

TURKANA COUNTY QUANTIFICATION AND FORECASTING

Technical Report
September 2019

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Abbreviation List

| | |
|-------|--|
| SCALE | Supply Chain Alternatives for Last Mile Equity |
| EMMS | Essential Medicines and Medical Supplies |
| CHMT | County Health Management Team |
| SCHMT | Sub County Health Management Team |
| SCP | Sub County Pharmacist |
| CHS | Community Health Strategy |
| KEMSA | Kenya Medical Supplies Agency |

1. Background

inSupply Health is an independent supply chain advisory firm affiliated with JSI Research and Training Institute Inc. that provides customized guidance to clients on supply chain management and design. Through the SCALE project (Supply Chain Alternatives for Last-mile Equity), inSupply Health aims to address inequity in access to health commodities by developing sustainable and scalable community-based distribution models that reach underserved and hard to reach communities. SCALE is funded by the Bill and Melinda Gates Foundation.

Part of the mandate of this project includes providing technical assistance and capacity building on supply chain management, including quantification and forecasting for health care commodities. On September 18th to 20th 2019, inSupply Health through the SCALE project co-supported a Forecasting and Quantification workshop led by the Turkana County Health Department, Directorate of Medical Supplies. The main goal of inSupply's participation was to do a needs assessment in preparation for the Forecasting and Quantification workshop planned for March 2020.

2. Objective

The main objective of this County Led activity was to estimate the biannual EMMS (Essential Medicines and Medical Supplies) commodity requirements for the county and as an output, place a commodity order to KEMSA. Based on the forecasted requirements per sub-county, the team would then rationalize the order to the allocated budget. Each sub-county quantified approximately 70 commodities but the products were varied based on the level of services provided.

a. Quantification Workshop Overview

Check Annex one for the Agenda.

The workshop took place in Bahamas Eliye Springs Resort. Participants included members of the Turkana County Directorate of Medical Supplies, Sub-county Pharmacists and a few CHMT members. A total of 22 participants attended the workshop. The attendees included:

- o Director Medical Supplies
- o Deputy Director Medical Supplies
- o Chief Officer for Health
- o County Pharmacist
- o Deputy County Pharmacist
- o County Nursing Officer
- o County Nutritionist
- o County Lab Coordinator
- o County Rehabilitative Services Coordinator
- o 2 County Biomedical Engineer
- o Senior Procurement officer
- o Procurement Officer
- o County CHS focal person
- o 6 Sub-county Pharmacists
- o Lodwar County Referral Hospital Pharmacist

Each of the Sub-county pharmacists analyzed their consumption data from the EMMS dashboard and the KHIS (Kenya Health Information System), which was used to come up with order estimates for each of their facilities within their sub-county. This was done on the first day of the workshop. The last two days were spent on presentations from the sub-county pharmacists with the rest of the team interrogating the estimates to rationalize the order amounts.

