Strengthening the quality of routine maternal and newborn health data through learning workshops in Gombe, Nigeria

4th Data Quality Learning Workshop Update

December 2018

IDEAS

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Prepared by the IDEAS project at the London School of Hygiene & Tropical Medicine.
Funded by the Bill & Melinda Gates Foundation
Written by Antoinette Bhattacharya

Contents

Acronyms and abbreviations

Acronym and abbreviation	Definition
ANC	antenatal care
BMGF	Bill & Melinda Gates Foundation
DQA	data quality assurance
GSPHCDA	Gombe State Primary Health Care Development Agency
IDEAS	Informed Decisions for Actions in Maternal and Newborn Health
LGA	local government area (district-level equivalent)
M&E	monitoring and evaluation
LSHTM	London School of Hygiene & Tropical Medicine
MNCH	maternal, newborn, and child health
MNH	maternal and newborn health

Executive Summary

Quality routine health data provide useful program monitoring information to identify gaps and take action to improve performance. Under the leadership of the Gombe State Primary Health Care Development Agency (the Agency) and in collaboration with their implementing partners, the LSHTM IDEAS project delivered learning workshops with local government area (LGA) actors to improve the quality of facility-based routine data.

Four workshops, one workshop every six months, took place from March 2017 through December 2018. The overall aim of the workshops is two-fold: (i) to improve the quality of routine maternal and newborn health (MNH) data at the facility- and LGA-levels; and (ii) to strengthen the subsequent use of routine MNH data to inform decision making at the facility- and LGA-levels.

The fourth and final data quality learning workshop took place on 10th and 11th December 2018. This workshop built on the first three workshops' key concepts in routine data quality review; interpreting, visualizing, and presenting findings for constructive peer-review; and planning for improved performance.

To prepare for the fourth workshop, state- and LGA-level actors conducted a data quality review for May-October 2018 and explored the potential reasons for higher and lower performing facilities. By the end of the workshop, the Agency leadership facilitated four main sessions taking place over two days: a learning session on the elements of a good presentation; a learning session on providing positive and constructive feedback; a presentation session for state and LGA officers to present their bi-annual quality review; and a forward-looking session on actions to improve the quality of data.

Introduction

Quality routine health data provide useful monitoring information to identify gaps and take action to improve performance. After consultation with government leadership and maternal and newborn health (MNH) implementing partners in Gombe State, Nigeria, the Informed Decisions for Action in Maternal and Newborn Health (IDEAS) project proposed collaborative workshops that would place an emphasis on working with local government area (LGA) actors to improve the quality of routine data. With efforts to improve routine data quality over time, it was expected that increased trust in the quality of the data would increase its subsequent use for decision making.

Partnerships

Under the leadership of the Gombe State Primary Health Care Development Agency (the Agency), the IDEAS project collaborated with the Agency's implementing partners, funded by the Bill & Melinda Gates Foundation, to implement this initiative. Through an iterative, consultative process, the team collaborated to develop the agenda and workshop content; to deliver the workshops and to support ongoing engagement with the LGA actors on data quality issues between workshops.

Data quality learning workshops

Four two-day workshops took place, approximately every six months, from March 2017 through December 2018. The fourth and final data quality learning workshop took place on 10th-11th December 2018. This workshop built on the previous workshops' key concepts for conducting reviews of routine data quality and interpreting and presenting these findings to peers:

Workshop 1

Learning and Practice:
- Refresher on data quality dimensions and metrics
- Introduction to job aids for data quality review
- Quality improvement and planning (plan-do-study-act cycles)

Presentation:
- Review findings for select data quality metrics (completeness of reporting and agreement between facility register data and reports)

Planning:
- 6-monthly planning to improve facility-based data

Workshop 2

Learning and Practice:
- Additional data quality review practice with job aids
- Interpreting and visualizing review findings

Presentation:
- Quarterly review for select data quality metrics (completeness of reporting, completeness of indicator data, consistency between related data)

Planning:
- 6-monthly planning to improve facility-based data

Workshop 3

Preparation, before workshop:
- Quarterly data quality review, January-March 2018
- Understanding reasons for facilities' higher/lower data quality metrics (included in review)

Learning and Practice:
- Interpreting and visualizing review findings
- Comparing LGA-level findings with performance of State and neighboring LGA

Presentation:
- Joint presentation of quarterly review findings with neighboring LGA

Planning:
- 6-monthly planning to improve facility-based data

Workshop 4

Preparation, before workshop:
- Biannual data quality review, May-October 2018
- Understanding reasons for facilities' higher/lower data quality metrics (included in review)

Learning and Practice:
- Elements of an effective presentation
- Providing positive and constructive feedback

Presentation:
- Bi-annual data quality review and priorities for next 6 months
- Demonstrating positive feedback to presenters

Planning:
- 6-monthly planning to improve facility-based data

4th data quality learning workshop: update

Learning sessions 1&2: effective presentations and constructive feedback to promote action

As the participants have demonstrated an increasing ability to conduct extensive reviews of their facilities' performances, we focused on how they presented their findings and provided feedback to promote action. The facilitator, using materials on how to teach post-graduate students, provided practical tips on delivering good presentations and offering feedback which focused on what works well and what could be improved.

Participants were surprisingly enthusiastic about these two learning sessions. A group exercise in which they critiqued a video of a supervisor's feedback revealed that our participants had similar views on how to approach colleagues during supportive supervision activities in the facilities. Reactions were similar to one LGA MNCH Coordinator, who noted, "Now I know that I have to talk about the positives so they [also] know what they are doing right".

Nasir Umar from the IDEAS project during a learning session. © IDEAS 2018

Presentation session: state- and LGA-level bi-annual data quality review, May-October 2018

In preparation for the 4th workshop, each state- and LGA-level team composed a bi-annual summary report of the quality of their MNH data, May-October 2018. The report covered the following data quality metrics at the ward- and LGA-levels: (i) completeness and timeliness of facility reporting; (ii) completeness of indicator data; and (iii) consistency between related indicator data.

The participants cited a range of activities perceived to have worked to emphasize the quality of routine data, including:

- Monthly data quality summary reports from the State M&E office, as feedback to LGA teams to highlight the completeness, timeliness, and internal consistency of reported data at the state- and LGA-levels.
- Monthly LGA- and ward-level data validation committee meetings: At the conclusion of each monthly reporting period, monthly meetings to validate the data reported facilities' monthly summary forms with the facilities' service registers.
- Collaborating with other LGA staff to address data quality across programs: Dividing the wards between the LGA data validation committee team members so that they can look at data across all programs during supportive supervision visits to ease the work burden.
- Creating and/or adapting tools from 1st workshop to review data quality for their LGAs, including developing a list of challenging indicators where inconsistencies are most present
- Focusing data quality reviews on the active facilities within DHIS2, as DHIS2 had not been updated to reflect functional facilities at the time of the workshop.

Antoinette Bhattacharya and participants at the workshop review data. © IDEAS 2018

The teams were also tasked with explaining the potential reasons for why their LGA and facilities may have higher or lower data quality metrics. Common findings and reflections included:

- Across all LGAs and facilities, two events affected the timeliness and completeness of facility-level reporting, with a notable reduction in timeliness: (1) a health worker strike in May 2018 and (2) ongoing maintenance with DHIS2 in June and July 2018.

- DHIS 2 did not have an up to date listing of their functional facilities. This affected calculations and completeness of facility reporting, making their completeness rates appear lower in most cases.
- Referral and/or private facilities did not regularly submit reports for most LGAs. While the Agency M&E officers are appointed to collect the reports across all facility types, obtaining reports from referral facilities in particular has been challenging as they are not under the official mandate of the Agency.
- There was an improvement in consistency between the number of women accessing antenatal care and (i) the number of women tested for anemia during pregnancy and (ii) the number of women receiving a long-lasting insecticide treated bednet. Testing kits and bednets were increasingly available from June 2018-onwards and there was a noted higher uptake of services.

Discussions took place on how to improve reporting, with most LGAs noting that they will review these findings with the facilities' ward focal persons responsible for checking the reports before submission to the LGA offices.

Presentation: Gombe State data quality review, November 2016-October 2018

To reflect on the progress to date, IDEAS presented a two-year analysis of the data quality metrics in Gombe State, covering November 2016-October 2018. Highlights of the analyses were shared with the participants (Annex 1).

The main takeaways from this analysis are that (1) more facilities, at least 80% of facilities, are consistently submitting reports in May-October 2018 than in any six-month review period since November 2016; and (2) facilities are reporting greater uptake in commodities and services (and thus, greater consistency between related indicators) in May-October 2018, compared to any six-month review period since November 2016. A notable exception is the lower proportion of women accessing their 4th antenatal care visit in a facility, which the state- and LGA-level officers attribute to how the indicator is worded on the facility's monthly summary form. They noted that previously, facilities have interpreted this indicator loosely and included all women who had accessed at least four visits; now, facilities have been paying more attention to the wording and only including the women who have accessed their fourth visit.

This session concluded with a celebration of the improved performance across the State and LGAs. The top performing LGAs for each data quality metric (see last page of Annex 1) were given special recognition by the Agency and their peers.

Working together, ongoing engagement

The Agency leadership will continue to identify priority issues and capacity building needs for their State- and LGA-level teams. The State M&E will continue to develop and disseminate data quality summary reports, highlighting recommendations and course corrections.

Further, from these workshops, the Agency acknowledged the importance of continuing to convene the LGA teams to conduct data quality reviews. The Agency will convene a monthly "data control room meeting", supported in the near term by workshop co-facilitator SAQIP, where LGA M&E officers come together once a month to review facility reports together. At these meetings, they will compile feedback and phone the health facility staff to ensure potential corrections are queried and noted for revision.

Acknowledgement

The IDEAS team wishes to acknowledge the leadership of the Gombe State Primary Health Care Development Agency throughout the development and implementation of the data quality learning workshops: Executive Secretary, Dr Ahmed Gana; current and former Directors of Planning, Research, and Statistics, Mr Felix Habila and Mr Haruna Ali Dadinkowa; State M&E Officer, Mr Ahmed Audu; and State HMIS Officer, Mr Jingi Usman. The IDEAS team appreciates the cooperation of and partnership with the LGA M&E officers and MNCH coordinators to improve the quality of routine maternal and newborn health data in Gombe State

Annex 1

Gombe State, Nigeria

December 2018

MNH Data Quality Summary Report, November 2016-October 2018

Introduction

This report provides an overview of the data quality in the monthly summary forms (MSF, NHMIS 2013) within the District Health Information Systems, version 2 (DHIS2) for maternal and neonatal health (MNH) indicators.

