Breaking down missing data into categories

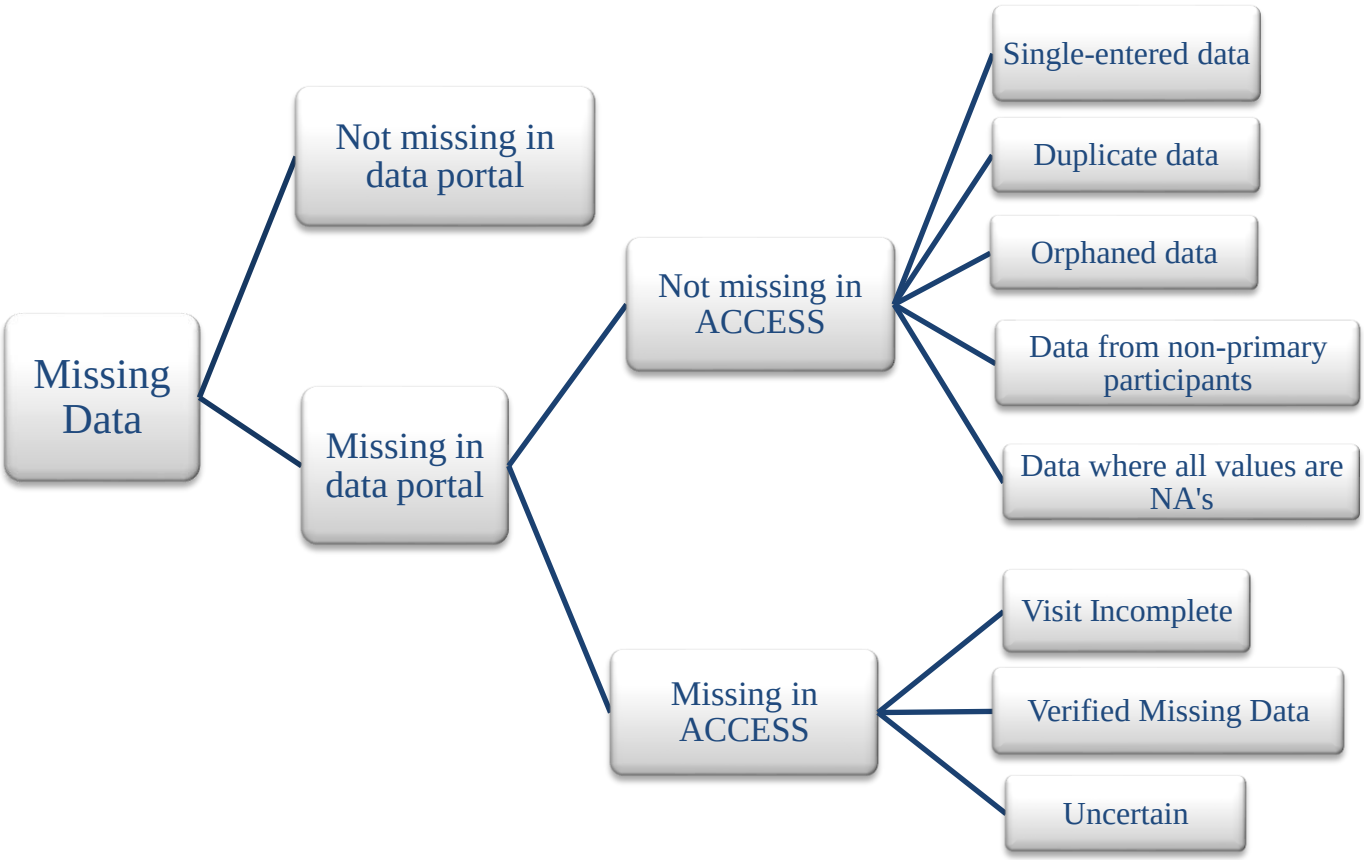


Table 1. Categories of missing data and definitions

Category	Description
Single-entered data	Data that are not double entered (removed before going to data portal)
Duplicate data	Data pairs that have the same id+visit with different age or id+age with different visit numbers (removed before going to data portal)
Orphaned data	Data from which the participant id's are not from tblSubject (master list of participants)
Non-primary data	Data that are from participants who are not marked as "primary" (i.e siblings, excluded)
Visit incomplete	Data from the participants which haven't completed the visit within the time pont (scheduled to be collected/entered)
Uncertain	Data that are tracked by coordinators as non-missing but not available in ACCESS (need to look for physical copies)
Verified missing data	Data that are tracked by coordinators as missing

