Data Validation Exercise before Entry into UCSR

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February 9, 2018

Abstract

Summary. This is a document to validate and check variables before they are inte grated into the UCSR.

1 High-level codebook for all variables

```
----------------------------------------------------------------------------------------------------
disease                                                                                       Disease
----------------------------------------------------------------------------------------------------

                  type:  string (str3)

         unique values:  1                         missing "":  0/101

            tabulation:  Freq.   Value
                          101   "HIV"

----------------------------------------------------------------------------------------------------
collapsed                                                                                   Collapsed
----------------------------------------------------------------------------------------------------

                  type:  string (str3), but longest is str2

         unique values:  1                         missing "":  0/101

            tabulation:  Freq.   Value
                          101   "No"

----------------------------------------------------------------------------------------------------
lead_author                                                                               Lead Author
----------------------------------------------------------------------------------------------------

                  type:  string (str43)

         unique values:  25                        missing "":  0/101

              examples:  "Chiwevu, CM"
                         "Hewett, PC"
                         "Marseille, E"
```

```
                          "Obiero, W"

             warning:  variable has embedded blanks


-------------------------------------------------------------------------------------
ref_year                                                               Reference Year
-------------------------------------------------------------------------------------

               type:  numeric (int)

              range:  [2006,2016]               units:  1
      unique values:  9              missing .:  2/101

         tabulation:  Freq.  Value
                         1   2006
                         3   2007
                        33   2010
                         2   2011
                         2   2012
                        10   2013
                        18   2014
                        17   2015
                        13   2016
                         2   .


-------------------------------------------------------------------------------------
output_unit2                                                               Output unit
-------------------------------------------------------------------------------------

               type:  string (str17)

      unique values:  1                         missing "":  0/101

         tabulation:  Freq.  Value
                        101   "service delivered"

             warning:  variable has embedded blanks


-------------------------------------------------------------------------------------
flags                                                                       (unlabeled)
-------------------------------------------------------------------------------------

               type:  string (str1)

      unique values:  1                         missing "":  0/101

         tabulation:  Freq.  Value
                        101   "."


-------------------------------------------------------------------------------------
ref_author                                                            Reference Authors
-------------------------------------------------------------------------------------

               type:  string (str152)
```

```
          unique values:  28                        missing "":  0/101

               examples:  "Chiwevu CM"
                          "Hewett PC, Nalubamba M, Bozzani F, Digitale J, Vu L,
                          Yam E, Nambao M"
                          "Marseille E, Kahn JG, Beatty S, Jared M, Perchal P"
                          "Obiero W, Young MR, Bailey RC"

                warning:  variable has embedded blanks

--------------------------------------------------------------------------------------------
title                                                                                  Title
--------------------------------------------------------------------------------------------

                   type:  string (str162)

          unique values:  29                        missing "":  0/101

               examples:  "Cost analysis of adult male circumcision with the
                          PrePex device versus surgery in Rwanda"
                          "Costing of male circumcision in Zambia and the
                          impacts of scaling up the male circumcision
                          programme"
                          "Costs and impacts of scaling up voluntary medical
                          male circumcision in Tanzania"
                          "How much does it cost to improve access to voluntary
                          medical male circumcision among high-risk, low-income
                          communities in Uganda?"

                warning:  variable has embedded blanks

--------------------------------------------------------------------------------------------
journal_etc                                                                          Journal
--------------------------------------------------------------------------------------------

                   type:  string (str123)

          unique values:  29                        missing "":  0/101

               examples:  "Journal of Acquired Immune Deficiency Syndrome.
                          63(3):e109-12."
                          "PLoS ONE 9(5): e83925."
                          "The USAID Health Policy Initiative (Unpublished)"
                          "Washington (District of Columbia): Futures Group,
                          Health Policy Initiative, Task Order 1."

                warning:  variable has embedded blanks

--------------------------------------------------------------------------------------------
url                                                                                      URL
--------------------------------------------------------------------------------------------

                   type:  string (str119)
```

```
         unique values:  24                          missing "":  0/101

              examples:  "<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC401157
                         5/>."
                         "<https://www.ncbi.nlm.nih.gov/pubmed/24450374>."
                         "<https://www.ncbi.nlm.nih.gov/pubmed/27331599>."
                         "Not avaliable"

               warning:  variable has embedded blanks

--------------------------------------------------------------------------------
iso_name                                                                 Country
--------------------------------------------------------------------------------

                  type:  string (str30)

         unique values:  11                          missing "":  0/101

              examples:  "Namibia"
                         "South Africa"
                         "Uganda"
                         "Zambia"

               warning:  variable has embedded blanks

--------------------------------------------------------------------------------
location                                                                Location
--------------------------------------------------------------------------------

                  type:  string (str179)

         unique values:  34                          missing "":  4/101

              examples:  "Harare"
                         "Lusaka"
                         "Multiple"
                         "Ngome Health Center (urban); Mafinga District
                         Hospital in Mufundi; Iringa Regional Hospital
                         (urban); Tosamanganga DD Hospital (rural); Lugoda
                         Hospital"

               warning:  variable has embedded blanks

--------------------------------------------------------------------------------
no_sites                                                                    Sites
--------------------------------------------------------------------------------

                  type:  numeric (int)

                 range:  [1,158]                         units:  1
         unique values:  16                          missing .:  10/101

                  mean:   6.62637
```

```
                std. dev:   17.7662

             percentiles:      10%       25%       50%       75%       90%
                                1         1         1         5        17

-------------------------------------------------------------------------------
pop_density                                                         Urbanicity
-------------------------------------------------------------------------------

                    type:  string (str10)

           unique values:  5                        missing "":  0/101

              tabulation:  Freq.  Value
                               1  "."
