VATOOL DOCUMENTATION

Introduction

VATOOL is a web based application aimed at providing visualisations of VA data and COD information obtained after successfully running/executing OpenVA pipeline. The tool also provides information that is informative on VA data quality and also CSMF based on aspects like age group and sex in a specific year.

Installation and use

Make sure you have installed openva_pipeline. [https://openva-pipeline.readthedocs.io/en/latest/install.html]

Copy the folder/zip file to any of your directory.

Download and Install Xampp [https://vitux.com/how-to-install-xampp-on-your-ubuntu-18-04-lts-system/]

Navigate to computer/opt/lamp/htdocs/ and paste the CRVS folder there.

Go to your working directory and paste all the remaining files there.

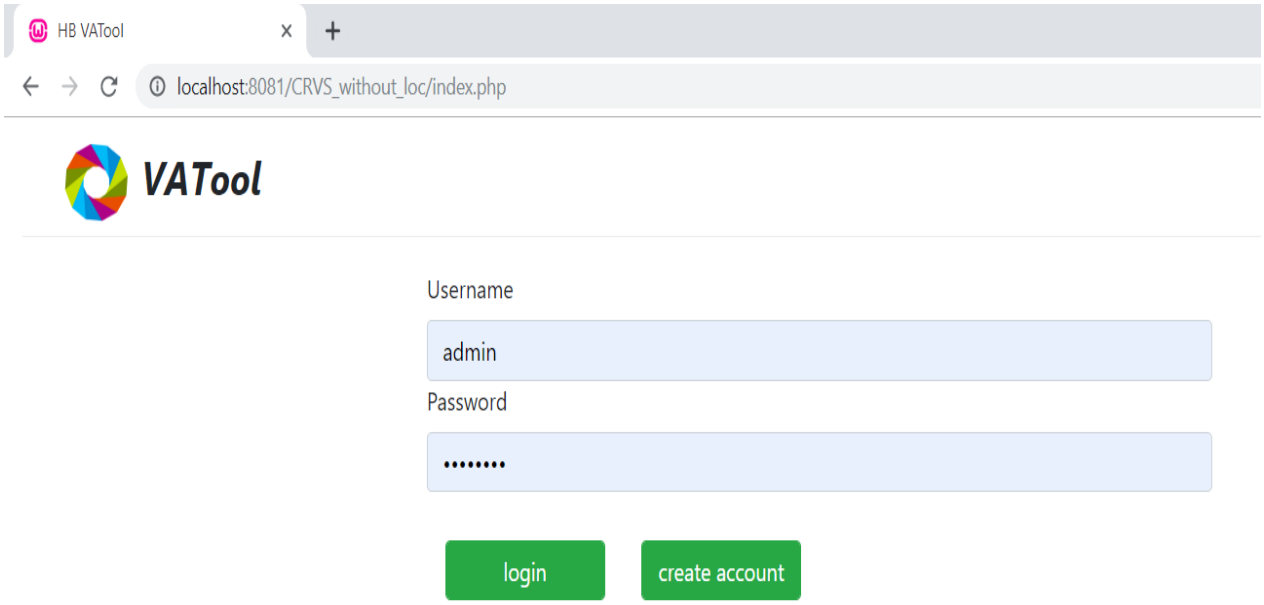
- **running_pipeline_code.py** – This is python code that will execute/run openva_pipeline to download data from ODK aggregate.
- **pipeline_cod.R –** The R code that picks csv from openva_pipeline output and processes it in ready-ness for dashboard python program. This is where data quality checks are done.
- **crvs_dash_code.py -** This is the python code that will process the data from pipeline R output, processes the data and pushed the database to the VATOOL folder.
- **Icd10.csv** – A list of InterVA/InsilcoVA COD mapped to icd10 codes and groupings

Then run the ***dashboard.sh*** bash file to run all the necessary dashboard code.

Once .sh file completes successfully, you can now go to your browser and enter IP address/DNS of your server. If within the server you can use **localhost, then apache port then application name**. i.e.

Type http://dns:port/CRVS or http://localhost/CRVS (If your apache runs in port 80)

You will be directed to login page as below:

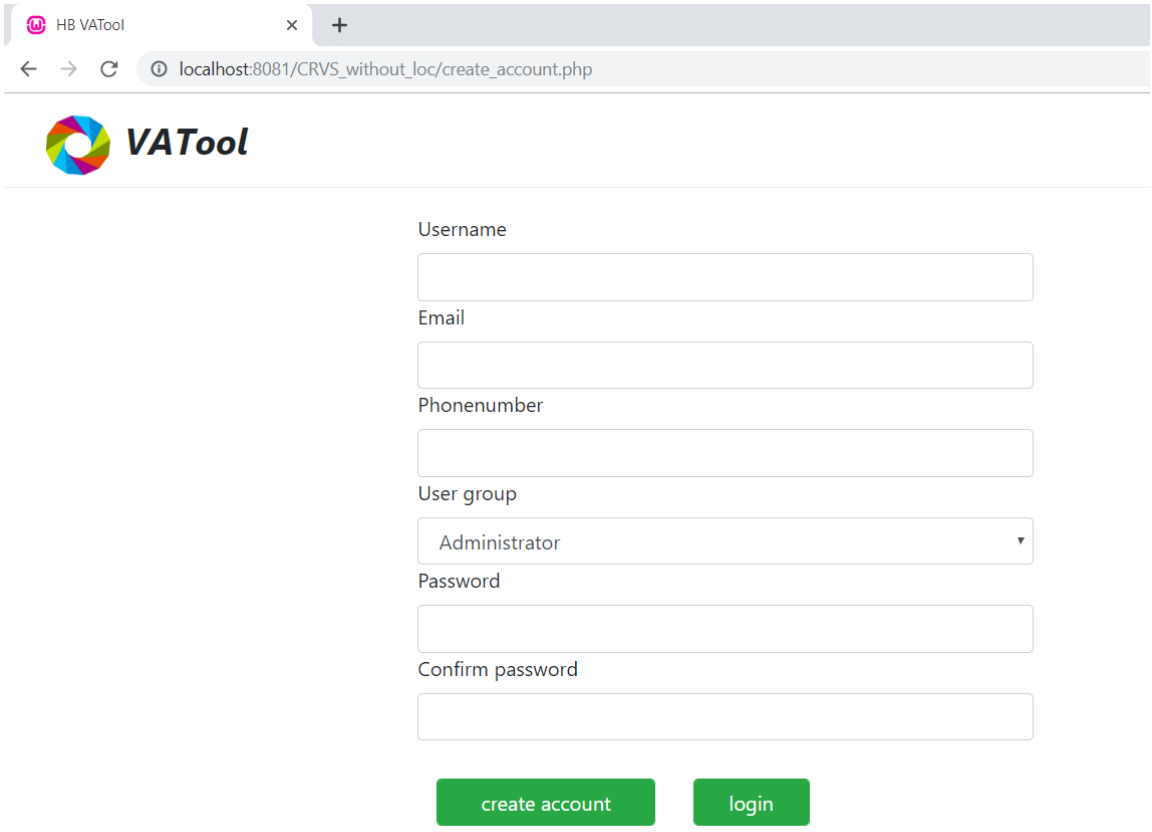


The default username is **Admin,** password **admin123.**

Creating account and adding users:

Simply click **create account** button.

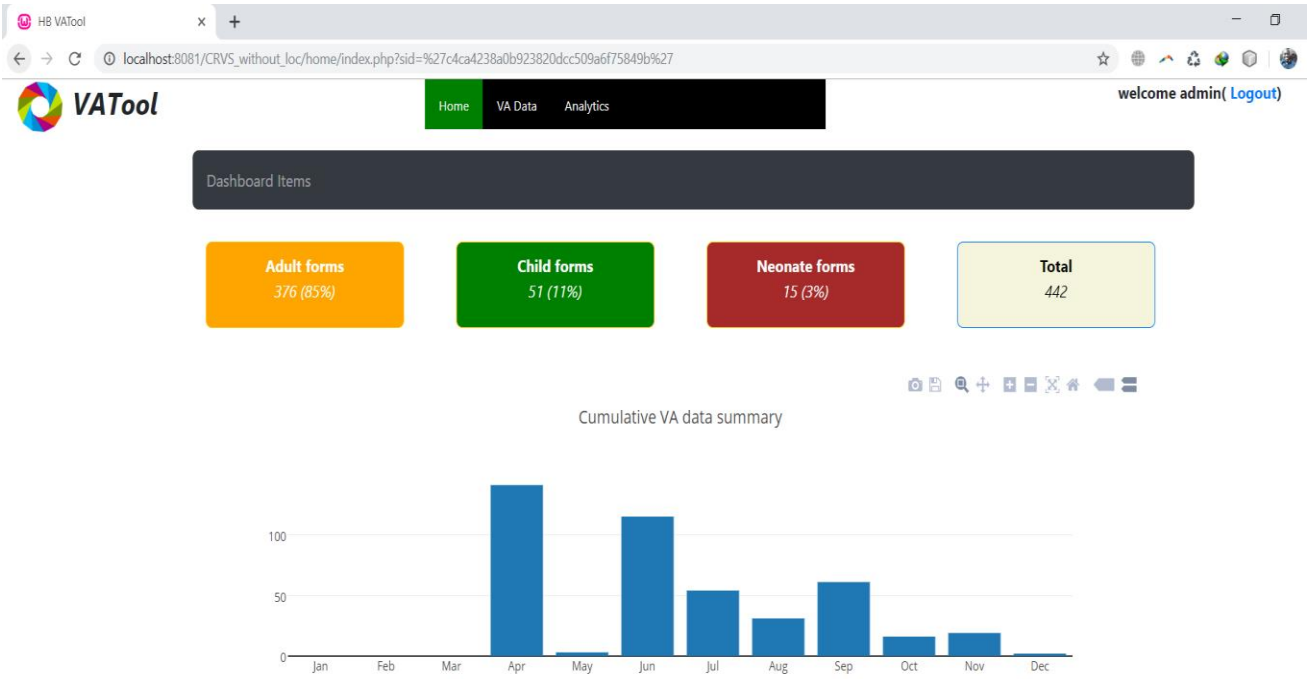
In the account creation page, enter details of new user and click **create account.** Please note that currently user rights are not constrained in the system. Meaning any user can interact with the system. User restriction in the system will come later as features are added to the system.