The period under review, November 2016-October 2018, has been broken down into six-month intervals: (i) November 2016-April 2017; (ii) May 2017-October 2017; (iii) November 2017-April 2018; and (iv) May 2018-October 2018.

In this report, we review the following aspects of routine data quality:

1. Completeness and timeliness of reporting, as entered in DHIS2
2. Consistency between related data that have a predictable relationship

All definitions and calculations follow the World Health Organization Data Quality Review guidance: http://www.who.int/healthinfo/tools_data_analysis/dqr_modules/en/.

District Health Information System, version 2 (DHIS2)

As of December 7th, 2018, DHIS2 categorized facilities within Gombe State as follows:

11	local government areas (LGAs)
116	wards
667	facilities

This report utilizes the data from DHIS2 and follows DHIS2's categorization of LGAs, wards, primary facilities, and referral facilities.

GOMBE STATE PRIMARY HEALTH CARE DEVELOPMENT AGENCY

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

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Introduction

This section reviews the completeness and timeliness of facility reporting, as submitted to the LGA Monitoring and Evaluation office and subsequently entered into DHIS2.

LGAs are ranked for the extent of their completeness and timelines at the following levels: (i) all facilities, (ii) primary facilities, and (iii) referral facilities.

Completeness and timeliness calculations

% MSF submitted = [(# MSF submitted) / (# MSF expected)] * 100%
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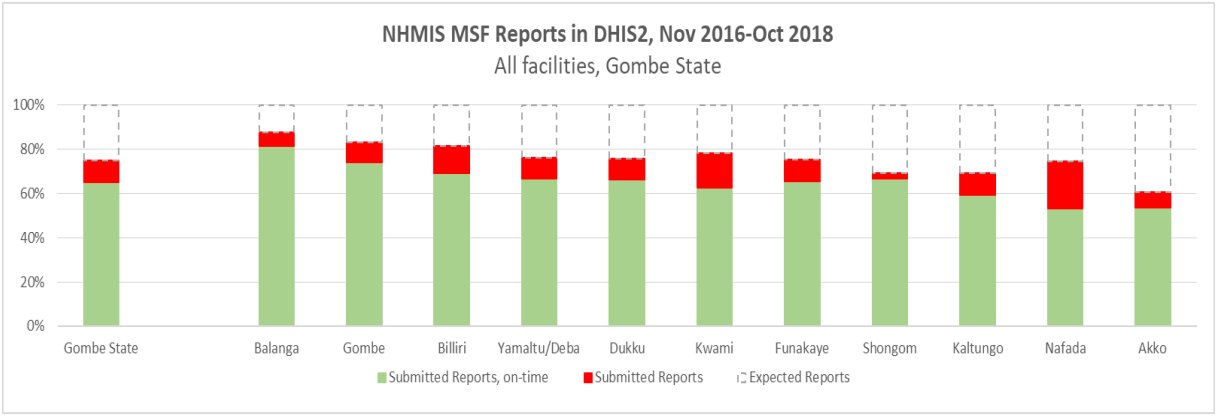
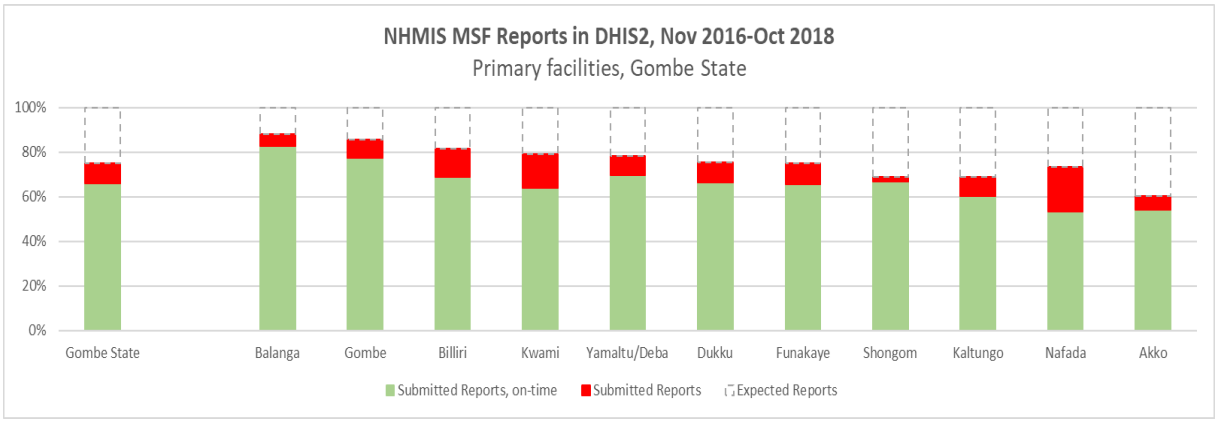
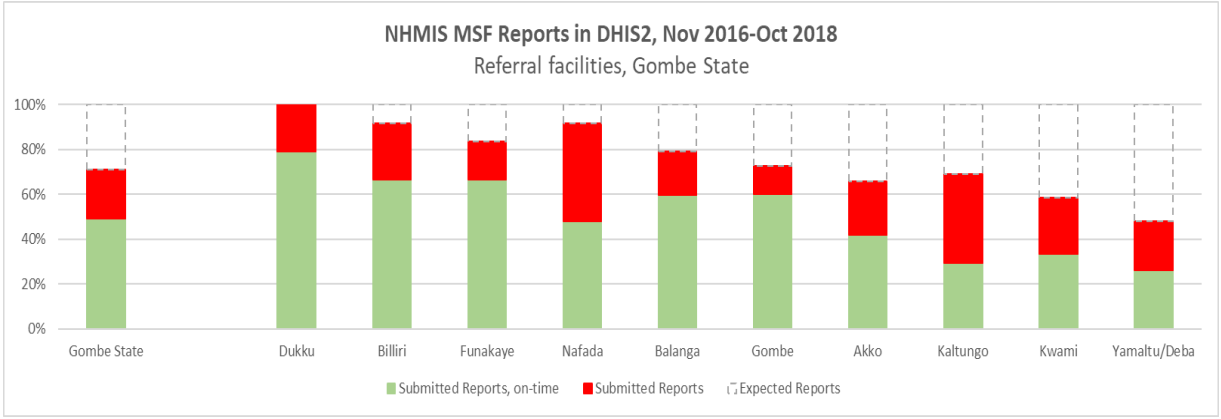
Data quality metric: Completeness and timeliness of data for NOVEMBER 2016 - OCTOBER 2018







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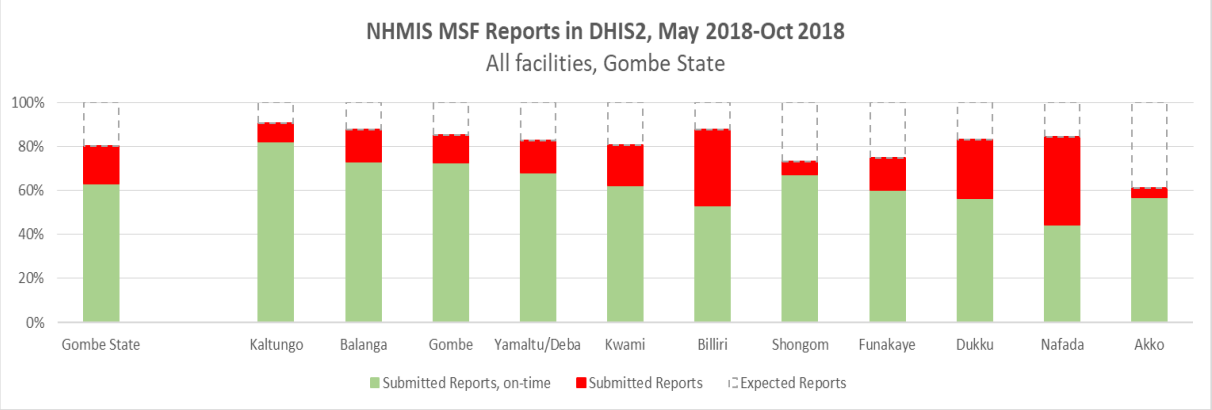
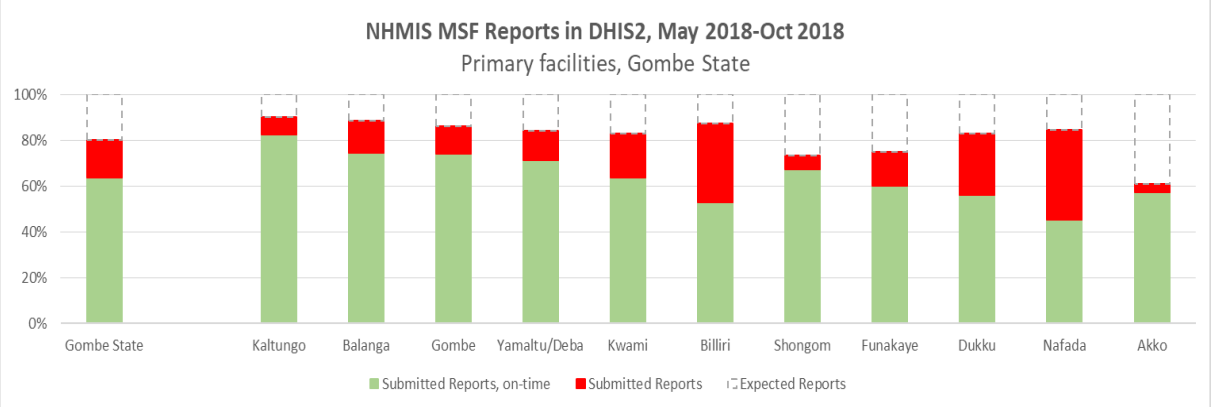
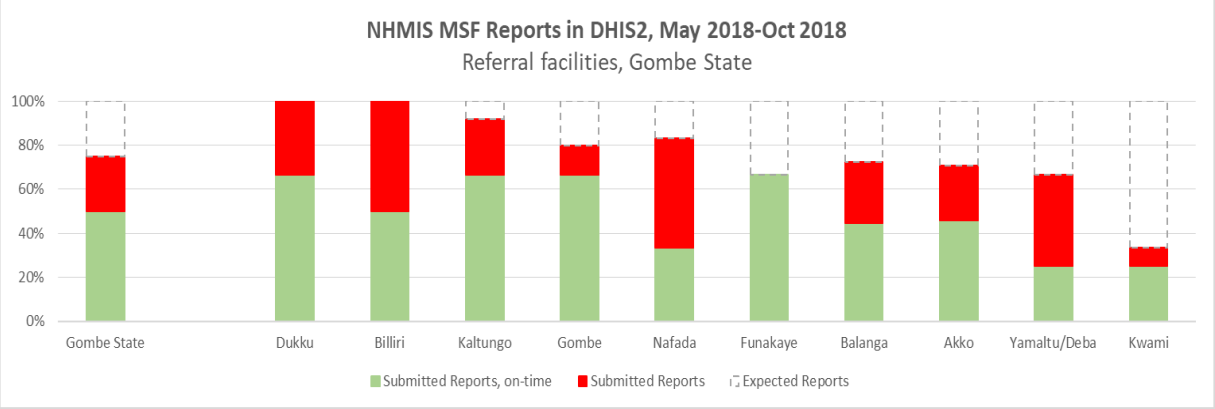
Data quality metric: Completeness and timeliness of data for MAY 2018 - OCTOBER 2018







