TEAM B: CHITS DASHBOARD

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I. Introduction

A. Tools

Software:

- Sublime Text
- Notepad
- XAMPP
- Google Chrome
- Opera

- phpMyAdmin
- HeidiSQL
- MySQL Workbench
- Charts.js
- DataTables

B. Methods

- *Data Warehouse*
- Data warehouse is a special type of business database which contains consolidated data from all accessible service systems. It is not optimized for quick transaction processing but rather for quick administration of analytical information obtained from big amount of data. It also ensures processes of storing, actualization, and administration of data.
- *Data Analytics*
- Data analytics is the pursuit of extracting meaning from raw data using specialized computer systems. These systems transform, organize, and model the data to draw conclusions and identify patterns.
- *Methods*
- Since our class is divided into two major groups, we also divided the indicators given to us so that each group will have an equal number of indicators to work with.
- *For the data warehousing part:*
1. We use phpMyAdmin (some uses HeidiSQL and MySQL Workbench) to import the databases given to us.
2. Based from the indicators assigned to us, we created queries as well as views that can help to fasten the extraction of necessary data that we needed for the data analysis part.
- *For the data analytics part:*
1. We use Charts.js for the visualization of the query results and to help us analyze the gathered data.

2. We use DataTables to show the data in a functional table and allows data sorting, searching, and exporting.
3. The data that we analyzed consist of historical records and new information that we processed for real-time analytics.
4. Since we are aiming in finding patterns and relationships in data, we used the method exploratory data analysis.

C. Framework
- CodeIgniter

D. Localhost path
- localhost/chits/index.php/dashboard

E. Programming Language
- PHP
- MySQL (database)
- JSON
- JavaScript
- HTML5
- CSS3

II. Timeline

A. Number of children on mixed feeding
Query:

'CREATE TABLE IF NOT EXISTS `data_i6_', db_name, `
        SELECT DATE(obs.date_created) AS date, SUBSTRING_INDEX(value, \';\', -1) AS disaggregation, count(distinct obs.person_id) AS data FROM ', db_name, '.obs, ', db_name, '.person, param_values WHERE obs.person_id = person.person_id AND person.birthdate IS NOT NULL AND obs.concept_id = SUBSTRING_INDEX(param_values.value, \';\', 1) AND param_values.value_param_id = 601 AND param_values.value_db_id = ', db_id, ' AND obs.value_text = \'false\' GROUP BY DATE(obs.date_created), disaggregation'

B. Number of PhilHealth beneficiaries (disaggregated by roles)
Query:

'CREATE TABLE IF NOT EXISTS `data_i8_', db_name, '`SELECT DATE(obs.date_created) AS date, name AS disaggregation, COUNT(*) as data FROM ', db_name, '.obs, ', db_name, '.concept_name WHERE obs.concept_id = concept_name.concept_id AND obs.concept_id IN (', concs, ') GROUP BY DATE(obs.date_created), name ORDER BY obs.date_created'

C. Number of CCT beneficiaries with PhilHealth who avail the services of the RHU or health centers

Query:

CREATE TABLE IF NOT EXISTS `data_i10_`, db_name, '`SELECT
DATE(date_created) as date, COUNT(DISTINCT person_id) as data FROM ',
db_name, '.obs WHERE person_id IN (SELECT DISTINCT
person_attribute.person_id FROM ', db_name, '.person_attribute WHERE
person_attribute_type_id = ', attr, ' AND value = \'Y\') GROUP BY
DATE(date_created)'

D. Women with antenatal care: date of delivery and coverage

Query:

'CREATE TABLE temp_p4_EnroleesTable (SELECT DISTINCT(person_id)
FROM ', db_name, '.patient_program, ', db_name, '.person WHERE
patient_program.patient_id = person.person_id AND person.gender = \'F\' AND
patient_program.program_id = ', prog, ' AND patient_program.date_completed IS
NULL)'

