

1 **SUPPLEMENTAL INFORMATION – ADDITIONAL FILE 4**

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3 **SUPPLEMENT TITLE**

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5 **Small and sick newborn care: African-led implementation research**

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7 **PAPER TITLE**

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Draft for Discussion

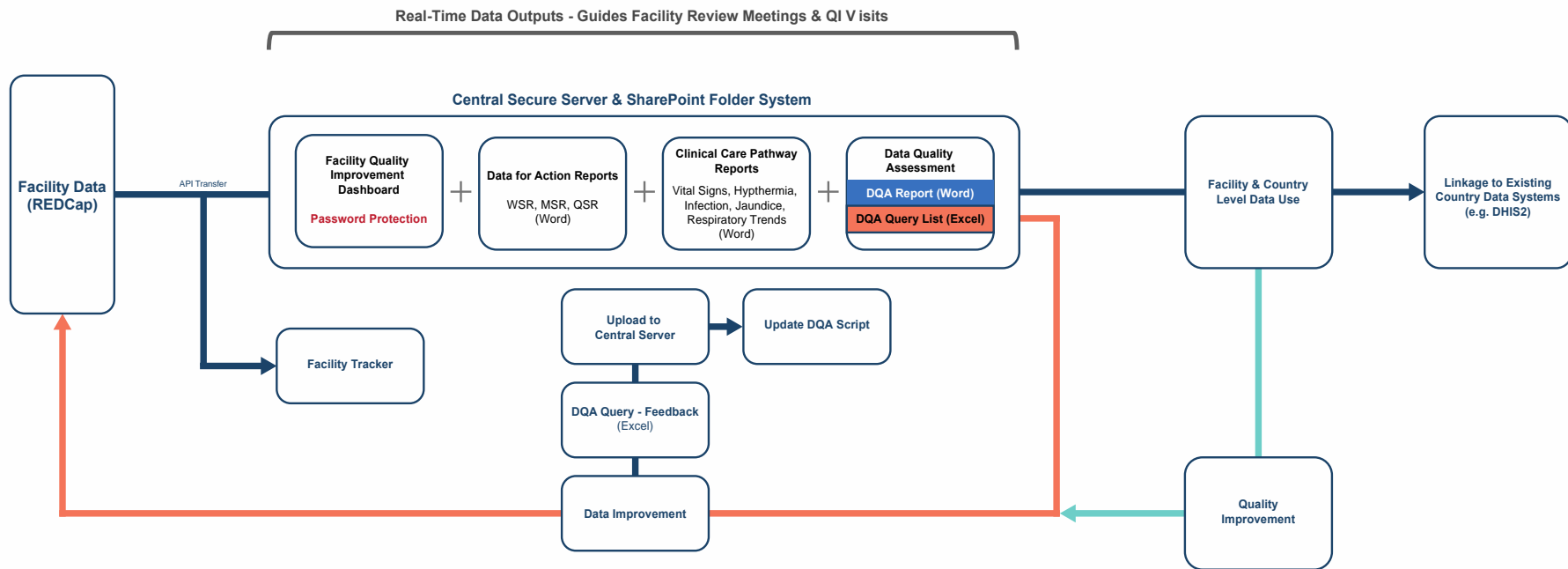
9 **Neonatal inpatient dataset for small and sick newborn care in low- and middle-income countries: systematic development**
10 **and multi-country operationalisation with NEST360.**

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12 *Additional File 4: Neonatal Inpatient Dataset data flow*

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16 The data flow diagram represents data management from a REDCap server to a central server. Pooled data are aggregated to form country
 17 and facility-level quality improvement dashboards. Data is also used to formulate data for action, clinical care pathway and data quality
 18 assessment reports and query lists. Data quality assessment query lists inform data improvement by country team manual data edits and
 19 feedback. Edited query lists are uploaded into the central server to update the next data quality assessment. All reports and the dashboard
 20 support care quality improvement at review meetings and QI visits. Individual-level data links to existing country and facility data systems.

21 **Legend:** Excel is a spreadsheet software developed by Microsoft. SharePoint is a web-based collaborative platform developed by Microsoft.
22 Word is a word-processing software developed by Microsoft. The shiny package in R software generates quality improvement facility
23 dashboards. Data for action, clinical care pathways, data quality assessment reports and query lists are automated using R software. Data
24 management scripts are produced using STATA and R Software.

25 **Abbreviations:** WSR, Weekly Summary Report; MSR, Monthly Summary Report; QSR, Quarterly Summary Report; QI, Quality Improvement;
26 DQA, Data Quality Assessment; API, Application Programming Interface; N, number; REDCap, Research Electronic Data Capture.

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