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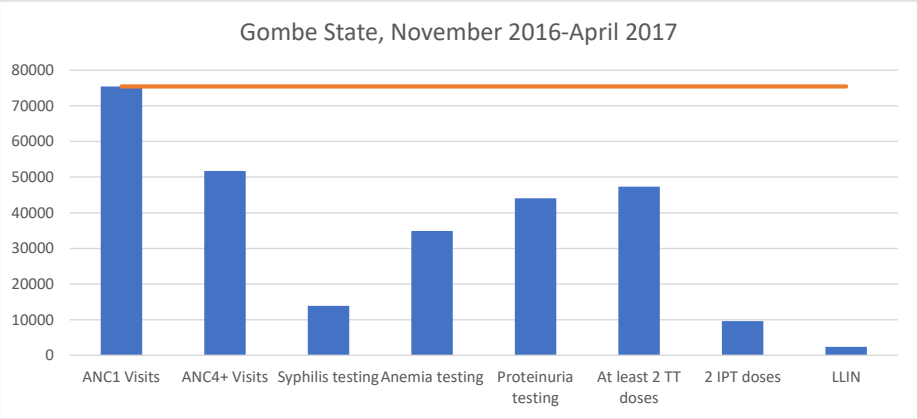
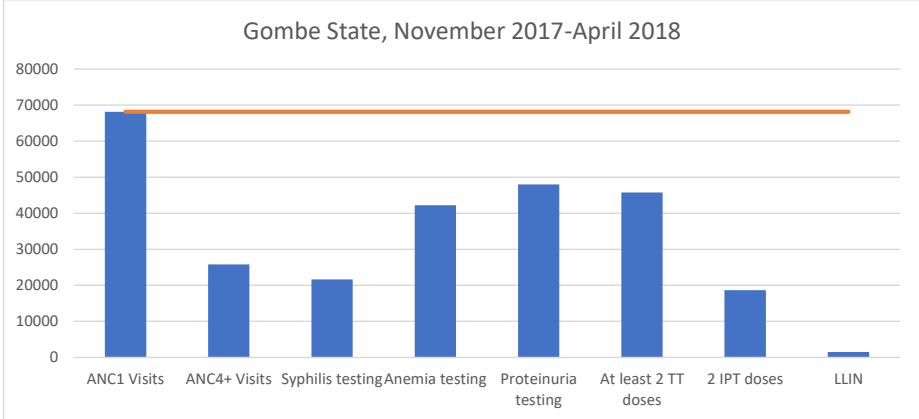
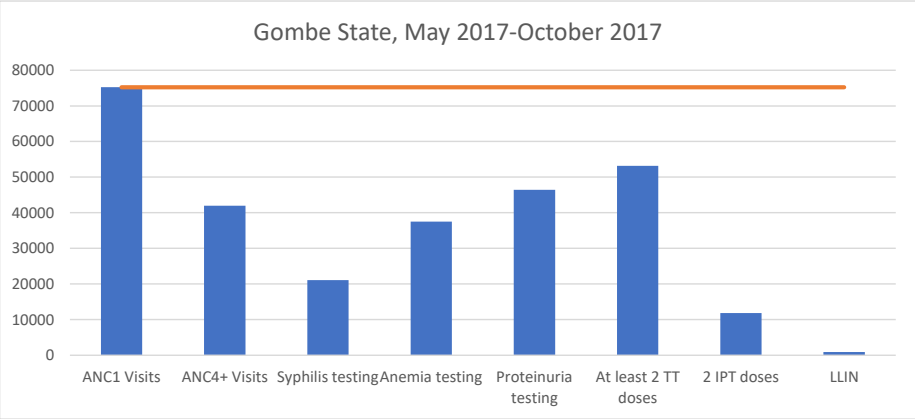
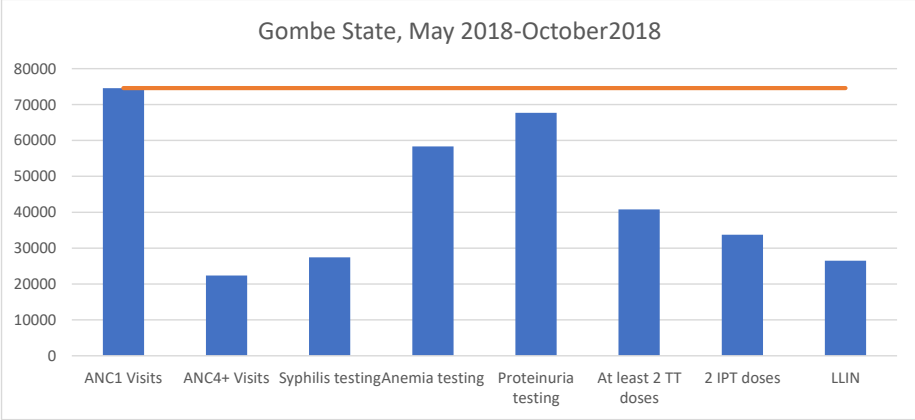
We review a two-year period, November 2016-October 2018, broken down into six-month intervals: November 2016-April 2017; May 2017-October 2017; November 2017-April 2018; and May 2018-October 2018.

Data quality metric: Consistency between related indicators









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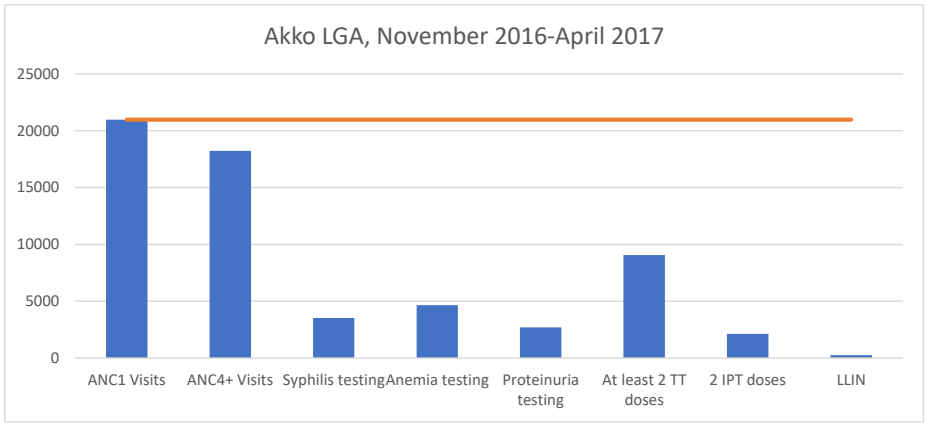