Features and modules modules

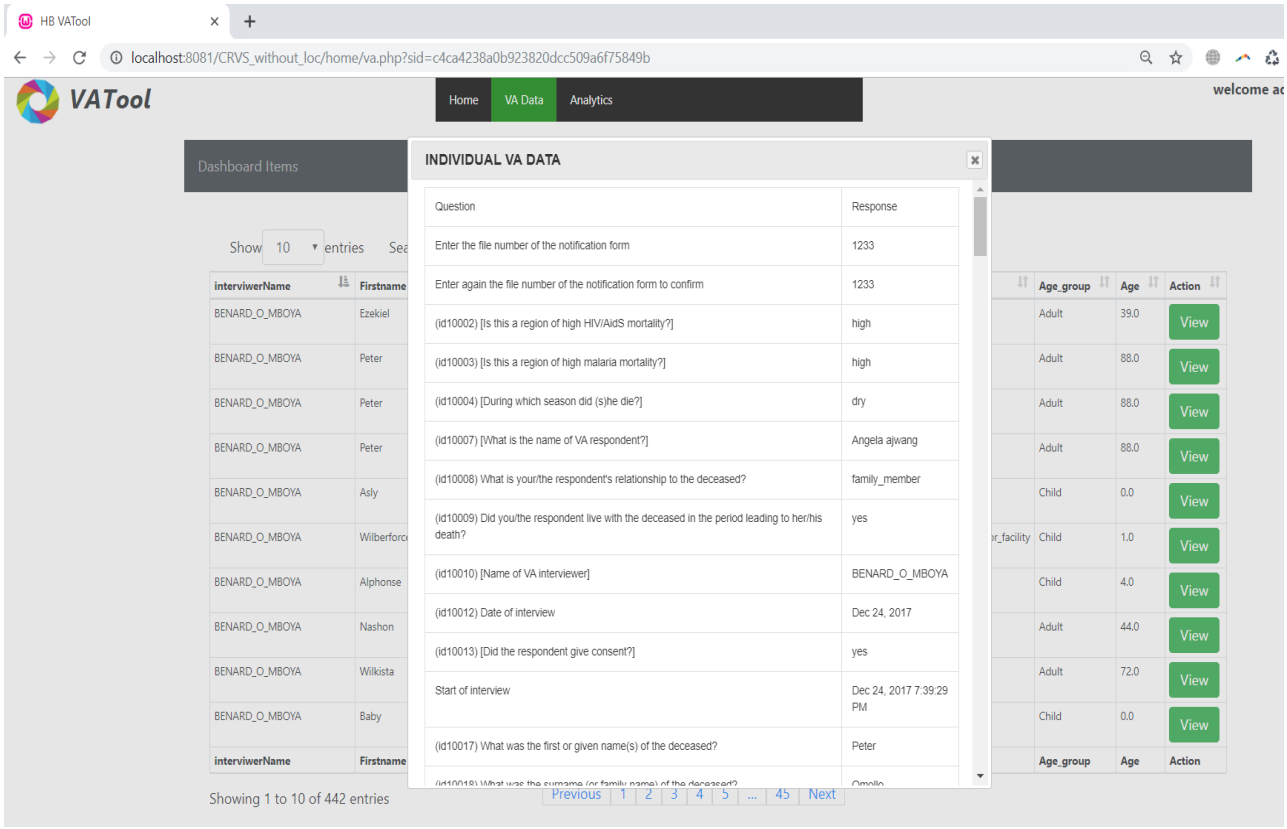
1. Home Page

When user first logs in, the first page to be displayed is the Home page. This page provides basic information about VA summaries by age group, and a chart showing cumulative data submission across months. More content can be added as the features increases.s



2. VA Data page

Purpose of this page is to avail RAW VA data for preview. This gives a simple interface to preview individual VA data question by question as labels are indicated in the WHO 2016 VA Questionnaire. To make it easier, the tool excludes responses that were skipped during skip pattern execution on tablets and only shows the questions that has responses. As future improvement, other users will only be able to see de-identified data according to user rights.