E. Facility Based Deliveries

Query:

'CREATE TABLE IF NOT EXISTS `data_i14_`, db_name, '` SELECT
DATE(date_created) as date, value_text AS disaggregation, COUNT(*) AS data
FROM ', db_name, '.obs WHERE person_id IN (SELECT DISTINCT patient_id
FROM ', db_name, '.patient_program, ', db_name, '.person HERE
patient_program.patient_id = person.person_id AND gender = \'F\' AND
program_id = ', prog, '   AND date_completed IS NULL) AND concept_id = ',
conc, 'GROUP BY DATE(date_created), value_coded ORDER BY date_created'

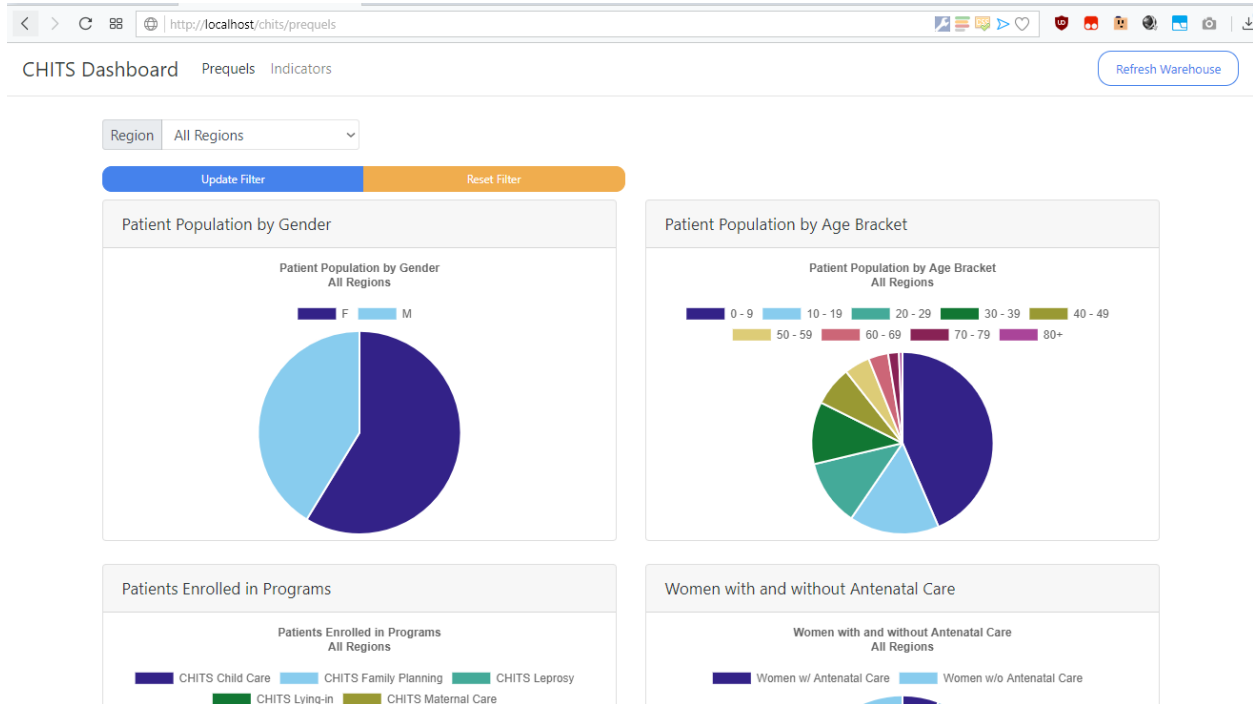## F. Contraceptive and family planning users: methods

Query:

'CREATE TABLE IF NOT EXISTS `data_i16_`, db_name, '` SELECT
DATE(date_created) as date, value_text AS disaggregation, COUNT(person_id)
AS data FROM ', db_name, '.obs WHERE person_id IN (SELECT DISTINCT
patient_id FROM ', db_name, '.patient_program, ', db_name, '.person WHERE
patient_program.patient_id = person.person_id AND program_id = ', prog, ' AND
date_completed IS NULL) AND concept_id = ', conc, ' GROUP BY
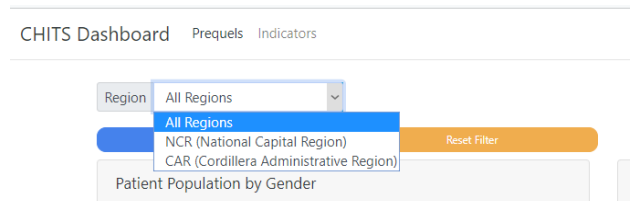DATE(date_created), value_coded ORDER BY date_created'

III. Project

- Simplest explanation from opening the dashboard to every features
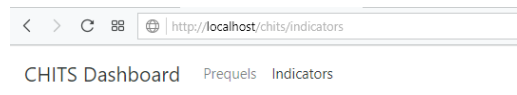
DASHBOARD MANUAL:

- Upon opening the dashboard, user will be on the prequel page.
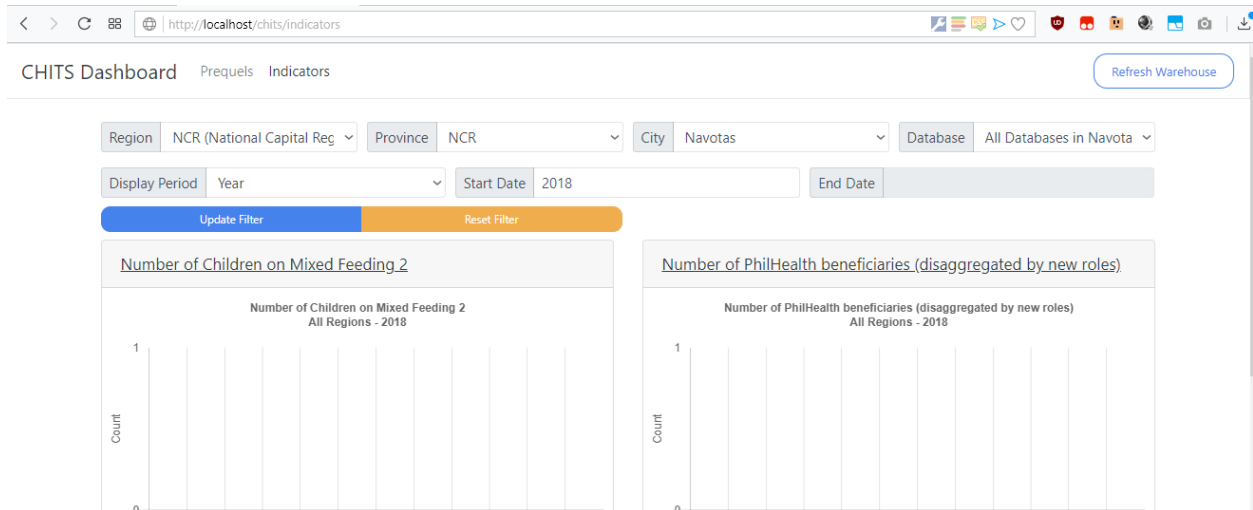

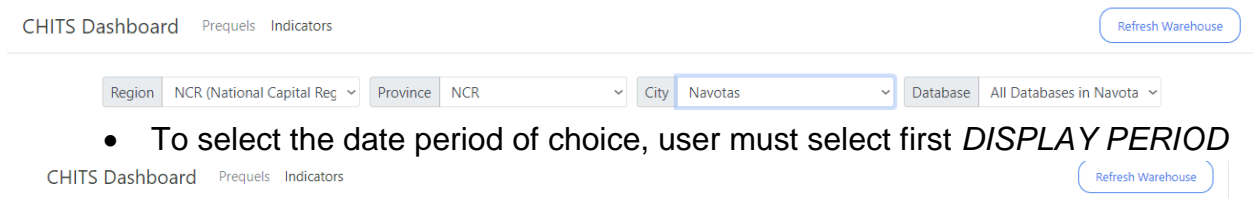- Here, user have the choice to select the area for each prequel graph.