                              47  "Mixture"
                               4  "Peri-urban"
                              16  "Rural"
                              33  "Urban"

-------------------------------------------------------------------------------
ownership                                                            Ownership
-------------------------------------------------------------------------------

                    type:  string (str17)

           unique values:  4                        missing "":  3/101

              tabulation:  Freq.  Value
                               3  ""
                              27  "International NGO"
                              11  "Mixed"
                               3  "Private"
                              57  "Public"

                 warning:  variable has embedded blanks

-------------------------------------------------------------------------------
platform                                                              Platform
-------------------------------------------------------------------------------

                    type:  string (str15)

           unique values:  4                        missing "":  0/101

              tabulation:  Freq.  Value
                              83  "Fixed facility"
                               6  "Other"
                              10  "Outreach"
                               2  "Population wide"

                 warning:  variable has embedded blanks

-------------------------------------------------------------------------------
```

```
facility_cat                                                    Platform_specificity
-----------------------------------------------------------------------------------

                type:   string (str68)

       unique values:   14                        missing "":  0/101

            examples:   "Hospital - Level Unspecified"
                        "Hospital - Primary (district)"
                        "Mix of health care facility types"
                        "Unspecified health care facility type"

             warning:   variable has embedded blanks


-----------------------------------------------------------------------------------
id_class                                                        Intervention Category
-----------------------------------------------------------------------------------

                type:   string (str13)

       unique values:   2                         missing "":  0/101

          tabulation:   Freq.  Value
                            2  "Health System"
                           99  "Prevention"

             warning:   variable has embedded blanks


-----------------------------------------------------------------------------------
id_type                                                         Intervention Type
-----------------------------------------------------------------------------------

                type:   string (str4)

       unique values:   1                         missing "":  0/101

          tabulation:   Freq.  Value
                          101  "VMMC"


-----------------------------------------------------------------------------------
id_int                                                          Intervention
-----------------------------------------------------------------------------------

                type:   string (str4)

       unique values:   1                         missing "":  0/101

          tabulation:   Freq.  Value
                          101  "VMMC"


-----------------------------------------------------------------------------------
int_description_long                              Intervention Description (Long)
-----------------------------------------------------------------------------------
```

```
              type:  string (str1484)

     unique values:  46                        missing "":  0/101

           examples:  "From Ally article: The campaign service delivery
                      model occurs at fixed sites but provides services as
                      part of a campaign event. The campaign site is
                      assigned to co-site managers, which are usually the
                      medical officers in charge of the facility and a
                      staff member from the partner supporting the VMMC
                      services in the region. The co-site manager is
                      responsible for the day-to- day activities and
                      oversees all logistics for human resources and
                      supplies in the site. This is combined with a team of
                      VMMC providers offering services in hard-to-reach
                      areas, with services being coordinated from a
                      non-campaign site located at a hospital. Island
                      outreach to the islands of Lake Victoria is one
                      example of a mobile service delivery model. Costing
                      was then carried out for adult VMMC using an
                      ingredients approach, whereby all the inputs were
                      listed and their contribution to the overall cost was
                      then quantified. Different service providers and
                      service delivery models (non-campaign, campaign, and
                      island outreach) were considered, allowing for
                      comparison and validation. The costing was largely
                      informed by the actual costs incurred at the selected
                      sites."
                      "MC is also a surgical procedure has been shown to
                      reduce mens risk of HIV infection through
                      heterosexual intercourse by at least one-half and
                      possibly as much as two-thirds"
                      "Method: PrePex device. Three routine follow up
                      visits were included. HCT is included, but no details
                      are given. Staff includes 2 teams composed of 3
                      nurses and 1 doctor each."
                      "The main objectives of the costing and modeling
                      exercise were the following:
 Determine the median
                      unit cost of MC
 Estimate the impact of MC on major
                      HIV indicators, such as the number of HIV infections
                      and
the net savings derived from MC (cost of MC
                      procedures versus antiretroviral treatment [ART])

                      Estimate the number of annual MC procedures required
                      to reach desired coverage targets
 Determine the
                      total annual cost and total cumulative cost for the
                      modeled period of scale-up
(20102025)
"
```

```
                warning:  variable has embedded and trailing blanks

    -----------------------------------------------------------------------------------------
    clinical_monitoring                                                    Clinical monitoring
    -----------------------------------------------------------------------------------------

                   type:  string (str2), but longest is str1

          unique values:  1                          missing "":  0/101

             tabulation:  Freq.  Value
                           101   "."

    -----------------------------------------------------------------------------------------
    demand_generation                                                      Demand generation
    -----------------------------------------------------------------------------------------

                   type:  string (str36)

          unique values:  4                          missing "":  0/101

             tabulation:  Freq.  Value
                            69   "."
                             6   "None"
                             2   "text all, sporting events, pamphlets"
                            24   "yes - type NR"

                warning:  variable has embedded blanks

    -----------------------------------------------------------------------------------------
    counseling_content                                                     Counseling content
    -----------------------------------------------------------------------------------------

                   type:  string (str33)

          unique values:  11                         missing "":  0/101

               examples:  "."
                          "."
                          "HIV Counseling"
                          "None"

                warning:  variable has leading and embedded blanks

    -----------------------------------------------------------------------------------------
    staff_type                                                             Staff type & number
    -----------------------------------------------------------------------------------------

                   type:  string (str294)

          unique values:  18                         missing "":  0/101

               examples:  "."
                          "."
```

```
                          "."
                          "Operators (32), Supervisor & AE Management (1),
                          Trainer (1), Runner (2), CSSD (2), Maintenance (2),
                          Laundry (2), Recovery (0), Discharge (1),
                          Registration (1), Customer Care (1), Supply
                          Management (1), Data Management (1), After care on
                          site cover (1), Counselling and testing (3), Hot Line
                          (3)"

            warning:  variable has leading and embedded blanks

-------------------------------------------------------------------------------
supportive_care                                                  Supportive care
-------------------------------------------------------------------------------

               type:  string (str3), but longest is str1

      unique values:  1                        missing "":  0/101

         tabulation:  Freq.  Value
                        101  "."

-------------------------------------------------------------------------------
visits                                                      Visit type & number
-------------------------------------------------------------------------------

               type:  string (str33)

      unique values:  11                       missing "":  0/101

           examples:  "."
                      "."
                      "."
                      "."

            warning:  variable has embedded blanks

-------------------------------------------------------------------------------
referrals                                                               Referrals
-------------------------------------------------------------------------------

               type:  string (str16)

      unique values:  2                        missing "":  0/101

         tabulation:  Freq.  Value
                         98  "."
                          3  "yes - details NR"

            warning:  variable has embedded blanks

-------------------------------------------------------------------------------
method                                                                    Method
-------------------------------------------------------------------------------
```

```
                 type:  string (str8)

       unique values:  4                          missing "":  0/101

          tabulation:  Freq.  Value
                          3   "."