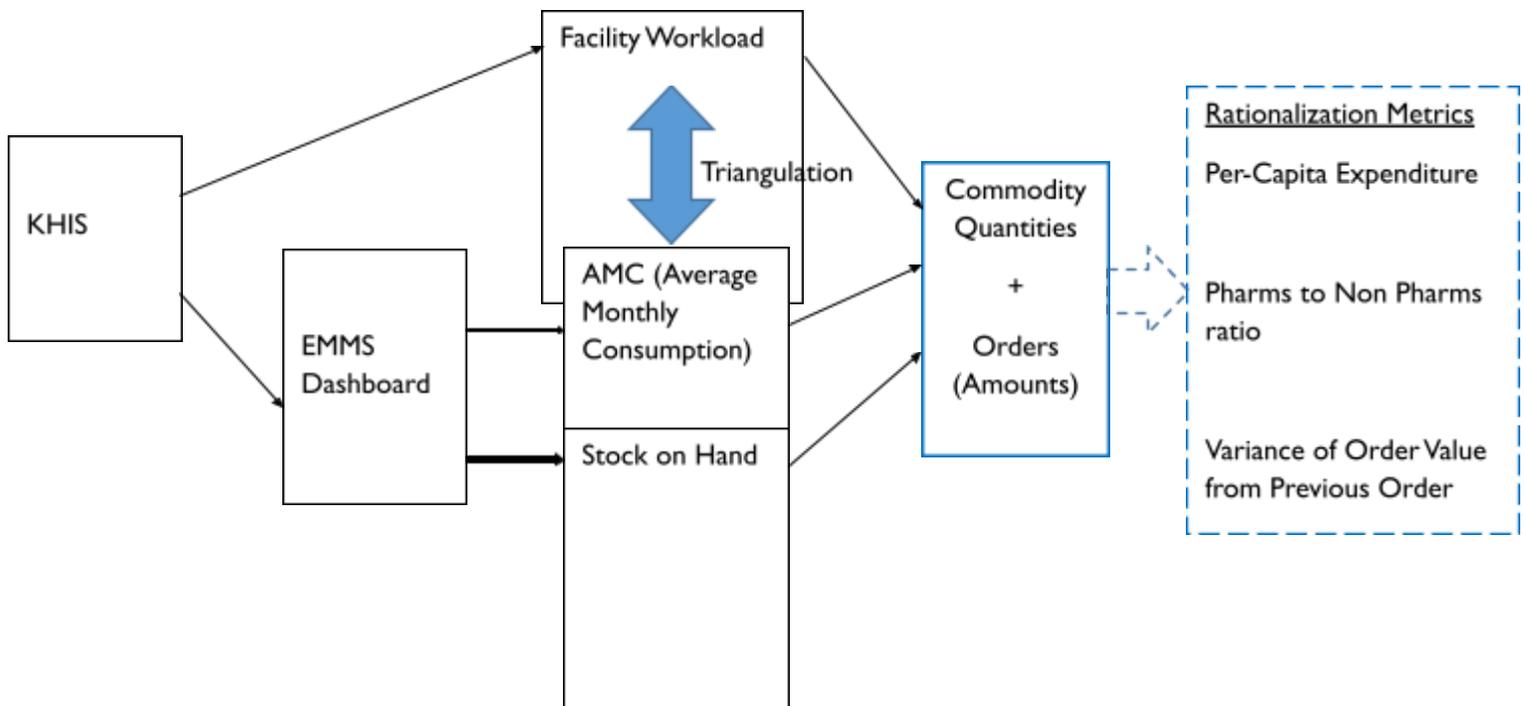
3. Forecasting Methodology

The Turkana team only used the consumption method to come up with their estimates. The data organization, preparation, and analysis was done by the sub-county pharmacists. Data used by the teams to generate the forecast had the following challenges which were highlighted during the presentations:

- i. Consumption data was profoundly affected by stock-outs.
- ii. Data quality was also cited as a challenge attributed to limited supply chain knowledge by facility staff.

Despite these challenges, the sub-county teams did not document their assumptions for the forecast. The team acknowledged that service data was better in terms of accuracy and reporting rates. However, this data was not used in the forecast. Historical data was also not utilized probably due to the large number of commodities they were quantifying. The commodity estimates were derived by multiplying the latest AMC for each commodity by 8 months, where 6 represented the period of the forecast/order, 1 month represented the lead time and an additional 1 month represented the buffer stock. Despite the attempt by the team to use data to develop the commodity estimates, the allocated budget was always a constraint and it affected the decision made by the team on the commodity requirements. Where data was not reliable the teams would use the Facility workload data to estimate the commodity requirements for a facility. The forecasting process is outlined in the diagram below:

Figure 1: Turkana County Quantification Process



Since the teams were estimating quantities for almost 70 commodities, rationalization was only done for the total order amount per facility and not per commodity. The data used was incomplete and quality of the data was affected by stock-outs and non-reporting facilities.

a. Rationalization Metrics Description

Rationalization during the workshop was done in an open discussion. The estimates and orders were interrogated by the whole team. During the presentations, three metrics were used by the team to rationalize the commodity orders. A description of these metrics and how they were calculated is provided below:

- i. **Per-Capita Expenditure:** This metric provided an estimate of the average amount spent on EMMS commodities for a given client per sub-county. The main goal was to minimize this amount. It was calculated by dividing the total order amount per facility by the total facility workload. The sub-county value was simply an average of facility per-capita expenditure. The ideal average per sub-county was KES 80 – 100.
- ii. **Pharms to Non Pharms ratio:** The ideal ratio was 80% for Pharmaceuticals to 20% for non-pharmaceutical products. The goal here was to minimize expenditure on non-pharmaceutical products.
- iii. **Variance between Current Order and Previous Order:** The goal of this metric was to allow the teams to give a justification for increasing expenditure.

b. Challenges faced by the County concerning Quantification (Forecasting and Supply Planning)

1. KEMSA has restricted the procurement of medical supplies from any other supplier. Counties have to request commodities from KEMSA first, and if the products are not there, they have to do a letter requesting approval to procure from another supplier. This is probably the reason why the lead times are very long (Sometimes 4-6 months)
2. Teams on the ground (Facility level) lack basic supply chain management knowledge. This is due to high turnover.
3. KEMSA does not stock a majority of the lab commodities. The fill rate for these commodities is approximately 20%.
4. Some facilities lack commodity tracking tools, ie. Stock cards, request forms, etc. This is possibly the reason why the reporting rates are low.
5. The budget allocation for medical commodities is not informed by the demand/needs of the county.
6. Data quality: No data on number of days stocked out per facility for the EMMS commodities.