Single-entered Data

- Still waiting for double entry for medical data
- Brianna and Alexa interviewed/hired volunteers, but the process would be on hold due to the pandemic situation.
- Currently 120 participants are involved across medical data (GI History, Autoimmune, Physical Exam, and Tanner Staging)

Orphaned Data

- Orphaned data is defined as all data which id is not in the list of tblSubject (master list of primary participants).
- Brianna checked the list and figured out most of them where they came from.
- Further on, Soo will weekly put an updated list into a folder where Brianna can check and audit.

Duplicate Data

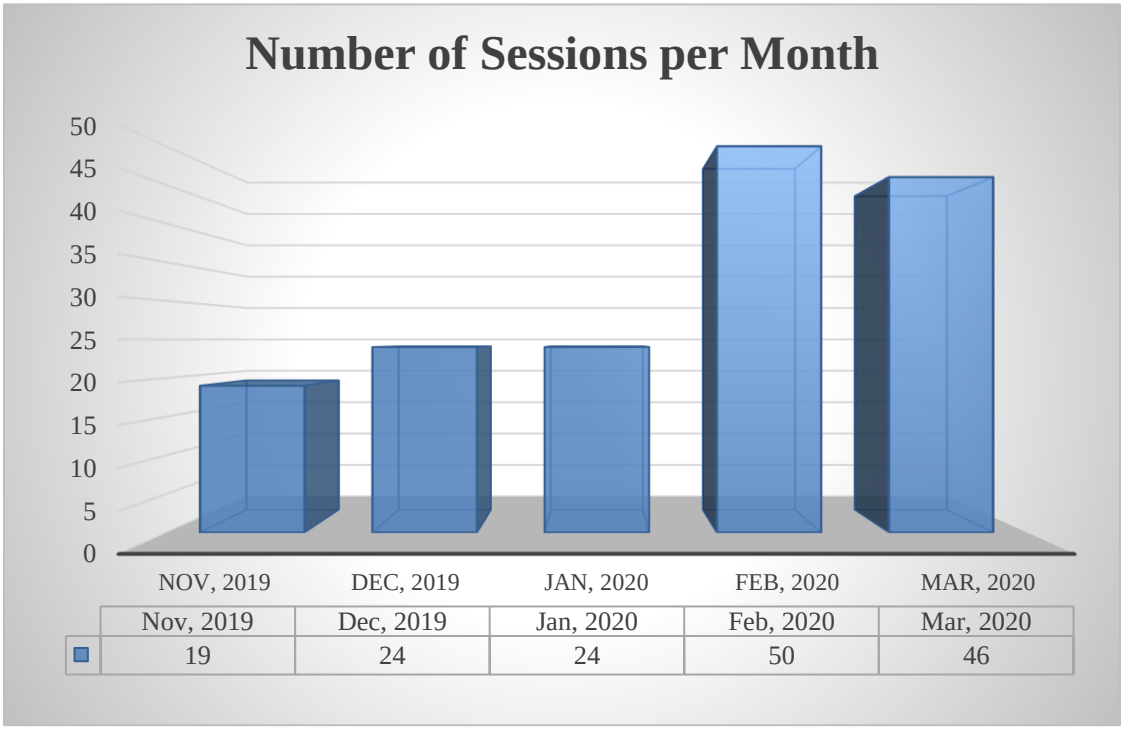
- Duplicate data is defined as either: 1) data pairs with **the same id and visit** (with different ages) OR 2) data pairs with **the same id and age** (with different visits)
- Same as orphaned data list, Soo will weekly put an updated list into a folder where Brianna can check and audit; the list has been small, and Brianna fixes the data quickly.
- Currently 4 participants (0.67%) are involved across ADOS, CDI-WG, and DAS.

