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RESEARCH AND EVALUATION REPORT

Synthesis of Findings and Learning from the Field Testing of Learning System Tools:

*The Standard Evaluation System (SES) Team
Documentation Journal, Team Synthesis Form,
and Excel Results Databases*

SEPTEMBER 2010

This synthesis report was prepared University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID). It was authored by Larissa Jennings, Lynne Miller Franco, Karen Askov Zeribi, and Erica Rosser. The field test of the Standard Evaluation System tools was carried out under the USAID Health Care Improvement Project, which is made possible by the generous support of the American people through USAID.

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DISCLAIMER

The views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
DAS	Documentation, analysis, and sharing
EONC	Essential obstetric and newborn care
HCI	Health Care Improvement Project
HIV	Human immunodeficiency virus
MNCH	Maternal and newborn child health
OVC	Orphans and vulnerable children
PDSA	Plan-do-study-act
PISAF	Integrated Family Health Project
PMTCT	Prevention of mother-to-child transmission of HIV
QAP	Quality Assurance Project
QI	Quality improvement
SES	Standard Evaluation System
TCS	Treatment, Care and Support
URC	University Research Co., LLC
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Introduction

Learning about what changes yield improvement is at the heart of collaborative improvement. Systems to manage such learning or knowledge must start with the people who implement quality improvement (QI): the QI teams. It is they who test changes and achieve results to improve care and health outcomes for clients. A learning system for improvement focuses on deriving learning from these teams' improvement experiences and seeks to generate answers to the question, "*What changes are robust and effective across teams?*" The answers can be shared with all sites participating in the collaborative and externally with new sites.

The United States Agency for International Development (USAID) funded many efforts in collaborative improvement between 2003 and 2008 through the Quality Assurance Project (QAP). QAP's experience revealed some limitations in effectively harvesting information about successful changes, due in part to 1) weaknesses in the capacity of QI teams to adequately use their data to determine which changes yield improvement and 2) inadequate analysis and synthesis of which changes warrant scale-up.

In 2008, the follow-on to QAP, the USAID Health Care Improvement Project (HCI), took on the challenge of improving the learning system that includes the processes of harvesting, analyzing, and synthesizing knowledge about what teams do to improve health care and the process of sharing what they learn with other QI teams. Using experience to date and some innovations, HCI developed a set of four tools—collectively known as the "Standard Evaluation System" (SES) tools—for teams and their coaches to use to facilitate these knowledge management processes. The SES tools include a QI team-level Journal, a QI team-level Synthesis Form, and two databases for results indicator data—one for QI teams and the other for the collaborative level. These tools were created to help support the collaborative learning system by which teams examine which of their changes were most effective and sharing this learning with other teams in the collaborative. This report summarizes the results of testing these SES tools to strengthen documentation, analysis, and sharing of QI team efforts to improve care through testing of changes.

Methodology for Testing the SES Tools

The SES tools were originally introduced in 2008 with 65 teams in six countries: Benin, Honduras, Niger, Russia, Tanzania, and Uganda. In 2009, endline evaluation data were collected from five of these countries (Niger's funding for improvement activities had ended) and three additional countries: Cote d'Ivoire, Guatemala, and Swaziland. The field test employed a standardized set of data collection instruments using interviews and surveys with collaborative managers, coaches, and QI team members. It used structured questionnaires with several closed and open-ended questions; opinion surveys that asked individuals to rate their agreement to a statement regarding the ease and feasibility of using the SES tools; and an evaluation form for documentation, analysis, and sharing (DAS) to rate QI team performance in these areas. Data were collected through interviews with 201 QI team members in 66 teams, 55 coaches, and 10 collaborative managers, and the performance of 103 teams was analyzed. The evaluation covered how the tools were introduced and used by teams; how and why the tools were adapted by country programs; QI team performance in the areas of documentation, analysis, and sharing; collaborative manager, coach, and QI team satisfaction with the tools; and strategies implemented to support use and integration of these tools into routine team activities.

Findings

Evaluation of performance related to documentation, analysis, and sharing at the QI team level revealed some variations: Some tasks were completed well and others not, even after 6-12 months of use. Some tasks that were performed by less than 60% of teams are key to the collaborative improvement goal of

producing rapid and significant improvements in care. Such tasks include documenting changes, annotating time series charts with changes implemented, discussing possible explanations for trends in results, deciding on actions on the basis of data, evaluating the effects of changes on results by examining time series charts, and sharing changes with other staff at the site and at other sites. Yet QI teams, coaches, and collaborative managers almost unanimously support continued use of these tools: They reported that the tools had helped teams improve in documenting, analyzing, synthesizing, and sharing key learning about changes that result (or not) in improvement. The respondents also reported that over time, they found the tools easier to use.

The learning system functions when key tasks of documentation, analysis, and sharing are carried out by teams. However, while the SES tools' design implicitly incorporates the results of these key tasks, QI team training and support activities may or may not have made explicit expectations related to these tasks. The tools themselves cannot solve the problems of weak documentation, analysis, and sharing: They can only facilitate these processes and only when teams are competent and motivated to carry out these tasks.

The findings of the SES endline evaluation, which are based primarily on data from a sample of teams that had been using these tools since the summer of 2008, indicate that:

- **Critical learning system skills in documentation, analysis, and sharing, particularly related to specific changes, need strengthening:** Many QI teams were still weak in their performance of documenting tested changes, including: regularly charting indicator data, annotating charted data with changes, and sharing changes leading to results. The evaluation found that teams almost universally needed capacity building and coaching support in these areas. As noted, the tools themselves do not generate skills.
- **The tools were widely adapted across the various countries, and significantly simplified in many, but all versions had several key elements in common:** The tools were intended to be and indeed were adapted in each country to the local improvement context, both in being simplified and in having new content added (e.g., integrating them with existing team tools). The fundamental features for Journal -- keeping teams focused on what they want to change in their health care processes, what changes they actually have implemented, and analysis of results in light of changes (annotation of time series charts of results indicators) -- can be seen in all adaptations. Key features for the Synthesis Form -- identification of changes worth sharing based, evidence that change leads to improvement, and documentation of key steps for implementing changes -- also remained.
- **QI teams and collaboratives found value in the structure provided by the SES tools:** QI teams, coaches, and collaborative managers reported that the tools provided structure to the QI process at the team level and were generally easy to use. While teams often displayed some initial resistance to the tools' application, with sustained use, most teams recognized the value of using the tools.
- **Any tool used to strengthen documentation, analysis, and sharing at the QI team level needs to be integrated into QI team processes and coaching activities and aligned with other documentation/ reporting tools:** In several cases, SES tools were added on top of other tools, rather than being introduced as part of an integrated set of tools for teams. This increased the perception of added work. Use of the tools was most effective when it was a shared responsibility of the team leader and another team member, when filling in and analyzing information was integrated into regular QI team meetings, and when synthesis of findings was linked to learning sessions and other sharing opportunities.

Next Steps

By January 2010, over 660 teams in 10 countries were using some version of the SES Journal, and 400 teams in five countries were using some version of the Synthesis Form. The original test countries had expanded the use of these tools from the original 65 teams to 451, and four additional countries were using tools with 211 teams. Collaborative managers in these countries continue to explore ways to simplify the tools and build capacity and motivation to ensure all teams use the tools well.

The general conclusions and specific country next steps suggest a few broad areas for action related to HCI's efforts to generate an effective learning and improvement system, and how the results of this evaluation help move us forward. The rich data from this evaluation have helped HCI staff articulate several strategies for moving forward to establish effective learning systems for health care improvement:

1. **Articulate clear expectations of minimum documentation, analysis, sharing and synthesis at QI team and collaborative level to ensure an effective learning system:** Use the experience of testing the SES tools and the endline evaluation to develop a minimal set of clear standards and expectations for QI teams and collaboratives and other large-scale improvement efforts related to documentation, analysis, sharing and synthesis of learning. The SES tools (in all their variations) are just a mechanism to help teams carry out important tasks related to learning and sharing what yields improvement. The box below presents those few key tasks that are the crux of quality improvement and collaborative learning, and should become the minimalist core of the learning system and therefore the fore the focus of the SES tools.

HCI learning system standards

Key QI Team Tasks:

1. Maintain a record of changes being tested (dates and description)
2. Graph indicators on time series chart and annotate with changes tested regularly
3. Share tested changes and results with others

Key Collaborative Tasks:

4. Maintain up-to-date inventory of changes being tested at each site
5. Aggregate and analyze results in light of tested changes across sites
6. Regularly consolidate and share learning about changes being tested within the collaborative
7. Package and share learning about effective changes to those outside the collaborative, both at national and global level (HCI Portal)

2. **Monitor and use these learning system standards for documentation, analysis, sharing, and synthesis to improve these processes at team and collaborative or program levels:** These tasks also need to be translated into explicit expectations for QI teams, and used to build capacity and guide coaching and team support. The key tasks, outlined the Box above, can serve as a simple set of standards to monitor and evaluate QI team and collaborative performance related to documentation, analysis, sharing, and synthesis. If countries wish, they can use the DAS Scoring Worksheet, an innovation developed for the SES endline evaluation, to assess a more detailed set of such standards. Although the DAS Scoring Worksheet was designed as a one-time, cross-sectional measure of QI team performance, it provides an excellent basis for monitoring performance and testing changes that could lead to improvement in documentation, analysis, sharing, and synthesis. A parallel set of standards and tools has been developed for the collaborative level to assess the compilation, analysis, and

sharing of effective changes within and beyond the collaborative. However, it would be extremely useful for all collaboratives to promote and track, at a minimum, the seven key tasks listed in the box above.

3. **Produce a simplified generic documentation journal and synthesis form, based on the seven learning system standards and annotate it with the various adaptations that countries have made:** Countries have made varying modifications to the SES Journal and the presentation format of the Synthesis Form. We do not recommend further development of a single, standardized set of tools that all countries would be expected to use. Rather, we recommend consolidating the learning and experiences generated in various countries surrounding the SES tools and allowing collaboratives and QI programs to develop or choose the tools they feel best fit the context in which they are implementing improvement. By making available the experiences to date alongside the learning system standards, programs will have the flexibility to determine how to best achieve learning system goals of good documentation, analysis, sharing and synthesis.
4. **Continue to evaluate strategies for sharing changes across teams and synthesizing effective changes within and beyond a collaborative:** HCI is already engaged in studies of shared learning and spread of effective changes. These studies should continue to explore how to make this process as efficient and effective as possible.
5. **Link information generated through the collaborative level documentation, analysis, sharing and synthesis with broader knowledge management efforts:** The HCI Web Portal's Improvement Database (http://www.hciproject.org/improvement_database) provides a mechanism for sharing documented efforts to improve care through tested changes in care organization. As teams improve their documentation, analysis, and sharing, HCI country teams need to invest time and effort to make this learning available to others through the Health Care Improvement Database and other sharing forums.
6. **Facilitate more frequent sharing among countries about effective processes used for documentation, analysis, sharing, and synthesis:** Many country programs expressed interest in having more frequent exchanges on these processes and on most effective changes. We believe that having a set of explicit yet simple standards for these key activities will facilitate sharing, as countries will be focusing explicitly on these tasks and will be able to share their strategies that lead to improvements in implementing these key QI processes.

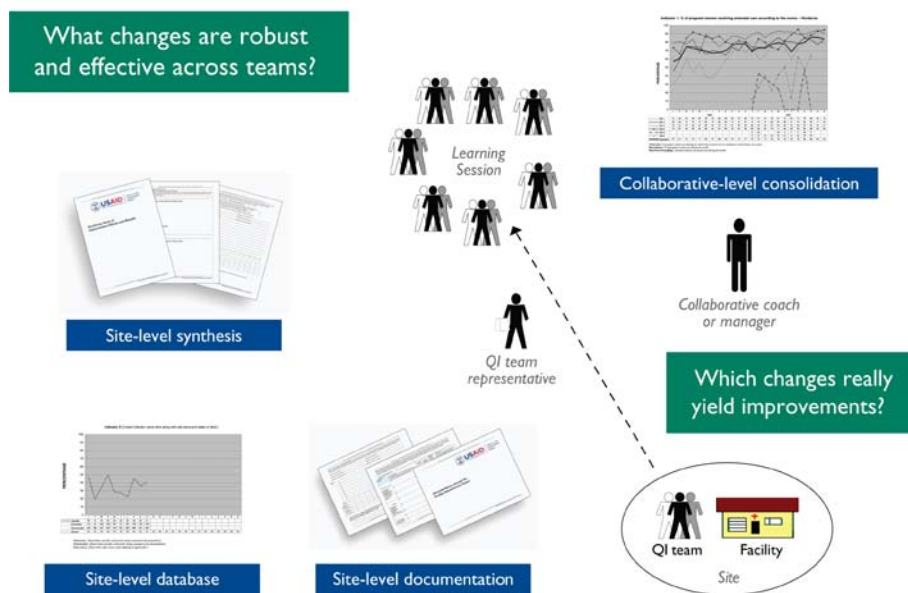
I. INTRODUCTION

Knowledge management systems focusing on learning about what changes yield improvement, are at the heart of collaborative improvement¹. Systems to manage such learning must start with the people who implement quality improvement (QI): the QI teams. In 2008, the United States Agency for International Development (USAID) Health Care Improvement (HCI) Project took on the challenge of improving the learning and improvement system that includes the processes of harvesting, analyzing, and synthesizing what teams do to improve health care and how they share what they learn with other QI teams. Using experience to date and some innovations, the project developed a set of tools for the teams and their coaches to use to facilitate this knowledge management process, otherwise known as the learning system for improvement. The learning system for improvement focuses on deriving learning from improvement experiences to generate answers to the question, “What changes lead to improvement?” at QI team level, and, based on answers to the questions, “What changes are robust and effective across teams?” and “Which changes develop an ‘enhanced implementation package’ that should be shared internally at the site and externally with new sites, as depicted in Figure . The tools, collectively known as the “Standard Evaluation System” (SES) tools, were designed to address both the insufficient documentation of site-level interventions and results and the often-inadequate analysis and use of data by teams in making decisions and sharing lessons learned.