4. Recommendations

1. The EMMS commodity list requires a review to ensure that the commodities on the list are still the commodities that the County would wish to continue to procure. Priority might be given to the commodities that treat the most prevalent diseases in the county. A few high priority disease areas can then be selected, and forecasting is done using demographic, morbidity data, and service data. Given that Turkana county has experienced two malaria outbreaks so far, malaria can be considered to be a high priority disease area.
2. Ideally, the main output of a quantification activity should be the commodity forecasts (quantities) that should inform a supply plan. This forecast can be used to advocate for more resources as it is a representation of the demand of the county.
3. During the preparation stage, when data is being extracted from DHIS and the EMMS dashboard, adjustments should be made where the reported consumption does not represent 100% of the facility consumption and/or the facility has had stock-outs during the period of reporting.
4. When determining forecast quantities, supply planning practices should be applied. First, determine the length of time needed for the period covered by the forecast that includes the lead time and Buffer stock. The value should then be multiplied by AMC and the current stock on hand plus quantities on order subtracted to get the forecast quantity.
5. Segmenting the EMMS commodities would enable the sub-counties to apply targeted forecasting strategies for the different segments, which will result in a less intense activity as the most emphasis will be directed to fewer products that contribute to the highest consumption. Since the county aims to be cost-effective and still ensure products are available at the facility level, the strategy would help them improve the accuracy of their forecast that would eventually lead to significant savings. Find the proposed segmentation strategy below:

Figure 3: Proposed segmentation strategy

| Segment | Description of Segment | Proposed Forecasting methodology |
|---------|--|--|
| A | <p>Comprised of the top 20% commodities.</p> <p><i>The criteria being consumption level.</i></p> | <ul style="list-style-type: none"> o Forecast based on consumption, service data, and morbidity (if the data is available) o The decision on which of the forecasts to use will depend on the quality of the data sets and assumptions made. Otherwise, an average of the different forecasts may be used. o A review of this forecast can be done more frequently, maybe biannually. |
| B | <p>Comprised of the next 30% commodities.</p> <p><i>The criteria being consumption level</i></p> | <ul style="list-style-type: none"> o Only one of the methods applied depending on the quality of the data sets. (most probably consumption data) o A review of the forecast could be done less frequently. Maybe annually |
| C | <p>Comprised of the bottom 50% commodities.</p> <p><i>The criteria being consumption level</i></p> | <ul style="list-style-type: none"> o Only one of the methods applied depending on the quality of the data sets. (most probably consumption data) o A review could be done every 2 years/during the next Forecasting and quantification activity. |

Annex I:Agenda

Day 1 (Wednesday, 18th September 2019)

| Time | Session | Lead |
|-------------------------|--|-----------------------------------|
| 8.30am - 9.00am | Welcome, registration and introductions | County Pharmacist |
| 9.00am - 9.15am | Opening remarks, workshop Objectives and expectations | County Director, Medical Supplies |
| 9.15am – 9.30am | Background to County FQ, introduction to FQ, Forecasting methodologies, FQ Assumptions and Decision making for Forecasting | County Pharmacist |
| 9.30 am – 11.00am | Group work – validation of Facility Data per sub county & Preparation for Sub County Presentations | All |
| 11.00am-11.30am | Tea | All |
| 11.30am - 13.00pm | Group work – validation of Facility Data per sub county & Preparation for Sub County Presentations | All |
| 13.00pm- 15.00pm | Lunch Break | All |
| 13.00pm -16.00pm | Presentation (Lodwar County Referral Hospital – LCRH) | Hospital Pharmacist (LCRH) |
| 16.00pm -17.00pm | Sub County Presentation (Turkana East) | SCP, Turkana East |
| 17.00pm | Tea and Day closure | All |

