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**Assessment of the Nursing Home Survey Processes: Current Trends and Future Prospects
for Survey Improvements**

I. Introduction

The Centers for Medicare & Medicaid Services (CMS), in concert with States, monitors and enforces basic levels of quality and safety for Medicare and Medicaid beneficiaries, as outlined in federal statutory and regulatory requirements. With respect to nursing homes, CMS focuses on optimizing the health, safety, and quality of life of residents, and promoting the highest practicable well-being of residents. Through agreements with State Agencies (SAs) under Section 1864 of the Social Security Act, CMS promotes close coordination between federal survey processes and State licensure.

Approximately 5,000 Federal and State surveyors conduct on-site surveys of certified nursing home every 12 months, on average, to determine compliance with the federal requirements and assure basic levels of quality and safety for beneficiaries. Since 2007, the CMS has used two separate processes for conducting the standard nursing home recertification survey, the Traditional Survey and the Quality Indicator Survey (QIS).

The CMS evaluates the effectiveness and efficiency of the nursing home survey processes by several means, including monitoring the number and type of deficiencies cited, conducting federal oversight surveys either by direct observation or comparative surveys, as well as tracking the time SA surveyors spend on the recertification survey. In addition, CMS and its Contractors continuously evaluate both quantitative and qualitative data related to both the Traditional survey and the QIS processes, including user feedback from CMS Regional Offices and State Survey Agencies, technical expert panels, review of CMS Form 2567 Statements of Deficiencies and field observational reviews of the survey processes.

This status report provides a high-level summary of the work done to examine nursing home survey methodologies for efficiency and effectiveness, as well as the actions that were taken to improve the processes, with particular emphasis on the QIS. This program brief is focused primarily on the standard recertification survey.

II. Background of the Nursing Home Survey Processes

Traditional Survey

The Traditional Nursing Home Survey refers to the original paper-based survey protocol that has been in use in various versions of the current form since its inception in 1995. The Traditional survey employs a 2-phased process:

- Phase I uses focused and comprehensive reviews to assess a sample that is derived from off-site quality measure reviews, facility file reviews, and from a thorough initial tour.
- Phase II is a focused review of additional concerns identified in Phase I.
- Throughout the survey, facility and environmental tasks are completed.

In the Traditional survey sample, surveyors use the survey protocol in the State Operations Manual to identify the number of residents to review (e.g., 18 residents in 100 bed facility), but have discretion in selecting the sample of residents to evaluate, allocating survey time, investigating potentially deficient practices observed during the survey, and determining what evidence is needed to identify a deficient practice. The post-survey data that is available to CMS consists of hours spent on the survey and the Statement of Deficiencies (i.e., CMS 2567 form).

The CMS has long recognized the need to improve the consistency and effectiveness of the Traditional Survey process based on critiques that included: 1- the need to improve consistency and accuracy of surveys; 2-the need to improve documentation of survey findings; and 3-the need to develop a systematic approach to the review of the nursing home regulatory requirements. To address these shortcomings, in 1998, the CMS began to research alternative survey methodologies to improve on the Traditional Survey.

Development of the Quality Indicator Survey

As a result of the CMS and Contractor research, the agency launched a demonstration pilot in 2005 to test the newly-developed QIS in five volunteer States. QIS was intended to improve upon the Traditional survey process through the following objectives:

- Focus survey resources to better achieve a more comprehensive and consistent survey process for nursing homes;
- Improve the consistency and accuracy of quality of care and quality of life problem identification using a structured process;
- Comprehensively review a wide range of regulatory care areas within current survey resources;
- Enhance documentation by automating survey findings through a computer-based application; and,
- Achieve all improvements to the survey process within the existing survey and certification budgeted resources.