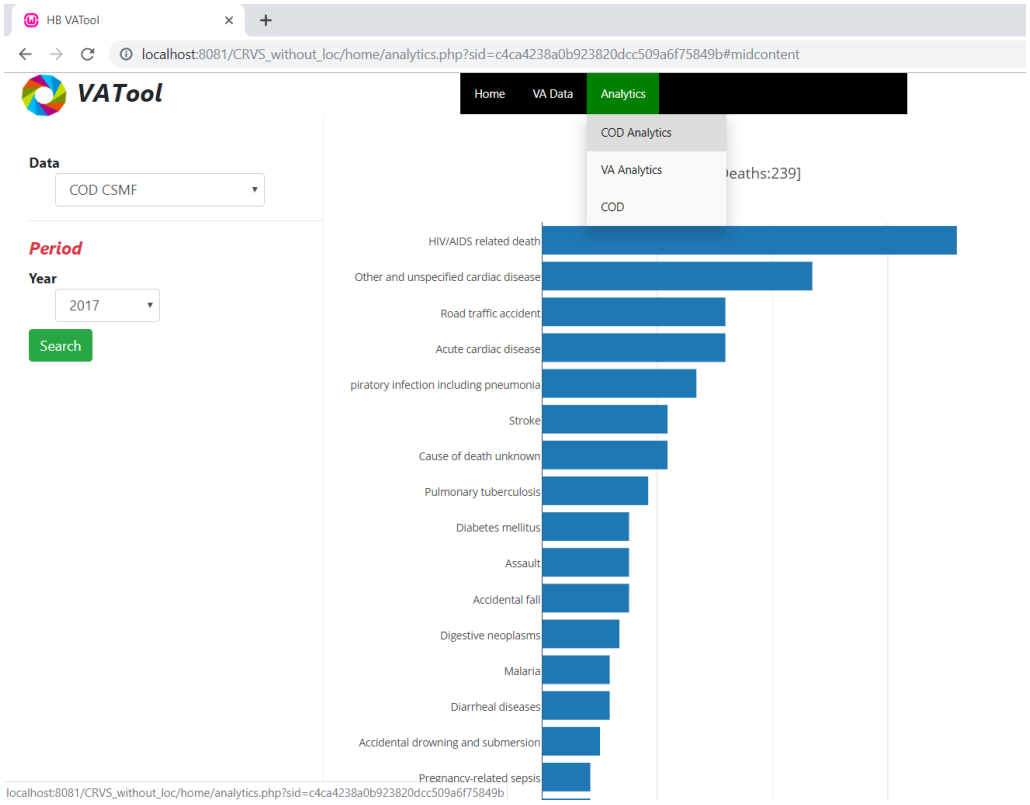
3. Analytics page

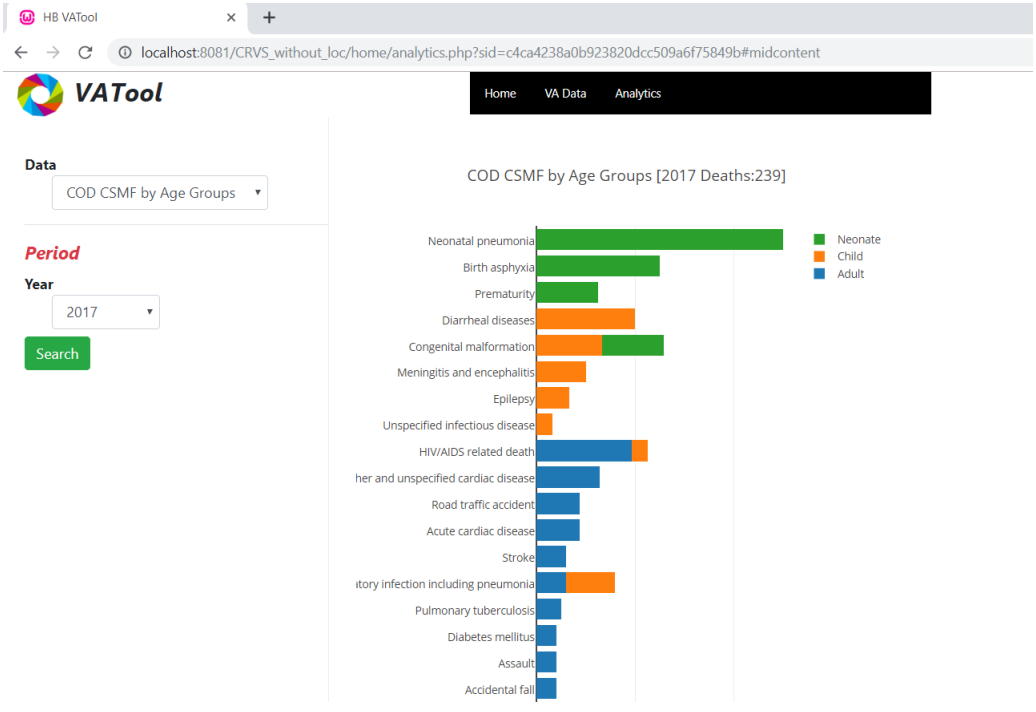
This menu provides links to pages that have in-depth analysis on VA and COD results as executed by InterVA5 and InsilicoVA.