                         19   "Device"
                          3   "Mixed"
                         76   "Surgical"

-------------------------------------------------------------------------------------------
id_tech                                                                          Technology
-------------------------------------------------------------------------------------------

                 type:  string (str40)

       unique values:  12                         missing "":  26/101

             examples:  ""
                        "Dorsal slit and Forceps-guided"
                        "dorsal slit"
                        "forceps guided"           🗨

              warning:  variable has embedded blanks

-------------------------------------------------------------------------------------------
treatment_phase                                                             Treatment phase
-------------------------------------------------------------------------------------------

                 type:  string (str3), but longest is str1

       unique values:  1                          missing "":  0/101

          tabulation:  Freq.  Value
                        101   "."

-------------------------------------------------------------------------------------------
arv_regimen                                                                     ARV Regimen
-------------------------------------------------------------------------------------------

                 type:  string (str3), but longest is str1

       unique values:  1                          missing "":  0/101

          tabulation:  Freq.  Value
                        101   "."

-------------------------------------------------------------------------------------------
treatment                                                                         Treatment
-------------------------------------------------------------------------------------------

                 type:  string (str3), but longest is str1
```

```
          unique values:  1                         missing "":  0/101

             tabulation:  Freq.  Value
                           101  "."


--------------------------------------------------------------------------------
screening_diagnoses                                      Screening and diagnosis
--------------------------------------------------------------------------------

                   type:  string (str16)

          unique values:  4                         missing "":  2/101

             tabulation:  Freq.  Value
                             2  ""
                            64  "."
                            25  "HIV testing"
                             1  "None"
                             9  "TB/HIV screening"

                warning:  variable has embedded blanks


--------------------------------------------------------------------------------
community_awareness                                          Community awareness
--------------------------------------------------------------------------------

                   type:  string (str2), but longest is str1

          unique values:  1                         missing "":  0/101

             tabulation:  Freq.  Value
                           101  "."


--------------------------------------------------------------------------------
id_activities                                                  Costed activities
--------------------------------------------------------------------------------

                   type:  string (str147)

          unique values:  23                        missing "":  0/101

               examples:  "."
                          "HIV testing; counseling; follow-up examination(s);
                          training; circumcision procedure; supply chain; waste
                          management"
                          "demand generation; HIV testing; counseling; condom
                          distribution; training; monitoring and evaluation;
                          circumcision procedure"
                          "demand generation; HIV testing; counseling;
                          training; monitoring and evaluation; circumcision
                          procedure; complications"

                warning:  variable has leading and embedded blanks
```

11

```
--------------------------------------------------------------------------------------------
start_month                                                                      Start Month
--------------------------------------------------------------------------------------------

                type:  numeric (byte)

               range:  [1,12]                          units:  1
       unique values:  8                            missing .:  22/101

          tabulation:  Freq.  Value
                         45   1
                          1   3
                         13   4
                          4   5
                          2   7
                          2   8
                          9   11
                          3   12
                         22   .

--------------------------------------------------------------------------------------------
start_year                                                                        Start Year
--------------------------------------------------------------------------------------------

                type:  numeric (int)

               range:  [2007,2014]                     units:  1
       unique values:  8                            missing .:  13/101

          tabulation:  Freq.   Value
                          1    2007
                         14    2008
                         26    2009
                          9    2010
                         10    2011
                          5    2012
                         12    2013
                         11    2014
                         13    .

--------------------------------------------------------------------------------------------
end_month                                                                          End Month
--------------------------------------------------------------------------------------------

                type:  numeric (byte)

               range:  [1,12]                          units:  1
       unique values:  10                           missing .:  23/101

                mean:  8.87179
            std. dev:  3.67992

         percentiles:        10%       25%        50%       75%       90%
                               4         6       11.5        12        12
```

```
----------------------------------------------------------------------------------------------------
end_year                                                                                    End Year
----------------------------------------------------------------------------------------------------

                        type:   numeric (int)

                       range:   [2007,2015]                        units:   1
               unique values:   9                            missing .:   16/101

                  tabulation:   Freq.   Value
                                    1   2007
                                    7   2008
                                   18   2009
                                    7   2010
                                   18   2011
                                    8   2012
                                   12   2013
                                   11   2014
                                    3   2015
                                   16   .


----------------------------------------------------------------------------------------------------
period_portrayed                                                                         Total Months
----------------------------------------------------------------------------------------------------

                        type:   numeric (double)

                       range:   [1,72]                             units:   .01
               unique values:   13                           missing .:   33/101

                        mean:   13.3574
                   std. dev:   12.9447

                 percentiles:          10%       25%       50%       75%       90%
                                         2         4        12        17        24


----------------------------------------------------------------------------------------------------
year_intro                                                                  Year introduced at study site
----------------------------------------------------------------------------------------------------

                        type:   numeric (int)

                       range:   [2008,2014]                        units:   1
               unique values:   6                            missing .:   66/101

                  tabulation:   Freq.   Value
                                    2   2008
                                    5   2009
                                    8   2010
                                    8   2011
                                   10   2013
                                    2   2014
                                   66   .
```

```
-------------------------------------------------------------------------------------------
coverage                                                                           Coverage
-------------------------------------------------------------------------------------------

                   type:  numeric (double)

                  range:  [.06,.8]                         units:  .001
          unique values:  7                            missing .:  64/101

              tabulation:  Freq.  Value
                              1   .06
                              2   .1
                             18   .15
                              9   .186
                              2   .23
                              3   .26
                              2   .8
                             64   .


-------------------------------------------------------------------------------------------
id_pop_dem_std                                                    Target group (demographic)
-------------------------------------------------------------------------------------------

                   type:  string (str41)

          unique values:  5                          missing "":  0/101

              tabulation:  Freq.  Value
                             11   "Adolescent Boys and Adult Men"          
                              2   "Adolescent Boys and Young Men, ages
                                   15-29"
                              5   "Infants, ages 1month - 2 yrs"
                             82   "Men"
                              1   "Neonates, ages birth - 1 month"

                 warning:  variable has embedded blanks


-------------------------------------------------------------------------------------------
id_pop_clin_std                                                      Target group (clinical)
-------------------------------------------------------------------------------------------

                   type:  string (str12)

          unique values:  2                          missing "":  0/101

              tabulation:  Freq.  Value
                            100   "HIV negative"          
                              1   "HiV negative"

                 warning:  variable has embedded blanks


-------------------------------------------------------------------------------------------
pop_age                                                                         Average Age
```

```
--------------------------------------------------------------------------------
                 type:  string (str8)

         unique values:  10                          missing "":  0/101

             examples:  "."