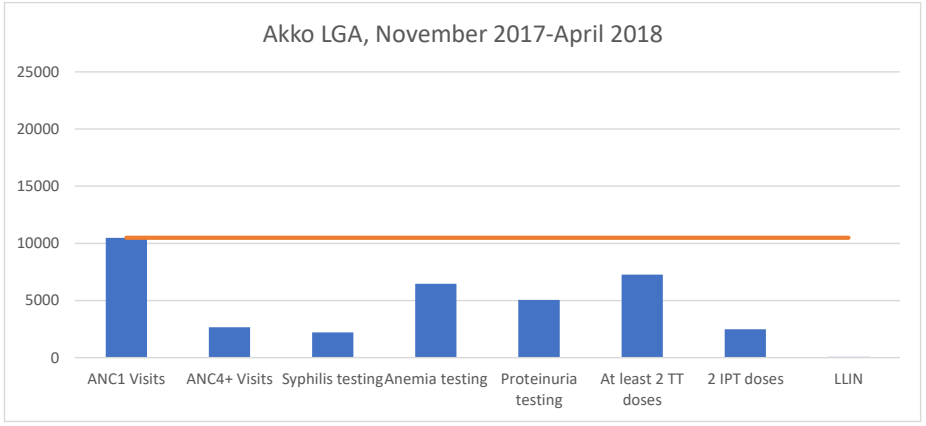

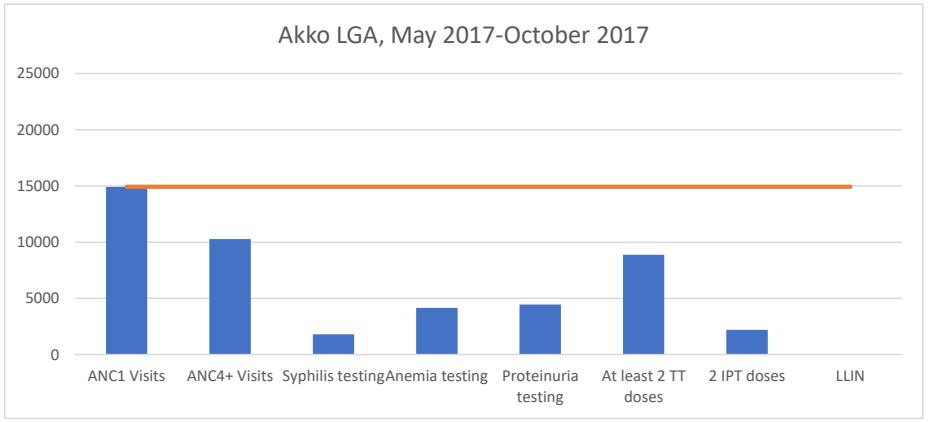

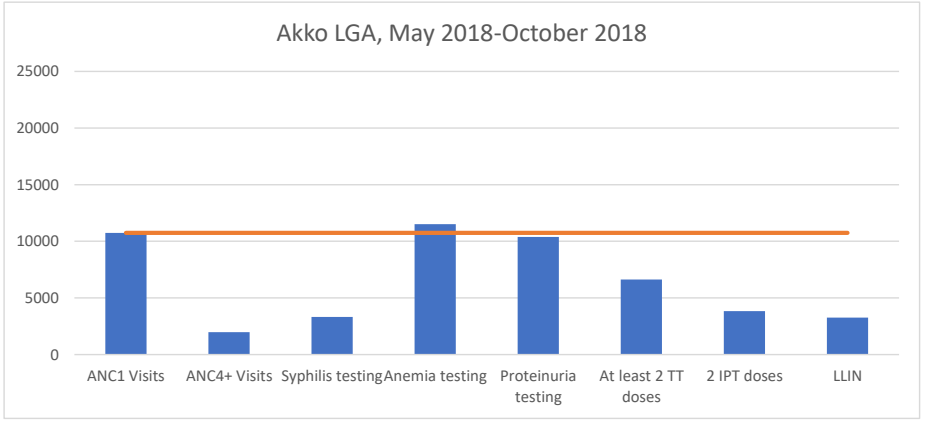

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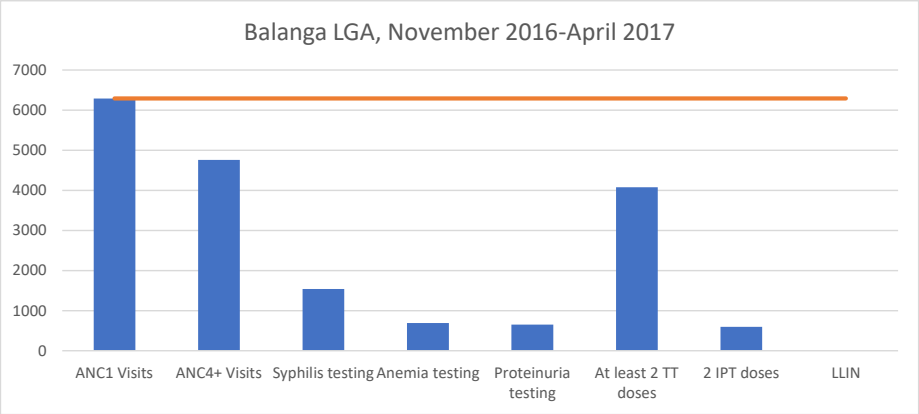

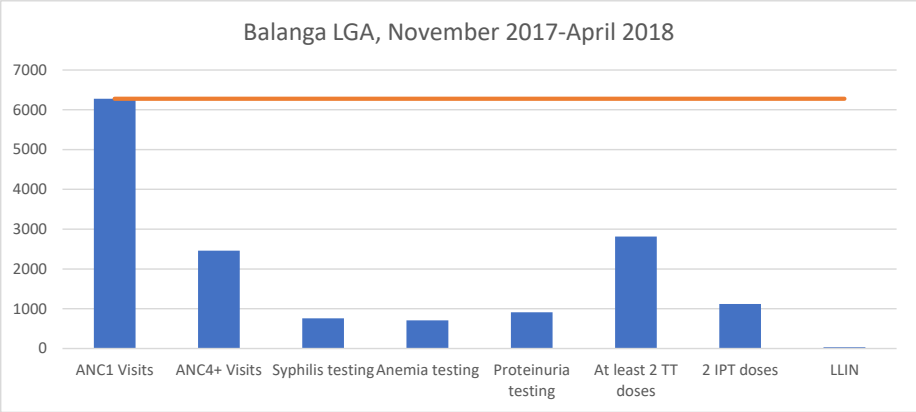

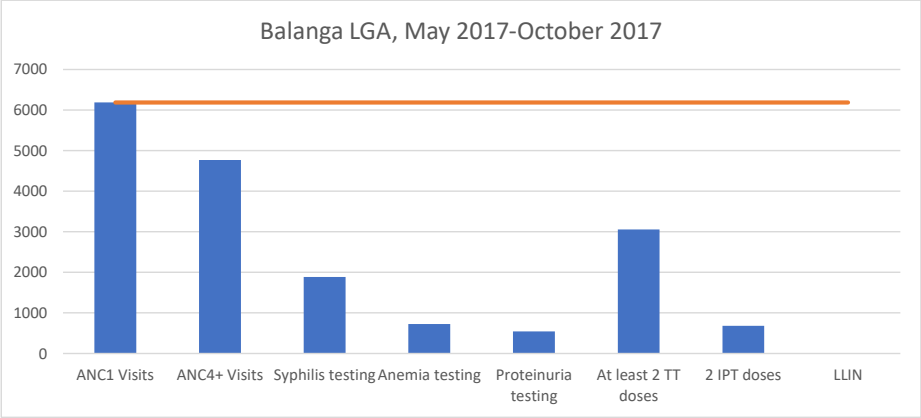

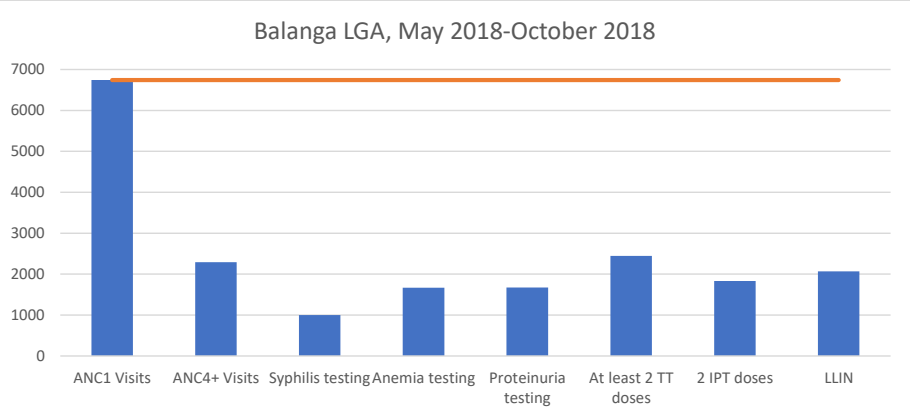

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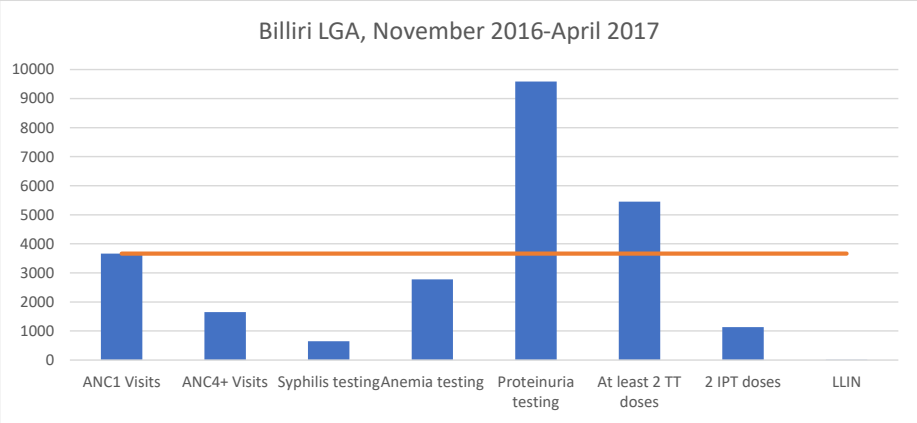

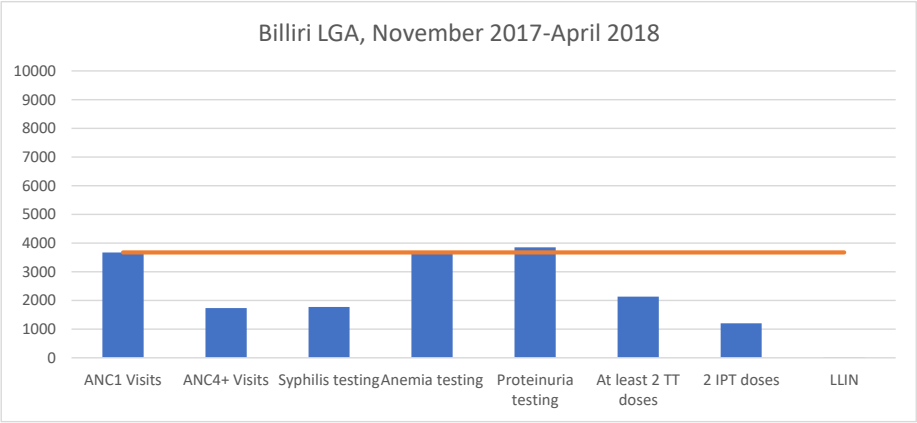

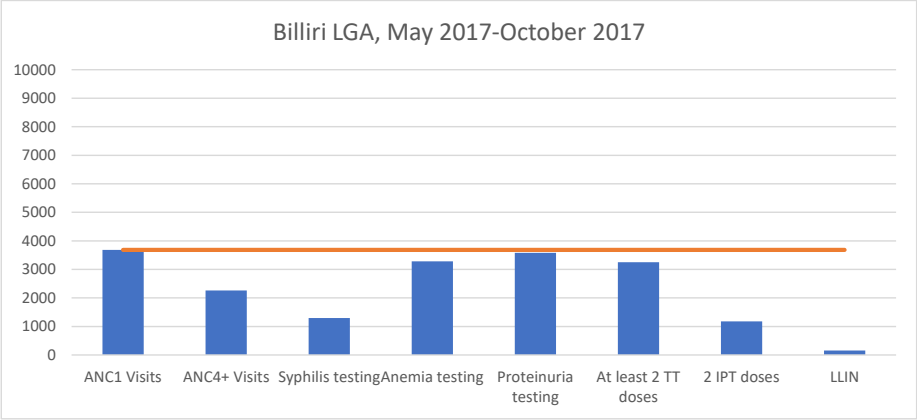

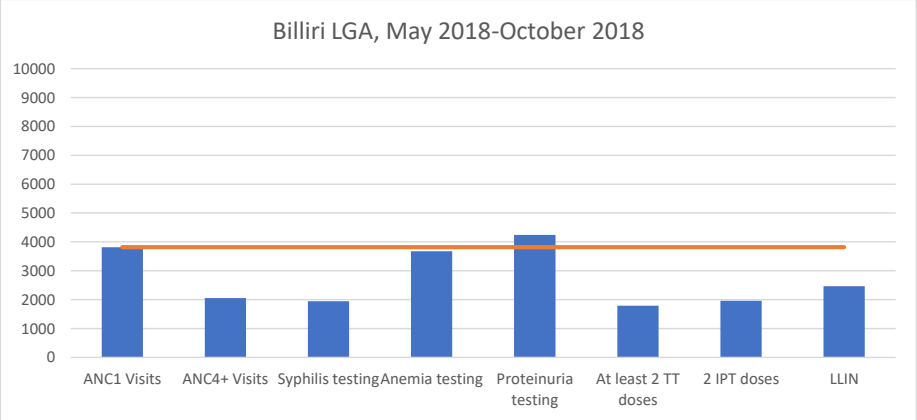

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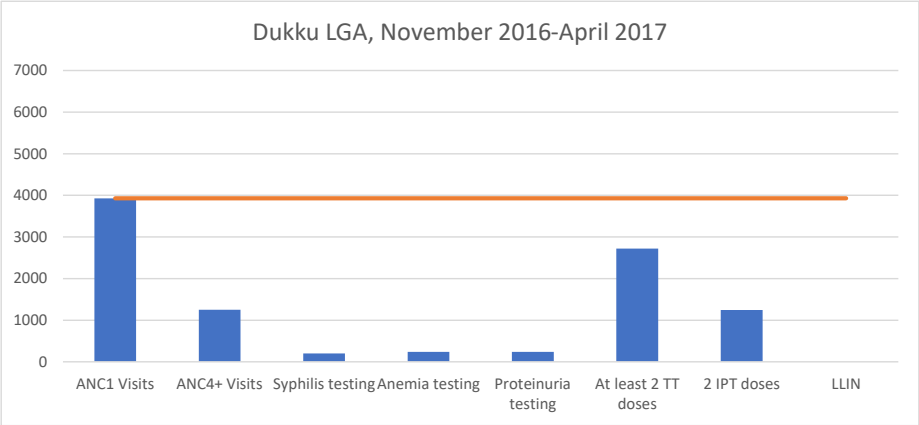