The QIS uses customized software (ASE-Q) on tablet computers to guide surveyors through a structured investigation. The QIS was designed as a two-stage process for use by surveyors to (1) systematically and objectively review a wide range of regulatory areas, and (2) subsequently focus on selected areas for further review. In brief:

- Stage I consists of both the collection of offsite data such as the Minimum Data Set (MDS) as well as real time information collected on site by utilizing structured resident, family and staff interviews as well as structured resident observations and record reviews for a randomly selected sample of residents. The QIS includes substantially larger random samples of residents including up to 40 residents currently residing in the facility and up to 30 admissions from the prior six months. This is expected to yield inferences about the care provided to residents and systems of care. The information gathered is used to derive and quantify a set of Quality of Care/Quality of Life Indicators (QCLIs) that identify a set of care areas of concern, as well as residents in each of the care areas for investigation in Stage II.
- Stage II is a systematic investigation of areas detected in Stage I. It is organized around Critical Element Pathways with investigative probes for the Care Areas that have been triggered.

- Mandatory and triggered facility tasks are conducted throughout the survey.

Following the 2005 pilot, in 2007 the CMS began a pilot to test a QIS surveyor training model in several States. In the fall of 2009, a detailed implementation plan and priority schedule for the national rollout of the QIS was developed. By December 2011, 26 States had adopted the QIS. The most recent State to adopt QIS was South Carolina in 2012.

In 2009, the CMS released an evaluation that assessed the progress the QIS made toward some of its intended goals including accuracy, documentation, changes in the number and type of deficiencies, and whether the new survey process is more efficient. In general, the evaluation did not find any differences in accuracy for the QIS and Standard surveys; there was no evidence that the QIS is more accurate than the traditional survey, despite the fact that its' objective of making the survey process more specific and focused with its Stage I protocols and automated data entry system. The study concluded that the best explanation for the lack of differences between the two survey methods is related to two issues:

- 1) The specificity of the investigative guidelines and the critical element pathways; and,
- 2) How feasible or "user friendly" the critical element pathways and interpretative guidelines are to implement.

The CMS concluded that greater clarity in the agency's interpretive guidance for surveyors, as well as additional training, would be the keys to strengthening the accuracy of surveys rather than the QIS process per se¹. The CMS had already taken action to further clarify the interpretive guidance and continued such efforts². The agency also concluded that the main advantage to the QIS would be to strengthen consistency both between States and between survey teams within a State. To this end CMS added features within QIS to provide additional tools for supervisors to monitor survey progress, identify issues, and provide supervisory feedback to surveyors (e.g., the Desk Audit Report system).

States and CMS Regional Offices also identified operational challenges in the QIS system. Examples included the difficulty of integrating new federal computer security safeguards in a survey medium that requires considerable sharing of information among surveyors, challenges for the Regional Offices to conduct validation surveys that check on the accuracy of State surveys, computer hardware incompatibilities, lack of QIS capability to integrate complaint investigations, limited sensitivity to differences in facility size (especially for the very small nursing homes), and evidence from the evaluation and other analysis (identified later in this program brief) that the QIS takes longer to complete and requires more resources. The

¹ See Survey and Certification Letter 09-46 (http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/SCLetter09_46.pdf).

² See, for example, at Survey & Certification Memoranda (<http://www.cms.hhs.gov/SurveyCertificationGenInfo/PMSR/list.asp>):
S&C-08-28: Issuance of Revised Nutrition and Sanitary Conditions (Tags F325 and F371) as Part of Appendix PP
S&C-09-22: Issuance of Revised Quality of Care Guidance at F309, including Pain Management at Appendix PP
S&C-09-29: FDA Warning to Nursing Homes Regarding Recalled Food Products Containing Peanuts
S&C-09-31: Issuance of Revisions to Interpretive Guidance at Several Tags as Part of Appendix PP
S&C-09-33: (revised as 09-36): H1N1 Flu (Swine-Origin Influenza A) – State Survey Agency Guidance

nationwide recession, federal budget sequestration, federal hiring freeze, and other resource limitations added further complexity.

These findings and challenges motivated CMS to focus the agency's efforts on improving and adjusting the QIS system to optimize the experience of those States already using QIS, and to refrain from adding new States until further notice. In 2012, CMS identified a set of goals and objectives to address software improvements, study deficiency patterns, and examine the causes for the increased time required to complete the survey. Additionally, alternative surveyor training models were explored in an effort to update and streamline the QIS surveyor training program.

