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RESEARCH AND EVALUATION REPORT

Use of comparison groups in quality improvement: A review of analyses under the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project

JUNE 2020

This research and evaluation report was prepared by University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID) and authored by the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, drawing on previously completed ASSIST comparison group studies. The USAID ASSIST Project was made possible by the generous support of the American people through USAID.

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For more information on the work of the USAID ASSIST Project, please visit www.urc-chs.com/assist or write assist-info@urc-chs.com.

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Abbreviations

AMTSL	Active management of third stage labor
ANC	Antenatal care
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
CEA	Cost-effectiveness analysis
DID	Difference-in-difference
HIV	Human immunodeficiency virus
MNCH	Maternal, newborn, and child health
OVC	Orphans and vulnerable children
PDSA	Plan-study-do-act
QI	Quality improvement
URC	University Research Co., LLC
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Introduction

While evaluations of quality improvement interventions often show significant improvements in performance, they often lack comparison groups. The USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project was mandated to validate 10% of country-reported indicators, conduct economic analysis in at least one activity in each country and collect data from comparison sites for 10% of country-reported indicators. This report synthesizes findings from these comparison group analyses.

Methodology

We reviewed ASSIST reports that included data from comparison sites for the following information: methodology, content area, and key findings. Comparison group analyses from eight countries were included in this synthesis report. A total of 63 indicators were compared for anemia, HIV, maternal, newborn, and child health (MNCH) and orphans and vulnerable children (OVC) programs.

Results

Follow-up time varied from five to 14 months across studies. Findings showed that improvements were greater in ASSIST sites compared to non-ASSIST sites for more than half the indicators (38 out of 63 indicators). All country analyses reported improvements in at least one indicator. Overall, indicators with high baseline values showed less improvement over time.

The main limitation of these comparison analyses is that country reports did not include specific information to assess the extent to which comparison sites were similar to intervention sites. Reports also failed to describe contextual factors that may have an impact on performance. The heterogeneity in methodological approaches and follow-up time also limits our ability to compare findings across studies.

Conclusions and Recommendations

This synthesis of comparison analyses conducted under ASSIST contribute to our understanding of the overall impact of quality improvement approaches in improving care. Overall, improvements were greater in ASSIST sites compared to non-ASSIST sites. Findings are, however, subject to limitations due to differences in methodologies and inadequate detail about sites' characteristics. Contamination and high baseline performance may have diluted differences between ASSIST and non-ASSIST sites. While classical experimental designs such as randomized trials may not be feasible in the context of complex interventions, future comparison group studies should use stronger methods to assess effectiveness, select comparison sites that are similar to ASSIST sites, describe key contextual factors, and include longer follow-up time to assess the sustainability of improvement approaches.

I. INTRODUCTION

The objective of the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project was to build host countries' capacity to apply evidenced-based quality improvement (QI) methods to improve the effectiveness, efficiency, patient/client centeredness, safety, accessibility, and equity of health care. ASSIST relied heavily on the improvement collaborative approach based on the Breakthrough Series Collaborative to meet its objectives (Institute for Health Care Improvement, 2003). With the collaborative improvement approach, a large number of teams or sites work together to improve a specific area of care. The collaborative approach combines teamwork, team learning, measurement of quality indicators, and coaching. In collaboratives, teams use plan-do-study-act (PDSA) cycles to measure the impact of changes tested. Using this approach, the USAID ASSIST Project played an important role in improving health care processes in a diverse set of health areas in 46 low- and middle-income countries.

Accurate measurement and correct interpretation of relevant data is key to QI in complex health systems (Berwick 2012). Improvement data produced by country programs are often extracted from facility records and reported by health providers and managers at district and regional levels. The implementation of improvement activities through methods such as improvement collaboratives often results in large improvements in processes of care. The evaluation of the application of 27 collaborative improvements in 12 countries by the USAID Health Care Improvement Project, ASSIST's predecessor, found large effects with average increases in performance of 52 percentage points (Franco and Marquez, 2011). However, studies using a comparison group are lacking (National Academies of Sciences, Engineering, and Medicine, 2015).

Under the ASSIST Cooperative Agreement, the project was mandated to collect data from comparison sites for 10% of country-reported indicators. Comparisons provide counterfactuals to determine what would have happened in the absence of the improvement activity. Collecting data from comparison groups helps determine the change in indicators that is attributable to the quality improvement intervention, an essential component of establishing effectiveness. Valid comparisons are also an essential component for determining programs' cost-effectiveness.