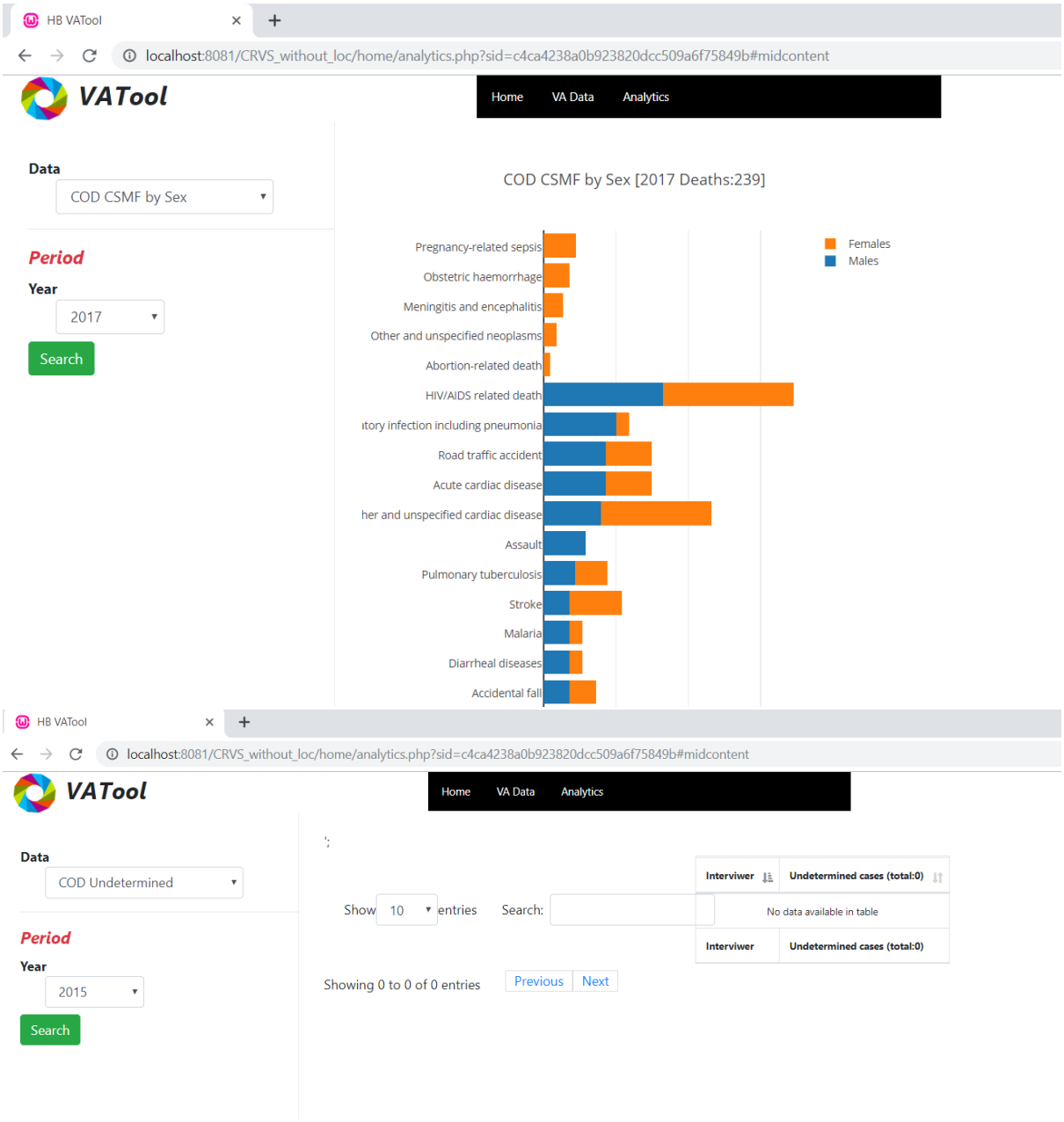
3.1. COD Analytics

This page offers modules that help in producing various visual aspects of cause of death data. These visualisation includes;

- ✓ COD CSMF overall, CSMF by major age groups (Child, Adult, Neonate) and CSMF by sex. All these aspects are being displayed by year of death and the option ***ALL*** is selected if data is to be displayed regardless of the year of death.
- ✓ Another aspect being displayed here are number of undetermined cases by interviewer. This is to help keep track of undetermined cases being produced by an interviewer to indicated need for retraining and control data quality from interviewers.