Day 2 (Thursday, 19th September, 2019)

| Time | Session | Lead |
|-------------------------|---|----------------------|
| 8.30am - 9.00am | Day 1 Recap | County Pharmacist |
| 9.00am - 10.00am | Sub County Presentation (Turkana South) | SCP, Turkana South |
| 10.00am – 11.00am | Sub County Presentation (Turkana Central) | SCP, Turkana Central |
| 11.00am-11.30am | Tea | All |
| 11.30am - 13.00pm | Sub County Presentation (Loima) | SCP, Loima |
| 13.00pm- 15.00pm | Lunch Break | All |
| 15.00pm -16.00pm | Sub County Pharmacist (Turkana West) | SCP, Turkana West |
| 16.00pm -17.00pm | Sub County Presentation (Kibish) | SCP, Kibish |
| 17.00pm | Tea and Day closure | All |

Day 3 (Friday, 20th September 2019)

| Time | Session | Lead |
|-------------------------|--|--------------------|
| 8.30am - 9.00am | Day 3 Recap | County Pharmacist |
| 9.00am - 10.00am | Sub County Presentation (Turkana North) | SCP, Turkana North |
| 10.00am – 11.00am | County commodity coordinators presentations (Laboratory, Rehabilitation services, Biomedical Equipment, Nutrition commodities, CHS Focal person) | Programme Officers |
| 11.00am-11.30am | Tea | All |
| 11.30am - 13.00pm | County commodity coordinators presentations (Laboratory, Rehabilitation services, Biomedical Equipment, Nutrition commodities, CHS Focal person) | Programme Officers |
| 13.00pm- 15.00pm | Lunch Break | All |

| | | |
|-------------------|----------------------------------|-----------------------------------|
| 15.00pm -16.00pm | Action points and way forward | County Pharmacist |
| 16.00pm - 16.30pm | Closing remarks and Appreciation | County Director, Medical supplies |
| 16.30pm | Tea and Departure | All |

Annex 2: Participants List

| Name | Role |
|------------------------|--|
| 1. Dr. Epem Esekou | Director Medical Supplies |
| 2. Dr. Eloto Abok | Chief Officer of Health |
| 3. David Moru Lokai | Deputy Director Medical Supplies |
| 4. Logilae Paul Ereng | Deputy County Pharmacist |
| 5. Benson Musyoka | SCP Turkana North |
| 6. Brian Muyokani | SCP Turkana west |
| 7. Mercy Kawira | SCP Turkana Central |
| 8. Denis Sinei | SCP Loima Sub County |
| 9. Nguyai Geoffrey | SCP Kibish Sub County |
| 10. David Moru Lokai | Deputy Director Medical Supplies |
| 11. Logilae Paul Ereng | Deputy County Pharmacist |
| 12. Benson Musyoka | SCP Turkana North |
| 13. Kenneth Ketter | SCP Turkana South |
| 14. Javan Inda | SCP Turkana East |
| 15. Concepta Longole | County Rehabilitative services Coordinator |

| | |
|----------------------|---|
| 16. Maragia James | County Medical Lab coordinator |
| 17. James Mwangi | County Nursing Officer |
| 18. Fredrick Esinyen | County Nutrition Officer |
| 19. Peter Birgen | SMET – Lodwar County Referral Hospital |
| 20. Antony Kihono | Pharmacist Incharge – Lodwar County Referral Hospital |
| 21. Joel Taitoi | SCMO – Lodwar County Referral Hospital |
| 22. Kokure Kamaret | SCMO – Lodwar County Referral Hospital |
| 23. Philemon Lokulan | County Senior Procurement Officer |