This report reviews and summarizes findings from comparison group analyses conducted under ASSIST.

II. METHODOLOGY

We reviewed all reports generated from individual comparison group analyses conducted by the USAID ASSIST Project and examined them for the following information:

- Comparison methodology
- Indicators compared
- Key findings

All research and evaluation and technical reports including a comparison group component were reviewed. Reports were excluded from this synthesis if they showed changes in performance in ASSIST and non-ASSIST sites but failed to include baseline and end line values.

III. RESULTS

A. Sample Characteristics

Comparison group analyses from eight countries were included in this synthesis report (Burundi, Cote d'Ivoire, Georgia, Kenya, Mali, Malawi, Tanzania and Uganda). A total of 63 indicators were compared for anemia, HIV, maternal, newborn, and child health (MNCH), and orphans and vulnerable children (OVC) programs. Comparisons conducted as part of cost-effectiveness analyses (CEA) that only showed differences in performance attributable to the intervention without baseline and end line values for both groups were excluded from this synthesis report.

The list of comparison group reports reviewed for this synthesis paper is presented in the **Appendix**.

B. Key Findings

Results of the comparison groups analyses are summarized in **Table 1**. Comparison analyses in Georgia, Kenya, Tanzania, and Uganda were conducted as a component of cost-effectiveness analyses. The analysis in Malawi was part of a formal evaluation, while those in the remaining countries (Burundi, Cote d'Ivoire, and Mali) were conducted to meet the comparison group mandate. Seven of the eight analyses relied on review of clinical records to compare the performance of indicators in ASSIST and non-ASSIST sites, while one country (Malawi) used a household survey. With the exception of Mali, where concurrent comparisons were not possible, all analyses included in this report show concurrent baseline and follow-up values for both intervention and comparison sites. The Mali analysis used a historical control for the first six months of the intervention. When baseline and end line data were collected over a period exceeding one month, reports compared the first month of baseline data to the last month of end line data.

Overall, findings revealed that improvements were greater in ASSIST sites compared to non-ASSIST sites for 60% of the indicators (38 out of 63 indicators) over a follow-up time period that varied from five to 14 months across studies. All country analyses reported improvements in at least one indicator. This determination was made using difference-in-difference (DID) p-values for statistical significance for five country analyses (four cost-effectiveness analyses and one formal evaluation) and comparison of time series charts for the remaining three country analyses. Indicators with high performance at baseline such as those in Kenya showed less improvement over time. The lowest reported performance at baseline was 0%. One report specified that lack of documentation or missing data on compliance with indicators of quality of care were recorded as not compliant.

Overall, country reports did include some but not enough information on site selection or the extent to which comparison sites were similar to intervention sites. A description of key contextual factors that may have had an impact on performance was also lacking. In addition, overall, the reports failed to describe the intensity of the QI activities or list which and how many components of the QI intervention ASSIST facilities received (i.e., number of coaching visits, number of learning sessions, number of providers trained, number of changes implemented).

Table 1: USAID ASSIST comparison group analyses

Country	Content area	Methods	Indicators compared	Key findings for each indicator *First baseline month → last end line month in ASSIST sites* *vs* *First baseline month → last end line month in non-ASSIST sites*	Conclusion
Burundi	HIV	Records review Time series chart Baseline: June - August 2015 Follow-up: September 2015 - May 2016	1. % of pregnant women attending antenatal care (ANC) tested for HIV 2. % of pregnant women attending ANC and tested for HIV whose partners are tested for HIV 3. % of HIV-exposed infants who are tested serologically at 18 months of age 4. % of pregnant women who have their first ANC visit before 14 weeks of pregnant	1. 99%→111% vs 77%→105%* 2. 50%→95% vs 17%→17% 3. 41%→90 vs 0%→33% 4. 41%→90% vs 15%→20% * % greater than 100 because women may have been tested more than once during pregnancy	Findings suggest that improvements were greater in ASSIST sites compared to non-ASSIST sites for 2 out of 4 indicators (Indicators 2 and 4)
Georgia	Child health (0-15 years)	Records review Component of CEA Baseline: April 2010-November 2011 Follow-up: April 2012 till September 2013	1. % of pediatric patients with Hemophilus Influenza type B vaccination recorded in chart 2.% of pediatric patients with pertussis vaccination status recorded in chart 3. % pediatric patients with negative status of seasonal influenza vaccination and counseling 4. % of pediatric patients with all vital signs recorded in the medical record	1. 83.2%→81.8% vs 58.8%→71.1% p-value<0.054 2. 97.7%→95.4% vs 73.8%→83.2% p-value<0.032 3. 1.5%→33.3% vs 5.2%→0.6% p-value<0.001 4. 16.1%→80.3% vs 12.4%→19.8% p-value<0.001	Improvements statistically higher in ASSIST sites compared to non-ASSIST sites for 11 out of 14 indicators (all but indicators 1, 2,10)