                        "."
                        "."
                        "20.6"

              warning:  variable has embedded blanks

--------------------------------------------------------------------------------
pop_sex                                                                   Gender
--------------------------------------------------------------------------------

                 type:  string (str5)

         unique values:  1                           missing "":  0/101

           tabulation:  Freq.  Value
                         101  "Males"

--------------------------------------------------------------------------------
pop_ses                                                                      SES
--------------------------------------------------------------------------------

                 type:  string (str63)

         unique values:  4                           missing "":  0/101

           tabulation:  Freq.  Value
                          96  "."
                           3  "46% working, 7.7 mean number of assets,
                              82.9% have mobile phone"
                           1  "66.3% employed"
                           1  "73.1% employed"

              warning:  variable has embedded blanks

--------------------------------------------------------------------------------
pop_education                                                          Education
--------------------------------------------------------------------------------

                 type:  string (str56)

         unique values:  3                           missing "":  0/101

           tabulation:  Freq.  Value
                          95  "."
                           3  "9.2 mean grade completed "
                           3  "Mothers completing secondary education:
                              83% (Mavhu 2015)"
```

```
                  warning:  variable has embedded and trailing blanks


-------------------------------------------------------------------------------------------
hiv_prev                                                                       HIV Prevalence
-------------------------------------------------------------------------------------------

                     type:  numeric (double)

                    range:  [.03,.2]                        units:  .001
            unique values:  9                         missing .:  73/101

                tabulation:  Freq.  Value
                                2   .03
                                3   .048
                                3   .061
                                1   .09
                                2   .091
                                1   .11
                                9   .122
                                2   .19
                                5   .2
                               73   .


-------------------------------------------------------------------------------------------
tb_prev                                                                        TB Prevalence
-------------------------------------------------------------------------------------------

                     type:  string (str3), but longest is str1

            unique values:  1                          missing "":  0/101

                tabulation:  Freq.  Value
                              101   "."


-------------------------------------------------------------------------------------------
tb_rx_resistance                                                            TB Drug Resistance
-------------------------------------------------------------------------------------------

                     type:  string (str3), but longest is str1

            unique values:  1                          missing "":  0/101

                tabulation:  Freq.  Value
                              101   "."


-------------------------------------------------------------------------------------------
costing_purpose                                                              Costing Purpose
-------------------------------------------------------------------------------------------

                     type:  string (str286)

            unique values:  30                         missing "":  0/101
```

```
        examples:  "To compare fixed vs mobile delivery costs"
                   "To derive the unit cost of delivering medical male
                   circumcision in South Africa at the facility level;
                   Assess costs from a client perspective; and Identify
                   the level of spending currently incurred for demand
                   creation"
                   "To estimate the current costs of providing a
                   comprehensive package of services for medical male
                   circumcision"
                   "To evaluate the logistic and financial feasibility
                   of various approaches, including the use of the
                   PrePexTM device"

         warning:  variable has embedded blanks

-------------------------------------------------------------------------------------
timing                                                                          Timing
-------------------------------------------------------------------------------------

            type:  string (str15)

   unique values:  2                          missing "":  2/101

       tabulation:  Freq.  Value
                      2    ""
                     70    "Cross-sectional"
                     29    "Longitudinal"

-------------------------------------------------------------------------------------
country_sampling                                                      Country Sampling
-------------------------------------------------------------------------------------

            type:  string (str11)

   unique values:  3                          missing "":  38/101

       tabulation:  Freq.  Value
                     38    ""
                     58    "."
                      1    "Convenience"
                      4    "Purposive"

-------------------------------------------------------------------------------------
geo_sampling_incountry                           Geographic Area In Country Sampling
-------------------------------------------------------------------------------------

            type:  string (str11)

   unique values:  3                          missing "":  43/101

       tabulation:  Freq.  Value
                     43    ""
                     23    "."
                      5    "Convenience"
```

```
                            30   "Purposive"


-----------------------------------------------------------------------------------
site_sampling                                                         Site Sampling
-----------------------------------------------------------------------------------

                 type:   string (str11)

        unique values:   2                        missing "":  47/101

           tabulation:   Freq.   Value
                           47   ""
                           53   "Purposive"
                            1   "convenience"


-----------------------------------------------------------------------------------
px_sampling                                                       Patient Sampling
-----------------------------------------------------------------------------------

                 type:   string (str14)

        unique values:   5                        missing "":  54/101

           tabulation:   Freq.   Value
                           54   ""
                           35   "."