HB VATool
localhost:8081/CRVS_without_loc/home/analytics.php?sid=c4ca4238a0b923820dcc509a6f75849b#midcontent
VATool
Home
VA Data
Analytics
COD Analytics
VA Analytics
COD
Data
COD CSMF
Period
Year
2017
Search
eaths:239]
HIV/AIDS related death
Other and unspecified cardiac disease
Road traffic accident
Acute cardiac disease
piratory infection including pneumonia
Stroke
Cause of death unknown
Pulmonary tuberculosis
Diabetes mellitus
Assault
Accidental fall
Digestive neoplasms
Malaria
Diarrheal diseases
Accidental drowning and submersion
Pregnancy-related sepsis
localhost:8081/CRVS_without_loc/home/analytics.php?sid=c4ca4238a0b923820dcc509a6f75849b


HB VATool
localhost:8081/CRVS_without_loc/home/analytics.php?sid=c4ca4238a0b923820dcc509a6f75849b#midcontent
VATool
Home
VA Data
Analytics
Data
COD CSMF by Age Groups
Period
Year
2017
Search
COD CSMF by Age Groups [2017 Deaths:239]
Neonate
Child
Adult
Neonatal pneumonia
Birth asphyxia
Prematurity
Diarrheal diseases
Congenital malformation
Meningitis and encephalitis
Epilepsy
Unspecified infectious disease
HIV/AIDS related death
her and unspecified cardiac disease
Road traffic accident
Acute cardiac disease
Stroke
itory infection including pneumonia
Pulmonary tuberculosis
Diabetes mellitus
Assault
Accidental fall



3.2. VA Analytics

This page offers modules that help visualize VA data summaries. These characteristics include; VA data summary by sex, by year of death and by age groups. These summaries are produced by year of death. In addition, one can also view submission summaries by interview across the months of the selected year. This helps in monitoring VA data submission monthly from each interviewer.

HB VATool

localhost:8081/CRVS_without_loc/home/va_analytics.php?sid=c4ca4238a0b923820dcc509a6f75849b#midcontent

VATool

Home | VA Data | Analytics

Data

VA SUMMARY By Year

Period

Year of death

2017

Search

Submission Data

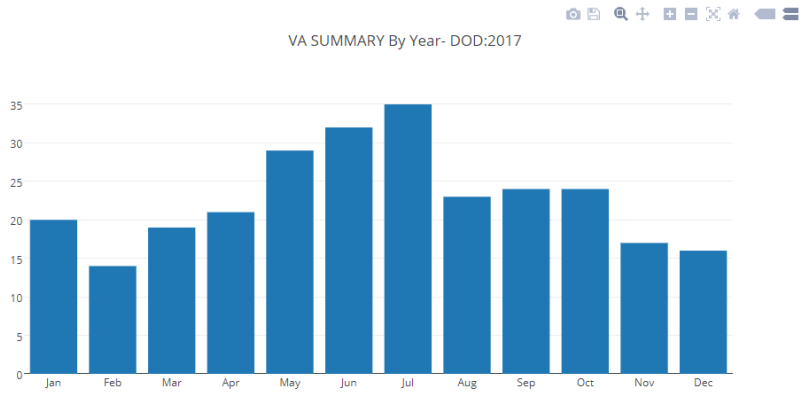
VA SUBMISSION

Period

Year

2018

View



Months	Count
Jan	20
Feb	14
Mar	19
Apr	21
May	29
Jun	32
Jul	35
Aug	23
Sep	24
Oct	24
Nov	17
Dec	16
Total	**274**

HB VATool

localhost:8081/CRVS_without_loc/home/va_analytics.php?sid=c4ca4238a0b923820dcc509a6f75849b#midcontent