Country	Content area	Methods	Indicators compared	Key findings for each indicator *First baseline month → last end line month in ASSIST sites* *vs* *First baseline month → last end line month in non-ASSIST sites*	Conclusion
			5. % of pediatric patients with duration of cough symptoms noted	5. 30.4%→95.0% vs 30.6%→52.5% p-value<0.001	
			6. % of medical charts of children diagnosed with acute respiratory tract infection for whom diagnosis is supported by medical chart documentation	6. 9.1%→90.1% vs 14.4%→22.3% p-value<0.001	
			7. % of medical charts of children treated with antibiotic for respiratory tract infection for whom chart documentation supports antibiotic use	7. 18.7%→96.7% vs 7.1%→17.1% p-value<0.001	
			8. % of medical charts of children treated with antibiotic for respiratory tract infection with evidence-based first-line antibiotic used	8. 8.3%→93.3% vs 0%→14.3% p-value<0.001	
			9. % of medical charts of children treated with antibiotic with adequate dosing based on weight	9. 0%→66.7% vs 0%→25.7% p-value<0.001	
			10. % of medical charts of children treated with antibiotic with adequate dosing based on age	10. 37.5%→26.7% vs 39.3%→37.1% p-value=0.57	
			11. % of medical charts with recommended dosage of antibiotics (if prescribed)	11. 37.5%→93.3% vs 39.3%→62.8% p-value=0.036	

Country	Content area	Methods	Indicators compared	Key findings for each indicator *First baseline month → last end line month in ASSIST sites* *vs* *First baseline month → last end line month in non-ASSIST sites*	Conclusion
			12. % of charts with recommendations, prescription with dosages and their duration documented in the chart 13. % of charts with adequate follow-up visit/contact recorded in chart 14. % of danger signs counseling recorded in the chart	12. 4.6%→30.3% vs 23.5%→6.8% p-value<0.001 13. 6.1%→75% vs 3.3%→6.8% p-value<0.001 14. 0%→28% vs 0%→0% p-value<0.001	
Malawi	OVC	Household survey Difference-in-difference analysis Baseline: February 2015 Follow-up: May 2016	1.% of children enrolled in school (reported by parents) 2. % of children enrolled in school who advanced standard/form from previous year 3. % of households exposed to social cash transfer programs 4. % of households participating in subsidized agriculture 5. % households exposed to organizations that provide seed livestock, such as revolving schemes 6. % of households exposed to village savings programs 7. % of households receiving bursaries for education	I. 79%→87% vs 85%→85% p-value=0.035 2. 66%→67% vs 69%→59% p-value=0.097 3. 11%→14% vs 10%→16% p-value=0.497 4. 66%→55% vs 68%→59% p-value=0.577 5. 4%→14% vs 9%→15% p-value=0.204 6. 42%→45% vs 44%→57% p-value=0.025 7. 1%→6% vs. 4%→7% p-value=0.389	Improvements statistically higher in ASSIST sites compared to non-ASSIST sites for 3 out of 10 indicators (Indicators 1,6, and 9)