                            4   "Convenience"
                            2   "Entire program"
                            5   "Random"
                            1   "convenience"

              warning:   variable has embedded blanks


-----------------------------------------------------------------------------------
sample_size_derived                                       Sample size formally derived
-----------------------------------------------------------------------------------

                 type:   string (str3)

        unique values:   2                        missing "":  59/101

           tabulation:   Freq.   Value
                           59   ""
                           28   "No"
                           14   "Yes"


-----------------------------------------------------------------------------------
controls                                                                  Controls
-----------------------------------------------------------------------------------

                 type:   string (str3)

        unique values:   2                        missing "":  35/101
```

```
                        tabulation:  Freq.  Value
                                      35   ""
                                      60   "No"
                                       6   "Yes"


-------------------------------------------------------------------------------------------
econ_perspective_actual                                                         Perspective
-------------------------------------------------------------------------------------------

                              type:  string (str8)

                     unique values:  2                         missing "":  0/101

                        tabulation:  Freq.  Value
                                      92   "Provider"
                                       9   "Society"


-------------------------------------------------------------------------------------------
econ_costing                                                             Economic / Financial
-------------------------------------------------------------------------------------------

                              type:  string (str8)

                     unique values:  1                         missing "":  0/101

                        tabulation:  Freq.  Value
                                     101   "economic"


-------------------------------------------------------------------------------------------
real_world                                                          Real World / Per Protocol
-------------------------------------------------------------------------------------------

                              type:  string (str13)

                     unique values:  4                         missing "":  0/101

                        tabulation:  Freq.  Value
                                       2   "N/A (modeled)"
                                       3   "Real World"
                                       8   "per protocol"
                                      88   "real world"

                           warning:  variable has embedded blanks


-------------------------------------------------------------------------------------------
asd_costs                                                          Above Service Costs Included
-------------------------------------------------------------------------------------------

                              type:  string (str19)

                     unique values:  5                         missing "":  11/101

                        tabulation:  Freq.  Value
                                      11   ""
```

```
                           2  "No costs included"
                           1  "no cost included"
                          69  "no costs included"
                          17  "some costs included"
                           1  "yes"

           warning:  variable has embedded blanks

-------------------------------------------------------------------------------
list_asd_costs                                           Above Service Cost List
-------------------------------------------------------------------------------

              type:  string (str104)

     unique values:  4                         missing "":  91/101

         tabulation:  Freq.  Value
                         91  ""
                          2  "Shared hospital costs above the level
                             of the program (HR, IT, finance and
                             hospital administration costs)"
                          2  "above facility management and
                             supervision"
                          2  "non-facility based technical assistant
                             Overhead, waste management and supply
                             chain"
                          4  "non-facility-based overheads"

           warning:  variable has embedded blanks

-------------------------------------------------------------------------------
omitted_costs                                                       Omitted Costs
-------------------------------------------------------------------------------

              type:  string (str191)

     unique values:  23                        missing "":  0/101

          examples:  "Demand generation, Other - patient insurance fees"
                     "Patient costs"
                     "Patient costs"
                     "Vehicle/transport, Demand creation, Other - waste
                     management, Patient costs"

           warning:  variable has embedded blanks

-------------------------------------------------------------------------------
sensitivity_analysis                                          Sensitivity Analysis
-------------------------------------------------------------------------------

              type:  string (str13)

     unique values:  3                         missing "":  0/101
```

```
         tabulation:  Freq.  Value
                        78   "None"
                        14   "comprehensive"
                         9   "limited"


------------------------------------------------------------------------------------
scale                                                             Economies of scale
------------------------------------------------------------------------------------

               type:  string (str12)

      unique values:  4                          missing "":  0/101

         tabulation:  Freq.  Value
                         4   "acknowledged"
                        14   "analyzed"
                        47   "discussed"
                        36   "ignored"


------------------------------------------------------------------------------------
research_costs                                                Research Costs Included
------------------------------------------------------------------------------------

               type:  string (str8)

      unique values:  1                          missing "":  20/101

         tabulation:  Freq.  Value
                        20   ""
                        81   "excluded"


------------------------------------------------------------------------------------
unrelated_costs                                             Unrelated Costs Included
------------------------------------------------------------------------------------

               type:  string (str1), but longest is str0

      unique values:  0                          missing "":  101/101

         tabulation:  Freq.  Value
                       101   ""


------------------------------------------------------------------------------------
overhead                                                     Overhead Costs Included
------------------------------------------------------------------------------------

               type:  string (str3)

      unique values:  2                          missing "":  0/101

         tabulation:  Freq.  Value
                        10   "no"
                        91   "yes"
```

```
--------------------------------------------------------------------------------
overhead_costs                                               Overhead Costs List
--------------------------------------------------------------------------------

              type:  string (str119)

     unique values:  25                         missing "":  3/101

          examples:  "."
                     "capital, maintenance and utilities, training,
                     support personnel"
                     "equipment, utilities, land and buildings"
                     "renovations, electricity, water, facility space,
                     administration and support "

           warning:  variable has embedded and trailing blanks

--------------------------------------------------------------------------------
pot_distortions                                              Potential distortions
--------------------------------------------------------------------------------

              type:  string (str336)

     unique values:  4                          missing "":  0/101

        tabulation:  Freq.  Value
                        96  "."
                         1  "Many indirect cost not included"
                         2  "Unit costs sensitive to resource
                            utilisation rates; If each staff role is
                            not fully utilized, unit cost will
                            increase; Costs based on current local
                            prices and subject to future inflation
                            and exchange rate variations; Success
                            depends on centres being fully utilised
                            (growing concern that the number of men
                            attending beginning to decline)"
                         2  "research setting (RCT)"

           warning:  variable has embedded blanks

--------------------------------------------------------------------------------
volunteer_time                                               Valuing Volunteer Time
--------------------------------------------------------------------------------

              type:  string (str3), but longest is str1

     unique values:  1                          missing "":  90/101

        tabulation:  Freq.  Value
                        90  ""
                        11  "."

--------------------------------------------------------------------------------
```

```
family_time                                                          Valuing Family Time
-----------------------------------------------------------------------------------------

                 type:  string (str9)

        unique values:  2                              missing "":  43/101

           tabulation:  Freq.  Value
                          43   ""
                          49   "."
                           9   "interview"

-----------------------------------------------------------------------------------------
px_costs_measured                                          Patient-Incurred Costs Measured
-----------------------------------------------------------------------------------------

                 type:  string (str12)

        unique values:  3                              missing "":  0/101

           tabulation:  Freq.  Value
                           7   "."
                           9   "included"
                          85   "not included"

              warning:  variable has embedded blanks

-----------------------------------------------------------------------------------------
cat_cost                                                      Catastrophic Cost Calculated
-----------------------------------------------------------------------------------------

                 type:  string (str3), but longest is str1

        unique values:  1                              missing "":  0/101

           tabulation:  Freq.  Value
                         101   "."

-----------------------------------------------------------------------------------------
currency_yr                                                        Reported Currency Year
-----------------------------------------------------------------------------------------

                 type:  numeric (int)

                range:  [2006,2015]                       units:  1
        unique values:  10                            missing .:  0/101

                 mean:  2010.97
             std. dev:  2.41021

          percentiles:         10%       25%       50%       75%       90%
                              2007      2009      2012      2013      2014

-----------------------------------------------------------------------------------------
```

```
iso_code                                                             Reported Currency
----------------------------------------------------------------------------------------

              type:  string (str6)

     unique values:  4                              missing "":  0/101

        tabulation:  Freq.  Value
                        1   "Kwacha"
                        1   "Maloti"
                       90   "USD"
                        9   "ZAR"


----------------------------------------------------------------------------------------
currency_iso                                                   Currency of Data Collection
----------------------------------------------------------------------------------------

              type:  string (str3)

     unique values:  8                              missing "":  0/101

        tabulation:  Freq.  Value
                       38   "."