Box 1: Problems the SES tools address

- 1) Insufficient documentation of interventions (i.e., site-level changes) related to results achieved at QI team level
- 2) Inadequate analysis or use of data at the team level to determine which changes led to improvement
- 3) Inadequate analysis and synthesis at collaborative level of which changes warranted scale-up

Figure 1: The learning system for improvement
The Learning System and its Tools



¹ For a description of health care improvement collaboratives, please visit http://www.hciproject.org/improvement_tools/improvement_collaboratives.

A. SES Tools

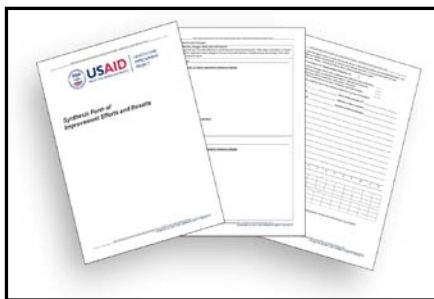
This report presents the results of introducing and testing the SES tools in several countries over the course of a year. The tested SES tools include three tools for use at the team level (the Journal, Synthesis Form, and a Microsoft Office Excel database) and one tool for collaborative managers (another Excel database). Full descriptions of the tools can be found at <http://www.hciproject.org/node/1271>.

Capturing and analyzing changes: Team-level SES

Journal: The Team Documentation Journal was designed to support teams in documenting in real-time changes they are testing and the impact of changes on key results measured over time. This tool is meant to be kept and used by teams for their own purposes and filled in with the level of detail that the team itself needs. The Journal's essential elements are: a running list of changes being implemented (including specific start and end dates, if appropriate) and the linking of those changes to results being tracked through regular monitoring of indicators, by annotating and analyzing time series charts of these results.



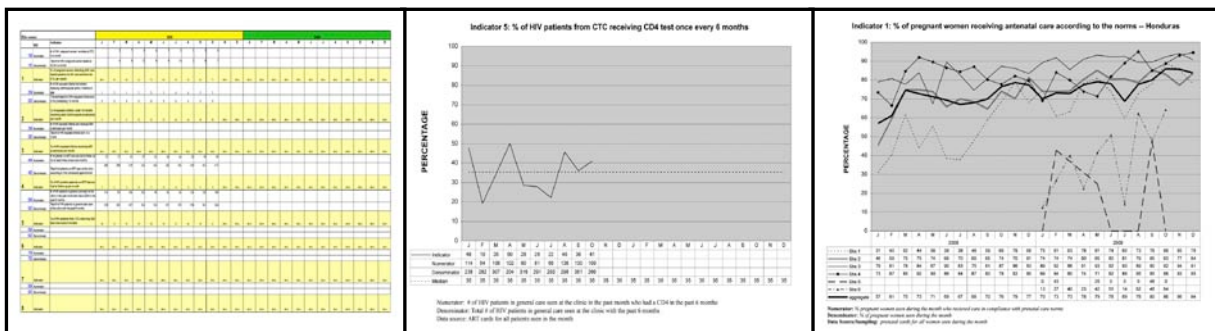
Preparing information on changes for sharing: Team-level SES Synthesis Form: The Team Synthesis Form was designed to enable a team to prepare information to share with other teams. It summarizes key changes the team has concluded worked (or did not work) and information on how the change was implemented that is worth sharing with other teams. The essential features of this form include a description of a change intended to improve health care outcomes, justification that the change led to an improvement, a description of steps that were taken to implement the change, and information on overcoming barriers to implementing the change. Here, the level of detail is determined by what another team would need to know to adopt, adapt, or decide against testing a change. The Synthesis Form could be completed by a team alone or with assistance from its coach.



Storing and analyzing results: Team- and Collaborative-level databases:

The Excel databases—one for use at the site level and another for use at aggregated levels (collaborative or even sub-collaborative, such as region or district)—were created to store and analyze result indicators. Both databases provide a means for data entry of improvement indicator data, with automatic graphing of results that includes a calculated median line for identifying trends and shifts over time. The Collaborative-level Database includes different worksheets for site-level data and for aggregated, collaborative-level data. It

calculates needed statistics (mean, median, high, and low values, denominators, and number of sites reporting). It additionally has a worksheet for tracking specific changes across teams and over time, so specific results can be linked with teams actually implementing a specific change or set of changes.



Countries using the SES tools: In mid-2008, five HCI countries (Honduras, Niger, Russia, Tanzania and Uganda) and one other URC project (Benin under the Integrated Family Health [PISAF] project) agreed to participate in the SES field test. Niger was later eliminated from the test as its funding for improvement collaboratives ceased. Four additional countries have since started using the SES tools, three of which contributed some data to the endline field test reported here: Cote d'Ivoire, Guatemala, and Swaziland. The test started in 2008 with 65 teams in six countries, and by January 2010, about 620 teams in 10 countries have been given some or all of the SES tools. Only Uganda, Honduras, and Russia tested the tools with teams participating in ongoing collaboratives (Table 1).

Table 1: Countries testing and using the SES tools

	Country	Year started	# sites testing tool(s)	# sites using tool(s) in 2010	Journal	Tool being used synthesis form	Team-level database
Field test	Benin/PISAF	2008	17	95	X	X	X
	Honduras	2008	14	14	X		X
	Niger	2008	8	26	X		
	Russia	2008	8	92	X*	X	
	Tanzania	2008	8	39	X		X
	Uganda	2008	20	185	X	X	X
New	Afghanistan	2009	--	25	X	X	X
	Cote d'Ivoire	2009	--	39	X		X
	Guatemala	2009	--	144	X		
	Swaziland	2009		3	X	X	X
TOTAL			65	662	10 countries	5 countries	5 countries

* In Russia, 18 teams were using a meeting minutes format completed by coaches; 18 were using a protocol format completed by teams; and 56 were using an on-line version of the Journal.

B. Endline Field Test Objectives and Methods

Objectives: The SES field test sought to evaluate whether the tools were feasible and effective in improving documentation, analysis, sharing, and synthesis of learning at the QI team and collaborative levels and to understand the processes used for their introduction and support. Countries agreeing to participate in the test were given a set of the generic tools (Journal, Synthesis Form, and databases) and asked to introduce them in some or all of the QI teams they supported. They were also asked to collect data on how the process went after about a year of use. Specific objectives of the SES field test were to:

- Describe the processes used by country programs to introduce and support SES tool use;
- Examine what SES tool components best supported team-level documentation, analysis, and sharing, including comparison (where applicable) to previous evaluation systems;
- Identify what factors facilitated or hindered effective implementation of the SES tools;
- Measure QI team performance related to documentation, analysis and sharing, and
- Determine what next steps would strengthen country programs' ability to document, analyze, and share their results.

Test sampling and methods: The field test used a standardized set of data collection instruments through interviews and surveys with collaborative managers, coaches, and QI team members. It used structured questionnaires with several closed and open-ended questions; opinion surveys that asked individuals to rate their agreement to a statement regarding the ease and feasibility of using the SES tools; and a documentation, analysis, and sharing (DAS) evaluation form to rate QI team performance.

Descriptions of the field test tools are in Appendix A. Table 2 presents the sample size for each tool for each country providing information.

Table 23: Interview and evaluation samples by country and data collection method

Country	Collaborative manager interview	Coach interview	Coach opinion survey	QI team interview	QI team opinion survey	DAS evaluation form
Benin	1	5	11	37	76	37
Honduras	1	15	15	11	19	11
Russia	-	1	-	-	-	-
Tanzania	7	3	14	10	60	10
Uganda	1	1	11	8	28	8
Cote d'Ivoire	-	-	-	-	20	-
Guatemala	-	-	-	-	-	34
Swaziland	-	-	4	-	17	3
TOTAL	10	24	55	66	220	103

This report of the SES field test is organized in the following sections:

- Strategies for introducing and using the SES tool,
- Impact of SES tools on QI team performance and satisfaction,
- Supporting use and integration of the SES tools in routine QI team activities, and
- Conclusions: Where do we go from here?

II. STRATEGIES FOR INTRODUCING AND USING THE SES TOOLS

This section describes the processes used by teams, coaches, and collaborative managers to introduce the SES tools, such as building capacity and assigning QI team roles, as well as how the SES tools were adapted and used by teams.

A. SES Introduction Process

Why This Is Important

To be effective in facilitating documentation, analysis, and sharing of results among teams, the SES tools must be integrated, from the beginning, into the processes QI teams use to record, track, and synthesize their QI results. We examined how various country programs introduced the tools to teams and coaches and how they integrated the tools to ensure they are not just added work but rather a system of learning and sharing of site-level experiences in improving the quality of care.

Key Questions

- *What processes were used to introduce and implement the SES tools?*
- *How were the SES tools integrated into routine practices?*
- *What emphasis is needed during the introduction phase?*

Summary of Findings

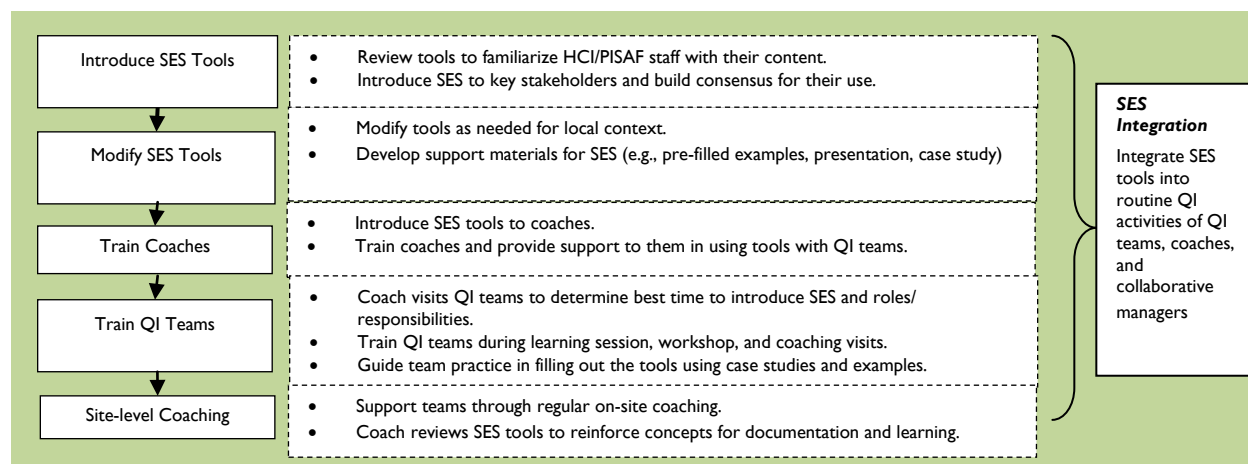
Most countries that tested the SES tools used a set of steps first to introduce and then to implement the tools. The steps had minimal variation. The introduction process typically consisted of an initial review of the tools by HCI staff and key stakeholders to familiarize the teams with the tools' content and organization, as well as build consensus around how they would be used.

The next step was to modify the generic tools to make them applicable in the local context and QI processes that teams used to improve the quality of care. Modification often involved developing support materials for the SES tools: content-specific examples of how the tools could be completed; a job aids; or a presentation of the tools' components relative to the documentation, analysis, and sharing tasks the tools would support. HCI staff and stakeholders used this time to determine the expected roles and responsibilities of coaches and teams in using the SES tools, such as how documentation would be organized (e.g., by improvement objective, by topic) and the role of coaches and managers in capturing lessons learned.

A third step involved orienting coaches to the SES tools. This may have included a training workshop for coaches to review the tools and assist them in modifying the tools as needed. Next, coaches led the process of introducing the SES tools to the teams, often through an initial overview during collaborative learning sessions followed by site visits to determine the best strategies and time for implementation. Throughout the early phase of tool implementation, coaches used coaching visits to help teams learn to use the tools in the context of doing QI work. These visits provided an opportunity to reinforce key concepts around documentation, analysis, and sharing.

Throughout the introduction phase, country programs emphasized integrating the SES tools into routine QI practices, such as team meetings, coaching visits, data collection and analysis, and learning sessions. Such integration was seen as imperative for capturing and sharing innovative practices in the content area.

Figure 2: Common steps in introducing SES tools



Key Learning

- **The step-wise introduction process facilitated integration of the SES tools into routine processes:** Following, at least generally, the steps in Figure 2 enabled collaboratives to build necessary support and engagement to make the tools an integrated component of the QI process. Countries that used a strategic and deliberate introduction process felt they achieved participation and acceptance by QI teams, coaches, collaborative managers, and other stakeholders.

- **Training and engagement of coaches are key:** Supportive coaching is a mainstay for helping teams engage in QI to improve the quality of care. Coaches play a central role in supporting teams in their use of SES, particularly in better reviewing and interpreting their results and distilling important lessons learned for sharing with others. Nearly all the test countries emphasized the importance of using coaching visits to solidify teams’ understanding of the QI concepts reflected in the tools. Building such capacity among coaches enables them to better guide and transfer these skills to their teams. The report from Uganda described this process:

Prior to introducing the SES tools to the sites, [the tools] were introduced to all members of the HCI core team who would be involved in coaching health facilities on how to use them. This was meant to ensure all coaching teams were giving the same message to all QI teams.

- **QI teams also need capacity building to support documentation, analysis, and sharing, and champion users can encourage others:** HCI Honduras noted that the catalyst for improved analysis and sharing was training the teams in using the SES tools and having coaches and collaborative managers reinforce that training. This ongoing reinforcement enabled QI teams to see the benefits of the tools and promote their adoption to other teams as well as advocate to coaches for their continued use. This was especially the case in Honduras, where the co-coordinators and coaches had originally been given responsibility to introduce and train the teams in the use of the Journal; however, when HCI staff discussed the tool and trained teams directly, the teams were “our best ally to show the validity of the tool,” according to one HCI staff member.
- **Meeting with teams and coaches prior to introducing the SES tools is helpful in determining the best implementation approach:** HCI Swaziland used an intermediary step of meeting with health facilities to prepare for the introduction of the tools. They reported that this helped them determine the best time to introduce the tools as well as establish well in advance clear expectations for the roles and responsibilities of teams and coaches. Having an introductory

meeting also allowed sites to gather existing documentation materials, review them, and reflect on best ways to improve their learning process. Similarly, the HCI team in Uganda advised,

Ensure that coaches fully understand what the tools have been designed to capture and are comfortable with them before [coaches] introduce [tools] to the sites.