Country	Content area	Methods	Indicators compared	Key findings for each indicator *First baseline month → last end line month in ASSIST sites* *vs* *First baseline month → last end line month in non-ASSIST sites*	Conclusion
			8. % of households receiving food or cash for work projects 9. % of households receiving relief programs 10. % of children not exposed to physical abuse	8. 35%→30% vs 27%→36% p-value=0.002 9. 11%→49% vs 19%→34% p-value<0.001 10. 81%→95% vs 87%→94% p-value=0.018	
Mali	Anemia	Records review Time series chart with historical control Intervention group first 6 months (demonstration sites): Oct 2012 to March 2013 Comparison sites/historical controls (before extension): July-December 2015	1.% of pregnant women (new and old) for whom pallor and hemoglobin were checked at ANC visits 2.% of new ANC women who received iron/folic acid 3. % of pregnant women in ANC at 4-8 months gestation who received iron, folic acid, antimalarial, and deworming 4.% of women who received appropriate counselling on how to prevent anemia during ANC visits 5.% of women giving birth in facility who received Vitamin A post-partum before discharge 6.% of newborns who received immediate breastfeeding (within one hour or birth)	1. 0%→4% vs 2%→1% 2. 68%→93% vs 57%→59% 3. 13%→35% vs 16%→13% 4. 0%→0% vs 0%→0% 5. 76%→89% vs 64%→64% 6. 27%→43% vs 34%→37%	Findings suggest that improvements were greater or slightly greater in ASSIST-supported sites for 8 out of 12 indicators (Indicators 1,2, 3,5,6,7,9,11)

Country	Content area	Methods	Indicators compared	Key findings for each indicator *First baseline month → last end line month in ASSIST sites* *vs* *First baseline month → last end line month in non-ASSIST sites*	Conclusion
			7.% of delivering women who received counseling for exclusive breastfeeding	7. 5%→13% vs 18%→19%	
			8.% of children under five for whom pallor was checked and documented	8. 0%→0% vs 0%→0%	
			9.% of children under five who received Vitamin A supplements according to standards	9. 23%→70% vs 18%→14%	
			10. % breastfeeding women who received nutrition counselling for themselves and age-appropriate counseling for their children	10. 0%→0% vs 9%→0%	
			11.% sick children under five years old whose pallor was checked and documented	11. 0%→4.5% vs 1%→0%	
			12.% of children 6-11 months who received Vitamin A supplements	12. 0%→0% vs 5%→8%	
Cote d'Ivoire	HIV	Record review Times series chart Baseline: July-December 2015 Follow-up: January-June 2060	1. % of adults and children alive and on treatment 6 months after initiation of antiretroviral therapy (ART)	1. 67%→89% vs 77%→82%	Findings suggest that improvements were higher in ASSIST sites (2 out of 2 indicators)
			2. % of newly diagnosed HIV-positive patients enrolled in care	2. 68%→84% vs 71%→80%	

Country	Content area	Methods	Indicators compared	Key findings for each indicator *First baseline month → last end line month in ASSIST sites* *vs* *First baseline month → last end line month in non-ASSIST sites*	Conclusion
Kenya	HIV	Records review Component of CEA Baseline: December 2016-February 2017 Follow-up: October 2017-December 2017	1.% of patients receiving HIV pre-test counseling 2.% of test samples collected according to guidelines 3.% of samples processed according to guidelines 4.% of results recorded accurately 5.% of patients receiving result 6.% of patients receiving post-test counseling 7.% of patients with HIV referred for HIV care 8.% of patients referred for HIV care and retested 9. % of HIV-positive patients linked to HIV care	1. 64%→ 94% vs 78% →80% 2. 100%→ 100% vs 96% →98% 3. 100%→ 100% vs 99% →100% 4. 86%→ 82% vs 74% →76% 5. 100%→ 100% vs 100% →100% 6. 86%→ 82% vs 91% →85% 7. 100%→ 92% vs 100% →92% 8. 93%→ 93% vs 86% →100% 9. 100%→ 100% vs 86% →100%	Findings suggest that improvements were higher in ASSIST sites for 1 out of 9 indicators (Indicator 1) The remaining indicators have high performance at baseline
Tanzania	HIV	Records review Component of CEA Baseline: January 2015 Follow-up: February 2016	1.% of women in family planning clinics receiving HIV test 2. % of HIV-positive women of reproductive age receiving family planning method	1.2%→ 58% vs 0%→11% p-value <0.001 2. 5%→ 55% vs 8%→18% p-value <0.001	Improvements statistically higher in ASSIST sites compared to non-ASSIST sites for 2 out of 2 indicators