| # | Facility Name | Total 12 Months service workload (May 2018 - April 2019) | Order amount | Data Reporting on EMMS dashboard | Data (ReLIABLE or Estimated) R/E |
|-----|---------------------------------------|---|--------------|----------------------------------|------------------------------------|
| 1. | Napeikar Dispensary | 11,097 | 453,307.00 | 100 | R |
| 2. | Namoruputh (PAG) Health Centre | 9,680 | 927,238.00 | 100 | R |
| 3. | St Elizabeth Lorugum Health Centre | 8,679 | 556,572.00 | 100 | R |
| 4. | Lorugum Sub County Hospital | 8,249 | 1,210,471.00 | 100 | R |
| 5. | Kopeeto Dispensary | 8,051 | 465,605.00 | 100 | R |
| 6. | Lobei Health Centre | 7,640 | 633,189.00 | 100 | R |
| 7. | Turkwel Health Centre | 6,820 | 834,530.00 | 100 | R |
| 8. | St Bridgit Kalemunyang Dispensary | 6,612 | 477,061.00 | 100 | R |
| 9. | Lokirama Dispensary | 6,216 | 517,341.00 | 100 | R |
| 10. | Lomil Dispensary | 6,086 | 391,844.00 | 100 | R |
| 11. | Lorengippi Dispensary | 5,619 | 431,110.00 | 66 | E |
| 12. | Kaitese Dispensary | 5,242 | 573,718.00 | 100 | R |
| 13. | Nasiger Dispensary | 4,927 | 440,436.00 | 100 | R |
| 14. | Nameyana Dispensary | 4,849 | 471,855.00 | 100 | R |
| 15. | Kangalita Dispensary | 4,659 | 476,464.00 | 100 | R |
| 16. | Natuntun Dispensary | 4,464 | 427,552.00 | 100 | R |
| 17. | Nadapal Dispensary | 4,454 | 367,324.00 | 100 | R |
| 18. | Naagis Dispensary | 4,423 | 455,864.00 | 100 | R |
| 19. | Kabulokor Dispensary | 4,176 | 372,479.00 | 100 | R |
| 20. | Lochoralomala Dispensary | 4,165 | 332,272.00 | 100 | R |
| 21. | Urum Dispensary | 4,101 | 435,668.00 | 100 | R |
| 22. | Lokwatubwa (PAG) Dispensary | 3,909 | 239,723.00 | 100 | R |
| 23. | Napeilim Dispensary | 3,586 | 315,707.00 | 100 | R |
| 24. | Kaapus Dispensary | 3,422 | 386,293.00 | 100 | R |
| 25. | Loroo Dispensary | 3,075 | 346,002.00 | 100 | R |
| 26. | Lokipetotarengan Dispensary | 2,936 | 361,694.00 | 100 | R |
| 27. | Kaesogoletom Dispensary | 2,906 | 243,654.00 | 66 | E |
| 28. | Nadapal Primary Health Care Programme | 2,448 | 93,180.00 | 100 | R |
| 29. | Lochorekuyen Dispensary | 2,296 | 317,116.00 | 100 | R |
| 30. | Lochoremeyan dispensary | 2,228 | 357,770.00 | 66 | E |
| 31. | Nakorimunyen Dispensary | 1,899 | 299,536.00 | 66 | E |
| 32. | Lochoredome Dispensary | 1,831 | 259,123.00 | 66 | E |
| 33. | Sasak Echoke Dispensary | 1,053 | 223,289.00 | 66 | E |

Annex 3: Sub-county presentations

Loima Sub-County Presentation

Kibish Sub-County Presentation

| # | Facility Name | CATCHMENT POPULATION | CURRENT VALUE (2019) | Per Capita Expenditure (cost per patient) | EMMS DATA REPORTING (LAST 3 MONTHS %) | DATA RELIABILITY |
|----|----------------------------|----------------------|----------------------|---|--|------------------|
| 1 | Kaikor Sub-county Hospital | 22081 | 998,058.00 | 62.08 | 100 | R |
| 2 | Kokuro Health Centre | 6188 | 677,545.00 | 92.00 | 66.7 | E |
| 3 | Karebur Dispensary | 4004 | 367,952.00 | 114.13 | 66.7 | E |
| 4 | Lobur Mission Dispensary | 5000 | 563,768.00 | 472.56 | | |
| 5 | Meyan Dispensary | 9284 | 543,835.00 | 66.04 | 100 | E |
| 6 | Sasame Dispensary | 3820 | 429,814.00 | 143.65 | 100 | E |
| 7 | Kakelae Dispensary | 7103 | 509,715.00 | 99.96 | 100 | R |
| 8 | Napak Dispensary | 14535 | 554,835.00 | 88.42 | 100 | R |
| 9 | Lobulono Dispensary | 5000 | 461,360.00 | | | |
| 10 | Koyasa Dispensary | 5154 | 498,831.00 | 141.35 | 100 | E |
| 11 | Lokamarinyang Dispensary | 7945 | 569,000.00 | 103.62 | 100 | R |
| 12 | Kibish Dispensary | 7130 | 639,590.00 | 123.93 | 100 | E |
| 13 | Kibish GSU Dispensary | 2000 | 0.00 | 0.00 | 0 | E |
| 14 | Ekicheles Dispensary | 7523 | 410,875.00 | 84.01 | 100 | R |
| 15 | Loruth Dispensary | 7217 | 598,835.00 | 100.11 | 100 | E |
| 16 | TOTAL | 94881 | 7,824,013.00 | 120.85 | 87 | 38.40% |