- **Initial reluctance toward the SES tools can be mitigated through careful introduction and adaptation of tool components:** Several countries testing the SES tools introduced them on top of existing team tools and encountered resistance from teams. Among QI teams with an existing documentation system or that had members with demanding clinical roles, concerns were often expressed that the SES tools would require extra time and resources. For example, in Russia, team members in the HIV/AIDS Treatment, Care and Support Collaborative resisted using the SES tools because local regulations required them to document their meetings in a very specific way, and the tools would double the work. In response, the Russian SES Journal was adapted for use by QI specialists (regional coaches) rather than teams. In Honduras, regional coordinators and QI teams appreciated that the tools were stronger than their then-current documentation system, but they were concerned that it lacked some valuable elements of that system. Thus, prior to introduction, Honduras adapted the tools to incorporate a flow chart and problem identification tool they had been using. Similarly, Tanzania reported,

At inception, the SES tools were bulky, complicated, and new. It is not surprising, therefore, that QI teams took a bit longer to accept the tool as there was general fear of extra work and/or duplication. Following revision, the teams saw that the tools were easy and also made work easier, and with time and exposure in using them and with subsequent results, the tools were considered useful and subsequently accepted. Involvement of stakeholders in simplifying and making the tools clearer, attractive, and easy to understand improved the tools' image and created positive attitudes among stakeholders.

Several countries mentioned that the tools were best introduced when QI teams are being established, and that the tools be adapted to the specific areas of improvement.

- **Integration of the SES tools into routine QI and clinical activities takes time, but is achievable and valued:** Most countries reported that an average of one to three months was needed to introduce and integrate the SES tools into ongoing QI team activities. The speed of integration often depended on the team's documentation and organizational capacity, but was viewed as a necessary achievement in ensuring effective use of the tools. Tanzania's HCI team shared their experience with this key learning:

The introduction [of SES tools] was also vertical such that the collaborative managers had to learn as they oriented coaches and site teams. All the same, the outcome was good, as most of the tools were eventually accepted and used after [the teams] recognized their benefit.

B. Assignment of Roles in QI Teams to Use SES tools

Why This Is Important

Effective quality improvement in health care facilities necessitates active engagement of multiple QI team members either in defining and preparing for a change, implementing it, or evaluating its impact. Consequently, the SES Journal was designed to be a team-level documentation tool for members to note the quality problem to be addressed, their improvement objective, and a description of the components and impact of organizational changes on the quality of care and health outcomes. During the field test, country programs were asked to determine team roles in using the tools: Who is responsible for completing the Journal, who collects the data, and who analyzes it or documents lessons learned across

various providers? This section summarizes experiences of field tests of QI teams in working together to evaluate their results over the course of their improvement efforts.

Key Questions

- *How was routine documentation and analysis using the SES tools organized at sites?*
- *Who was responsible for filling out the Journal?*
- *What were the advantages and disadvantages of various approaches?*

Summary of Findings

We asked 63 teams to describe who usually completed the SES Journal (e.g., team leader, a designated member, joint responsibility, etc.), why this process was chosen, and the extent to which it worked well or not. We also asked 201 members of these teams whether each had ever participated in directly filling out the Journal, “who” usually provided information to complete the Journal, and whether this process had been adequate in reviewing changes in health care quality and results in health outcomes over time.

Table 3 shows the results of team participation in using the Journal: Most (87%) team members had participated in filling it out at some point in the course of the improvement work. In some countries—Swaziland, Tanzania, and Benin—almost all team members had participated in this task, while in others—Uganda, Cote D’Ivoire, Honduras—a smaller majority was involved. Most teams (73%) also reported that all members provided information during team meetings, as opposed to just the individual filling out the Journal (data not shown). These results indicate that the process of reviewing their changes and results over time was primarily viewed as a collective responsibility.

Table 3: Team member participation in filling out the SES journal

	Total	Tanzania	Honduras	Benin	Uganda	Swaziland	Cote d’Ivoire
QI Team Members	N=220	n=60	n=19	n=76	n=28	n=17	n=20
% members who participated in filling out the Journal	87%	91%	68%	90%	80%	100%	82%

Three main approaches seem to have been used in assigning roles and responsibilities for completing the Journal and Synthesis Form, as summarized in Table 4. The most common approach, used by 41% of teams, made a team member and the team leader jointly responsible for routinely updating the SES tools. The second most common approach, used by 24% of teams, consisted of completing these tools as a group during team meetings or coaching visits—“anyone and everyone”—with no individual solely responsible. The third most common approach assigned this task to a single individual (rather than a pair or no one specifically), either the QI leader (11% of teams) or another designated team member (6% of teams). The remainder (14% of teams) used another agent such as the secretary, multiple coaches, or other health workers. Feedback regarding the advantages and disadvantages of various approaches was mixed. Most teams reported that the chosen approach reflected the availability and engagement of team members and that their method worked well in most cases, but with some limitations. In several cases, the team or a designated individual completed the Journal, and the Synthesis Form was completed primarily by the coach with team input.

Table 4: Assignment of completing the SES journal

Indicator: % of teams indicating a particular assignment	Total	Tanzania	Honduras	Benin	Uganda
QI Teams	N=66	n=10	n=11	n=37	n=8
Team leader AND another team member (<i>Joint</i>)	41%	60%	64%	24%	62.5%
Any and every team member (<i>Group</i>)	24%	10%	9%	35%	12.5%
Team leader OR a designated team member (<i>Individual</i>)	17%	20%	0	22%	12.5%
Other agent	14%	0	18%	16%	12.5%
% of teams not reporting	4%	10%	9%	3%	0

Key Learning

- Approach #1: Completing the SES journal as a group (“anyone and everyone”) promotes engagement and sustainability, but may weaken accountability:** The common reasons cited for this approach were to take advantage of the range of expertise among team members, ensure that in the absence of the team leader the work could continue, and promote working together as a team. Group assignment was seen as the best strategy to avoid overloading a single member and provide an opportunity for the team to share ownership of the journal’s content, including sharing ideas and building consensus for the organizational changes and experiences to be documented. Teams using this approach often reported filling out the journal together during team meetings or creating a rotation system in which different members were assigned responsibility. On the other hand, one country program reported a difficulty with this arrangement in that no one assumed responsibility for the journal, since “everyone was responsible.” In such cases, it was unclear who was in charge of capturing the team’s learning and in his/her absence, who would be held accountable.
- Approach #2: Assigning the journal to a single individual may improve the accuracy and continuity of the documented information, but was not often recommended as it discouraged involvement of multiple members:** The teams that reported designating the team leader or another team member to fill out the journal noted that this approach best ensured that the documented information was accurate and reliable. Yet, much of the feedback from teams using this approach indicated that that this procedure both resulted in a lack of interest and involvement of other team members and was often chosen due to the lack of availability or interest of other team members. In addition, having a designated individual often meant that the Journal content did not cover the entire care process.
- Approach #3: Joint responsibility of filling out the journal by the QI team leader and an additional team member lessens the load on a single individual:** This approach is a blend of the group and individual effort and therefore reaps the benefits of each. Joint responsibility provides clear accountability of two individuals for the use of the journal, while also ensuring continuity if one person is unable to do so. This approach does not explicitly involve the entire team, a concern that should be considered in selecting an approach.

- **Effective synthesis of learning requires the individual who is most knowledgeable about the QI team’s experience, although synthesizing as a group raises awareness and engagement in the QI process:** As to completing the Synthesis Form, many teams reported that having the team leader do this worked well as this person was the most QI competent and knowledgeable about the team’s work. In other cases, the coach filled out the Synthesis Form with the team leader to help the latter learn the tools. Finally, other teams reported that the entire team did it together to inform the team of its QI strengths and weaknesses. Honduras reported that team completion of the Syntheses Form would “make the rest of the personnel realize where we are failing, since this is a good group. This involves others and the process doesn’t decay.”

Box 2: Reasons for assigning joint responsibility for the journal to QI team leader and another team member

“In case the team leader is not around, documentation will continue” (Uganda).

“So that other members can complete it and share experiences” (Tanzania).

“We share more ideas; improves organization, awareness, and team work” (Honduras).

Reasons for completing the Journal as a group (or not):

“Everyone in the team has an idea on how to fill it out and evaluate tested changes” (Tanzania).

“Everyone takes responsibility” (Honduras).

“This hasn’t worked because of my availability and of the members; the whole group has not taken ownership of the Journal” (Benin).

Reasons for assigning the Journal to a single individual:

“Other members don’t have the time” (Benin).

“The circumstances of our working environment” (Tanzania).

C. Frequency, Time, and Process for Updating the Journal and Synthesis Form

Why This Is Important

A central aim of the SES Journal was to develop an efficient and effective means to help teams document their improvement results from tested changes at a frequency and level of detail that best fit their needs. The journal was designed to be filled out in real time, taking the minimum time necessary to record progress for later analysis and decision making. As there was no external reporting requirement with the journal, teams were encouraged to freely note only what was important to them for deciding what tested changes should be integrated into routine care processes. This section examines how teams actually used the tools and what processes appear most beneficial for teams in documenting their results. In contrast to the journal, which was an internal team tool, the completed synthesis form was to be shared with others. It was hypothesized that both tools could be used in preparing for learning sessions.

Key Questions

- *How often do teams use the SES tools?*
- *By what means is information on the effectiveness of changes gathered and recorded?*
- *What amount of time or resources is invested in documentation and analysis and preparing for sharing?*

Summary of Findings

SES Journal: Table presents responses from the 66 teams in various countries on time spent on the SES tools. The teams generally filled out the SES Journal monthly (50%) or weekly (32%); smaller proportions reported filling it out twice a month (8%) or every two to three months (6%). Tanzania and Uganda teams generally filled them out monthly or less frequently; Benin and Honduras teams were more evenly split between weekly and monthly. Teams averaged 1.4 hours per week to fill out the journal.

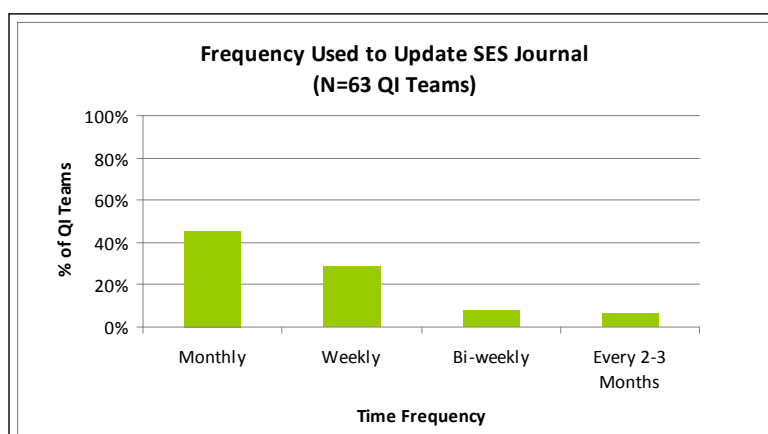
Table 5: Teams' perceptions: Time spent weekly in completing the journal

	Total	Tanzania	Honduras	Benin	Uganda	Avg time spent per week (hrs)
QI Teams	N=66	n=10	N=11	n=37	n=8	
Mean hours spent per week [<i>min, max</i>] by teams completing journal	1.4 [0.16,8]	2.3 [1,4]	4.1 [2,8]	0.85 [0.16,3]	1.1 [0.33,3]	
% of teams reporting "too much" time was spent	47%	10%	18%	73%	13%	1.1
% of teams reporting that "too little" time was spent	6%	10%	18%	0	13%	1.5
% of teams reporting that time spent was "not too much or too little"	32%	80%	27%	2%	25%	2
% of teams not reporting	15%	0	36%	5%	50%	N/A

About 75% of teams in Tanzania, Honduras, and Uganda felt that not too much time was spent on the Journal, while in Benin, 77% of teams felt too much time was spent (even though they reported spending the least amount of time of all the countries providing data). Of the teams from Tanzania, Honduras, Benin, and Uganda that reported that too much time spent, 51% spent less than an hour per week, 39% spent one to two hours, and 10% spent more than two hours. For teams that had a previous documentation system, most (65%) responded that the amount of time they spent on the Journal was less than that spent on the previous system.

QI teams also provided information on how often they reviewed and added information to the journal (e.g., weekly, bi-weekly, monthly, etc.) and why they choose this frequency. As seen in Figure 3, the most common frequency was monthly (46% of teams), followed by weekly (29%). Smaller proportions of teams reported doing this twice a month (8%) or every two–three months (6%). Teams reported that monthly schedules for filling out the Journal worked well, as this frequency coincides with data collection for monitored indicators and allows enough time to see change. Reasons for filling out the Journal weekly included: "to present problems in the process and give immediate solutions" (Honduras), "to follow the rhythm of QI team meetings (Benin), and "to avoid forgetting anything" (Benin). Teams that reported updating the Journal every two–three months or only having added to the journal once (n=5) acknowledged that it should be filled out more frequently but indicated that they did not have time or did not understand the Journal.

Figure 3: Team frequency in filling out the journal



Coaches were asked to describe the factors that differentiated teams that were able to pick up the SES tools quickly versus those that struggled to learn them. They reported that teams with the will, engagement, and ownership of QI work were more likely to adopt the tools quickly as they were perceived as useful for documenting their work. On the other end of the spectrum, teams struggling with the tools tended to have little understanding of their purpose or added advantage; these teams often had only one person using the tools, precluding team ownership of the work. Consistent themes across all the teams were that the use of the tools required a change in behavior to adopt a new process and that the continuous support from coaches and relevant examples to learn the tools were critical to making this change quickly.

Synthesis Form: Table 6 presents QI team’s data on the use of and time spent on completing the Synthesis Form: 24% of teams had ever used it, and 15% had ever received a completed Syntheses Form (a “synthesis document”) from another team. Of those teams using this form, most reported filling it out before a learning session, covering that action period. Several teams commented that this was an appropriate frequency for completing the form, as the three- to four-month span was enough to generate measurable changes in an indicator. A Uganda team reported that six months is “*just enough, considering we had to summarize improvement activities over a long period...the time between learning sessions.*” However, some teams felt they needed more time to show results from their changes. Another Ugandan team reported that even eight months was too little: “*If tested changes are to be observed, they should be monitored over a period of time.*” (Since the study, more teams have used the Synthesis Form. For example, Honduras has introduced it in 22 sites in the Pneumonia and Diarrhea Collaborative, whose participants found it useful for sharing their analyses and lessons learned.)