Country	Content area	Methods	Indicators compared	Key findings for each indicator *First baseline month → last end line month in ASSIST sites* *vs* *First baseline month → last end line month in non-ASSIST sites*	Conclusion
Uganda	MNCH	Records review Component of CEA Baseline: July-September 2015 Follow-up: September-November 2016	1. % of sick infants under 2 months with all three vital signs (respiratory rate, temperature, weight) documented 2. % of sick children under 2 months with severity classification documented based on IMNCI protocol 3. % of sick children 2 months-5 years with documented IMNCI-based classification 4. % of sick children 2 months-5 years with documented nutritional status/z score 5. % of sick children 2 months-5 years with documented danger signs 6. % of children 2 months-5 years with diarrhea treated with oral rehydration therapy 7. % of children 2 months-5 years with cough or cold without prescription unjustified antibiotics 8.% of children 2 months-5 years with pneumonia receiving evidenced-based treatment (1st line antibiotic in correct dosage) 9. % of children 2 months-5 years with diarrhea treated with	1.0%→42% vs 0%→2% p-value<0.0001 2. 29%→74% vs 0%→20% p-value<0.0001 3. 49%→90% vs 58%→57% p-value<0.0001 4. 0%→83% vs 0%→20% p-value<0.0001 5. 0%→32% vs 0%→0% p-value<0.0001 6. 77%→93% vs 78%→85% p-value<0.0526 7.17%→73% vs 3%→3% p-value<0.0001 8. 0%→80% vs 0%→0% p-value<0.0526 9. 36%→79% vs 35%→35%	Improvements statistically higher in ASSIST sites compared to non-ASSIST sites for 9 of the 10 indicators (all except Indicator 6 which was borderline statistically significant)

Country	Content area	Methods	Indicators compared	Key findings for each indicator *First baseline month → last end line month in ASSIST sites* *vs* *First baseline month → last end line month in non-ASSIST sites*	Conclusion
			oral rehydration solution and zinc without concurrent non-evidenced-based treatment 10. % of children 2 months-5 years with severe acute malnutrition who receive evidence-based treatment bundle	p-value<0.0526 10. 0%→39% vs 0%→1% p-value<0.0001	

IV. DISCUSSION

This report synthesizes the key findings generated from the comparison group analyses conducted under the USAID ASSIST Project. Analyses based mostly on record review and CEA revealed that ASSIST-supported sites reported greater improvements compared to sites not supported by ASSIST for 60% of the indicators compared.

Findings also showed that indicators with high performance at baseline did not experience significant improvement over time. Others have reported that improvements were greater when baseline levels of quality were lower, suggesting, that the impact of quality improvement interventions may be more appropriate in contexts where the quality of care is poor (Franco and Marquez, 2011). Differences in improvements may therefore not be detected when baseline performance is adequate.

More studies are needed to demonstrate the effectiveness of quality improvement collaboratives to improve care (Walshe and Freeman, 2002; Wells et al., 2018; Strating et al., 2010). The evidence for the effectiveness of improvement collaboratives has been described as “generally low to very low” (Garcia-Elorrio, et al., 2019). A review of improvement collaboratives showed that this quality improvement approach was associated with “moderate to impressive” improvements in both clinical processes and patient outcomes. However, the authors warned that although these findings are encouraging, publication bias may be present (Wells et al., 2018). There is agreement that improvement collaboratives need to quantify the results resulting from the changes implemented during the intervention to determine the overall success and sustainability of the intervention (Walshe and Freeman, 2002; Strating et al., 2010; Hulscher et al., 2012; Schouten et al., 2008). A large evaluation conducted under the USAID Health Care Improvement Project, ASSIST’s predecessor, found that quality improvement activities were associated with higher performance. However, that analysis relied on pre-post data and did not include comparison groups (Franco and Marquez, 2011).

A few key limitations of this synthesis should be noted. This synthesis is based on the reports produced from comparison analyses carried out by the USAID ASSIST Project which employed different methods, limiting the ability to compare them. For instance, country reports included in this synthesis report differed in terms of follow-up length and clinical area, both of which may impact the ability of the analysis to detect improvements. In addition, ASSIST comparison reports used different methodologies to determine whether improvements were observed (e.g. DID, time series).

Another limitation of the analyses included in this report is that the reports examined do not provide enough information to determine the extent to which ASSIST sites were similar to comparison sites. Facilities were often purposively selected to receive the ASSIST intervention based on prioritized need and to maximize the impact of the ASSIST intervention. They therefore may differ from non-ASSIST sites in terms of size, client load, location, or number of health providers, thereby limiting the ability to find comparison sites that are similar to ASSIST sites and affecting the validity of the findings. Inadequate detail about sites’ characteristics is an important limitation.