III. Interventions to Improve the NH survey 2012 – 2015

The CMS evaluated survey data, conducted multiple field observations of surveys to identify surveyor challenges and improvements to survey process flow, and sought feedback from stakeholders related to both the Traditional survey and Quality Indicator Survey (QIS) processes. The CMS has undertaken a series of significant improvements to QIS to address concerns noted above.

2012 - 14 QIS Action Plan

In 2012, CMS developed an action plan to design improvements in the QIS to address the issues that led to the implementation suspension, with the ultimate goal of resuming national implementation. The following priorities were addressed:

- Enhance QIS software for efficient user navigation and technical management of the ASE-Q software survey tool;
- Reduce Stage 1 sample sizes, and modify interview questions and QCLI triggering thresholds, as well as Stage 2 critical element pathway reviews in an effort to reduce their length and optimize the effectiveness of the investigative protocols;
- Evaluate Surveyor and Trainer Training; and,
- Explore strategies to align the QIS and Traditional surveys by incorporating highly effective QIS tools and facility tasks into the Traditional process as a means to familiarize surveyors with the tools to ease the transition from Traditional to QIS.

Impact of the 2012 Action Plan

1. Enhance QIS Software for efficient navigation and technical management of ASE-Q:
Three significant QIS software releases were made since March of 2013, and CMS is preparing for another major set of revisions to the software in July, 2015. Examples of software improvements include modified user interface screens that improved how surveyor notes and observations are stored and retrieved throughout the survey.
2. Efficiency and effectiveness analyses focused on QIS Stage 1 and Stage 2.

The QIS team implemented the following interventions with the deployment of protocol and application enhancements in March 2013 (ASE-Q 10.1.4) and August 2013 (ASE-Q 10.1.5); another set of revisions will be deployed with the release of ASE-Q 10.2 in July 2015:

- Tested and revised Stage 1 random sample to be proportional to the facility census;

- Modified the Stage 2 sample selection process to allow for more surveyor discretion;
- Allow the survey team to incorporate a resident named in a complaint into the Stage 1 census sample;
- Changed revisit sampling, making it easier for surveyors to amend the sample
- Revised and tested medication administration observation sample size reduction;
- Revised and tested threshold triggers for resident concerns identification;
- Threshold triggers for care area concerns in Stage 2 were adjusted; and
- Critical element pathways were refined and shortened for ease of navigation.
- Added flexibility in the QIS system design to incorporate complaint investigations (being implemented in July 2015).

3. Surveyor Training Evaluation

The QIS surveyor training model was identified as resource-intensive, using two mock surveys in facilities to assess the competency of the surveyor to function independently; this presents challenges to both Regional Offices and State Agencies for managing surveyor training times for current and new surveyors. CMS has explored streamlining the training requirements to reduce the amount of time currently required to train both surveyors and trainers as an alternative to the current approach.

4. Aligning the QIS and Traditional surveys

CMS conducted the following analyses and actions for the Traditional Survey primarily to align the survey processes as much as possible in preparation for the resumption of QIS. The objective of aligning the two survey processes was to familiarize Traditional Survey staff with many of the QIS processes and forms by combining the two survey processes where appropriate. The following work was initiated:

- The medication administration observation sample size was changed to match the QIS methodology;
- Incorporating critical element pathways (investigative protocols) into the Traditional Survey was tested. As the pathways are shortened and refined, CMS will explore integration into the Traditional Survey for investigative skills training, new surveyor orientation and training, quality assurance for investigations, etc.
- Some QIS Mandatory facility tasks were analyzed for the ease of integration into the Traditional survey.