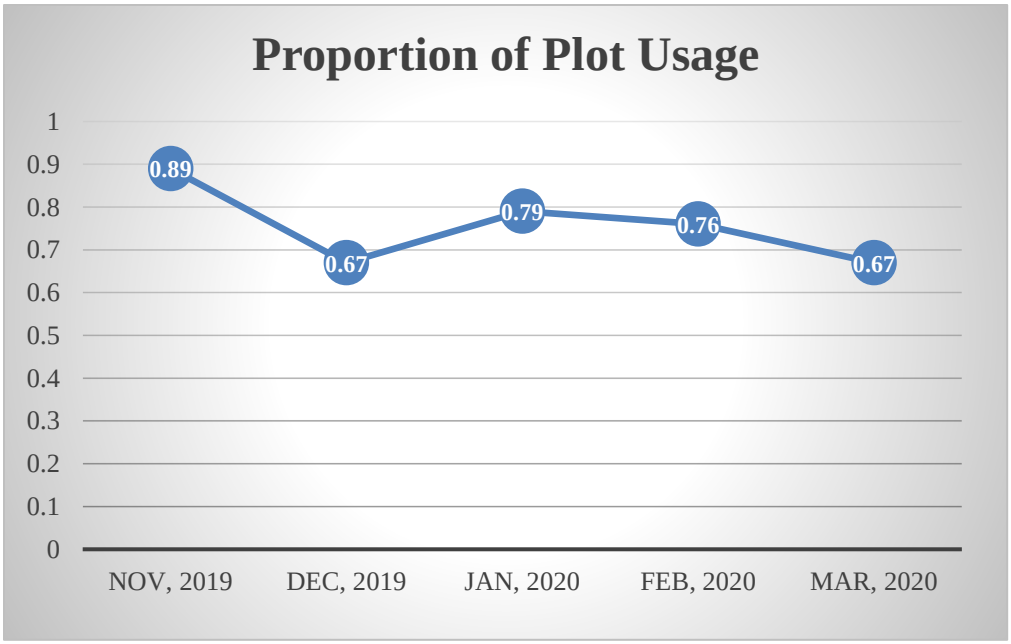
Suspected Missing Data ("Uncertain" category)

- A major ongoing project is to account for suspected missing data, which is defined as following: The status of the data is **not** tracked as "Missing Data", but the data is missing in ACCESS database, when the participant completed the visit where the data belongs to.
- Missing data with miscellaneous reasons
- Sameera, a Senior volunteer, took over this piece of data auditing. It is currently working in progress. More detailed update can come from Brianna.

User Logs

- 3 bugs report in March: Longitudinal IQ, ADIS, adding data to Einat's query
- Average time of using the data portal is 9.2 mins.
- The results by months are shown below:





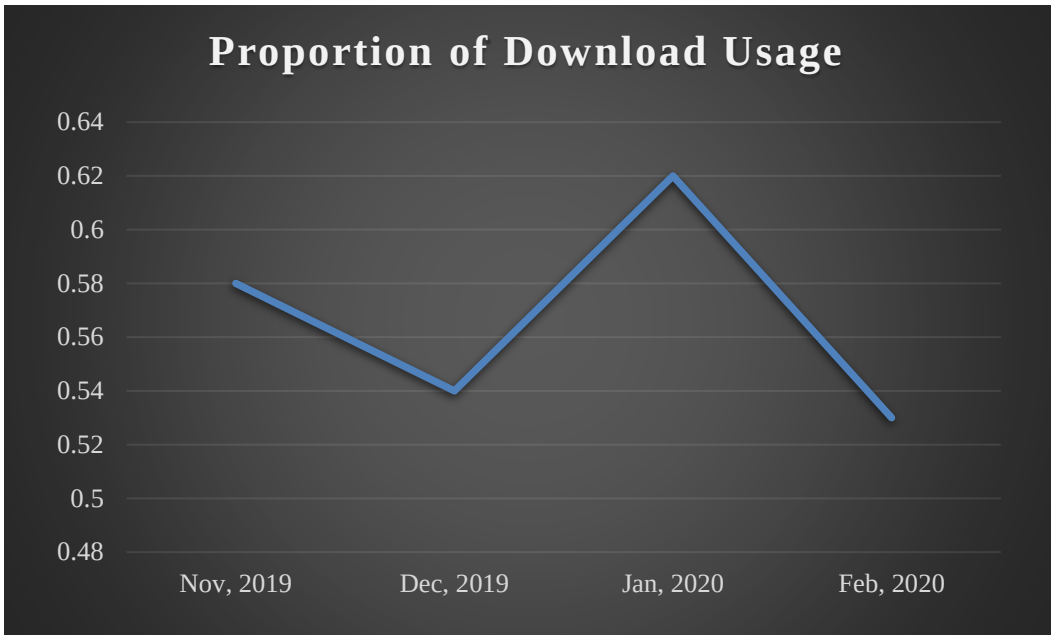


Table 2. Number of Sessions in March, 2020 by Username for dataportal.explore

User Name	# of Sessions
park	12
dwyer	9
waizbard	7
heath	6
wunordahl	6
lee	5
young	1

Table 3. How Many Time Tables Queried in March, 2020?

Table Name	Freq
tbl_longitudinal_iq	14
tbl_ados	11
tbl_msel	11
tbl_scan_details	10
tbl_dm_status	7
tbl_cbcl	6
tbl_mori_regions	4
tbl_srs	4
tbl_adi	3
tbl_mori_total	3

tbl_ssp	3
tbl_tcv	3
tbl_adis	2
tbl_demographics	2
tbl_growth_measurement	2
tbl_vineland	2
tbl_cdi_wg	1
tbl_cdi_ws	1
tbl_cshq	1
tbl_eowpvt	1
tbl_gort	1
tbl_ppvt	1
tbl_rbs	1
tbl_ssp2	1
tbl_sti	1

Significant Age Outliers

Table 4. Sample age outliers table

id	visit	avg_age	measure_list	visit_mean_age	visit_median_age	age_gap
100604-200	1	74.09	scq	43.39	43.72	30.37
101370-100	3	113.93	adi; cdi_ws; eowpvt; ppvt; rbs; scq; srs; sti	112.33	112.39	1.54
102268-100	4	160.95	gort	154.66	153.81	7.14

- This audit list is to double check if the visit number or date is correctly entered for the flagged participants.
- The full list is in S:/MIND/RESEARCH/APP/APP Database/7 – Data Auditing/age_outliers_list.csv
- Variable descriptions:
  - **Measure_list** = list of measures within the corresponding id and visit pair is flagged as age outliers (i.e the measure_outlier_list variable contains age variables for the corresponding id and visit pairs.)
  - **Avg_age** = average value of the ages in the "measure_list" variable
  - **Visit_mean_age** and **visit_median_age** = mean and median age of the overall visit for the corresponding id and visit pair
  - **Age_gap** = absolute value of the difference between avg_age and visit_median_age

Eligibility Assessment Missing

- Eligibility stated by Brianna:
  - For APP: any ASD missing ADOS, Mullen, or ADI & any TD missing SCQ
  - For GAIN/NAPP/BRAIN: any participant missing ADOS, Mullen, SCQ & any ASD missing ADI.
- 25 SCQ's, 1 ADI, and 1 MSEL total
- Full list of id's and visits is available S:/MIND/RESEARCH/APP/APP Database/7 – Data Auditing/eligibility_measures_missing.csv

Other Audit Lists generated (for Brianna)

- List of unscorable (both whole and partial) data
- Lists to modify tracking tables