In Benin and Uganda, 25% of teams that had used the Synthesis Form said it was completed “*a little at a time over the course of several weeks/months,*” compared to 69% of teams that completed it “*all at once, just prior to the learning session*” and 6% that filled it out “*all at once, during or after the learning session.*”

Table 6: Team use of and time spent in completing the synthesis form

	Total	Tanzania	Honduras	Benin	Uganda
QI Teams	N=66	n=10	n=11	n=37	n=8
% of teams that ever used the Synthesis Form	24%	0	0	22%	100%
% of teams that ever received a synthesis document from another team	15%	0	0	11%	75%
Mean time (hours*) spent filling out the Synthesis Form	7.8	0	0	2.3	11.8

* For teams that reported spending one or more days filling out the Synthesis Form, we counted each day as three hours.

Sharing information contained in the Synthesis Form with other teams took place either by giving a synthesis document to the coach for transfer to another team(s) or using it for talking points during presentations at a learning session. Teams reporting on who completed the form listed the following members as responsible: 6% coach only, 12.5% coach and leader, 12.5% coach and members, 50% without coach². When asked to what extent the coached helped, 13% of teams said he/she helped a little, 50% said a lot, 6% said he/she did most of the work, and 6% said the team completed the form alone³. Because it is used less frequently than the Journal, teams reported feeling less confident in their ability to use the Synthesis Form, and coaches played an important role in helping teams prepare the form before learning sessions. Just over half the teams (56%) thought their process of completing the form was adequate.

² An additional 13% of teams selected “other” in response to this question, but did not specify what agent completed the form; 6% of teams did not respond to this question.

³ The remaining 25% of teams did not respond to this question.

Among teams receiving a synthesis document from another team (n=10), 30% indicated that its information helped a little while 60% indicated it helped a lot. Team suggestions for improving team-level synthesis included simplifying the format and avoiding any repetition in the reporting.

Key Learning

- **Updating the Journal during monthly team meetings ensures uptake and timely review of QI efforts:** Teams found filling out the Journal during monthly QI team meetings to be highly positive, stating that doing so enables a more thorough analysis of a problem from all angles, engages others in decision making, informs stakeholders outside the QI team, and ensures that the Journal is updated in a timely fashion. Reasons for filling it out weekly included: *“to present problems in the process and give immediate solutions”* (Honduras), *“to follow the rhythm of QI team meetings”* (Benin), and *“to avoid forgetting anything”* (Benin). Some collaborative managers and coaches indicated the need to improve the process of gathering information on the effectiveness of changes, since sometimes such information is missing or not recorded.
- **Teams synthesize their improvement efforts most often in preparation for learning sessions, typically every three to four months, but the synthesis process needs strengthening:** Not all country programs had yet introduced the Synthesis Form at the time of the endline data collection. The teams that had done so reported that the process of filling it out was helpful as it provided an opportunity to review the Journal contents. Teams are generally less familiar with the Synthesis Form and rely heavily on assistance from coaches.
- **While no specific amount of time was deemed optimal for working on the Journal, evidence suggests that teams perceive such work as beneficial:** QI teams also reported spending too little time on filling out the Journal: 25% of teams from Tanzania, Honduras, Benin, and Uganda reported that less than an hour was too little time, and 50% said one to two hours was still not enough. Some team members reported that the amount of time currently spent was much less than that before the SES tools, *“Before, we had to look for data to inform managers and visitors, but now we easily document the activities”* (Benin). On the other hand, team members who reported that the time for the SES tools was much more than that for the previous systems were not dissatisfied: *“Now it is more productive. There are many ideas that we share. We analyze problems better and come up with solutions”* (Honduras).

D. Adaptations to the SES Journal

Why This Is Important

The SES tools sent to be field-tested were termed “generic”: The intention was that each country would adapt it to the elements—at least improvement objectives and indicators—of its own collaborative(s). Because the tools were built on best practices to date and necessary innovations, tool designers (HCI staff) hoped that test countries would keep the main features, but no restrictions were imposed. Several countries made some initial adaptations before they began testing, but most made (further) adaptations as they expanded the use of the tools to additional teams. These adaptations reflect their experience, hopes, and concerns.

Key Questions

- *How and why were the SES tools adapted in various country programs?*
- *What components of the SES tools most often required adaptation or not?*
- *What best practices emerged in ensuring the SES tools “fit” local team processes?*

Summary of Findings

Adaptations to the SES tools were many and varied across the different countries. Four of the six original countries tried the tools out in the generic version, without any adaptation of language or layout to better fit the structure of their collaboratives (e.g., number of improvement objectives and number of indicators to be graphed). Only Tanzania did any major restructuring before originally introducing them. Benin, Uganda, Tanzania, Russia, and Honduras all soon made modifications to the Journal to tailor it to their needs and other considerations. In most countries, these modifications were developed in consultation among collaborative managers and coaches, and for subsequent adaptations, in light of feedback and experience of teams. Guatemala and Cote d'Ivoire, which began using the tools in the second phase, made modifications based on lessons learned and presented in the *Interim Synthesis of Findings and Learning: Testing of the SES QI Team Tools. June–December 2008*. Table 7 lays out the major categories of adaptations, and Appendix B includes more specific details on adaptations.

Table 7: Types of adaptations made to the SES journal

Type of change	Change	Reasons for changes	Countries making changes
Simplification	Reduce number of pages Remove change categories	Thought it was too complicated for teams to use, documentation burden was too high	Guatemala Tanzania Uganda
Organization	Reorganize to accommodate improvement collaborative objectives and indicators	To make it match the flow and logic of the teams' QI work	Benin (PISAF) Cote d'Ivoire Guatemala Uganda
Additions	Add sections for team meetings, process flow charts, documentation of plan-do-study-act (PDSA) cycle, and indicator reporting forms	To create a single tool for all documentation the collaborative wanted from its teams	Cote d'Ivoire Honduras Niger

Russia made fundamental changes to the tools: They were being used in its antiretroviral therapy (ART) collaboratives that were long-standing spread sites and had less need for a journal (teams collect and present their data in Russia, but HCI analyzes results and trends). In fact, Russia was the only country where teams in one collaborative refused to use the new form, leaving HCI coaches to fill it in, but the Journal is mainly used there to record minutes of a team meeting.

Key Learning

- The SES Journal can and has been adapted by collaborative managers to eliminate or add sections:** There is no single “right” version of the SES tools. They are most effective when they reflect the local language of improvement, when they match the structure of the improvement objectives and indicators, and when they reflect the steps in improvement as used in that country. In Tanzania, Uganda, Russia, and Guatemala, this meant shortening or simplifying the document. In Benin, Honduras, Niger, and Cote d'Ivoire, it meant adding other tools and forms. Many countries adapted the Journal to make it a single document of all the tools teams were expected to use. Teams appreciated having the tools all in one place. Both shortening and lengthening seem to work in their own contexts.
- Modifying tools is an important step in building ownership and consensus around using the tools:** In all countries, the process of review, adaptation, experience, and further modification created ownership of these tools within collaboratives and country programs. The tools were intended to strengthening documentation, analysis, and sharing within the context of a given collaborative and therefore should reflect the structure of objectives and indicators, the local language of improvement, and the steps to improvement as taught to teams.

- **Regardless of modification, the Journals retained several minimum essential components:** These components are the improvement objectives, problem to be addressed, tested changes, and annotated results. Two common areas of simplification related to the Problem Analysis portion; the Changes portion; and the Comments portion (which focused on reflection questions about the results). The most common adaptation to the Changes portion was removing categorization of changes (input/process or sub-categorization within those headings). The Journal's most important aspects—keeping teams focused on what they want to change in their health care processes, what changes they have actually implemented, and analysis of results in light of changes implemented (annotation of charts)—are fundamental. Other details in the generic versions of the tools are added value and may depend on the sophistication of the team.
- **Countries have effectively used the Synthesis Form as a paper document for distribution and as a conceptual frame for presenting information orally at learning sessions:** The Synthesis Form was tested in fewer countries (Benin, Russia, and Uganda), but experience to date suggests that its outline and questions are of great value, while the format and timing of use can vary. This is an area that needs additional learning from experience across countries.

III. IMPACT OF SES TOOLS ON QI TEAM PERFORMANCE AND SATISFACTION

A. QI Team Performance

Why This Is Important

The purpose of the SES Journal is to help teams document their changes and analyze their results to determine what worked. Such documentation includes annotating time series charts, so teams can successfully share effective and ineffective changes with others. As part of the SES endline evaluation, HCI developed the Documentation, Analysis, and Sharing (DAS) Scoring Worksheet to allow collaborative managers and coaches to more systematically measure QI team performance related to documenting, analyzing, and sharing their results. A DAS score has three components, each with five items, as shown in Table 8.

Table 8: Components of the documentation, analysis, and sharing score

Documentation	Analysis	Sharing
<ul style="list-style-type: none"> Documented problem and improvement objective Written action plan with assigned roles and timeline Measured and recorded indicators to evaluate care Recorded changes tested at site Documented QI team meetings 	<ul style="list-style-type: none"> Graphed indicators using time series charts Discussed factors driving observed trends Annotated key changes or driving factors on graphs Discussed next steps based on data Evaluated most recent changes in terms of influence on care process 	<ul style="list-style-type: none"> Shared indicators/results with higher levels of health system Shared indicators/results with other site-based staff Shared learning on tested changes with other providers Shared learning on how to implement changes with other sites Used at site information from other sites on improving care

Note: Each item in the DAS Worksheet is scored on a scale of 0–3, with 0 = not done, 1 = below satisfactory, 2 = satisfactory, and 3 = above satisfactory. The total possible score is 45 points, with 15 possible for each component. We classified overall scores as “outstanding” for 36–45 points, “good” for 26–35 points, “fair” for 16–25 points, and “poor” for 14 points or less.

Information from the DAS Scoring Worksheet was available only at the endline, so these data will not determine whether the tools led to improvement in performance⁴.

Key Questions

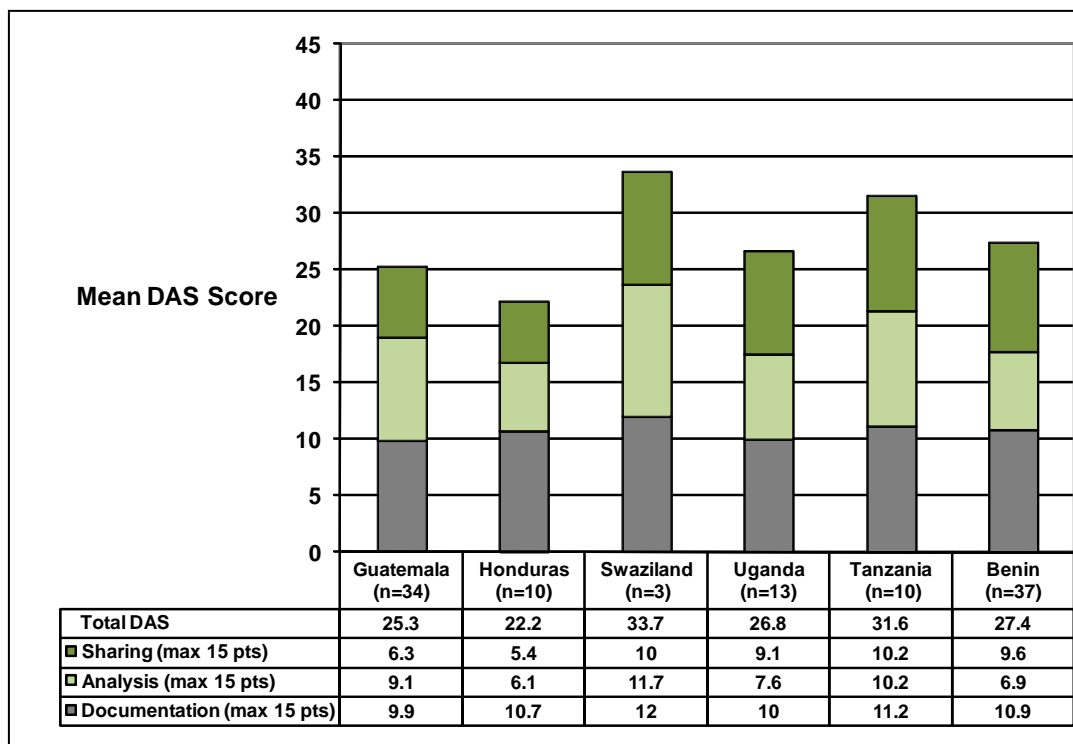
- How well did teams conduct their key documentation activities?
- How well did teams conduct their key analysis activities?
- How well did teams conduct their key sharing activities?

Summary of Findings

Figure presents the pooled average DAS score by country across the 102 teams evaluated and illustrates the variation among countries. Scores ranged from 22 to 34, with only Honduras falling in the “fair” performance category and the rest in the “good” category, but toward the lower end. However, the differences between countries are not statistically significant. While in most countries most teams fell into the good/excellent or the fair/poor categories, Guatemalan teams were evenly split between these two. Tanzania scores were based on team self-assessment, rather than the external (coach) assessment done in other countries.

⁴ In Tanzania, the DAS worksheet was filled out by the teams themselves as a self-assessment.