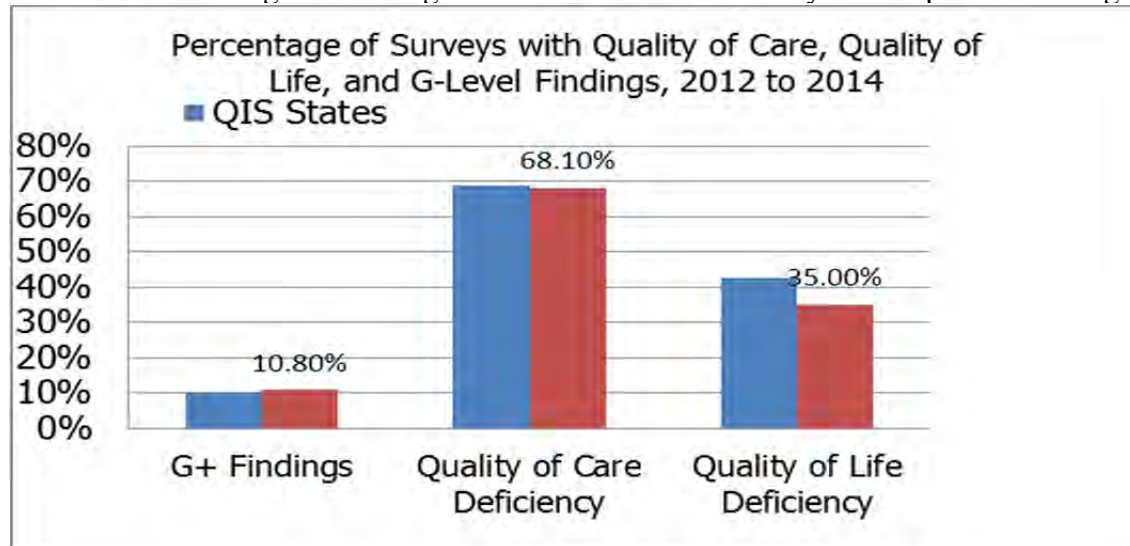
IV. Review of Survey Outcomes: Deficiency Characteristics and Survey Workload

Deficiency Characteristics

The CMS continues to monitor the circumstances that led a Government Accountability Office (GAO) review to conclude that “Nursing home survey data show a significant decrease in serious quality problems in recent years, but other information indicates that this trend masks two important and continuing issues: inconsistency in how States conduct surveys and understatement of serious quality problems.” (GAO-06-117 Nursing Home Quality and Safety Initiatives, p. 9). Monitoring the rates of deficiencies cited on recertification surveys is a priority for CMS. Although QIS does not have the objective of citing more or fewer deficiencies, there is interest in how the QIS may impact not only the number, but the scope and severity of deficiencies cited over time.

A broad comparison of deficiencies in the Traditional Survey with the QIS demonstrates consistency between the two survey processes with Quality of Life concerns being cited at a slightly higher percentage (consistent with prior QIS evaluations).

Exhibit 1. Percentage of Nursing Home Recertification Surveys with Specific Findings



The top 25 tags cited on recertification surveys in both survey types are roughly the same with few exceptions; however, when the deficiencies are analyzed by regulatory grouping and/or individual tags, some differences emerge.

Table 1. Citation Rate Differences Over 10 Percent for Selected Tags

FY 2013		Citation Rates	
Tag	Topic	Traditional	QIS
<i>QIS Citations Higher than Traditional</i>			
F329	Freedom from Unnecessary Medications	19%	31%
F280	Care Planning	8%	20%
<i>Traditional Citations Higher than QIS</i>			
F441	Infection Control	42%	31%
F281	Services Meet Professional Standards	17%	9%