Furthermore, documentation of care is often poor in facilities and as part of its improvement activities, ASSIST aims to improve documentation and measurement of care. Therefore, it is often not possible to distinguish low performance from low documentation in comparison sites. Lower reported performance in comparison sites may be related to lower documentation rather than lower performance, exaggerating differences between ASSIST and non-ASSIST sites.

On the other hand, contamination may be present when ASSIST and comparison sites are geographically close. Contamination combined with high baseline performance may have diluted differences between ASSIST and non-ASSIST sites.

Finally, the possibility that other factors beyond the intervention may explain differences in improvements between ASSIST and non-ASSIST sites cannot be ruled out. The reports examined did not provided enough information on key contextual factors that may have an impact on performance. Quality improvement approaches are often specific to the context and location in which they occur, which makes comparison between facilities challenging (Walshe and Freeman, 2002). The absence of fidelity assessment describing the specific components and intensity of the intervention further limits the ability to compare findings across countries and programs.

V. CONCLUSION AND RECOMMENDATIONS

Comparison group analyses conducted by ASSIST have shown that improvements in performance were higher in ASSIST sites compared to non-ASSIST sites for 60% of the indicators compared. All country analyses reported that ASSIST sites performed better than non-ASSIST sites over time for at least one indicator.

While the ability to compare the analyses may be limited due to differences in methods and inadequate detail about site characteristics and key contextual factors, these analyses contribute to our understanding of the overall impact of quality improvement interventions. Although randomized trials may not be feasible in the context of complex interventions, future comparison group studies should use stronger methods to study effectiveness including selecting comparison sites that are similar to ASSIST sites, using interrupted time series analysis, describing more thoroughly key contextual factors and the intensity of the QI intervention, using data sources less subject to bias than those collected by QI teams, including a large number of facilities in the sample, and using longer follow-up time so as the assess the sustainability of improvement approaches. High-quality studies may produce much-needed reliable estimates of the effectiveness of collaborative improvement.

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Wells S, Tamir O, Gray J, et al. 2018. Are quality improvement collaboratives effective? A systematic review. *BMJ Qual Saf*. 2018; 27:226-240.

APPENDIX: ASSIST COMPARISON STUDY REPORTS

Burundi

Matituye B, Coly A, Niyomwungere CF, Nykunzimana A, Iriwacu B L, Nkunzimana F. 2018.Validation des Données et Analyses Comparatives des Activités d'Amélioration de la Qualité des Soins VIH du projet ASSIST au Burundi. *Rapport de Recherche et d'Évaluation*. Published by the USAID ASSIST Project. Chevy Chase, MD: University Research Co., LLC (URC). Available at: https://dec.usaid.gov/dec/content/Detail_Presto.aspx?ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&rID=NTU5MjYz&inr=VHJ1ZQ%3d%3d&dc=YWRk&rrtc=VHJ1ZQ%3d%3d&bckToL=.

Cote d'Ivoire

Assoa S E-B, Coly A. 2017. Comparaison des indicateurs d'amélioration de la qualité des sites ASSIST et sites non-ASSIST en Côte d'Ivoire. *Rapport de Recherche et d'Évaluation*. Publié par le Projet ASSIST de l'USAID. Chevy Chase, MD: University Research Co., LLC (URC). Available at: https://pdf.usaid.gov/pdf_docs/a613e226908046749faf82cd272efbb7.pdf.

Georgia

Chitashvili T. 2015. Scaling Up, Sustaining and Institutionalizing Better Health Care in Georgia: Results and Strategic Recommendations from USAID Support for Improving Quality of Priority Clinical Conditions during 2012-2015. *Technical Report*. Published by the USAID ASSIST Project. Bethesda, MD: University Research Co., LLC (URC). Available at: https://dec.usaid.gov/dec/content/Detail_Presto.aspx?ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&rID=MjE0NjY3&inr=VHJ1ZQ%3d%3d&dc=YWRk&bckToL=.

Kenya

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Malawi

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Mali

USAID ASSIST Project. 2020. A comparison of improvements in anemia indicators in ASSIST and non-ASSIST sites in Mali. *Short Report*. Published by the USAID ASSIST Project. Chevy Chase, MD: University Research Co., LLC (URC). Available at: https://pdf.usaid.gov/pdf_docs/c64a124a5cdc420bb4807ea075f2d9d1.pdf.

Tanzania

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