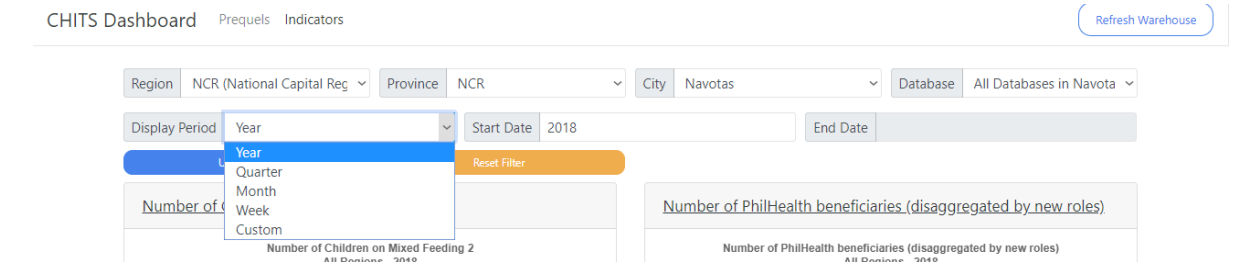- The user can navigate to the indicator by clicking "INDICATORS" in the navigation bar.

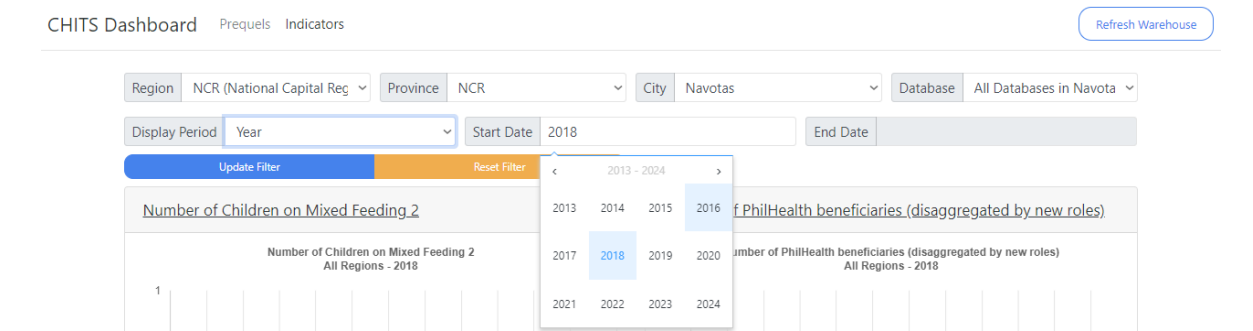- Here, the user is led to the indicator page.

- To select the area of choice, user must select in *DISPLAY PERIOD* to filter *REGION, PROVINCE, CITY,* and *DATABASE.*