                       11   "KES"
                        2   "MZN"
                        7   "NAD"
                        8   "TZS"
                        9   "UGX"
                       14   "USD"
                       12   "ZAR"


----------------------------------------------------------------------------------------
currency_x                                                       Currency Exchange Method
----------------------------------------------------------------------------------------

              type:  string (str11)

     unique values:  3                              missing "":  71/101

        tabulation:  Freq.  Value
                       71   ""
                        5   "."
                       24   "market only"
                        1   "mixed"

           warning:  variable has embedded blanks


----------------------------------------------------------------------------------------
current_x_rate                                                    Currency Exchange Rate
----------------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [1,4290.1]                     units:  .001
```

```
        unique values:  14                          missing .:  46/101

                 mean:   628.671
            std. dev:    1031.48

         percentiles:        10%       25%       50%       75%       90%
                              1        7.9     10.83      1469      2469


--------------------------------------------------------------------------------
discount_rate                                                      Discount Rate
--------------------------------------------------------------------------------

                 type:  numeric (double)

                range:  [.03,.06]                    units:  .01
        unique values:  2                          missing .:  72/101

           tabulation:  Freq.   Value
                          23    .03
                           6    .06
                          72    .


--------------------------------------------------------------------------------
inflation                                                          Inflation rate
--------------------------------------------------------------------------------

                 type:  string (str64)

        unique values:  2                         missing "":  0/101

           tabulation:  Freq.   Value
                          99    "."
                           2    "GDP deflator for South Africa compared
                                 to reference year of 2005"

              warning:  variable has embedded blanks


--------------------------------------------------------------------------------
mean_cost                                                          Mean Unit Cost
--------------------------------------------------------------------------------

                 type:  numeric (double)

                range:  [3.2515259,168.17026]        units:  1.000e-08
        unique values:  99                         missing .:  0/101

                 mean:   62.5523
            std. dev:    31.7357

         percentiles:        10%       25%       50%       75%       90%
                          23.9851   44.0985   57.9363   77.2312   104.731


--------------------------------------------------------------------------------
si_personnel                                                      Personnel (SI)
```

```
--------------------------------------------------------------------------------
             type:   numeric (double)

            range:   [.36474141,73.044065]        units:  1.000e-15
    unique values:   58                        missing .:  41/101

             mean:   18.0583
         std. dev:   12.4901

      percentiles:          10%        25%        50%        75%        90%
                        4.59049    8.31241    18.6586    23.0601    28.6283

--------------------------------------------------------------------------------
si_per_service_delivery                      Personnel: Direct Service Delivery (SI)
--------------------------------------------------------------------------------
             type:   numeric (double)

            range:   [.3647414,58.169079]         units:  1.000e-07
    unique values:   55                        missing .:  44/101

             mean:   12.4324
         std. dev:   9.24278

      percentiles:          10%        25%        50%        75%        90%
                        4.05384    6.03875    11.2142    17.7056    21.9267

--------------------------------------------------------------------------------
si_per_support                                           Personnel: Support (SI)
--------------------------------------------------------------------------------
             type:   numeric (double)

            range:   [.19800248,40.299169]        units:  1.000e-09
    unique values:   40                        missing .:  55/101

             mean:   6.6973
         std. dev:   7.45557

      percentiles:          10%        25%        50%        75%        90%
                        .635692    1.02503     3.8389    11.4049    14.9186

--------------------------------------------------------------------------------
si_per_mixed_unspec                          Personnel: Mixed Unspecified (SI)
--------------------------------------------------------------------------------
             type:   numeric (double)

            range:   [15.527563,32.667171]        units:  1.000e-06
    unique values:   3                         missing .:  98/101

       tabulation:   Freq.   Value
                         1   15.527563
```

```
                               1   18.580971
                               1   32.667171
                              98    .

--------------------------------------------------------------------------------
si_recurrent                                               Recurrent Goods (SI)
--------------------------------------------------------------------------------

                    type:   numeric (double)

                   range:   [1.8669433,35.842525]        units:   1.000e-08
           unique values:   56                        missing .:   39/101

                    mean:        18.62
                std. dev:      10.2404

             percentiles:          10%         25%         50%         75%         90%
                              5.89391     9.90115     16.7523     29.5658     32.2327

--------------------------------------------------------------------------------
si_rec_key_drugs                              Recurring: Supplies (key drugs) (SI)
--------------------------------------------------------------------------------

                    type:   numeric (float)

                   range:   [.,.]                         units:   .
           unique values:   0                         missing .:   101/101

               tabulation:   Freq.  Value
                               101    .

--------------------------------------------------------------------------------
si_rec_med_int_supplies          Recurring: Medical Supplies (excluding drugs) (SI)
--------------------------------------------------------------------------------

                    type:   numeric (double)

                   range:   [.20955418,35.842525]        units:   1.000e-08
           unique values:   56                        missing .:   39/101

                    mean:     18.0225
                std. dev:      10.481

             percentiles:          10%         25%         50%         75%         90%
                              5.72678     9.43521     16.7523     29.3328     32.2223

--------------------------------------------------------------------------------
si_rec_nonmed_int_supplies                   Recurring: Non-medical Supplies (SI)
--------------------------------------------------------------------------------

                    type:   numeric (double)

                   range:   [0,.1225576]                  units:   1.000e-09
           unique values:   4                         missing .:   94/101
```

```
      tabulation:  Freq.  Value
                     1    0
                     1    .0668496
                     2    .09363309
                     3    .1225576
                    94    .

--------------------------------------------------------------------------------
si_rec_building_space                                  Recurring: Building Space (SI)
--------------------------------------------------------------------------------

            type:  numeric (double)

           range:  [0,12.262023]               units:  1.000e-07
   unique values:  8                        missing .:  91/101

      tabulation:  Freq.  Value
                     2    0
                     1    .055708
                     2    .83600968
                     1    3.1433487
                     1    4.4900646
                     1    6.6703644
                     1    6.6738186
                     1    12.262023
                    91    .