Figure 4: Documentation, analysis, and sharing scores by country

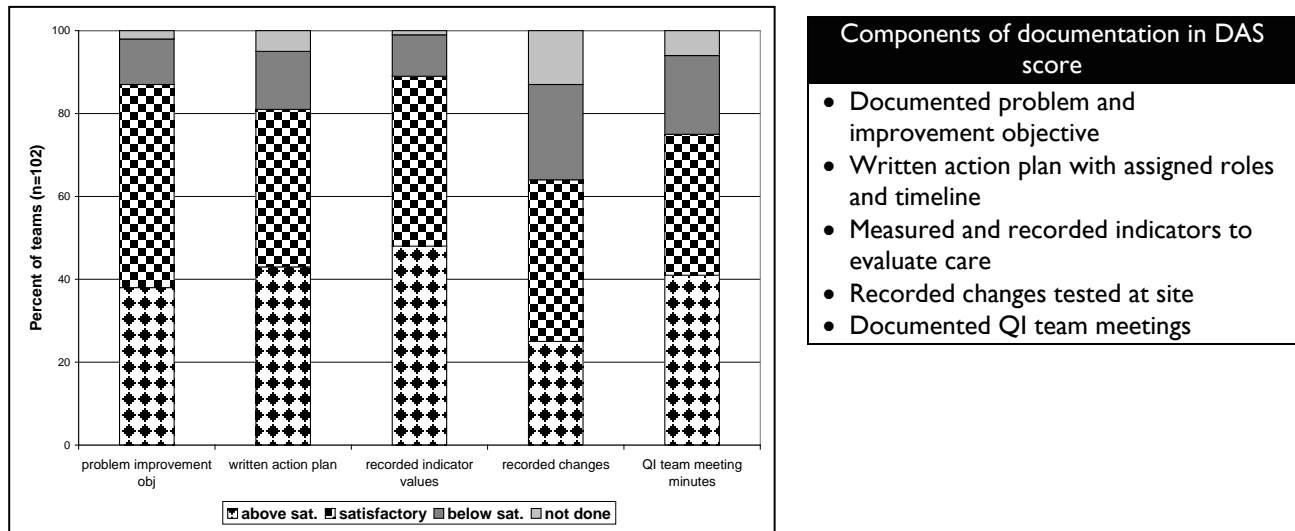


Overall, the best performance scores were in documentation, with scores of 10 or higher (of 15 possible), while sharing generally scored the worst (between 5 and 10) and was the only sub-score that showed significant differences across countries⁵.

Teams' performance in documentation: The SES journal was designed to provide a structure for adequate documentation of changes implemented, within the logic of a team's improvement objectives and action plan. Figure 5 shows that overall documentation is relatively strong, with 75% or more of the 102 teams for which information was available in the satisfactory or above range (those portions with checkered patterns). However, documentation of tested changes was lower—a third of teams were still not recording changes tested in a satisfactory manner: Poor performance was especially prevalent in Honduras (45%), Guatemala (34%), and Uganda (38%). These three countries performed less well on documenting action plans with roles and timelines (27–35% of teams did not perform this task satisfactorily), and Guatemala performed poorly on all three tasks. Documentation of QI team meetings was better but still problematic in Guatemala (42% of teams not satisfactory).

⁵ Presence of significant differences between countries is dependent on sample size, and several countries had very few teams assessed.

Figure 5: Performance in documentation



- Components of documentation in DAS score**
- Documented problem and improvement objective
 - Written action plan with assigned roles and timeline
 - Measured and recorded indicators to evaluate care
 - Recorded changes tested at site
 - Documented QI team meetings

These findings are reflected in the coaches' opinions of team documentation. Table 9 presents coaches' opinions by country. About half the coaches (51%) reported that teams documented all changes they made in the Journal, but this varied widely from country to country, with a very low level in Uganda.

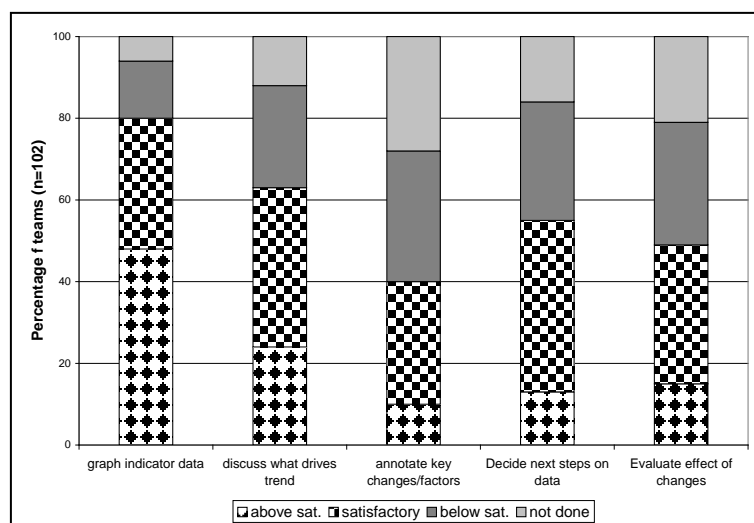
Table 9: Coaches' opinions: Teams' complete documentation of all changes in journal

Coaches' opinion	TOTAL	Tanzania	Honduras	Benin	Uganda	Swaziland
% coaches who agree with statement:	N=55	n=14	n=15	n=11	n=11	n=4
Teams documented all the changes they made in the Journal.	51%	71%	60%	36%	9%	100%

Teams' performance in analysis: The Journal provides a paper-based graphing template where teams could draw their time series charts and annotate them; they could also use the completed graphs for evaluation and decision making.

Figure 6 presents the DAS analysis scores, which are generally lower than those for documentation. With the exception of graphing indicator data, on which most countries scored well, most items fell below 60% of satisfactory performance (except Honduras, where only a third of teams did this). Performance was particularly low for annotating changes on graphs (only 40% of teams annotated their graphs), and less than 50% evaluated the effects of the changes they were introducing. In particular, in Uganda only 12% of teams were annotating charts; in Honduras, only 27% were analyzing the effects of changes on the process of care. (Following the study, teams in Uganda were reported to have improved analysis of their results.)

Figure 6: Performance in analysis



Components of analysis in DAS score

- Graphed indicators using time series charts
- Discussed factors driving observed trends
- Annotated key changes or driving factors on graphs
- Discussed next steps based on data
- Evaluated most recent changes in terms of influence on care process

Data from the QI team opinion survey very consistently indicate that teams agree with the statement: “[The Journal] improved the way my team documented and analyzed changes implemented and the results achieved,” with an average score of 3.4 (out of 4) across all countries (n=206 team members in six countries).

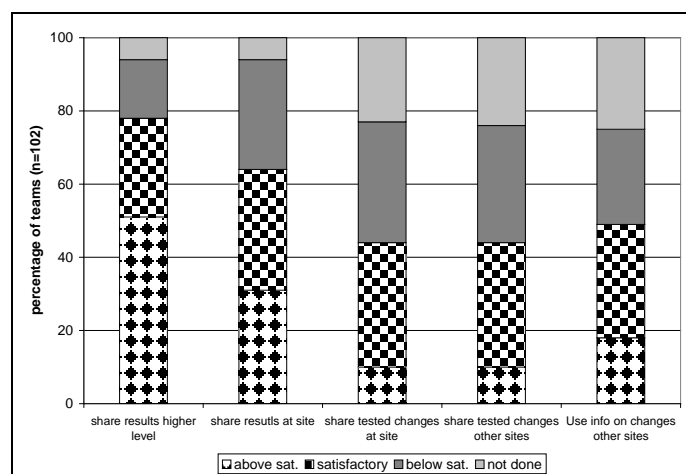
Table 10: Coach’s opinions: Teams’ analysis of changes

Coaches’ opinion	TOTAL	Tanzania	Honduras	Benin	Uganda	Swaziland
% of coaches who agree with the statement:	N=55	n=14	N=15	n=11	n=11	n=4
Journal helped teams document/analyze changes and results better.	91%	100%	80%	100%	82%	100%
Teams could follow the effect of changes tested better when using an annotated chart of results.	70%	79%	64%	64%	60%	100%
Teams used Changes Worksheet information when annotating results on their graphs.	75%	100%	79%	73%	40%	75%

Teams’ performance in sharing: The Journal is intended to help teams analyze the results of the changes they make to learn what works so they can successfully share effective and ineffective changes with others. Some countries used the Synthesis Form (or some modification of it) to facilitate this, but teams could and should be sharing their results even without that form—and in more forums than just the learning session.

Figure 7 indicates that teams’ performance in sharing was much lower than in the other components of the DAS score. They did relatively well (as indicated by a satisfactory or higher rating) in sharing their indicator results with higher levels, with 51% of teams doing this above satisfactorily and another 27% doing it satisfactorily: This may reflect mandatory reporting of indicator data and not necessarily effective changes. However, sharing results with others at the site was poorer, with 31% above satisfactory and 33% satisfactory: For example, in Honduras, where all teams shared with higher levels, less than half shared with others at their site. Across countries, sharing changes with other teams at a satisfactory or above satisfactory level fell below 50%, as did using information on changes from other teams, with Guatemala and Honduras scoring the lowest on all three measures.

Figure 7: Performance in sharing



- Components of sharing in DAS score**
- Shared indicators/results with higher levels of health system
 - Shared indicators/results with other site-based staff
 - Shared learning on tested changes with other providers
 - Shared learning on how to implement changes with other sites
 - Used at site information from other sites on improving care

The DAS score does not indicate *how* information was shared, but surveys indicated that the most common mechanisms for sharing were presentations during learning sessions, discussions with colleagues, posters, and photocopied talking points. Survey data from QI teams captured how teams perceived the utility of the information (see Table 11). Generally speaking, teams appreciated the details and information provided by other teams (see Box 3). QI team members that had seen a synthesis document prepared by another team reported that it was helpful because it provided “the steps for introducing changes” (Uganda) and “allows us to compare ourselves to other teams and look for best practices” (Benin). Team members that reported the Synthesis Form as being only a little helpful explained, “We could not easily replicate what other sites had done” (Uganda).

Box 3: Team members’ comments on sharing ideas through the SES

“The other [teams] have already discussed all the difficulties while sharing their experiences during the [learning] session; we used their example to go quickly.” (Benin)

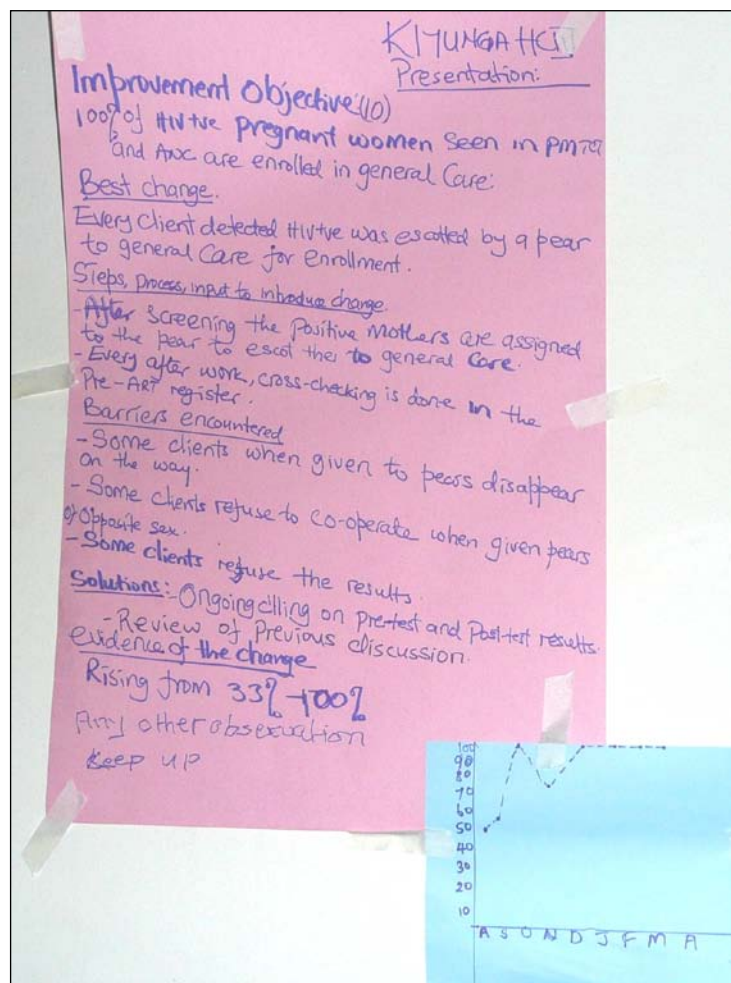
“This allows us to avoid the same errors as the others.” (Benin)

Table 11: Teams’ opinions: Sharing changes

Teams’ Opinion	TOTAL	Honduras	Benin	Uganda	Swaziland
% of QI team members who agree with the statement:	N=140	n=19	n=76	n=28	n=17
Information from other teams about their effective and ineffective changes was easy to follow.	83%	100%	91%	68%	67%
Level of detail other teams provided about their changes was sufficient to understand how to implement them.	88%	75%	90%	81%	100%
Information from other teams about barriers and strategies to overcome them was useful.	98%	100%	98%	100%	88%
Way other teams presented their graphs (annotated with specific changes) was convincing that changes were effective.	96%	100%	98%	88%	100%
Information provided about unanticipated effects, alternative explanations, or specific lessons learned was useful.	94%	100%	93%	96%	88%

Note: No data are available from Tanzania and Cote d’Ivoire.

Figure 8: Award-Winning Poster Based on Synthesis Form, Uganda



Some countries used the Synthesis Form format to structure presentations, either as posters or PowerPoint files. Uganda used the Synthesis Form as a template for poster presentations, and teams were asked to make a poster of their best change. A contest was held during a learning session for the poster with the best information (Figure 8). Russia used the Synthesis Form as a PowerPoint template for presenting at learning sessions.

Key Learning

- **Documentation of objectives, action plans, indicator results, and QI team meetings continues to be teams' strongest performance area, but continued work is needed to strengthen documentation of changes tested:** Many documentation elements (identifying the problem/ improvement objectives, recording data) have been part of team responsibilities since the collaborative approach was first introduced, and the main elements continue to be implemented—and well by most

teams. Teams scored lowest in the documentation category for recording changes: Only Swaziland and Tanzania were rated satisfactory (Tanzania's DAS score was self-assessed).

- **Efforts are needed to improve QI team performance in analyzing their results:** Analysis tasks, which involve the actual use of documented information, still need work. Charting indicator data regularly appears to have been a new task for some teams, and annotating still had not taken root as a team activity. While Guatemala and Honduras had higher percentages of teams scoring in the unsatisfactory category, they also had the highest percentage of teams performing above satisfactory, indicating that performance varies widely, even within a collaborative.
- **Teams appear to not yet fully understand the power of and their responsibility to share their results and the changes that led to them with others:** While teams are sharing their results with higher levels and do moderately well in sharing results with others at their sites, sharing information about what changes led to those results with those at their site and information about how to implement the change with other sites is infrequent in many countries (particularly Honduras and Guatemala), as is using information from other sites to improve care.
- **The Synthesis Form facilitates sharing and can be coupled with other exchange mechanisms:** At the time of the evaluation, three countries had introduced a generic Synthesis Form to teams in preparation for sharing at learning sessions. Various methods for sharing

synthesized information were used: paper forms, PowerPoint presentation without a paper form, and a poster format for the single most important change. Still more learning is needed about the process of synthesizing and sharing learning across teams. Most sharing took place during learning sessions, through presentations, discussions with colleagues, posters, and photocopied talking points.