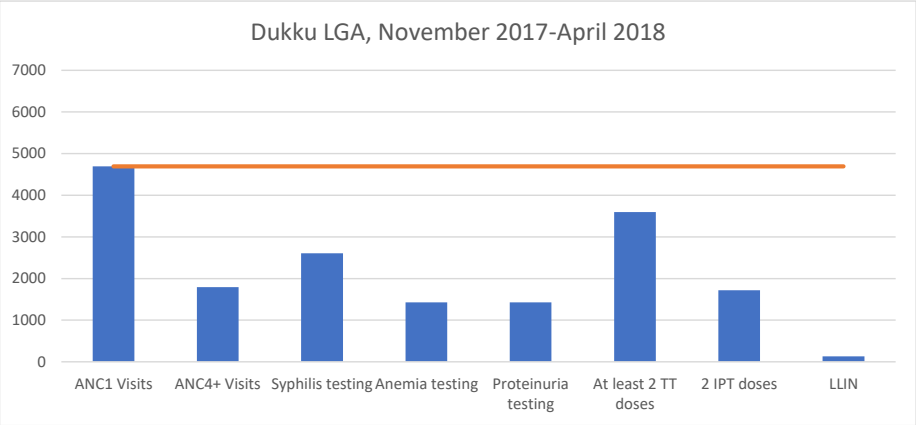

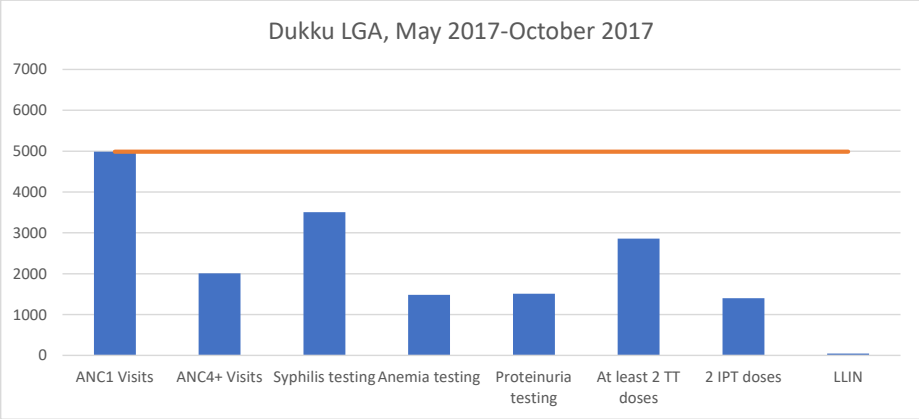

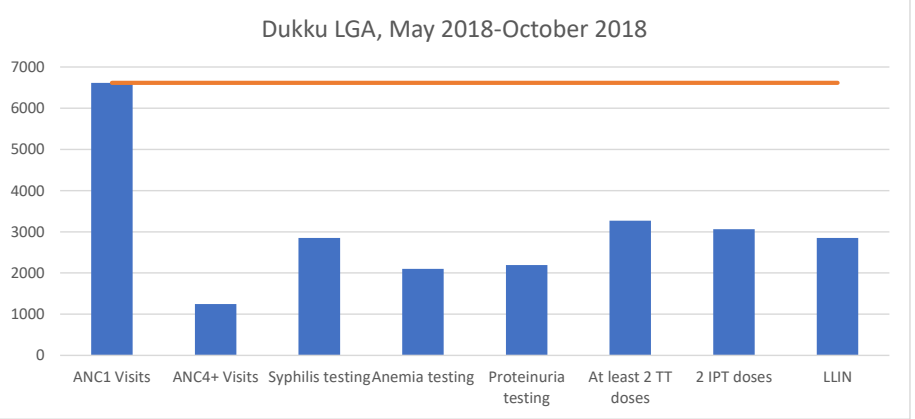

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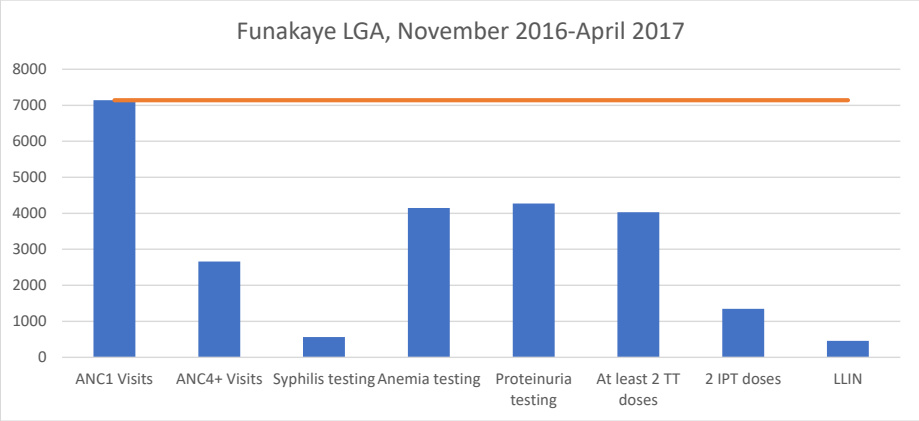

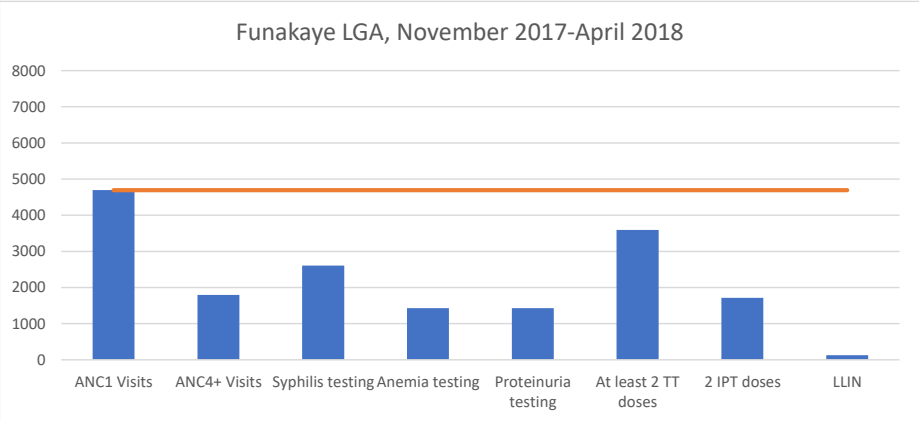

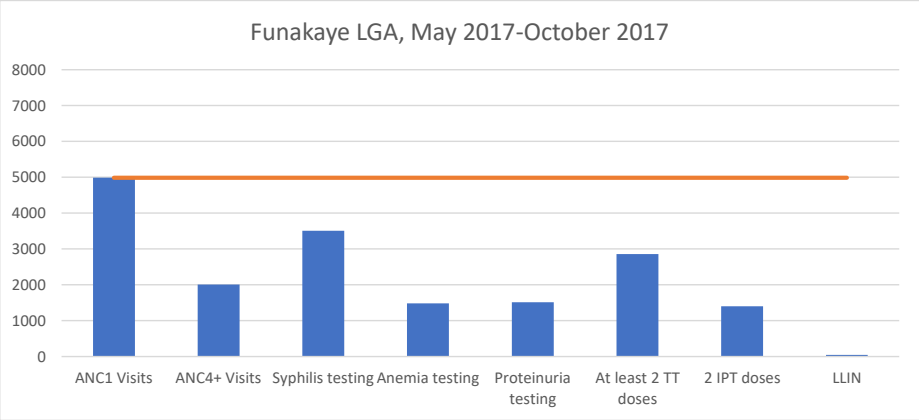

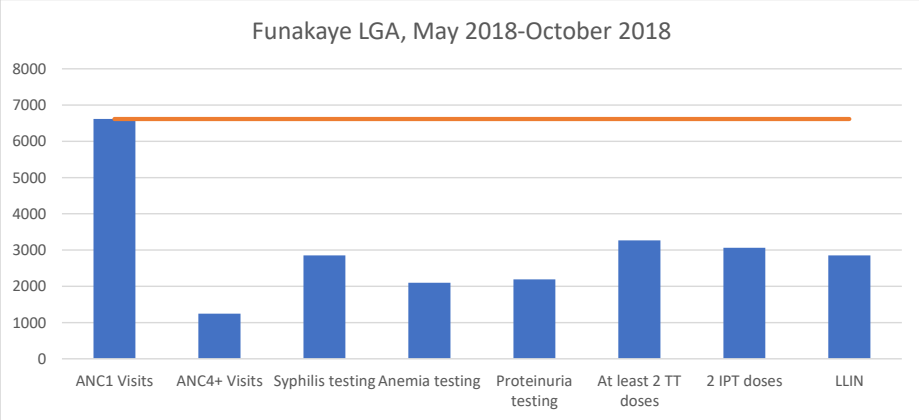

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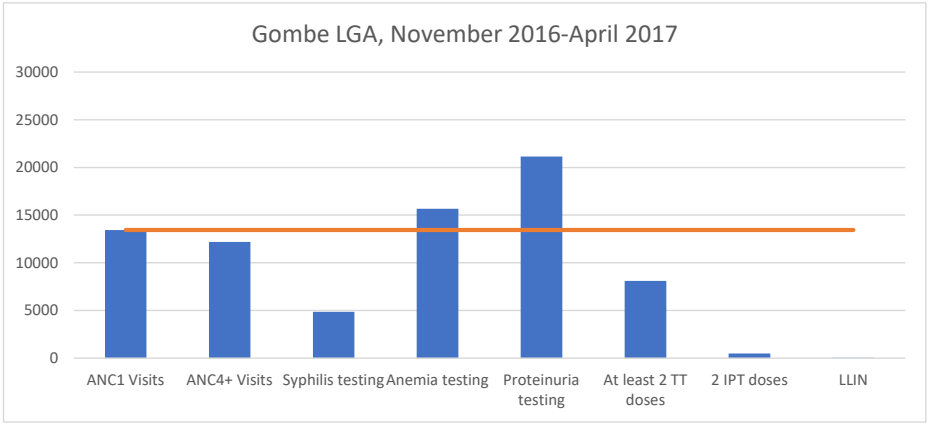