--------------------------------------------------------------------------------
si_rec_other                                                   Recurring: Other (SI)
--------------------------------------------------------------------------------

            type:  numeric (double)

           range:  [0,11]                      units:  1
   unique values:  2                        missing .:  0/101

      tabulation:  Freq.  Value
                    99    0
                     2    11

--------------------------------------------------------------------------------
si_capital                                                           Capital (SI)
--------------------------------------------------------------------------------

            type:  numeric (double)

           range:  [.04696702,41.517996]       units:  1.000e-17
   unique values:  56                       missing .:  42/101

            mean:    4.67886
        std. dev:    7.55193

     percentiles:        10%        25%        50%        75%        90%
```

```
                 .336787    .751852    1.84455    5.02486    12.7285


-------------------------------------------------------------------------------------
si_cap_medical_equip                                    Capital: Equipment (medical) (SI)
-------------------------------------------------------------------------------------

              type:   numeric (double)

             range:   [.04051049,31.645706]        units:   1.000e-10
     unique values:   45                        missing .:   48/101

              mean:   1.85014
          std. dev:   4.59324

       percentiles:        10%        25%        50%        75%        90%
                      .072948    .135475    .458532    1.08924    5.77126


-------------------------------------------------------------------------------------
si_cap_nonmed_equip                                Capital: Equipment (non-medical) (SI)
-------------------------------------------------------------------------------------

              type:   numeric (double)

             range:   [1.1880149,41.413784]        units:   1.000e-07
     unique values:   9                         missing .:   92/101

        tabulation:   Freq.   Value
                         1   1.1880149
                         1   1.4798081
                         1   1.4902292
                         1   1.6361258
                         1   1.7090741
                         1   1.7299165
                         1   2.3465157
                         1   2.7720349
                         1   41.413784
                        92   .


-------------------------------------------------------------------------------------
si_cap_build                                           Capital: Building/space (SI)
-------------------------------------------------------------------------------------

              type:   numeric (float)

             range:   [.,.]                        units:   .
     unique values:   0                         missing .:   101/101

        tabulation:   Freq.   Value
                       101   .


-------------------------------------------------------------------------------------
si_cap_vehic                                              Capital: Vehicles (SI)
-------------------------------------------------------------------------------------
```

```
              type:  numeric (float)

             range:  [.,.]                          units:  .
     unique values:  0                          missing .:  101/101

         tabulation:  Freq.  Value
                      101   .

-------------------------------------------------------------------------------------
si_cap_other                                                      Capital: Other (SI)
-------------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [.30382866,19.42108]          units:  1.000e-08
     unique values:  26                         missing .:  72/101

              mean:  4.21483
          std. dev:  5.39879

       percentiles:        10%       25%       50%       75%       90%
                       .367673   1.57097   2.28403   2.98623   14.6958

-------------------------------------------------------------------------------------
si_mixed                                                                   Mixed (SI)
-------------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [.1822972,65.226187]          units:  1.000e-17
     unique values:  54                         missing .:  43/101

              mean:  12.0564
          std. dev:  12.4192

       percentiles:        10%       25%       50%       75%       90%
                       .412989   4.10926   9.60833   16.0536   24.3469

-------------------------------------------------------------------------------------
si_mix_mixed                                                        Mixed: Mixed (SI)
-------------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [.1822972,65.226187]          units:  1.000e-17
     unique values:  54                         missing .:  43/101

              mean:  12.0564
          std. dev:  12.4192

       percentiles:        10%       25%       50%       75%       90%
                       .412989   4.10926   9.60833   16.0536   24.3469

-------------------------------------------------------------------------------------
```

```
a_primary_sd                                                Primary Service Delivery (A)
------------------------------------------------------------------------------------------

                 type:  numeric (double)

                range:  [1.5471697,90.631969]        units:  1.000e-14
        unique values:  62                         missing .:  39/101

                 mean:  30.8063
            std. dev:  15.3572

          percentiles:        10%        25%        50%        75%        90%
                          15.0795    19.0563    29.2488    37.4126    52.0472


------------------------------------------------------------------------------------------
a_prisd_circumcision_proced                        Primary SD: Circumcision Procedure (A)
------------------------------------------------------------------------------------------

                 type:  numeric (double)

                range:  [0,35.69946]                 units:  1.000e-08
        unique values:  15                         missing .:  85/101

                 mean:  13.952
            std. dev:  12.5797

          percentiles:        10%        25%        50%        75%        90%
                          .218845    2.46703    10.2374    25.6962    34.7651


------------------------------------------------------------------------------------------
a_prisd_unspecified                                       Primary SD: Unspecified (A)
------------------------------------------------------------------------------------------

                 type:  numeric (double)

                range:  [.36323768,90.631969]        units:  1.000e-14
        unique values:  58                         missing .:  43/101

                 mean:  29.0559
            std. dev:  16.6692

          percentiles:        10%        25%        50%        75%        90%
                          8.48216    18.4125    27.6069     36.818    53.3928


------------------------------------------------------------------------------------------
a_secondary_sd                                           Secondary Service Delivery (A)
------------------------------------------------------------------------------------------

                 type:  numeric (double)

                range:  [0,12.659739]                 units:  1.000e-07
        unique values:  9                          missing .:  90/101

          tabulation:  Freq.   Value
```

```
                              1   0
                              1   3.1556609
                              1   3.5223045
                              1   3.5773406
                              2   3.6110077
                              2   9.5874891
                              1   10.328146
                              1   12.488043
                              1   12.659739
                             90   .
```

----
a_secsd_hct   Secondary SD: HIV Counseling and Testing (A)

```
              type:   numeric (double)

             range:   [0,10.328146]                units:  1.000e-07
     unique values:   7                          missing .:  92/101

        tabulation:   Freq.  Value
                          1   0
                          1   3.1556609
                          1   3.5223045
                          1   3.5773406
                          2   3.6110077
                          2   9.5874891
                          1   10.328146
                         92   .