Turkana South Sub-County Presentation

| # | Facility Name | Workload | CURRENT ORDER VALUE (2019) | Per Capita Expenditure (costper patient) | EMMS DATA REPORTING (LAST 3 MONTHS %) | DATA RELIABILITY |
|----|----------------------------------|----------|----------------------------|--|--|------------------|
| 1 | Katilu Sub county Hospital | 35,313 | 1,876,377.00 | 53.14 | 67 | R |
| 2 | Kainuk Health Centre | 15,219 | 991,722.00 | 65.16 | 67 | R |
| 3 | Lokichar (RCEA) Health Centre | 15,019 | 558,634.00 | 37.20 | 67 | R |
| 4 | Lopur Dispensary (Turkana South) | 12,060 | 628,113.00 | 52.08 | 100 | R |
| 5 | Lokichar Sub county Hospital | 28,306 | 1,665,135.00 | 58.83 | 100 | R |
| 6 | Kalemungorok Dispensary | 10,053 | 761,748.00 | 75.77 | 100 | R |
| 7 | Kaputir Dispensary | 8,009 | 689,032.00 | 86.03 | 67 | R |
| 8 | Nakabosan Dispensary | 9,916 | 383,012.00 | 38.63 | 100 | R |
| 9 | Napusimoru Dispensary | 8,782 | 516,737.00 | 58.84 | 67 | R |
| 10 | Locheremoit Dispensary | 8,551 | 607,211.00 | 71.01 | 100 | R |
| 11 | Lokapel Dispensary | 9,430 | 589,369.00 | 62.50 | 100 | R |
| 12 | Juluk Dispensary | 5,322 | 372,293.00 | 69.95 | 100 | R |
| 13 | Lochwaangikatak Dispensary | 8,466 | 549,136.00 | 64.86 | 100 | R |
| 14 | Nakaalei Dispensary | 5,598 | 574,020.00 | 102.54 | 100 | R |
| 15 | Namakak Dispensary | 6,423 | 403,891.00 | 62.88 | 100 | R |
| 16 | Kangakipur Dispensary | 6,692 | 390,900.00 | 58.41 | 100 | R |
| 17 | Loperot Dispensary | 9,040 | 513,312.00 | 56.78 | 100 | R |
| 18 | Korinyang Dispensary | 9,754 | 479,567.00 | 49.17 | 100 | R |
| 19 | Kanaodon Dispensary | 4,805 | 450,426.00 | 93.74 | 67 | R |
| 20 | Kekorisogol Dispensary | 5,225 | 382,590.00 | 73.22 | 100 | R |
| 21 | Kagitankori Dispensary | 4,050 | 442,576.00 | 109.28 | 100 | R |
| 22 | Kakong Dispensary | 3,830 | 467,488.00 | 122.06 | 100 | R |
| 23 | Sopel Dispensary | 4,478 | 444,287.00 | 99.22 | 100 | R |
| 24 | Nakwamoru Health Centre | 3,561 | 480,314.00 | 134.88 | 100 | R |
| 25 | Lorogon Dispensary | 3,862 | 374,155.00 | 96.88 | 100 | R |
| 26 | Kapelibok Dispensary | 2,307 | 361,985.00 | 156.91 | 100 | R |
| 27 | Katir Dispensary | 3,691 | 376,507.00 | 102.01 | 100 | R |
| 28 | Kasuroi Dispensary | 5,338 | 397,109.00 | 74.39 | 100 | R |
| 29 | Lokaburu Dispensary | 2,249 | 329,475.00 | 146.50 | 100 | R |

| | | | | | | |
|----|--------------------|-------|------------|-------|----|---|
| 30 | Loyapat Dispensary | 3,770 | 342,891.00 | 90.95 | 67 | R |
|----|--------------------|-------|------------|-------|----|---|