- **Efforts are needed to improve sharing of how to implement change concepts reported by other teams, which has implications on cost and resource planning:** Of those countries for which DAS scores were available and that used the Synthesis Form (Benin and Uganda), 60–65% of teams did share information about how to implement changes with other teams: Other countries had much lower values. Similar patterns were seen for teams using information from other sites to improve care. These findings indicate that a tool or format to share specific information on changes facilitates the sharing and uptake of change ideas. However, a few teams mentioned that they could not always take up another team’s idea: *“There were other resources required that we did not have”*; *“We could not easily replicate what other sites had done”* (Uganda). Perhaps more understanding is needed to distinguish between a change and a change concept that may be more adaptable.

B. Satisfaction with and Perceived Value of the SES tools

Why This Is Important

Designed to help ease teams’ QI tasks, the SES tools were new to teams, something they had not seen or had to fill in before—yet designed to help ease their tasks in improvement. Using the tools was not mandatory: Completing them depended (and still depends) largely on the teams’ motivation to fill them out. Therefore, teams’ perceptions of the usefulness and added value of these tools will be important for their continued use.

Key Questions

- *What components of the SES tools were perceived as most helpful to teams?*
- *How did the new SES tools compare to those under previous documentation systems?*
- *Do teams and coaches intend to continue using the SES tools?*

Summary of Findings

All countries and almost all participants in the study recommended continued use of the SES tools. Reasons included their practicality, precision, and value in decision making and team work. Two hundred and one QI team members and 55 coaches provided their opinions on whether the tools were worth the time it took to fill them out and whether they wanted to continue using them. Table 12 presents the results and shows that team members and coaches almost unanimously called for continued use. QI team members generally found using the Journal and Synthesis Form worth the time investment, with no significant differences between countries.

Table 12: Team Members' and Coaches' Opinions: Usefulness of SES Tools

Tool	Statement	% of team members agreeing	% of coaches agreeing
		N=220	N=55
Journal	The time required to fill in the Journal was worth it.	82%	82%
	Teams should continue to use the Journal.	96%	98%
Synthesis Form	The time required to fill the Synthesis Form was worth it.	76%	100%
	Teams should continue to use the Synthesis Form.	92%	100%
Team-level Database	Teams should continue to use the Team-level Database.	99%	97%

Note: N=49 for QI team responses to the Synthesis Form, and N=56 for the database

Of the components of the Journal, perhaps the most “new or different” section was the Changes Worksheet, which asked teams to keep a list of changes as they were being implemented (with dates and an assessment of effectiveness). When asked how the Changes Worksheet helped them in their documentation and analysis tasks, overall, the responses were very positive (see Table 1313). Generally, team members from all countries except Honduras felt this was a useful component of their documentation duties.

Table 13: Team members' opinions: Changes worksheet

Statement	TOTAL	Tanzania	Honduras	Benin	Uganda	Swaziland	Cote d'Ivoire
% of QI team members who agree with the statement:	N=220	n=60	N=19	n=76	n=28	n=17	n=20
Worksheet was helpful for documenting changes we tested.	91%	92%	69%	93%	92%	100%	94%
Worksheet was helpful for noting when changes took place and if effective.	88%	90%	69%	88%	89%	92%	94%
Worksheet was helpful when annotating results.	83%	90%	56%	88%	78%	60%	89%
Annotating changes on the graph helps to better follow the effect of changes tested.	87%	93%	60%	89%	74%	93%	88%

QI team members and coaches appreciated the structured nature of the tools. Honduran coaches said, “We should continue with the SES tools because it is easy and practical, annotating graphs with letters and numbers. It is easier to manage”; “The use of the tools is important for better control of the information on what occurred.” A Beninese team member found structured documentation using SES tools to be more conducive to sharing information: “The content of the Journal is very helpful if filled out regularly. It is better than before, even if we don’t fill out the Journal regularly.”

Although only Uganda, Honduras, and Russia tested the SES tools with teams participating in the context of an ongoing collaborative, other countries reported on the benefits and challenges of the tools relative to what they had done before. Table 14 summarizes perceived benefits and challenges from interviews.

Table 14: Perceived benefits and remaining challenges of the SES tools

Benefits of the tools relative to previous systems	Remaining challenges with the tools
<ul style="list-style-type: none"> Journal captures process and change(s). Journal allows annotation of improvement data. PowerPoint (based on Synthesis Form) allows for comparison between teams. Current tools have more structure than older system. They better engage teams; promote teamwork. They encourage more complete documentation. They help clarify, in writing, the indicator definition. Run charts facilitate ongoing analysis of results. Tools make it easier to share innovations among teams. Tools are simpler and more user-friendly 	<ul style="list-style-type: none"> Journal can quickly become too bulky. Journal's Changes Worksheet is too complex in its categorization of changes. Journal does not show dynamics of teamwork or rationale behind team decision making. Tools require additional paperwork for staff who are already stretched thin. Process of introducing and adapting the tools requires more intense coaching and resource expenditure. SES is in some ways more complicated than previous documentation system. Tools require consideration of best strategies for institutionalizing the new system relative to the Ministry of Health system.

Most (71%) coaches and managers indicated that having introduced the SES tools, they would rate their overall system for *documentation and analysis* as “excellent” or “good” compared to 9% rating it “fair” and 3% rating it “poor” or “non-existent” (Table 15).

Of coaches and managers, 60% indicated that after introducing the tools, they rate their overall system for *sharing* as “excellent” or “good” compared to 31% rating it “fair” and 3% “poor” or “non-existent.”

Box 4: Changes facilitated by the SES tools

“Before using the Journal, we were more focused on documenting the meeting agenda and developing plans rather than documenting changes/PDSAs and analyzing our progress. Before using the PowerPoint template based on the Synthesis Form, it was hard to compare teams as they were presenting different types of information” (Russia).

Table 15: Coach/manager ratings: Documentation, analysis and sharing after introducing SES tools

Coaches and managers	N=35
System for documentation and analysis	
% rating current system for documentation and analysis as “excellent” or “good”	71%
% rating current system for documentation and analysis as “fair”	9%
% rating current system for documentation and analysis as “poor”	3%
% of coaches/managers not reporting	17%
System for sharing lessons learned	
% rating current system for sharing as “excellent” or “good”	60%
% rating current system for sharing as “fair”	31%
% rating current system for sharing as “poor”	3%
% of coaches/managers not reporting	6%

Key Learning

- QI team members and coaches said the SES tools were useful and beneficial in providing a more structured and participatory approach for documentation:** They also commented that the tools facilitated organizing information around their QI efforts in “one place” that was “easy to follow up and less loss [prone].” In this sense, the Journal served as a guide through the QI learning process. Effective implementation often required a change in behavior among team

members. Building a participatory process of documenting changes and measuring results also enabled teams to better work together. As two team members stated, “Use of tool is not one person’s task but team work. This strengthened our team” (Tanzania); “This shares the work and the ideas, [it helps] not only in filling out a document, but also [in] obtaining the information” (Honduras).

- **QI teams and coaches were largely positive about the SES tools as compared to previous systems—or in some cases, a lack thereof—and almost all called for continued use:** Satisfaction with the tools was fairly consistent across countries and for QI team members, coaches, and collaborative managers. In general, both QI team members and coaches agreed that it was worth the time required to fill out the tools and that they should be continued. Common reasons to continue using the tools included: is easy and practical to use; improves documentation; supports decision making, improves communication, and helps analyze problems; engages health workers from other departments; and allows teams to better track their progress. Someone from Benin said, “It facilitates synthesis. The Journal is a summary of it all. Even if you weren’t there, you can read about all the activities done.”
- **Implementing the SES tools requires more investment of resources to build capacity and ensure adequate follow-up and is perceived by some as more complicated than a previous system:** QI team members acknowledged that these improvements in documentation, sharing, and analysis required more time and follow-up on the process of collecting information and that there was a learning curve among team members and coaches to learn and understand the tools. The following statement from Uganda reflects the balance between the benefits of the SES tools and the time and resources required (especially initially): “The SES tools have organized the site teams’ efforts in documenting QI activities, though they present additional paperwork to already stretched staff. The process of introduction required more intense coaching and support to QI teams, though it also yielded better results.”
- **Additional time and resource investment is worth the perceived gains in team documentation, analysis, and sharing:** Although 82% of respondents said the time spent completing the SES tools was worth it, that percentage was less than that of those who said their use should be continued (96%). This difference may reflect a need, in some cases, to streamline the tools to the essential components and in all cases to build the teams’ capacity to use the tools correctly. One QI team member reported, “Before it took us two days to fill out the documents. Now it only takes an afternoon” (Honduras). The efforts invested during this learning curve do pay off for some teams: “The Journal serves as a guide and a path we should follow. We know what we want, what the priorities are, and where we are going” (Benin).

Box 5: Reasons to scale up SES tools

HCI Uganda has spread use of the SES tools to all sites because:

- “The tools systematically outline and document the efforts made by QI teams to improve the quality of care;
- The teams’ efforts to achieve an objective are all in one Journal;
- The Synthesis Forms summarize the teams’ efforts over the whole action period.”

IV. SUPPORTING USE AND INTEGRATION OF SES TOOLS IN ROUTINE QI ACTIVITIES

Why This Is Important

The interim synthesis of findings related to testing the SES QI team tools for June–December 2008 indicated that many teams either delayed using the Journal or were not using it properly to document and analyze what they were doing on an ongoing basis. As a result, countries used several strategies—including coaching visits and preparation for learning sessions—to further assist teams to understand and use the tools as part of routine QI activities. Critical to the sustainability of any learning system for improvement is the ability to link documentation and analysis with what teams are doing day-to-day and to build on factors that facilitated this process while mitigating those that did not. This section discusses teams’ and coaches’ perceptions of the tools’ ease of use and the investment required to integrate the them into QI teamwork; it also identifies what helped or hindered implementation across countries.

Key Questions

- *To what extent were the SES tools easy to use by teams?*
- *What kind of support was provided by coaches and managers to facilitate integration of SES tools?*
- *What factors facilitated or hindered effective implementation of the tools?*

Summary of Findings

Ease of integration and use: Table 16 presents results on perceived ease of using the SES tools at the endline (after more than a year of using the tools). Most team members (71%) stated that the Journal was easy to understand and use, as were the Synthesis Form (78%) and Team-level Database (80%), although most teams also indicated that assistance was needed from their coach to correctly fill out the Journal (85% of team members) and Synthesis Form (96%). Coaches responded similarly: SES Journal (82%), Synthesis Form (82%), and Team-level Database (76%). These trends were comparable across countries, although teams in Uganda (59%) and Honduras (56%) said less often that the tools were easy to use. Fewer than half of team members and coaches felt that the analytical questions on the Synthesis Form regarding unanticipated effects and alternative explanations were easy for teams to understand and complete. There was largely positive feedback regarding the database and the ability of teams (80%) and coaches (76%) to understand and use it.

Asked what components of the SES Journal and Synthesis Form were “easiest to use,” “needed more time” for teams to effectively use, or were “still difficult” to use, most teams reported that the Journal’s Planning Page, Changes Worksheet, and Graphing Template were “easiest to use,” as were the Synthesis Form’s sections for describing effective changes. Components of the tools that were “still difficult” for many teams were the annotation component of the Journal Graphing Template and describing ineffective changes and unanticipated results on the Synthesis Form. However, this varied significantly by country, as shown in Table 17.

Table 16: Team members' and coaches' opinions: Ease of use and understanding of SES tools

Indicator: % of QI team members who agreed with the statement	TOTAL	Tanzania	Hon-duras	Benin	Uganda	Swazi-land	Cote d'Ivoire
QI Team Members	N=220	n=60	n=19	n=76	n=28	n=17	n=20
SES Journal							
The Journal was easy to understand and use.	71%	80%	56%	68%	59%	100%	61%
We needed assistance from our coach to fill out the Journal correctly.	85%	90%	63%	82%	93%	93%	77%
The graphing template for indicators in the Journal was easy to complete.	82%	82%	75%	86%	71%	92%	81%
SES Synthesis Form and Team-level Database							
The Synthesis Form was easy to understand and use.	78%	N/A	75%	100%	57%	100%	N/A
We needed assistance from our coach to complete the Synthesis Form correctly.	96%	N/A	100%	88%	96%	100%	N/A
Questions on unanticipated effects and alternative explanations in the Synthesis Form were easy to understand.	46%	N/A	50%	63%	29%	64%	N/A
The database was easy to understand and use.	80%	77%	67%	N/A	75%	100%	N/A
Coaches	N=55	n=14	n=15	n=11	n=11	n=4	No data
SES Journal							
Teams found the Journal easy to understand and use.	82%	93%	80%	91%	55%	100%	N/A
Teams found the Graphing Template for indicators in the Journal easy to complete.	73%	71%	60%	82%	82%	75%	N/A
SES Synthesis Form and Team-level Database							
The Synthesis Form was easy to understand and use.	82%	N/A	75%	N/A	78%	100%	N/A
Questions on unanticipated effects and alternative explanations in the Synthesis Form were well understood.	44%	N/A	67%	N/A	22%	75%	N/A
Teams found the database easy to understand and use.	76%	89%	91%	N/A	0	33%	N/A

We also asked teams to rate, by using three categories, their overall progress in using the Journal: *great progress*: “We’ve done a good job integrating the Journal into our work with routine use that documents and analyzes most of our learning”; *moderate progress*: “We’ve done a good job integrating the Journal into our work, but it is not consistent, and not all of our learning is documented or analyzed”; and *little progress*: “We’ve attempted to integrate the Journal into our work, but there are still several obstacles we have not yet overcome.” Results are in Table 18: 39% rated themselves as having made great progress in using and integrating the SES tools into routine activities, while 32% rated themselves as having made moderate progress and 24% little progress. This varied significantly among countries ($p=0.00$).