VATool

Home | VA Data | Analytics

Data

VA SUMMARY BY SEX

Period

Year of death

2017

Search

Submission Data

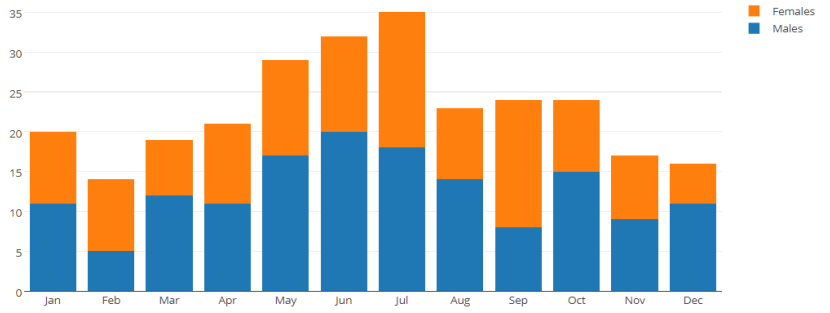
VA SUBMISSION

Period

Year

2018

View



Males	Females	Total
151 (55.11%)	123 (44.89%)	274

Data

VA SUMMARY BY AGE GROU

Period

Year of death

2017

Search

Submission Data

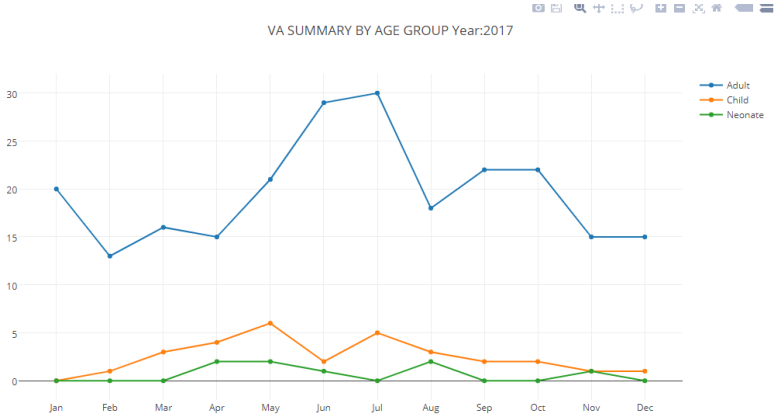
VA SUBMISSION

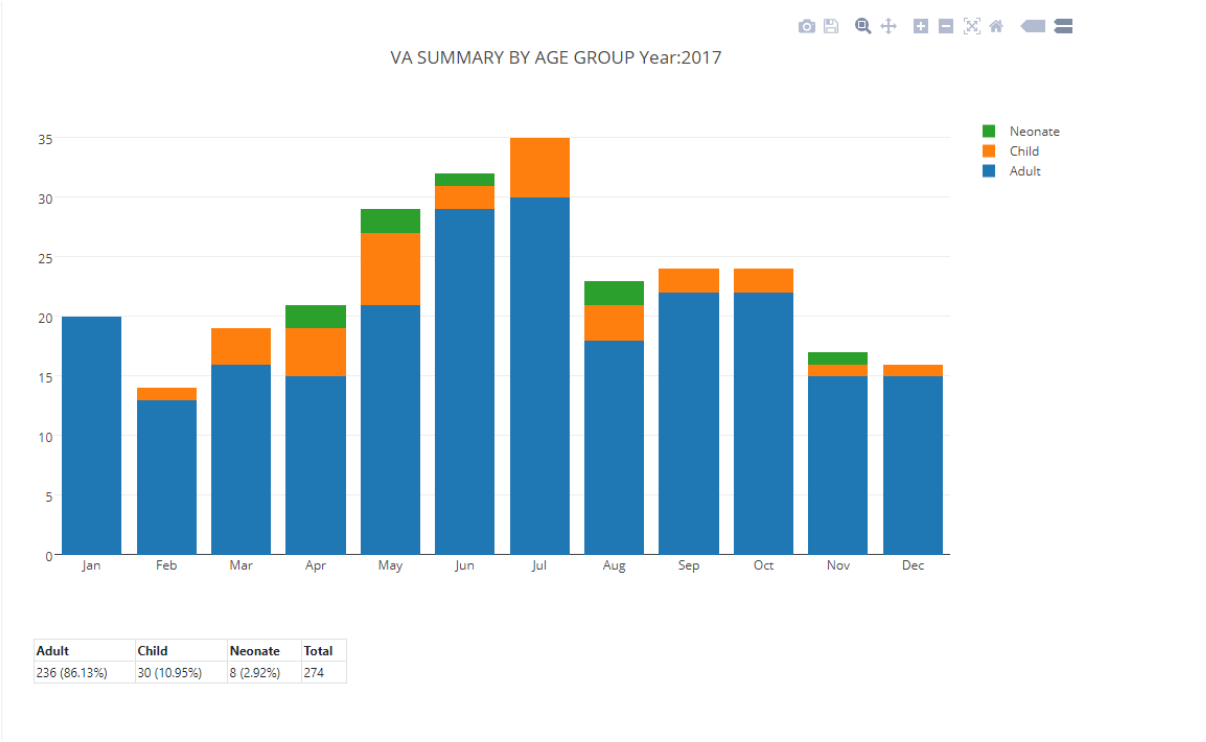
Period

Year

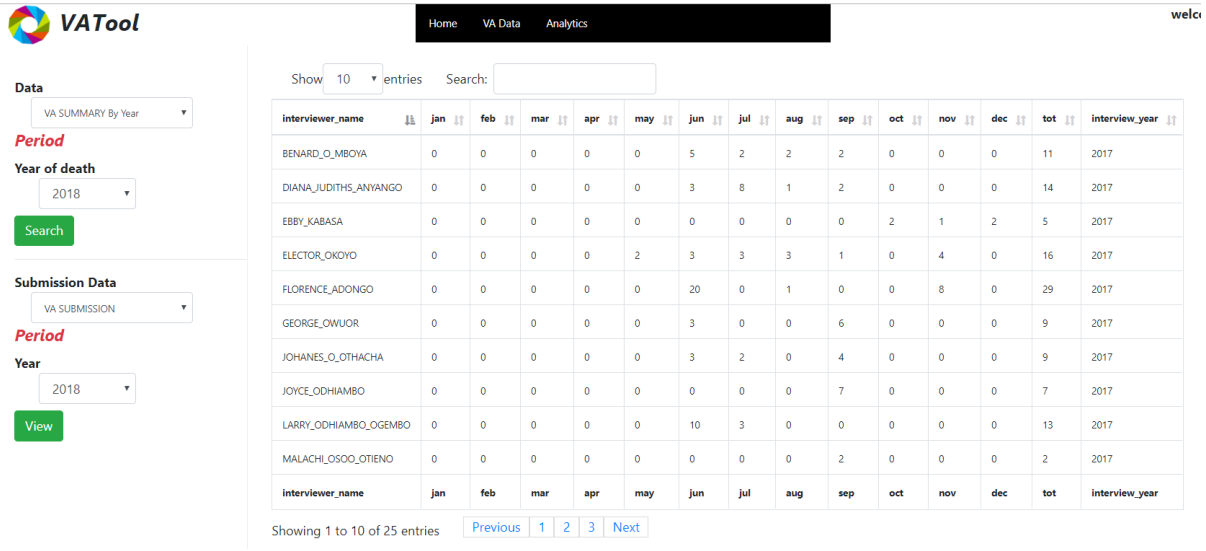
2018

View



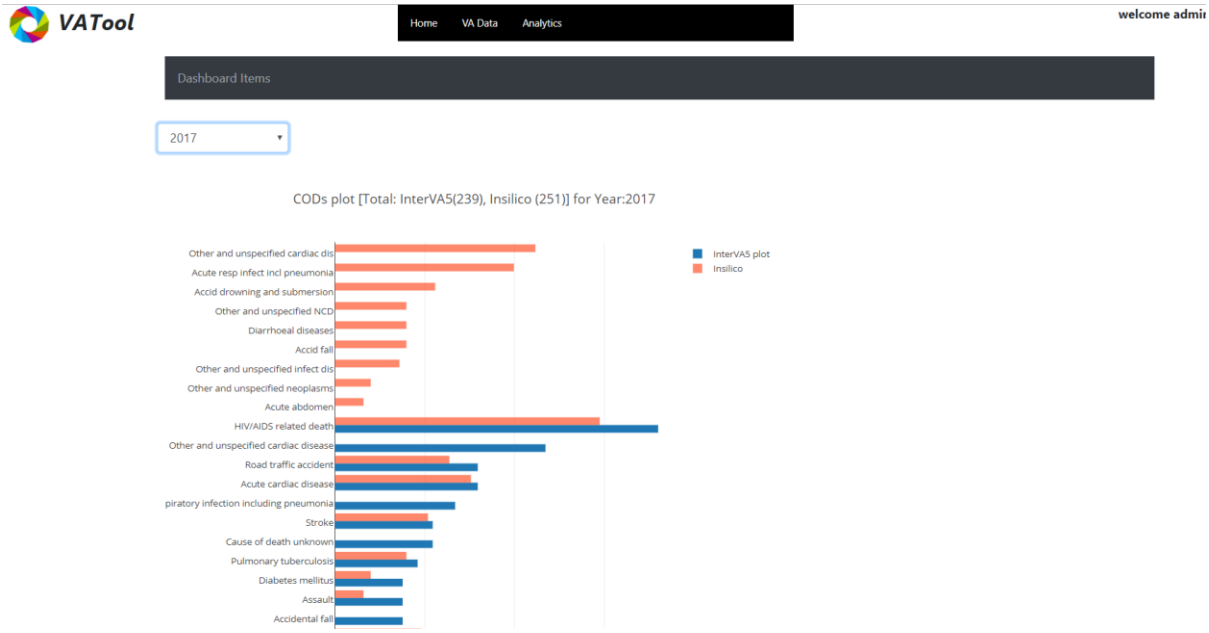


Adult	Child	Neonate	Total
236 (86.13%)	30 (10.95%)	8 (2.92%)	274



3.3. COD

This page shows a comparison between top 20 causes of death from Interva5 and InsilicoVA.



Future improvements

Dynamic Pivot tables

Integration to DHIS2 depending on country needs

Acknowledgment

NB:

First of all you need to install gksu with the following command:

```
sudo apt-get install gksu
```

Then, run:

```
gksu gedit /usr/share/applications/xampp-control-panel.desktop
```

and save the following code in the file.

(You are using 64 bit system so there is no need to change anything, simply do copy paste)

```
[Desktop Entry]
Encoding=UTF-8
Name=XAMPP Control Panel
Comment=Start and Stop XAMPP
Exec=gksudo /opt/lampp/manager-linux-x64.run
Icon=/opt/lampp/htdocs/favicon.ico
Categories=Application
Type=Application
Terminal=false
```

Note: For 32 bit xampp type "manager-linux.run" at place of "manager-linux-x64.run"

Run following command in terminal:

```
sudo apt-get update
```

id10176_unit renamed to id10178_unit