- To select the date period of choice, user must select first *DISPLAY PERIOD*

- then, a user must pick among the choices available in the *START DATE* and *END DATE.*
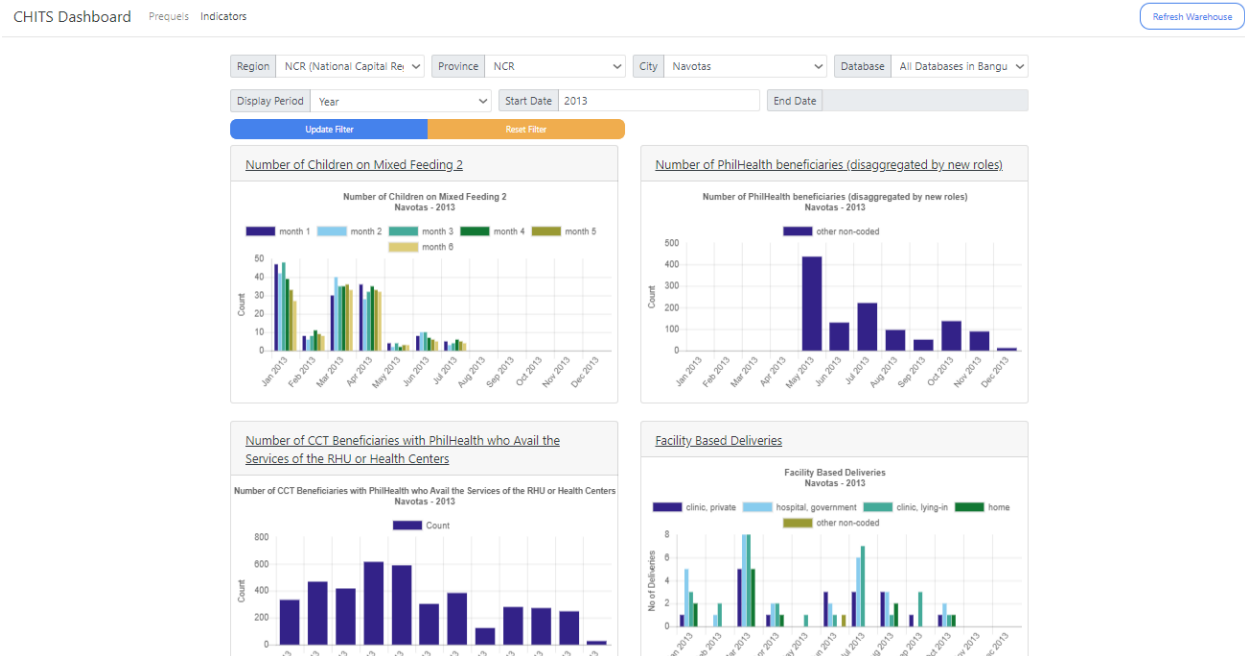

NOTE: END DATE adjusts depending on the choice of *DISPLAY PERIOD* and *START DATE.*