Turkana North Sub-County Presentation

| # | Facility Name | June 2018 - July 2019) Facility workload | CURRENT VALUE (2019) | Per Capita Expenditure (costper patient) | EMMS DATA REPORTING (LAST 3 MONTHS %) | DATA RELIABILITY |
|----|-------------------------------|--|----------------------|--|--|------------------|
| 1 | Lokitaung Sub County Hospital | 8660 | 1,910,180.00 | 220.58 | 100 | |
| 2 | Kaaleng Health Centre | 8733 | 477,902.00 | 54.72 | 100 | R |
| 3 | Narengewoi Dispensary | 13210 | 378,188.00 | 28.63 | 67 | R |
| 4 | Kanakurudio Health Centre | 7631 | 420,258.00 | 55.07 | 100 | R |
| 5 | Lowarengak Health Centre | 10009 | 453,139.00 | 45.27 | 67 | R |
| 6 | Kokiselei Dispensary | 6046 | 311,729.00 | 51.56 | 100 | R |
| 7 | Kataboi Dispensary | 5440 | 360,542.00 | 66.28 | 67 | UR |
| 8 | Nachukui Dispensary | 4197 | 285,967.00 | 68.14 | 100 | R |
| 9 | Nariokotome Dispensary | 10046 | 357,536.00 | 35.59 | 100 | R |
| 10 | Epur Dispensary | 3611 | 257,087.00 | 71.20 | 100 | R |
| 11 | Kaalem Dispensary | 3286 | 212,032.00 | 64.53 | 100 | R |
| 12 | Kachoda Dispensary | 7417 | 275,089.00 | 37.09 | 100 | R |
| 13 | Kaeris Dispensary | 5631 | 381,833.00 | 67.81 | 100 | R |
| 14 | Todonyang Dispensary | 1142 | 268,925.00 | 235.49 | 100 | R |
| 15 | Lomekwi Dispensary | 1795 | 216,163.00 | 120.43 | 67 | R |
| 16 | Milima Tatu Dispensary | 3620 | 275,110.00 | 76.00 | 33 | UR |
| 17 | Nadung'a Dispensary | 4424 | 268,452.00 | 60.68 | 100 | R |
| 18 | Nakapelewoi Dispensary | 1053 | 244,830.00 | 232.51 | 100 | R |
| 19 | Nakitoekakumon Dispensary | 2721 | 244,402.00 | 89.82 | 67 | UR |
| 20 | Riokomor Dispensary | 3466 | 266,738.00 | 76.96 | 100 | R |
| 21 | Lokapelpus Dispensary | 1813 | 258,299.00 | 142.47 | 100 | R |
| 22 | Lomi Dispensary | 2096 | 311,633.00 | 148.68 | 100 | R |
| 23 | Natoo Dispensary | 2272 | 202,162.00 | 88.98 | 100 | R |

Turkana East Sub-County Presentation

| # | Facility Name | June 2018 - July 2019) Facility workload | CURRENT VALUE (2019) | Per Capita Expenditure (cost per patient) | EMMS DATA REPORTING (LAST 3 MONTHS %) | DATA RELIABILITY |
|----|--------------------------------------|---|----------------------|---|---------------------------------------|------------------|
| 1 | Lokori Primary Health Care Programme | 15,748 | 569,396.00 | 36.16 | 100 | R |
| 2 | Lokwii Health Centre | 14,483 | 598,353.00 | 41.31 | 100 | R |
| 3 | Morulem Dispensary | 14,313 | 552,269.00 | 38.59 | 100 | R |
| 4 | Elelea Health Centre | 10,810 | 1,002,615.00 | 92.75 | 100 | R |
| 5 | Lokori (AIC) Health Centre | 6,658 | 511,896.00 | 76.88 | 100 | R |
| 6 | Kapedo Health Centre | 7,865 | 463,740.00 | 58.96 | 100 | R |
| 7 | Lotubae (AIC) Dispensary | 6,166 | 355,816.00 | 57.71 | 67 | UR |
| 8 | Katilia Dispensary | 6,482 | 496,593.00 | 76.61 | 67 | R |
| 9 | Lopedur Dispensary | 5,131 | 478,253.00 | 93.21 | 100 | R |
| 10 | Lomelo Dispensary | 6,489 | 428,732.00 | 66.07 | 100 | R |
| 11 | Nakukulas Dispensary | 7,680 | 499,450.00 | 65.03 | 100 | R |
| 12 | Lokorkor Dispensary | 4,818 | 415,269.00 | 86.19 | 100 | R |
| 13 | Karuko Dispensary | 5,283 | 457,877.00 | 86.67 | 100 | R |
| 14 | Lokwamosing Dispensary | 4,078 | 380,217.00 | 93.24 | 100 | R |
| 15 | Nakatongwa Dispensary | 3,463 | 357,312.00 | 103.18 | 100 | R |
| 16 | Lopii Dispensary | 3,229 | 342,867.00 | 106.18 | 100 | R |
| 17 | Napeitom Dispensary | 2,181 | 363,925.00 | 166.86 | 33 | UR |
| 18 | Kamuge Dispensary | 2,095 | 325,668.00 | 155.45 | 0 | UR |

