example: Improving Call Efficiencies Opportunities and Challenges

Opportunities

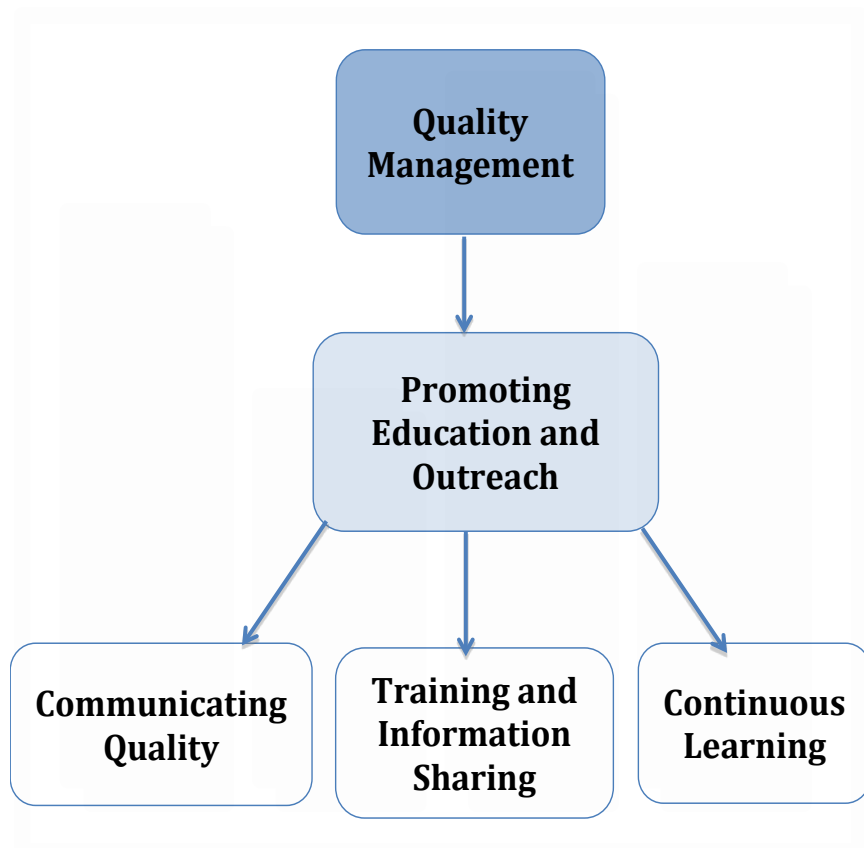
- Established consistent procedures setting call parameters across data collection centers
- Improved call efficiencies
- Staff involvement

Challenges

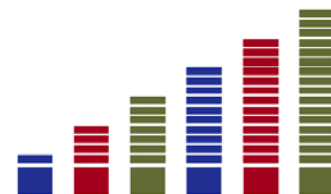
- Understanding and interpreting complex call data output from Blaise
- Optimizing call parameters without negatively affecting response rates



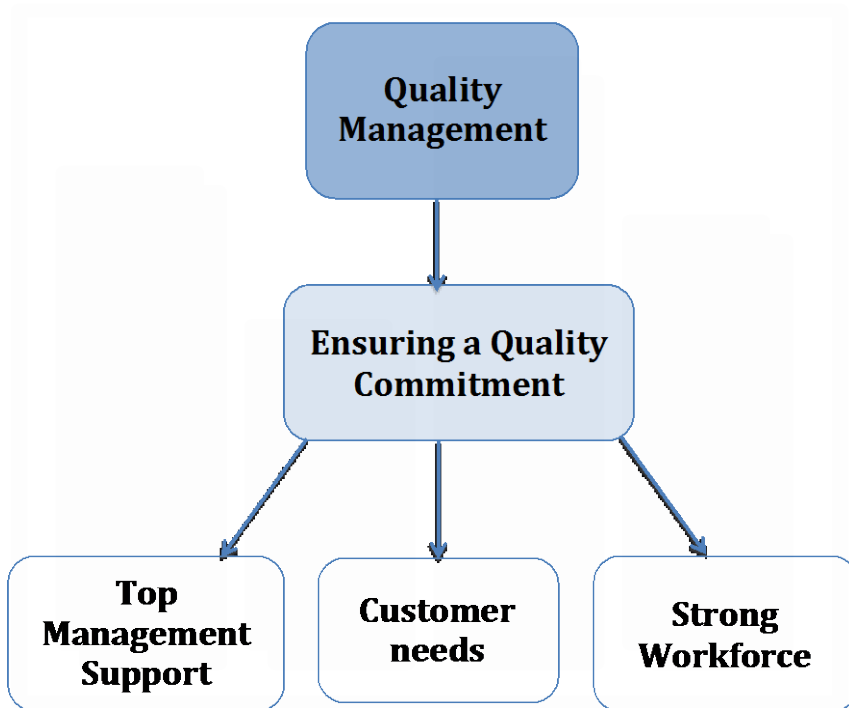
Element 5: Promoting Education and Outreach



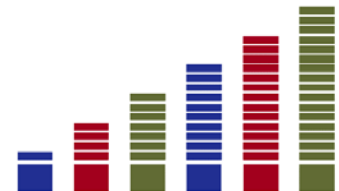
1. Provide training to broaden staff knowledge of technical and quality issues
2. Foster learning through information sharing
3. Encourage continuous learning to keep up-to-date on developments in methodologies and techniques relevant to our mission
4. Establish mechanisms for communicating and increasing awareness of quality



Element 6: Ensuring a Quality Commitment



1. Need top management support and a commitment to quality and other management frameworks
2. Ensure that the objectives of the organization are linked to customer needs and expectations
3. Hire and develop a strong, dedicated workforce



Summary

- Develop quality management model as a foundation to guide the organization
- Establish clear standards on which to base sound decisions and ensure consistency
- Consider opportunities and challenges to implementation
- Engage staff in the development and implementation of quality initiatives