- After filtering, user must click *UPDATE FILTER* to generate the charts associated with the filter.
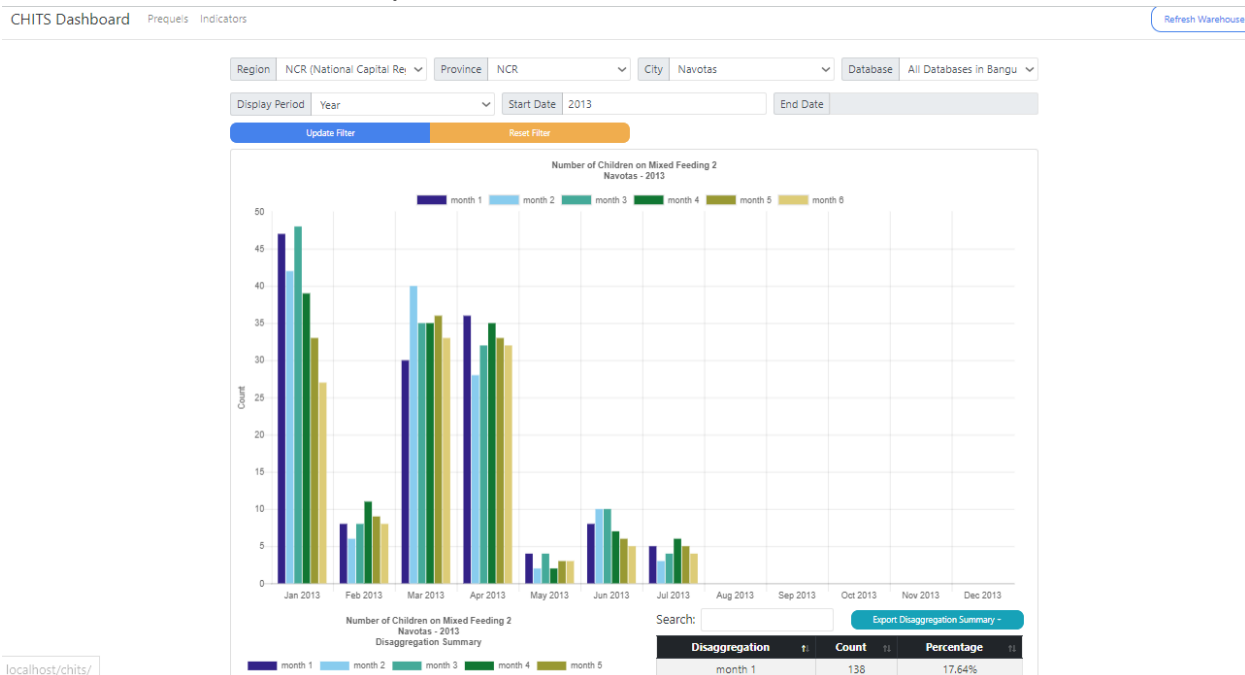
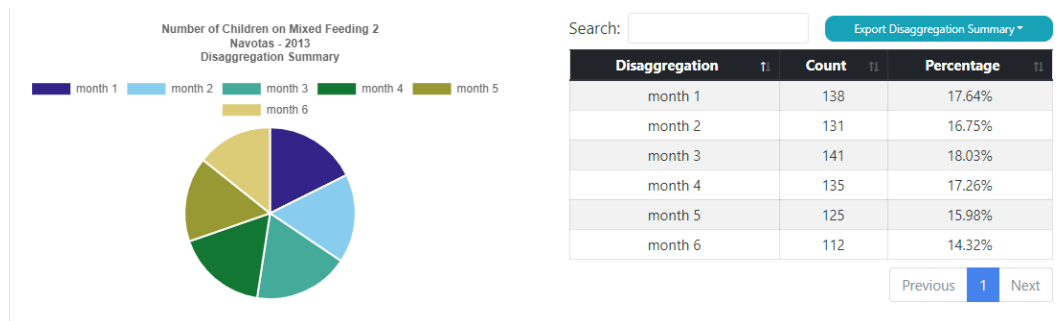NOTE: User has a choice to reset filters by clicking on *RESET FILTER.*
- The charts are then generated automatically.

- User can click to the title of every chart that will lead them to the page dedicated to that particular indicator.

- This page shows the graph form and tabular form of the indicator. It includes the indicator's disaggregation graph and table.

Number of Children on Mixed Feeding 2
Navotas - 2013
Disaggregation Summary

Disaggregation	Count	Percentage
month 1	138	17.64%
month 2	131	16.75%
month 3	141	18.03%
month 4	135	17.26%
month 5	125	15.98%
month 6	112	14.32%

NOTE: Some indicators does not have a disaggregation graph and table.

- User is able to *sort, search* and *export* the table.
- To export, user must click on EXPORT and is shown the export media.

- For the tabular form of the indicator, user can choose how many rows will be shown.

Show 10 entries   Search: Export Data Set ▾

Period	Disaggregation	Count	Percentage
Jan 2013	month 1	47	6.01%
Jan 2013	month 2	42	5.37%
Jan 2013	month 3	48	6.13%
Jan 2013	month 4	39	4.98%
Jan 2013	month 5	33	4.21%
Jan 2013	month 6	27	3.45%
Feb 2013	month 1	8	1.02%
Feb 2013	month 2	6	0.76%
Feb 2013	month 3	8	1.02%
Feb 2013	month 4	11	1.4%

Showing 1 to 10 of 42 entries   Previous 1 2 3 4 5 Next

IV. Other features

Color Friendly Palette
- The colors seen in the dashboard are specifically chosen to suit every user. Red, green and blues are avoided to accommodate color blind users.