```

----
a_ancillary   Ancillary (A)

```
              type:   numeric (double)

             range:   [.2896816,11.787558]         units:  1.000e-07
     unique values:   11                         missing .:  89/101

              mean:   3.53092
         std. dev:   3.99987

       percentiles:          10%       25%       50%       75%        90%
                         .307095   .646213   2.26472   4.06896    11.4529
```

----
a_anc_demand_generation   Ancillary: Demand Generation (A)

```
              type:   numeric (double)

             range:   [.2896816,3.9291861]         units:  1.000e-07
     unique values:   9                          missing .:  89/101
```

```
        tabulation:  Freq.   Value
                        1    .28968161
                        1    .30709451
                        1    .52365518
                        1    .7576288
                        2    2.022588
                        1    2.50686
                        1    2.5514264
                        2    3.6474142
                        2    3.9291861
                       89    .
```

---
a_anc_lab_services   Ancillary: Lab Services (A)

```
             type:  numeric (double)

            range:  [0,6.7357473]              units:  1.000e-07
    unique values:  3                     missing .:  98/101

        tabulation:  Freq.   Value
                        1    0
                        1    6.2527099
                        1    6.7357473
                       98    .
```

---
a_anc_adhreten   Ancillary: Adherence/Retention (A)

```
             type:  numeric (float)

            range:  [.,.]                        units:  .
    unique values:  0                     missing .:  101/101

        tabulation:  Freq.   Value
                      101    .
```

---
a_anc_unspecified   Ancillary: Unspecified (A)

```
             type:  numeric (double)

            range:  [0,1.5527563]              units:  1.000e-08
    unique values:  5                     missing .:  93/101

        tabulation:  Freq.   Value
                        4    0
                        1    .0111416
                        1    .56131226
                        1    1.1226245
                        1    1.5527563
```

```
-------------------------------------------------------------------------------
a_mix_mixed                                                Ancillary: Mixed (A)
-------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [15.527563,32.667171]       units:  1.000e-06
     unique values:  3                           missing .:  98/101

        tabulation:  Freq.  Value
                         1  15.527563
                         1  18.580971
                         1  32.667171
                        98  .

-------------------------------------------------------------------------------
a_operational                                                    Operational (A)
-------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [.89809966,100.90832]       units:  1.000e-10
     unique values:  54                          missing .:  43/101

              mean:  19.3448
          std. dev:  18.3597

       percentiles:        10%       25%       50%       75%       90%
                       1.64137    5.7045   14.0987   28.5916    36.745

-------------------------------------------------------------------------------
a_ope_bldg_equip_main                      Operational: Buildings and Equipment (A)
-------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [0,39.996502]               units:  1.000e-08
     unique values:  31                          missing .:  59/101

              mean:  4.47881
          std. dev:  7.34888

       percentiles:        10%       25%       50%       75%       90%
                             0   .317684    2.0222   4.10926   11.8435

-------------------------------------------------------------------------------
a_ope_logistics                                           Operational: Logistics (A)
-------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [9.9313879,21.056778]       units:  1.000e-07
```

```
              unique values:  4                          missing .:  97/101

                 tabulation:  Freq.  Value
                                 1   9.9313879
                                 1   10.098126
                                 1   12.735332
                                 1   21.056778
                                97   .

-------------------------------------------------------------------------------------
a_ope_program_mgmt                                    Operational: Program Management (A)
-------------------------------------------------------------------------------------

                       type:  numeric (double)

                      range:  [1.228378,1.228378]       units:  1.000e-06
              unique values:  1                        missing .:  100/101

                 tabulation:  Freq.  Value
                                 1   1.2283781
                               100   .

-------------------------------------------------------------------------------------
a_ope_supervision                                          Operational: Supervision (A)
-------------------------------------------------------------------------------------

                       type:  numeric (double)

                      range:  [.01042118,12.675591]      units:  1.000e-09
              unique values:  16                       missing .:  80/101

                       mean:    4.4374
                  std. dev:    5.26343

                percentiles:        10%        25%        50%        75%        90%
                                .031264    .222832    .990012    11.3519    11.3519

-------------------------------------------------------------------------------------
a_ope_training                                                Operational: Training (A)
-------------------------------------------------------------------------------------

                       type:  numeric (double)

                      range:  [.09379065,65.049026]      units:  1.000e-08
              unique values:  37                       missing .:  57/101

                       mean:    4.00389
                  std. dev:    10.0338

                percentiles:        10%        25%        50%        75%        90%
                                .273446    .491622    1.06917    3.74993    10.2336

-------------------------------------------------------------------------------------
a_ope_transportation                                    Operational: Transportation (A)
```

```
--------------------------------------------------------------------------------------------
              type:  numeric (double)

             range:  [0,8.7795811]                    units:  1.000e-07
     unique values:  6                           missing .:  94/101

        tabulation:  Freq.  Value
                        1   0
                        2   .57517463
                        1   1.8606472
                        1   4.4009318
                        1   4.5234895
                        1   8.7795811
                       94   .

--------------------------------------------------------------------------------------------
a_ope_massed                                               Operational: Mass Education (A)
--------------------------------------------------------------------------------------------

              type:  numeric (float)

             range:  [.,.]                             units:  .
     unique values:  0                           missing .:  101/101

        tabulation:  Freq.  Value
                      101   .

--------------------------------------------------------------------------------------------
a_ope_hmis                                            Operational: HMIS and Record-Keeping (A)
--------------------------------------------------------------------------------------------

              type:  numeric (float)

             range:  [.,.]                             units:  .
     unique values:  0                           missing .:  101/101

        tabulation:  Freq.  Value
                      101   .

--------------------------------------------------------------------------------------------
a_ope_unspecified                                          Operational: Unspecified (A)
--------------------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [1.1140385,45.915735]             units:  1.000e-15
     unique values:  49                          missing .:  49/101

              mean:   11.3224
          std. dev:   10.7179

       percentiles:         10%       25%       50%       75%       90%
                        1.56318   2.90751   9.26424   14.9799   20.3963
```

```
--------------------------------------------------------------------------------
a_mixed                                                                Mixed (A)
--------------------------------------------------------------------------------

              type:  numeric (double)

             range:  [15.527563,32.667171]          units:  1.000e-06
     unique values:  3                          missing .:  98/101

        tabulation:  Freq.   Value
                         1   15.527563
                         1   18.580971
                         1   32.667171
                        98   .
```