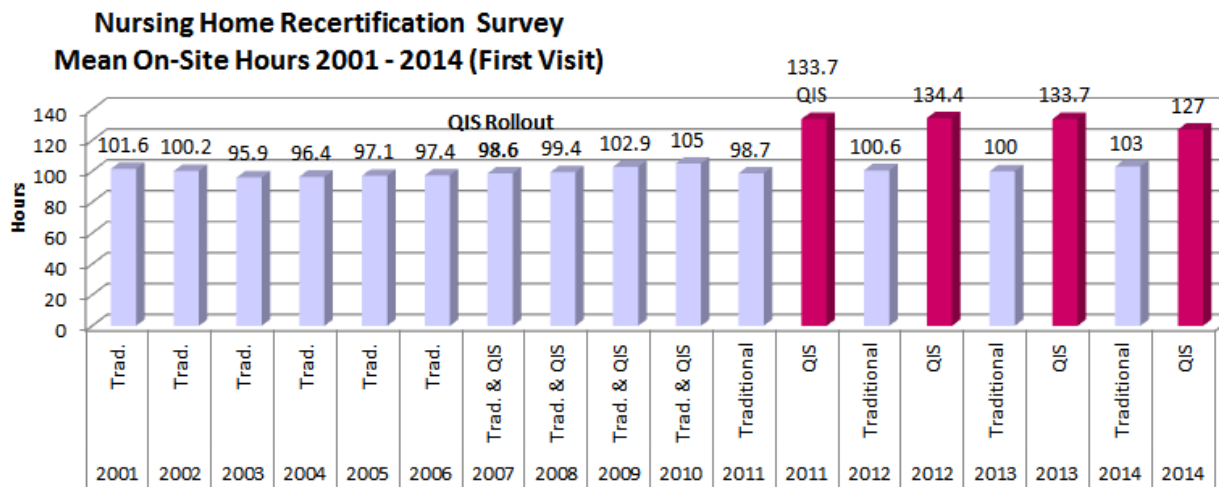
An example of different rates of citation at the individual tag level, F329 unnecessary medications was cited by the QIS on 31 percent of providers, while Traditional cited it 19 percent. Another tag, F441, infection control shows a higher rate of citations on the Traditional Survey, with 42 percent of providers cited, while the QIS cited 30 percent of providers. The CMS has not performed a critical analysis of why these differences occur but differences in survey tools and how they are applied can be assumed to play a role. Examples of commonly cited tags with similar rates for both survey types include F309, care and services to achieve highest practicable well-being for residents; F323, freedom from accidents and supervision; and F371, food procurement, storage and service.

Survey Workload and Time on Survey

As a result of the recession of 2008 and 2009, nearly all States enacted various personnel adjustments to meet budget shortfalls including hiring freezes, staff furloughs, wage freezes, and/or wage reductions. Many State survey agencies (SAs) have not fully recovered, and some SAs are experiencing sustained challenges in meeting federal performance expectations as per the 1864 Agreement. Two major issues facing States since the QIS was implemented are, 1) the lengthy training model for new QIS surveyors, and 2) data that continue to demonstrate that QIS onsite time is longer than the Traditional survey process. States that have experienced increased surveyor turnover compounds these two issues. As a result, some States are falling short on meeting the statutorily required average and maximum survey interval time. In order for the QIS to be deemed feasible for full implementation, it is important that it be resource neutral in terms of the total surveyor time required.

Exhibit 2 shows the distribution of onsite hours spent on recertification surveys. The Traditional survey has remained relatively constant, while QIS time is approximately 20 hours longer on average. The improvements made to the QIS implemented in 2013 and 2014 are beginning to be realized, and further time may be gained with the upcoming software release in July of 2015 to add to the decrease of 6 – 7 onsite hours since 2011.

Exhibit 2. Nursing Home Mean On-Site Hours, 2001 - 2014



V. Conclusion and Next Steps

The survey tools, protocols, and interpretive guidance found in Appendix PP of the State Operations Manual (SOM) are key factors in guiding survey operations; however, they are not the only factors that determine Survey and Certification operational outcomes. State survey agencies administer and have discretion over many survey activities and policies that can impact survey results, including, hiring and retaining a surveyor workforce, training surveyors and trainers, and conducting supervisory reviews of surveys. When analyzing nursing home survey outcomes it is important to consider not only the effectiveness of the survey tools, but also the complex interactions with the survey tools and the SA management of the 1864 Agreement. These interactions include fiscal constraints, human resource and personnel policies, IT capacity and support, surveyor behavior, and training. These factors and others can vary substantially by

State. Thus, not only is the survey process important, but consistency and operational performance (i.e., implementation) is a critical consideration. CMS Central Office also plays a critical role in the performance of surveyors such as providing effective surveyor training, as well as providing clear guidance on the information contained in the SOM, regulations, and statute.