Table 17: Country evaluations: Ease of use of various SES tool components

	Easiest to use	Needed more time	Still difficult
<i>Journal</i>			
Planning Page	Tanzania, Benin, Uganda, Russia	Honduras	
Changes Worksheet	Honduras, Benin	Uganda	Honduras
Graphing Template	Tanzania, Benin, Uganda	Honduras, Russia	Benin, Russia
Annotation component		Tanzania, Benin, Russia	Benin, Uganda, Russia
<i>Synthesis Form</i>			
Describing effective changes	Uganda, Russia		
Describing ineffective changes	Russia	Uganda	Uganda
Describing barriers to overcome and explaining how this was done	Russia, Uganda	Uganda	
Explaining reasons for lack of success	Russia	Uganda	
Describing unanticipated effects	Uganda, Russia	Russia	Uganda
Presenting recommendations	Uganda		Uganda, Russia
<i>Team-level Database</i>			
Getting access to computer	Tanzania, Honduras		
Entering data	Tanzania, Honduras, Uganda		
Annotating graphs		Tanzania	Uganda

Note: Several coaches and collaborative managers from each country evaluated ease of use, so countries are included in multiple categories depending on their responses.

Table 18: Teams' opinions: Their progress in using the journal

		Total N=66	Tanzania n=10	Honduras n=11	Benin n=37	Uganda n=8
QI Teams	Category description					
% of teams that indicated that they had made " great progress "	<i>We've done a good job integrating the Journal into our work with routine use that documents and analyzes most of our learning.</i>	39%	0%	18%	57%	37.5%
% of teams that indicated that they had made " moderate progress "	<i>We've done a good job integrating the Journal into our work, but it is not consistent, and not all our learning is documented or analyzed.</i>	32%	80%	18%	22%	37.5%
% of teams that indicated that they had made " little progress "	<i>We've attempted to integrate the Journal into our work, but there are still several obstacles we have not yet overcome.</i>	24%	20%	55%	16%	25%
% of teams not reporting		5%	0	9%	5%	0
% teams reporting that the SES tools has influenced "better than before" how they document, analyze, and share.		89%	80%	100%	92%	75%

Efforts by coaches and collaborative managers to support integration: Collaborative managers and coaches used several strategies to help teams integrate the SES tools into routine QI activities,

including identifying the core resources and competencies needed by teams and coaches [Table 19]. Coaches and teams reported that developing these competencies was important in stimulating the use of and satisfaction with the tools, as becoming familiar with the tools enabled their rapid and effective use. The need to strengthen these competencies was a key point in the report from Honduras: “Introducing the Journal demonstrated that the coordinator, coaches, and teams have difficulty in designing objectives, identifying failures and changes, and documenting the analysis and results (including graphing). Introducing the Journal was an opportunity to bring support to solve these problems.”

Table 19: Support provided to teams to strengthen core resources and competencies

Key resources and competencies	Support provided from level above
Collaborative managers and coaches	
<ul style="list-style-type: none"> • Funds • Computers/supplies • Availability of staff • Explain the objective of the SES tools to leaders and QI teams • Able to coach others in how to use the SES tools • Able to adapt and manage the Team-level Database 	<p><i>Level above: HCI Chevy Chase</i></p> <ul style="list-style-type: none"> • Orientation via presentations on WebEx • Occasional visits to the field • Support via telephone, especially for using the Collaborative-level Database • Feedback on potential adaptations to tools • Training in QI principles • Frequent mentoring and follow-up • Pre-prepared forms, examples, and case studies
QI teams	
<ul style="list-style-type: none"> • Able to meet and work as a team • Motivate team members to fill out tools • Able to interpret and explain data • Understand how to link the problem statement, process analysis, and tested changes 	<p><i>Level above: Coaches and collaborative managers</i></p> <ul style="list-style-type: none"> • Financial support for meetings • Incentives • Time dedicated to explanation during learning sessions • Coaching and mentoring • Feedback on/ validation of contents of tools • Pre-filled examples • Completing the tools with the coach

It is interesting that collaborative managers and coaches often remarked on the logistics as well as financial and human resources required to support the implementation of SES tools, especially during the introduction phase when teams needed more support. Team members offered suggestions to improve support for such implementation: integrate support and guidance with district, regional, and central health management systems; provide regular support and refresher sessions every three months on how to fill out the Journal, and build regular explanation and support on using the tools into program activities.

Factors facilitating and hindering SES integration: Collaborative managers and coaches identified several factors, listed in Table 20, that contributed to or hindered SES integration. Common facilitating factors included the teams’ ability to work together, ownership of the SES process and tools, team member engagement, supportive and consistent coaches, use of relevant examples and modified tools, ensuring available resources for carrying out QI processes (meetings, supervision, etc.), and training teams and coaches for improved documentation and analysis.

Factors that often hindered effective use and integration of the SES tools included lack of in-depth understanding of the tools or documentation, analysis, and sharing process the tool were meant to support; a dysfunctional team; perceptions that the tools required too much time; lack of follow-up and support from coaches; and lack of resources, such as a computer for using the database. In the introductory phase of implementation of the SES tools, teams that had not yet begun using the Journal or were not using it properly reported finding the new tools confusing, being unsure of how to fill them out, and/or lacking sufficient guidance.

Table 20: Factors facilitating and hindering SES integration: Four countries combined

Facilitating factors	Hindering factors
<ul style="list-style-type: none"> • Team’s ability to work together • Ownership of the process and tools • Engagement and attitudes of individuals on the team • Relevant examples • Persistent and consistent dialogue with stakeholders • Adaptation of the tools to be simpler and easier to follow • Consistent messaging and support by core HCI team/ coaches • Preparing coaches with a guide to identify and document problematic areas • Preparatory meetings before site visits • Previous training in documentation, analysis, and sharing • Regional funds to finance meetings, supervision visits, and supplies 	<ul style="list-style-type: none"> • Lack of in-depth understanding of the tool(s) • Dysfunctional teamwork (uneven distribution of work) • Time commitment discouraged learning the SES tools • Lack of follow-up and support from coaches • Lack of teamwork and extra time (especially in the beginning) and additional supervision from coaches • Lack of a computer for the database

Note: This is a summary of responses from QI team members, coaches, and collaborative managers collected by interviews and group discussions in Tanzania, Honduras, Benin, and Uganda.

Response rates were similar when disaggregated by country (Table 21). In Tanzania, an additional aspect that supported implementation of the SES tools was organizing the Journal by improvement objective to ensure that the documentation and analysis process was easy to follow and aligned with the current structure of their QI work. Another facilitating factor was having one person responsible for completing the Journal, coupled with a pre-filled example to guide teams on what information was most useful to capture and review over time. In Honduras, Benin, and Uganda, coaching support, training, and improvement objective organization were also noted as helpful for implementation of the tools, including assigning responsibility for updating the Journal to one person (only Honduras). Hindering factors did not vary significantly among countries and were mostly lack of guidance, uncertainty on how to use the Journal, lack of time, and having too many indicators and changes that were not well organized in the tools.

Table 21: Factors facilitating and hindering SES integration, by country

	Tanzania	Honduras	Benin	Uganda
Facilitating factors	<ul style="list-style-type: none"> • SES training (80%) • Advice and support from coach (80%) • Organized tools by improvement objective, easy to follow (70%) • Having one person responsible for filling out Journal (70%) • Using a pre-filled example or case study (60%) 	<ul style="list-style-type: none"> • Assigning responsibility to fill out Journal (64%) • Advice and support from coach (55%) • Organized tools by improvement objective, easy to follow (55%) • SES training (45%) 	<ul style="list-style-type: none"> • SES Training (68%) • Advice and support from coach (62%) • Organized by improvement objective, easy to follow (46%) 	<ul style="list-style-type: none"> • SES training (75%) • Advice and support from coach (75%)
Hindering factors	<ul style="list-style-type: none"> • Lack of regular support (50%) • Too many indicators and changes, takes too much time (50%) 	<ul style="list-style-type: none"> • New tool, confusing (82%) • Unsure of how use (64%) • Little guidance (45%) • Lack of regular support (45%) 	<ul style="list-style-type: none"> • Unsure of how to use (19%) • Insufficient guidance (14%) 	<ul style="list-style-type: none"> • Unsure how to use (25%) • New tool, confusing (25%)

Remaining areas for improvement for integration of SES tools: Collaborative managers and teams were asked, after their experience with using SES tools, what kinds of changes they would make to their processes to integrate and support the SES tools in the future. Consistent responses across countries included: strengthening field support and hands-on mentoring, increasing practice and training, spreading the use of the tools to additional team members, continuing to improve instructions and

examples, and reducing the length of the tools. Suggestions that came from one or two countries included:

- **Tanzania/Russia:** Translate the tools into the local language; introduce the SES tools to new collaboratives rather than in existing collaboratives, i.e., from the start.
- **Honduras:** Incorporate training of coaches in the QI team training; ask teams with SES experience to promote the tools to other teams; give incentives to coaches for following up on the tools.
- **Swaziland:** Introduce the tools while introducing QI concepts to new teams.

Additional recommended support for teams included training manuals, job aids, and/or case studies in various technical areas to demonstrate use of the SES tools. Such support for coaches and collaborative managers included resources to support training and field visits; increased capacity to modify the database and track indicators over time; and institutionalizing documentation, analysis, and sharing processes in coach training and other QI preparatory activities.

Key Learning

- **QI teams and coaches found the SES tools easy to understand and use, although some had difficulty with the analytical components on the effectiveness of changes:** Team members and coaches provided highly positive feedback on the ease of understanding and using the Journal, Synthesis Form, and Team-level Database. However, during the synthesis process, difficulties remain for teams in showing the link between changes and results; such links can often be made apparent by annotating graphs or providing a statement to justify ruling out the influence of confounding factors. Teams are also challenged in identifying ineffective changes and sharing any unanticipated effects, such as increased patient satisfaction or a reduction in the time a service takes. Nonetheless, there was strong consensus for continued use of the tools and the ability of teams to understand and implement them when provided sufficient guidance. In the words of the Tanzania report, *“An apparent lesson is that most providers prefer simple and practical aids that can produce fast and visible results, such as the run charts through which QI teams could monitor and compare performances.”*
- **Collaborative managers and coaches provided a range of support to ensure adequate resources and competencies for implementation of SES tools:** A common theme across all levels was the need for consistent support documentation and sharing processes through capacity building; examples, preparation, and communication; simplifying and customizing the tools; and financial and human resources. Thus, successful implementation of the SES tools relies on myriad resources and activities targeted to coach and team competencies as well as ongoing capacity building for effective and sustainable analysis and learning. This support runs from HCI Chevy Chase to collaborative managers, from them to coaches, and from them to teams. New support mechanisms may also include team-to-team facilitation. URC’s Uganda staff advised, *“Ensure that coaches fully understand what the tools were designed to capture and are comfortable with them before they introduce them to the sites.”*
- **Effective implementation of the SES tools is facilitated by linking tools with ongoing processes for documenting, analyzing, and sharing:** Coaches and collaborative managers indicated that the SES tools can be successfully implemented only if the foundation for teamwork, dedicated time, coaching and support, and the necessary infrastructure are in place. Ensuring teams have a clear understanding of how to record, track, and interpret their data is key to effectively use the tools. More is needed to institutionalize supportive processes for teams and coaches in documenting, analyzing, and sharing their QI experiences. As Tanzania reported, this is also true for institutionalizing these processes throughout the system at large: *“The practicality of using [the tools]*

system-wide requires further exploration....Spread beyond these [pilot] units will be guided by the national QI framework but also will need champions to sell it to the relevant leadership.”

- **Lack of training and guidance, poor organization of tools, and irregular support hinder effective implementation of SES tools among coaches and teams:** Coaches and teams identified many hindering factors, including lack of understanding of how to use the tools and how best to add them to existing processes. Many such factors were mitigated by developing support materials and better defining the extent of documentation (e.g., which indicators and/or improvement objectives) as well as how often and in what form documentation and sharing would be conducted. Incorporating the tools into monthly team meetings and coaching visits helped further address initial hindering factors. HCI Russia advised, *“Focus on motivating teams to document their QI work and collect, interpret, and present data as graphs. These [annotated data] can be used to present at other meetings, not only learning sessions. Once the teams realize the practical value of documenting their work, the documentation process will likely become routine.”* Challenges remain, however, for teams whose members often rotate among sites. HCI Swaziland stated that *“The dynamic nature of health facilities affects our consistency in the use of the SES tools and tracking of changes, as health care workers work in shifts and on a rotational basis in different units/ departments in the health facility.”*

V. CONCLUSION: WHERE DO WE GO FROM HERE?

A. Summary of Main Study Findings

The SES tools were created to help support the collaborative learning system, by which teams examine which of their changes were most effective and share this learning with other teams in the collaborative. The tools were originally tested with 65 teams in six countries, beginning in the Summer of 2008. Many countries made modifications and simplifications to the SES generic tools. By January 2010, over 660 teams in 10 countries had SES Journals, and 400 teams in five countries had some version of the SES Synthesis Form⁶. The endline evaluation results come from five of the six original test countries and three additional countries; these results are based on interviews with 201 QI team members in 66 teams, 55 coaches, and 10 collaborative managers and an analysis of the performance of 103 teams.

Evaluation of performance related to documentation, analysis, and synthesis and assessment of use of the tools shows some variations, with some tasks completed well, and others not. Yet, teams, coaches, and collaborative managers generally support continued use of these tools, as they believe the tools have helped teams improve in documenting and analyzing data and sharing key learning about changes that result (or not) in improvement.

The learning system functions when key tasks of documentation, analysis, and sharing are carried out by teams. However, while the SES tools' design implicitly incorporates the results of these key tasks, QI team training and support activities may or may not have made explicit expectations related to these tasks. The tools themselves cannot solve the problems of weak documentation, analysis, and sharing: They can only facilitate these processes, and only when teams are motivated and competent to carry out these tasks.