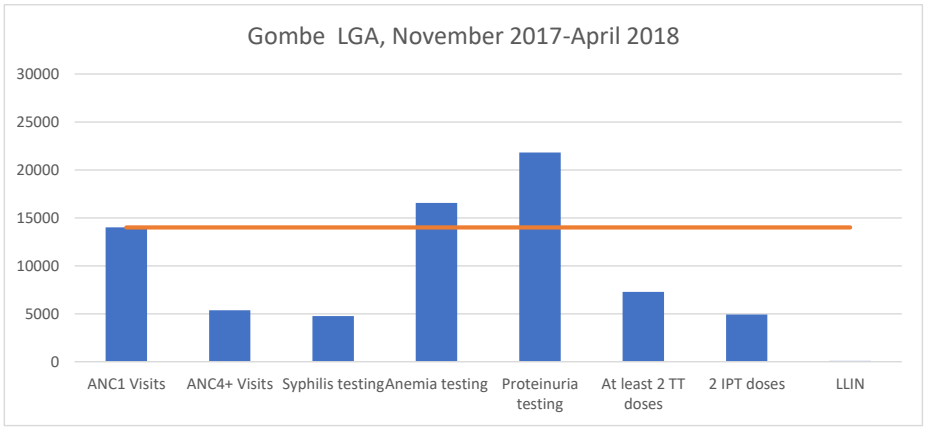

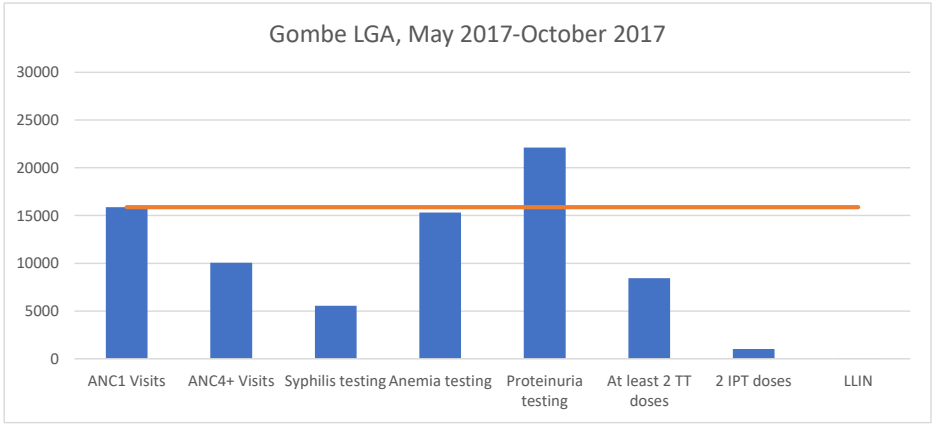

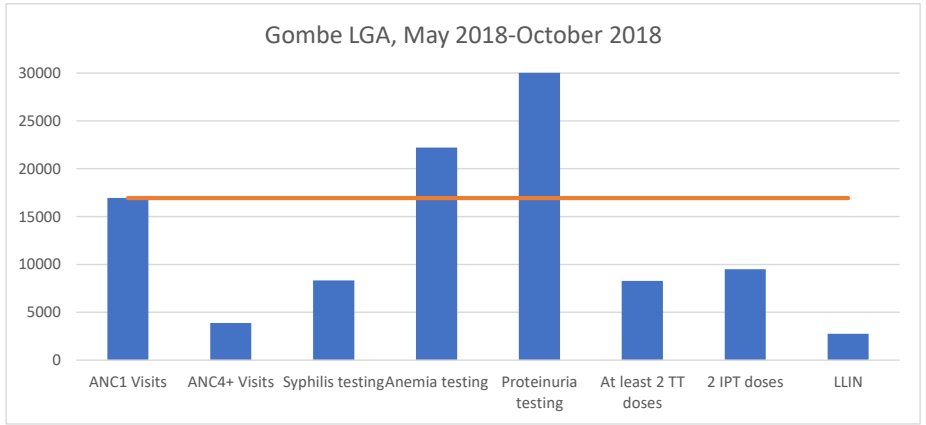

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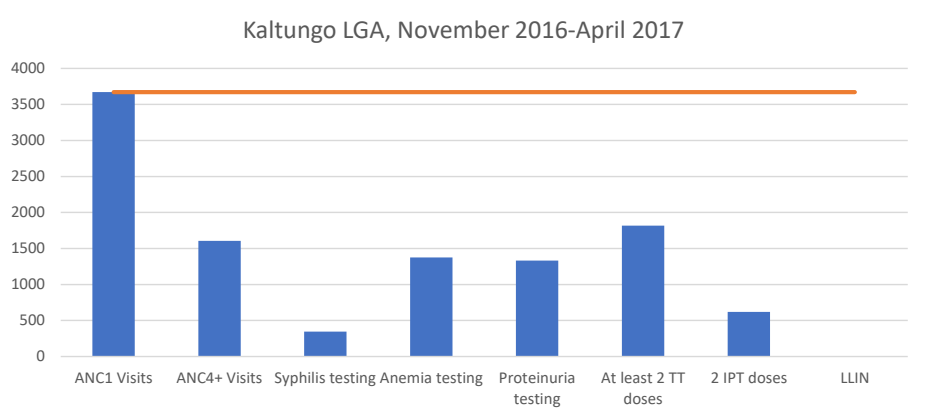

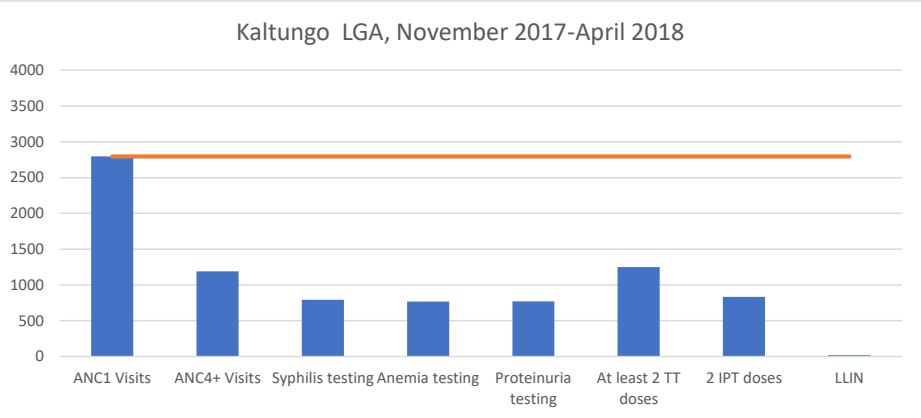

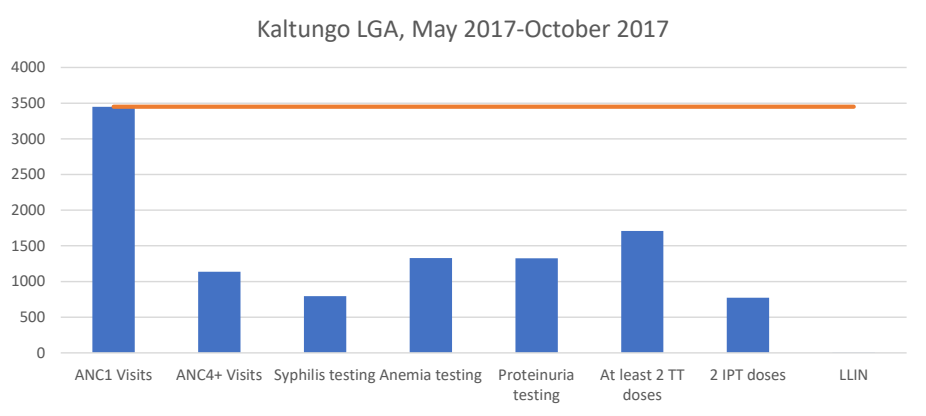

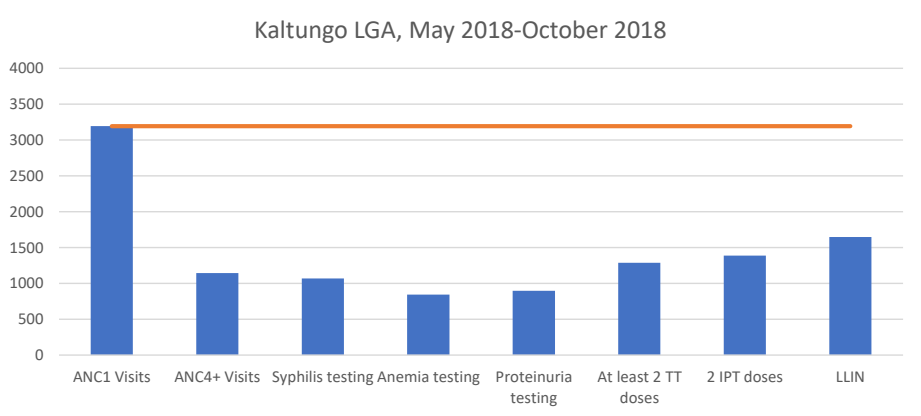

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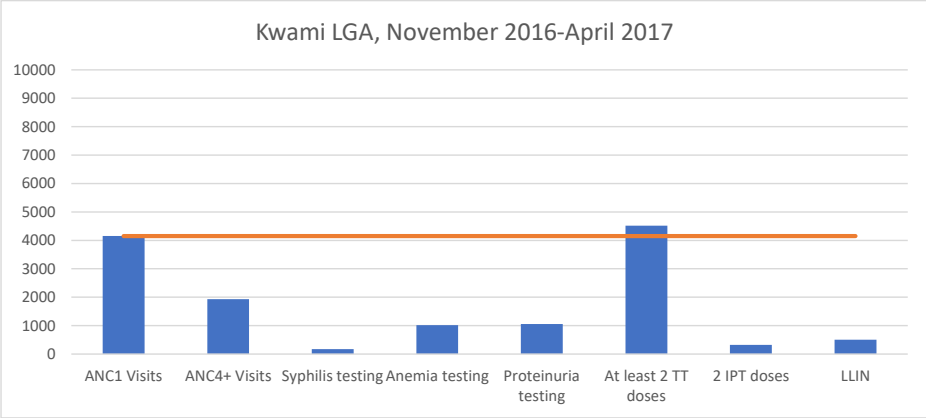