The Traditional Survey maintains the advantage of flexibility to adjust the sample of residents selected to identify issues after the start of the survey, the accommodation of protocol changes or adjustments with less development time than the QIS. Another advantage of the Traditional Survey continues to be less on-site time, and the ability for surveyors to use their professional experience and knowledge without being as dependent on IT or software-related changes. QIS surveyors have also raised additional concerns as described below:

- Surveyors have expressed the need for more discretion in the ability to select residents in Stage 1 for a more in-depth investigation of possible care area issues without increasing the sample size.
- Complaint investigations are conducted during the annual survey on approximately 30% of surveys in many States. As noted above, the QIS presents challenges to adding the subjects of the complaints to the census sample; however, this option will be made available in July of 2015 with the release of ASPEN 10.2.
- Surveyors have expressed concerns about using a computer to record observations, conduct interviews and perform facility tasks. A frequent critique made by surveyors is the impersonal nature of interactions where the computer becomes the focus of the survey; these interactions are often perceived to construct a barrier between the surveyor and the interviews and observations of the residents, staff, and facility.

The QIS process has several strengths, including the structured approach to the resident interview and the critical element pathways to investigate potential issues. These processes guide surveyors through evidence-based pathways to identify areas of concern, and reduce variability between surveyors. Another significant advantage of the QIS process is how the tablet-based system navigates surveyors through the interpretive guidance to help them identify the appropriate regulation to assess for compliance. Simply put, Appendix PP of the SOM includes interpretive guidance for over 170 F tags and is over 600 pages long. While Traditional surveyors do a great job in learning the guidance in order to refer to the appropriate areas when necessary, having a computer-aided system to help surveyors navigate the large volume of information is a natural advantage.

While each survey process has unique advantages, they each also have areas that can be improved upon. For example, the Traditional Survey may benefit from a more structured approach and the use of computer-aided navigation through the regulations. Conversely, the QIS process would be enhanced by reducing the survey time onsite, and creating more flexibility for surveyors to pursue quality of care issues identified while onsite during interview, observation or record review.

Regardless of the advantages or opportunities for improvement that exist in either process, we also cannot ignore the inefficiencies created by operating two survey processes throughout the

country. For example, CMS must maintain two separate training programs for each process. This represents an increased burden in the amount of resources and sessions that must be made available to support two processes.

Additionally, CMS Central and Regional Offices must have staff fluent in both processes in order to provide their statutorily required oversight and enforcement roles. This also leads to an increased burden to maintain staff who are knowledgeable in both processes. Or, this may produce inefficiency and confusion if some staff are trained in the Traditional Survey, while others are trained in QIS.

The findings of the analyses of both survey processes, coupled with the inefficiency of maintaining two survey processes raises a few basic questions:

- How do we leverage the positive aspects of each survey process to improve the effectiveness of each survey and surveyor?
- How do we maximize survey efficiency and effectiveness by identifying a facility's compliance with the requirements for participation as quickly as possible?
- How do we leverage emerging technologies to increase a surveyor's ability to navigate a large volume of information, while still allowing for flexibility to address certain situations "on the fly"?
- How do we reduce the inefficiency created by managing two distinct survey processes nationwide?
- How do we ensure that nursing home residents are safe and achieving their highest practicable well-being no matter what State they are in, or which survey process has been implemented?

The next step for CMS will be to engage in further exploration, research and dialogue with all stakeholders and subject matter experts to answer these questions, and develop options for improving the efficiency and effectiveness of the survey process. The objective continues to be to ensure nursing homes are complying with the requirements for participation for Medicare and Medicaid, and providing quality care that ensures the safety of residents and enables them to meet their highest practicable well-being.