In summary, the main findings of the SES endline evaluation are:

- **Critical learning system skills in documentation, analysis, and sharing, particularly related to specific changes, need strengthening:** Many QI teams were still weak in their performance of documenting tested changes, including: regularly charting indicator data, annotating charted data with changes, and sharing changes leading to results. The evaluation found that teams almost universally needed capacity building and coaching support in these areas. As noted, the tools themselves do not generate skills.
- **The tools were widely adapted across the various countries, and significantly simplified in many, but all versions had several key elements in common:** The tools were intended to be and indeed were adapted in each country to the local improvement context, both in being simplified and in having new content added (e.g., integrating them with existing team tools). The fundamental features of the Journal -- keeping teams focused on what they want to change in their health care processes, what changes they actually have implemented, and analysis of results in light of changes (annotation of time series charts of results indicators) -- can be seen in all adaptations. Key features of the Synthesis Form -- identification of changes worth sharing based, evidence that change leads to improvement, and documentation of key steps for implementing changes -- also remained.
- **QI teams and collaboratives found value in the structure provided by the SES tools:** QI teams, coaches, and collaborative managers reported that the tools provided structure to the QI process at the team level and were generally easy to use. While teams often displayed some initial

⁶ In three of these five countries, teams were using the structure of the SES Synthesis Form transformed into a PowerPoint presentation or poster for presenting at a learning session.

resistance to the tools' application, with sustained use, most teams recognized the value of using the tools.

- **Any tool used to strengthen documentation, analysis, and sharing at the QI team level needs to be integrated into QI team processes and coaching activities and aligned with other documentation/ reporting tools:** In several cases, SES tools were added on top of other tools, rather than being introduced as part of an integrated set of tools for teams. This increased the perception of added work. Use of the tools was most effective when it was a shared responsibility of the team leader and another team member, when filling in and analyzing information was integrated into regular QI team meetings, and when synthesis of findings was linked to learning sessions and other sharing opportunities.

B. Planned Next Steps for Country Programs in Improving Use of SES Tools

Many of the countries testing the SES tools summarized their next steps relative to the use of these tools in the conclusion of their country reports. Two common plans were to 1) expand use of the SES tools and 2) widen knowledge of SES tools to a national audience through reports, case studies, and presentations. Each country's specific plans are summarized in Table 22.

HCI Tanzania offered some specific ideas for further expanding the SES tools:

- Develop self-assessment/re-assessment tools for Regional and Council Health Management Teams and facility-based QI teams,
- Create another tool to support supervisors' evaluations of team members, and
- Devise a way to introduce a system to assess individual performance against priority changes and integrate QI activities into performance appraisals.

These short-term next steps for the SES tools should not be examined in isolation of the longer term vision for the learning system as QI programs and skills mature. Three countries piloting the tools (Tanzania, Honduras, and Swaziland) reflected how the Journal might change over time as QI team results become more stable and institutionalized. Interestingly, all three commented that at least in the near future, the Journal will always be necessary, though it may need to be modified to address new clinical areas. The quotations in Box 6 indicate that the SES tools in some form serve a key role in the learning system, but that they are not static – the tools will need to be adapted as the improvement work evolves.

Box 6: Need for continued use of the SES journal

“The health care system still needs a lot of improvement, for the time being and for years to come most sites will be implementing and testing changes. The question [of whether the Journal will always be necessary] should be asked maybe three or more years after [a team has] used the tools” (Tanzania).

“Teams get acquainted with SES tools with time, and the skill of process analysis also improves with time. After attaining the highest level, they may need to devise a tool that will ensure that they stabilize at the point of highest attainment. I believe QI has no limit” (Tanzania).

“What I can see is that the teams always will have problems to resolve, maybe [they can use the Journal] in another topic” (Honduras).

“Change will always be inevitable; as the workload and epidemiology of diseases change, there will always be a need for quality improvement, so the Journal will be revised to suit the then situation” (Swaziland).

Table 22: Next steps planned for the SES tools, by country

Tanzania
<p>Incorporate tools into the QI training manual</p> <p>Share reports with field staff, Ministry of Health, and relevant partners; use the reports to plan improvement changes to be integrated in training manuals</p> <p>Roll tools out countrywide and introduce them in agreements with new regions</p> <p>Support the spread of tools through structured QI training followed by supportive supervision and mentorship by Regional and Council Health Management Teams</p> <p>Harmonize the tools for use by other partners.</p>
Guatemala
<p>Simplify the Journal so that it will take less time to complete and be more appealing to teams</p> <p>Expand use of the (simplified) Journal to all teams in all collaboratives</p>
Honduras
<p>Publish case studies about successful teams and document their use of the tools</p> <p>Present a synthesis of successful cases during national meetings</p> <p>Share written reports with partners, donors, and teams via the internet</p> <p>Introduce the Journal at the national level</p> <p>Introduce the Synthesis Form in all sites using the Journal</p> <p>Promote meeting to share the learning of the teams and use the Synthesis Form</p>
Russia
<p>Use the Journal and PowerPoint template for all current activities under the Treatment, Care and Support Collaborative</p> <p>Use the Journal, filled out by coaches, as a tool for providing methodologically structured feedback on teams' work and distribute completed Journals at learning sessions twice yearly</p> <p>Continue using the Journal on www.healthquality.ru for maternal and newborn health teams</p>
Swaziland
<p>Document what the QI teams have done, the results they have achieved, and other lessons learned</p> <p>Create an "enhanced implementation package" to be shared internally within the collaborative and spread to new sites</p> <p>Increase the number of sites using SES tools for QI activities</p> <p>Share QI results and SES reports in HCI sites with the National AIDS Program</p> <p>Harmonize SES tools for use by the National AIDS Program and other partners</p>
Uganda
<p>Continue to use SES tools as the standard DAS tools at all sites.</p> <p>Modify the DAS Scoring Worksheet to track progress in documentation by QI teams in the data/monitoring collaborative and other collaboratives</p> <p>Re-design the Collaborative-level Database with pre-entered indicators for districts participating in the district collaborative</p>

VI. NEXT STEPS FOR THE USAID HEALTH CARE IMPROVEMENT PROJECT

The general conclusions and specific country next steps suggest a few broad areas for action related to HCI's efforts to generate an effective learning and improvement system, and how results of this evaluation help move us forward. The widespread dissemination of the tools is encouraging, but evaluation of performance results for 103 teams found that work remains in our efforts to ensure solid processes for documentation, analysis, and sharing at the QI team level and effective consolidation, analysis, and synthesis at the collaborative level.

These results impel us to ask some questions about how much documentation is really needed (providing added value without overburdening teams and collaborative managers), how can the tools be simplified, and how can collaborative managers and others make best use of this documentation. The rich data from this evaluation have helped HCI staff articulate several strategies for moving forward to establish effective learning systems for health care improvement:

- 1. Articulate clear expectations of minimum documentation, analysis sharing and synthesis at QI team and collaborative level to ensure an effective learning system:** Use the experience of testing the SES tools and the endline evaluation to develop a minimal set of clear standards and expectations for QI teams and collaboratives and other large-scale improvement efforts related to documentation, analysis, sharing and synthesis of learning: The SES tools (in all their variations) are just a mechanism to help teams carry out important tasks related to learning and sharing what yields improvement. Box 7 presents those few key tasks that are the crux of quality improvement and collaborative learning, and should become the minimalist core of the learning system and therefore the focus of the SES tools.
- 2. Monitor and use these learning system standards for documentation, analysis, sharing, and synthesis to improve these processes at team and collaborative or program levels:** These tasks also need to be translated into explicit expectations for QI teams and used to build capacity and guide coaching and team support. The key tasks, outlined in Box 7, can serve as a simple set of standards to monitor and evaluate QI team and collaborative performance related to documentation, analysis, sharing, and synthesis. If countries wish, they can use the DAS Scoring Worksheet, an innovation developed for the SES endline evaluation to assess a more detailed set of such standards. Although it was designed as a one-time, cross-sectional measure of QI team performance, it provides an excellent basis for monitoring performance and testing changes that could lead to improvement in documentation, analysis, sharing, and synthesis. A parallel set of standards and tools has been developed for the

Box 7: HCI learning system standards

Key QI Team Tasks:

1. Maintain a record of changes being tested (dates and description)
2. Graph indicators on time series chart and annotate with changes tested regularly
3. Share tested changes and results with others

Key Collaborative Tasks:

4. Maintain up-to-date inventory of changes being tested at each site
5. Aggregate and analyze results in light of tested changes across sites
6. Regularly consolidate and share learning about changes being tested within the collaborative
7. Package and share learning about effective changes to those outside the collaborative, both at national and global level (HCI Portal)

collaborative level to assess the compilation, analysis, and sharing of effective changes within and beyond the collaborative. However, it would be extremely useful for all collaboratives to promote and track, at a minimum, the seven key tasks listed in Box 7.

3. **Produce a simplified, generic documentation journal and synthesis form, based on the seven learning system standards, and annotate it with the various adaptations that countries have made:** Countries have made varying modifications to the SES Journal and the presentation format of the Synthesis Form. We do not recommend further development of a single, standardized set of tools that all countries would be expected to use. Rather, we recommend consolidating the learning and experiences generated in various countries surrounding the SES tools and allowing collaboratives and QI programs to develop or choose the tools they feel best fit the context in which they are implementing improvement. By making available the experiences to date alongside the learning system standards, programs will have the flexibility to determine how to best achieve learning system goals of good documentation, analysis, sharing and synthesis.
4. **Continue to evaluate strategies for sharing changes across teams and synthesizing effective changes within and beyond a collaborative:** HCI is already engaged in studies of shared learning and spread of effective changes. These studies should continue to explore how to make this process as efficient and effective as possible.
5. **Link information generated through the collaborative level documentation, analysis, sharing and synthesis with broader knowledge management efforts:** The HCI Web Portal (www.hciproject.org) provides a mechanism for sharing documented efforts to improve care through tested changes in care organization. As teams improve their documentation, analysis, and sharing, HCI country teams need to invest time and effort to make this learning available to others through the Health Care Improvement Database and other sharing forums.
6. **Facilitate more frequent sharing among countries about effective processes used for documentation, analysis, sharing, and synthesis:** Many country programs expressed interest in having more frequent exchanges on these processes and on most effective changes. We believe that having a set of explicit yet simple standards for these key activities will facilitate sharing, as countries will be focusing explicitly on these tasks and will be able to share their strategies that lead to improvements in implementing these key QI processes.

APPENDIX A: INSTRUMENTS USES IN THE SES ENDLINE EVALUATION

Title	Information goal	From whom	Data collection method	Sampling recommendations
QI collaborative manager's template	Overall process of introducing, implementing, and modifying the SES tools used, and value	Collaborative manager/HCI office	Self-administered questionnaire to be filled in by HCI staff	All collaboratives that have used the SES tools over the past 3–15 months
QI team-level instruments				
QI Team Opinion Survey	Quantitative, structured feedback on all SES tools by teams using them	Individual team members from participating sites	Self-administered quantitative survey completed at site or during learning session	If administered during a learning session, we recommend that all QI team members present (hopefully at least 30) fill out this form (a 15- to 20-minute segment should suffice). If administered during coaching visits, please administer to 3 or 4 team members per site in 8–10 sites.
Endline QI Team Questionnaire	Process, use, and value of the Journal and Synthesis Form	Team members from QI teams using the SES tools	Semi-structured group discussion conducted at site or during learning session	Include QI teams that have had varied performance in using SES tools (high vs. low performers); QI teams that have been using the SES tools for different time periods (e.g., demonstration vs. spread phases), and primary care as well as higher level sites. We recommend sampling a minimum of 8–10 teams.
Coach-level instruments				
Endline Coach Questionnaire	Process, use, value, and support needed for SES tools (from the perspective of coaches)	Coaches supporting teams that use SES tools	Semi-structured group or individual discussion	Best if coaches from across regions, types of sites, and implementation phases are included to have as representative a sample as possible. Please aim for a minimum of 6–8 coaches.
Coach Opinion Survey	Structured feedback on all SES tools by coaches of participating teams	Individual coaches at participating sites	Self-administered quantitative survey completed at site or during learning session	Best to survey coaches from across regions, types of sites, and implementation phases to have as representative a sample as possible. Please aim for a minimum of 6–8 coaches.
QI Team DAS Scoring Worksheet	Quantitative measure to determine how well QI team is documenting, analyzing, and sharing information	Coach for each QI team	Can be collected simultaneously with the other instruments for coaches	We recommended a sample of 8–10 teams.

APPENDIX B: MODIFICATIONS TO THE SES TOOLS BY COUNTRY

Country: Collaborative topic	# pages	Instruc- tions	Improvement objective/ indicators	Problem or process analysis	Change categories	Graphing Template	Comments section
Team Journal							
GENERIC MODEL	8	Yes	Yes	Yes	Yes	Yes	Yes
Afghanistan: EONC	9	Yes	Yes	Yes	No categorization	Yes	Yes
Cote d'Ivoire: HIV/AIDS	18–20	No	Yes	Yes: flow chart, problem areas	Yes	Yes	No
Benin: EONC	35	Yes	Yes	Yes	Yes	Yes	Yes
Benin: Malaria	25	Yes	Yes	Yes	Yes	Yes	Yes
Benin: Community- based insurance scheme	21	Yes	Yes	Yes	Yes	Yes	Yes
Benin: Human resources	21	Yes	Yes	Yes	Yes	Yes	Yes
Guatemala: EONC	4	Yes	Yes	No	Yes	Yes	No
Honduras: EONC	6	Yes	Yes	Yes: flow chart	Yes	Yes	No
Niger: EONC	9	Yes	Yes	Yes	Yes	Yes	Yes
Niger: Human resources	19	Yes	Yes	Yes: flow chart, problem areas	Yes	Yes	No
Russia: Care/treatment	2	No	No	No	No listing	No	No
Russia: MNCH (web)	Varies	No	Yes	Yes	Yes	Yes	Yes
Tanzania: PMTCT/ART	3	No	Yes	Yes	No categorization	Yes	No
Uganda: PMTCT/ART	4	No	Yes	Yes	No categorization	Yes	Yes

Notes: EONC is essential obstetric and newborn care; OVC is orphans and vulnerable children; MNCH is maternal and newborn child health; PMTCT is prevention of mother-to-child transmission of HIV; and ART is antiretroviral therapy.

Country: Collaborative topic	# pages	Format	Instructions	Effective changes	Ineffective changes	Graphing template	Evaluation
Synthesis Form							
GENERIC MODEL	6	Paper	Yes	Yes	Yes	Yes	Yes
Benin Family Planning, Malaria, Human Resources	14–16	Paper	Yes	Yes	Yes	Yes	Yes
Russia: ART and MNCH	8 slides	Slides	Yes	Yes	Yes	Yes	Yes
Uganda: PMTCT/ART	9	Paper	No	Yes	Yes	Yes	Yes

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