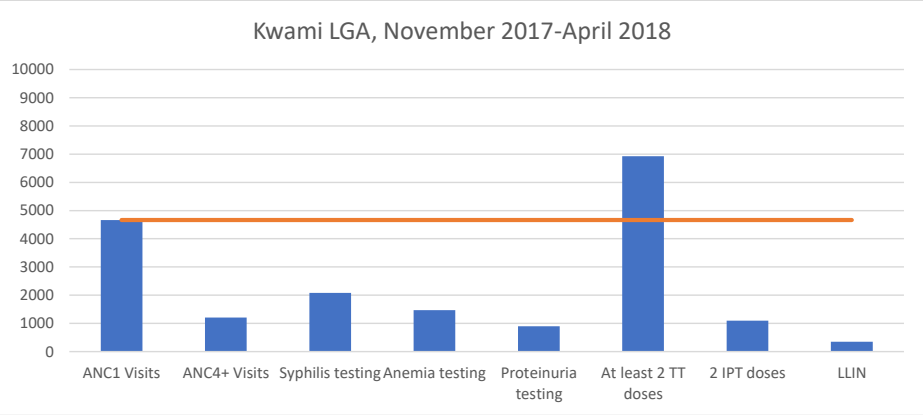

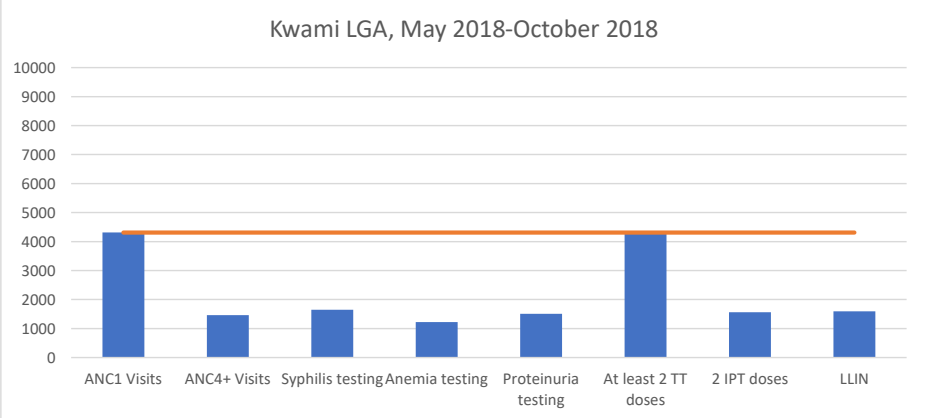

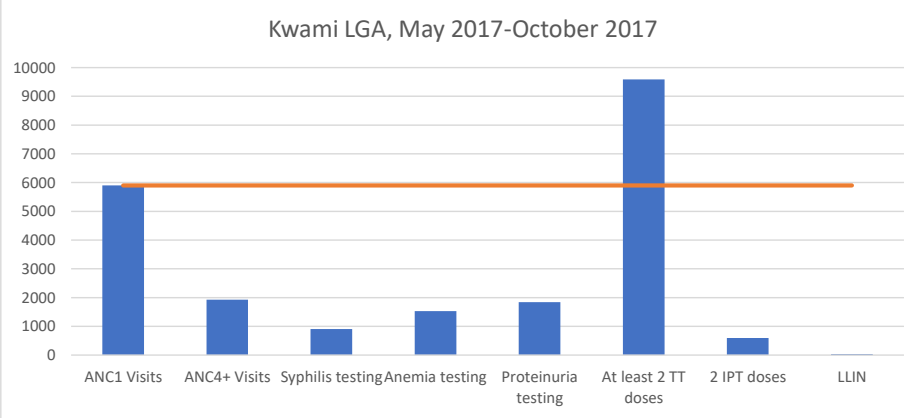

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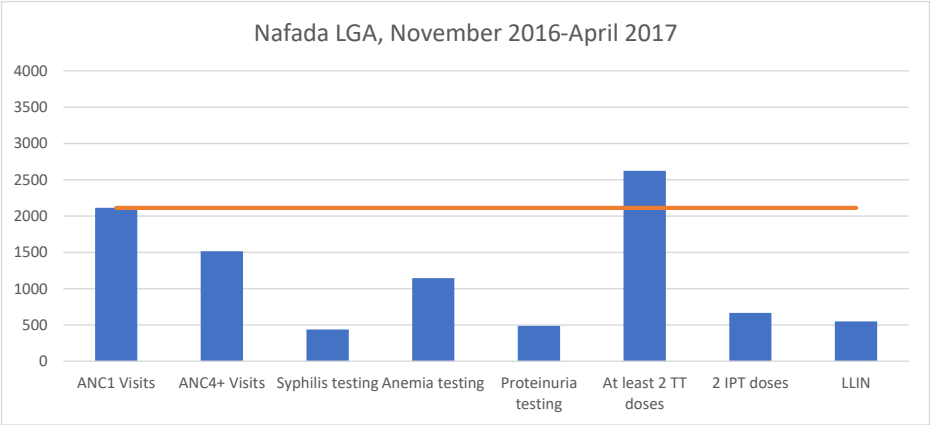

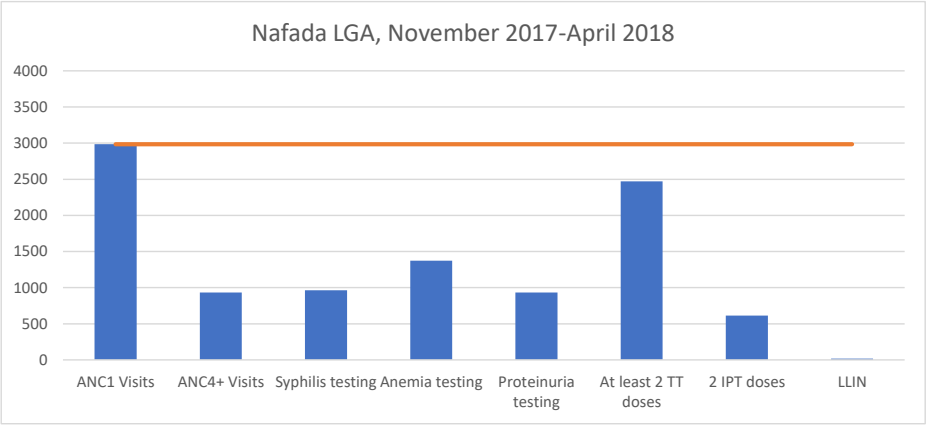

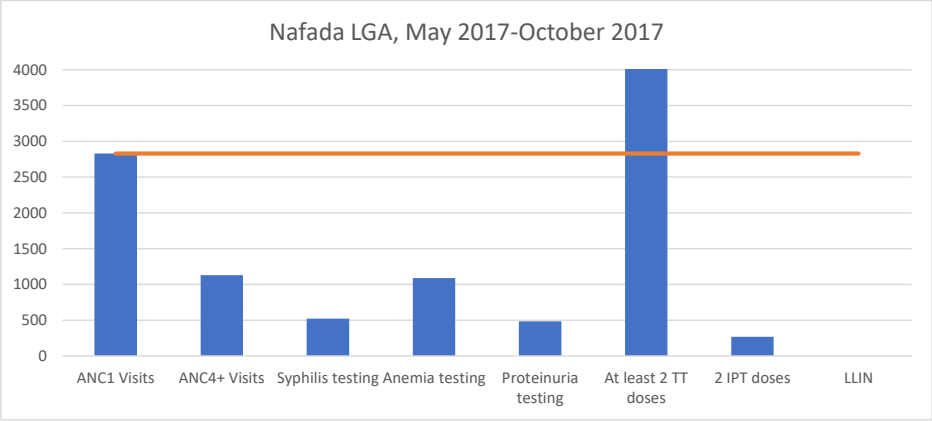

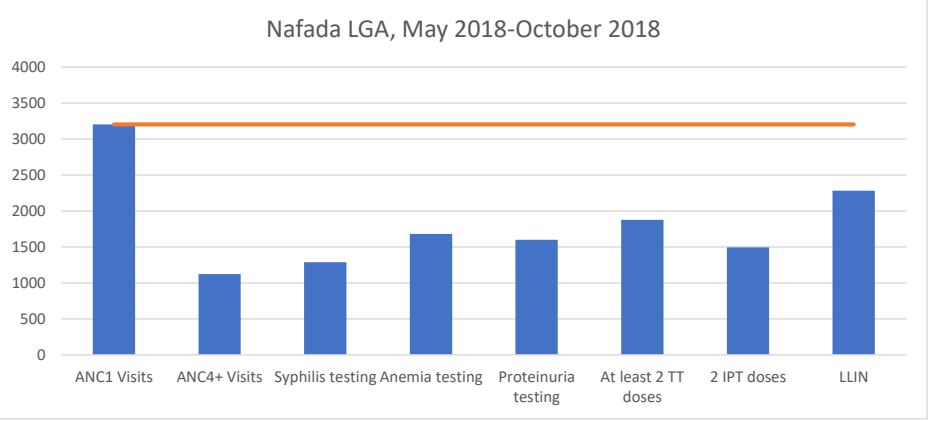

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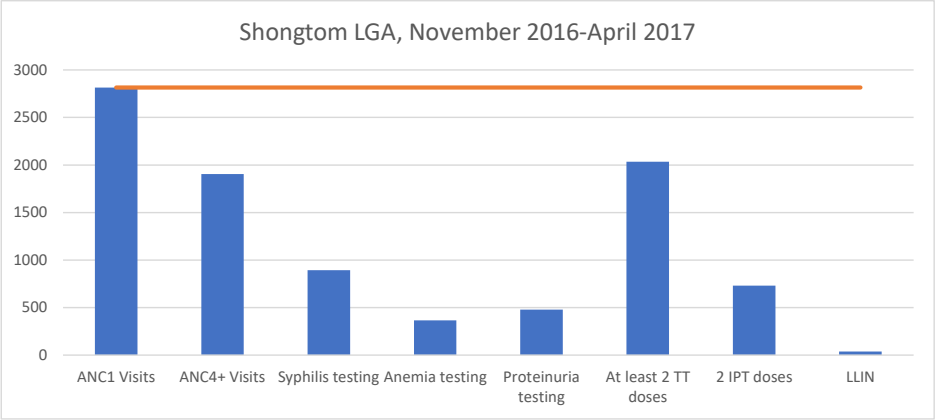