Custom Date Filter
- User is provided with a custom date filter that can help in qualitative and quantitative research.
- It includes date periods such as year, quarter, month, week, and custom.

Graph Results Selector
- The user can toggle legends to toggle the visibility of their data set on the chart by clicking on its legend.

Export as CSV, PDF, or Excel, and Print
- Tables generated by queries can be exported as .csv/.pdf/.xlsx files so that the data gathered can be imported to other platforms.
- It can also be directly printed from the page.

Tabular Representation
- Query results are presented in a tabular manner to make analysation of the data easier for the user.
- The table allows sorting, and searching for specific data.

V. Writeups
A. Number of children on mixed feeding
- According to national Childbirth Trust UK, when it comes to feeding a baby, it's not always a question of only breastfeeding or only formula feeding; many women do a combination of both, often called combination feeding, combined feeding, mixed feeding, or partial breastfeeding. Women may want to try mixed feeding because they want to breastfeed for some of their baby's feeds, but give infant formula for one or more feeds, or because they are bottle feeding their baby and want to start or resume breastfeeding.
- Bar Graph is used to track changes over time.

B. Number of PhilHealth beneficiaries (disaggregated by new roles)
- PhilHealth members are entitled to benefits that depends on their role.
- Pie Chart is used as people are grouped by role.

C. Number of CCT beneficiaries with PhilHealth who avail the services of the RHU or health centers
- The World Health Organization (WHO) and UNICEF both recommend that mothers should breastfeed their child exclusively for the first 6 months. When a child is exclusively breast fed, their immune system is strengthened, enabling it to life-threatening illness like pneumonia and diarrhea amongst other infections. Results from the query shows that there are numerous number of child who are exclusively breastfed by their mothers. This results show that there are great

number of infants who have strong immune system and healthy growth and development.
- Bar graph is used to track changes over time.

D. Women with antenatal care: date of delivery and coverage
- WHO recommends that women start antenatal care at a gestational age of less than 12 weeks – this is referred to as 'early antenatal care'. Early antenatal care is a critical opportunity for health providers to deliver care and support, and to give information, to pregnant women in the first trimester of pregnancy. Despite this, a recent study shows that many of the poorest women still do not have equal access to the high-quality early antenatal care that can help to ensure their health and well-being.
- Pie chart is used to the division of data.

E. Facility Based Deliveries
- Facility-based deliveries measures the percent of live births that take place in a public or private health facility. Deliveries in health facilities can reduce maternal and neonatal mortality and morbidity by increasing the likelihood that women deliver with a skilled birth attendant and are connected to a referral system.
- We can see that there are higher number of deliveries in government hospitals.
- Bar graph is used to track changes over time.

F. Contraceptive and family planning users: methods
- Promotion of family planning – and ensuring access to preferred contraceptive methods for women and couples – is essential to securing the well-being and autonomy of women, while supporting the health and development of communities.
- Bar graph is used to track changes over time.

G. Vitamin A Coverage for Children
- According to WHO, Vitamin A deficiency affects about 190 million preschool-age children, mostly from Africa and South-East Asia. In infants and children, vitamin A is essential to support rapid growth and to help combat infections. Inadequate intakes of vitamin A may lead to vitamin A deficiency which can cause visual impairment in the form of night blindness and may increase the risk of illness and death from childhood infections, including measles and those causing diarrhoea.
- Bar Graph is used to track changes over time.

VI. References

http://www.who.int/elena/titles/vitamina_children/en/
https://www.nct.org.uk/parenting/mixed-feeding-combining-breast-and-bottle-feeding
http://www.who.int/reproductivehealth/early-anc-worldwide/en/
https://phcperformanceinitiative.org/indicator/facility-based-deliveries#?loc=&viz=0&ci=false
http://www.who.int/news-room/fact-sheets/detail/family-planning-contraception