Turkana Central Sub-County Presentation

| # | Facility Name | Work load | CURRENT VALUE (2019) | Data (Received or Estimated) R/E | DATA RELIABILITY |
|-----|---|-----------|----------------------|------------------------------------|------------------|
| 1. | St Patrick Kanamkemer Dispensary | 32,437 | 834,171.00 | R | R |
| 2. | Kerio Health Centre | 18,894 | 1,250,071.00 | R | R |
| 3. | Kalokol (AIC) Health Centre | 13,860 | 860,330.00 | R | R |
| 4. | Ngiitakito Dispensary | 13,385 | 1,126,485.00 | R | R |
| 5. | Kangirisae Dispensary | 13,092 | 775,247.00 | R | R |
| 6. | Kanawoi Dispensary | 11,626 | 864,545.00 | R | R |
| 7. | Nabulon Dispensary | 9,774 | 857,539.00 | R | UR |
| 8. | Nakurio Dispensary | 9,293 | 555,753.00 | R | R |
| 9. | Longech Dispensary | 9,258 | 552,463.00 | R | R |
| 10. | St Monica Nakwamekwi Dispensary | 9,106 | 552,289.00 | R | R |
| 11. | Lolupe Dispensary (Turkana Central) | 8,431 | 410,978.00 | E | UR |
| 12. | Nadoto Dispensary | 7,826 | 610,636.00 | R | R |
| 13. | Loturerei Dispensary | 6,914 | 540,896.00 | R | R |
| 14. | Kawalase Dispensary | 6,627 | 477,221.00 | R | UR |
| 15. | Louwae Dispensary | 6,537 | 385,123.00 | R | R |
| 16. | Kalokol Dispensary | 6,337 | 444,180.00 | R | R |
| 17. | Moruongor Dispensary | 5,620 | 454,639.00 | E | UR |
| 18. | lochoraikeny dispensary | 5,539 | 413,560.00 | E | UR |
| 19. | Namukuse Dispensary | 4,951 | 486,550.00 | R | R |
| 20. | Nakechichok Dispensary | 4,921 | 380,570.00 | E | UR |
| 21. | Kangatosa Dispensary | 4,818 | 471,291.00 | R | R |
| 22. | St Catherine Napetet Dispensary | 4,638 | 284,092.00 | R | R |
| 23. | Kakwanyang Dispensary | 4,375 | 336,125.00 | R | R |
| 24. | Kosikiria Dispensary | 4,174 | 249,170.00 | R | R |
| 25. | Kalimapus Dispensary | 4,143 | 396,570.00 | R | R |
| 26. | GK Prisons Dispensary (Turkana Central) | 4,115 | 338,920.00 | E | UR |

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|-----|---|-------|------------|---|----|
| 27. | Naotin Dispensary | 4,017 | 353,062.00 | R | R |
| 28. | Kapua Dispensary | 3,526 | 423,473.00 | E | UR |
| 29. | Nayanaeangikalalio Dispensary | 3,507 | 282,560.00 | E | UR |
| 30. | Elelea Dispensary | 3,383 | 182,654.00 | E | UR |
| 31. | Naoros Dispensary | 3,328 | 205,350.00 | R | R |
| 32. | St Mary Kalokol Primary Health Care Programme | 3,313 | 288,991.00 | R | R |
| 33. | Monti Dispensary | 3,092 | 228,155.00 | R | R |
| 34. | Eliye Springs Community Dispensary | 3,080 | 169,910.00 | | UR |
| 35. | Lorengelup Dispensary | 3,009 | 321,088.00 | R | UR |
| 36. | Chokchok Dispensary | 2,953 | 222,692.00 | E | UR |
| 37. | Kangagetei Dispensary | 2,863 | 241,692.00 | E | UR |
| 38. | Kenya Oil Dispensary | 2,207 | 180,745.00 | R | R |
| 39. | Kapokor Dispensary | 2,180 | 256,986.00 | R | R |
| 40. | Akatuman Dispensary | 2,136 | 256,475.00 | E | UR |
| 41. | Eliye Springs (AIC) Dispensary | 1,706 | 180,745.00 | R | R |
| 42. | Nakiria Dispensary | 1,602 | 156,373.00 | R | R |
| 43. | Lodoketengol Dispensary | 1,508 | 137,729.00 | E | UR |