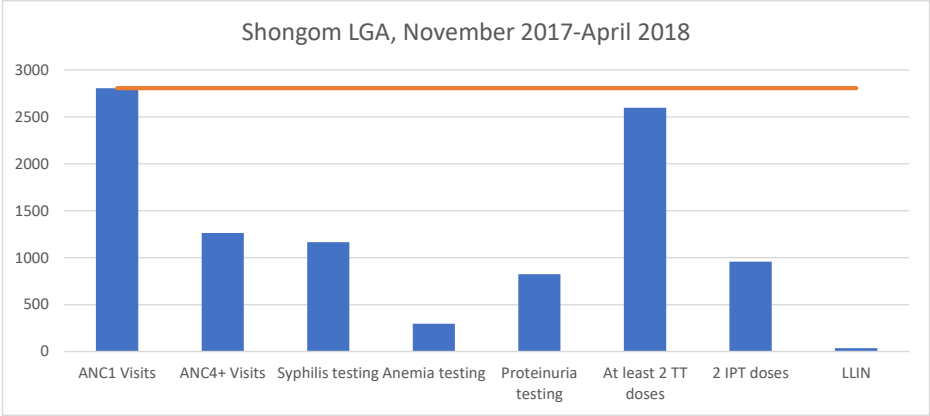

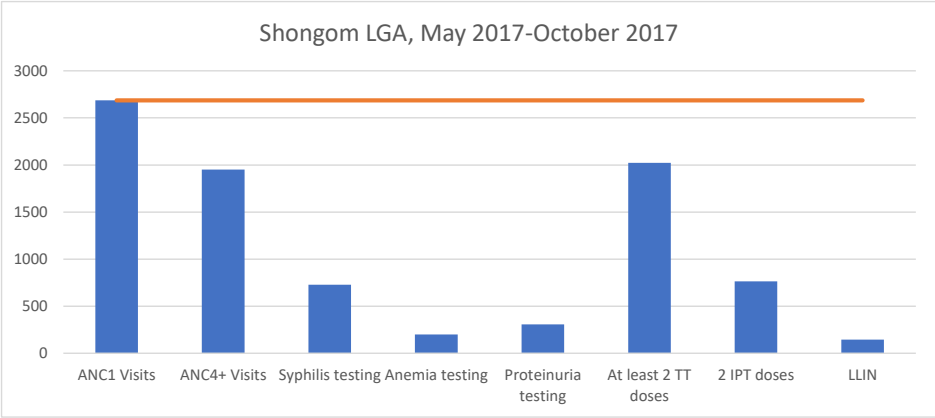

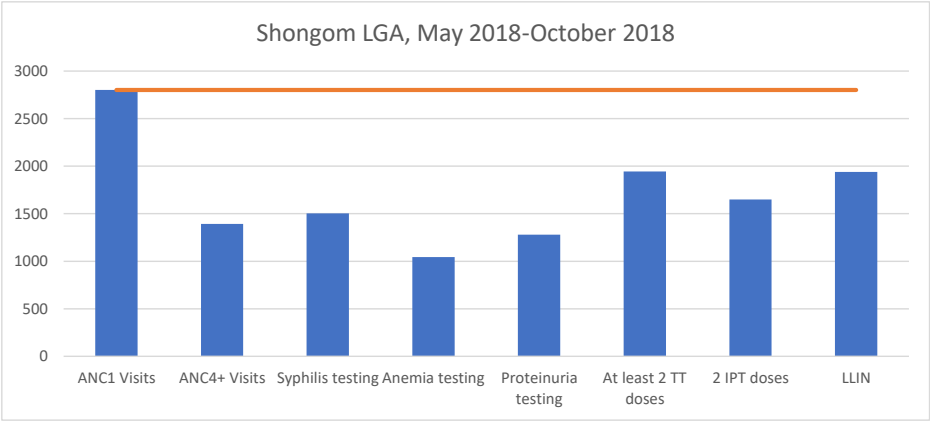

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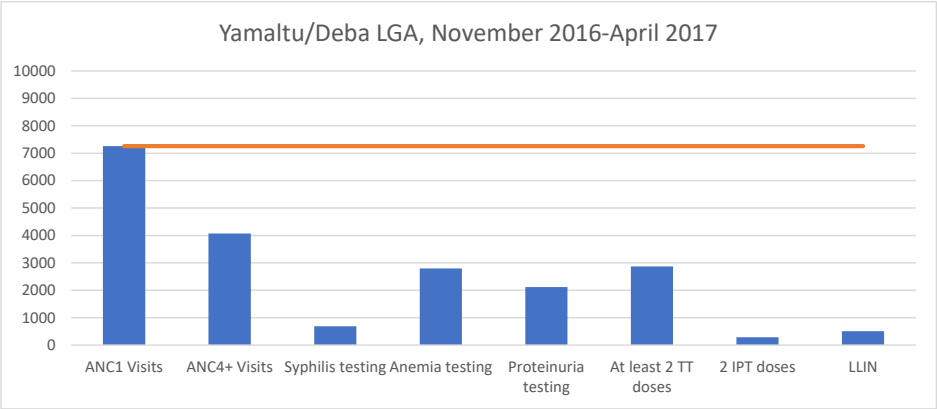

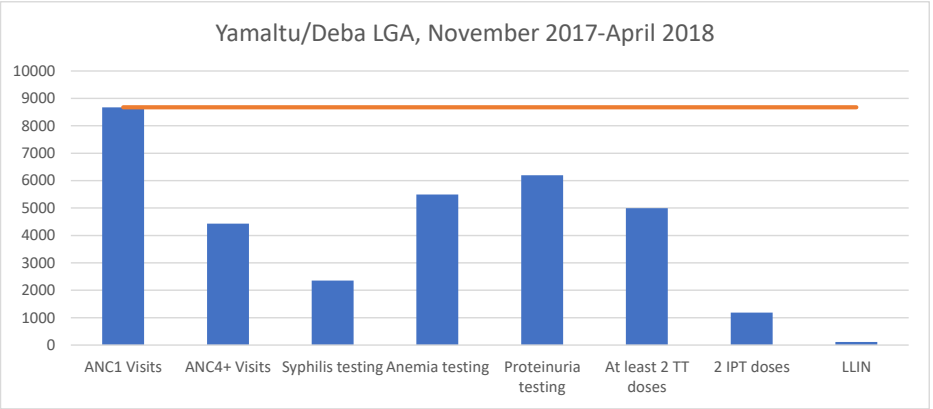

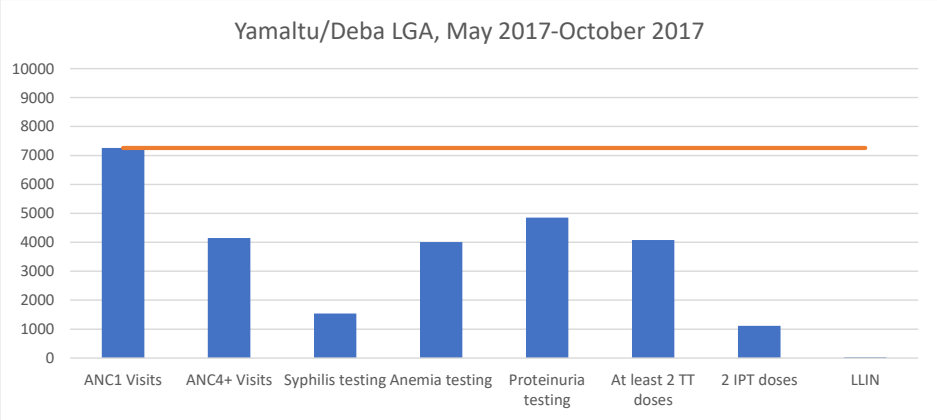

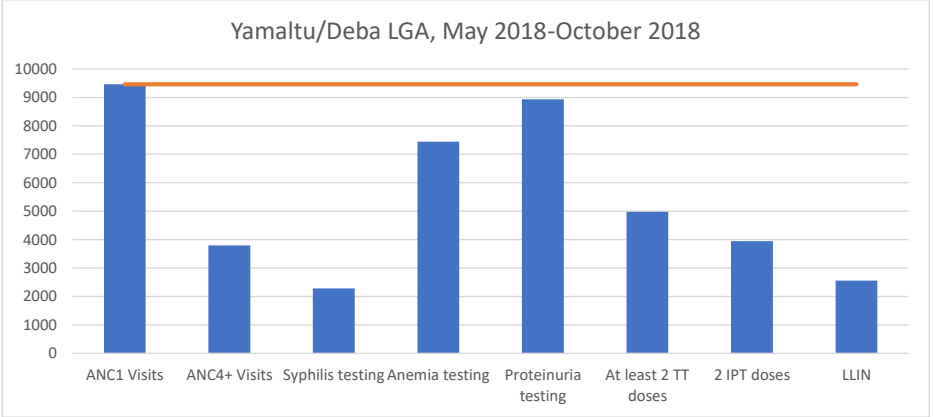

Completeness and timeliness

Ranking for completeness and timeliness, November 2016-October 2018:

1st	Balanga
2nd	Gombe
3rd	Billiri
4th	Yamaltu/Deba
5th	Kwami
6th	Funakaye
7th	Dukku
8th	Shongom
9th	Kaltungo
10th	Nafada
11th	Akko

Ranking for completeness and timeliness, May 2018-October 2018:

1st	Kaltungo
2nd	Balanga
3rd	Gombe
4th	Yamaltu/Deba
5th	Kwami
6th	Billiri
7th	Shongom
8th	Funakaye
9th	Dukku
10th	Nafada
11th	Akko

Consistency between related indicators

Ranking for highest consistency between related indicators:

1st	Billiri
2nd	Gombe
3rd	Nafada
4th	Funakaye
5th	Kwami
6th	Yamaltu/Deba
7th	Shongom
8th	Akko
9th	Dukku
10th	Kaltungo
11th	Balanga

Top four LGAs with the highest improvement in consistency between related indicators:

1st	Akko
2nd	Yamaltu/Deba
3rd	Shongom
4th	Funakaye

Gombe LGA and **Billiri** had the highest consistency between related indicators in November 2016-April 2017 and maintained this level of consistency through May 2018-October 2018.

IDEAS project

IDEAS (Informed Decisions for Actions) aims to improve the health and survival of mothers and babies through generating evidence to inform policy and practice. Working in Ethiopia, northeast Nigeria and the state of Uttar Pradesh in India, IDEAS uses measurement, learning and evaluation to find out what works, why and how in maternal and newborn health programs.

IDEAS is funded by a grant from the Bill & Melinda Gates foundation to the London School of Hygiene & Tropical Medicine.

ideas.lshtm.ac.uk

London School of Hygiene & Tropical Medicine

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