# COVID Aerosols - Merged Data Codebook

Autogenerated data summary from dataMaid

2021-01-06 09:42:40

## Data report overview

The dataset examined has the following dimensions:

| Feature | Result |
|---|---|
| Number of observations | 55 |
| Number of variables | 86 |

## Codebook summary table

| Label | Variable | Class | # unique values | Missing | Description |
|---|---|---|---|---|---|
| Sample ID | **sampleid** | character | 55 | 0.00 % | |
| Date of collection | **colldate** | character | 21 | 0.00 % | |
| Outdoor CO2 level on date of collection (ppm) | **outdoorco2** | numeric | 15 | 0.00 % | |
| Hospital name | **hosp** | character | 7 | 0.00 % | |
| Sampling location | **samploc** | character | 10 | 0.00 % | |
| Type of sampling space | **loctype** | character | 6 | 0.00 % | |
| Start time | **starttime** | character | 36 | 0.00 % | |
| Ambient temperature at start (C) | **tempstart** | numeric | 42 | 0.00 % | |
| Ambient humidity at start | **humiditystart** | numeric | 53 | 0.00 % | |
| CO2 level at start of collection (ppm) | **co2start** | numeric | 53 | 0.00 % | |
| Number of COVID patients | **numcovidstart** | numeric | 18 | 0.00 % | |
| Number of non-COVID patients | **numnoncovidstart** | numeric | 5 | 0.00 % | |
| Number of staff | **numstaffstart** | numeric | 9 | 1.82 % | |
| Number of people other than patients or staff (visitors, etc.) | **numotherstart** | numeric | 20 | 0.00 % | |
| Number of people wearing masks | **nummasksstart** | numeric | 3 | 96.36 % | |
| People_start | **numpeoplestart** | numeric | 31 | 1.82 % | |
| Number of patients using nasal cannula | **numnasal** | numeric | 5 | 1.82 % | |

| Label | Variable | Class | # unique values | Missing | Description |
|---|---|---|---|---|---|
| Number of patients using oxygen masks | **numoxymask** | numeric | 9 | 1.82 % | |
| Number of patients using CPAP (non-invasive ventilation) | **numcpap** | numeric | 1 | 0.00 % | |
| Number of patients intubated | **numintub** | numeric | 3 | 0.00 % | |
| Distance of air sampler from nearest patient (feet, convert inches to decimal) | **distpatient** | numeric | 41 | 0.00 % | |
| Distance of air sampler from nearest window (feet, convert inches to decimal) | **distwindow** | numeric | 40 | 0.00 % | |
| Is the nearest window open or closed? | **nearwindowopen** | character | 3 | 0.00 % | |
| Distance of air sampler from nearest door (feet, convert inches to decimal) | **distdoor** | numeric | 52 | 1.82 % | |
| Is the nearest door open or closed? | **neardooropen** | character | 2 | 0.00 % | |
| Number of COVID patients (15 minutes) | **numcovidmid** | numeric | 20 | 5.45 % | |
| Number of non-COVID patients (15 minutes) | **numnoncovidmid** | numeric | 5 | 3.64 % | |
| Number of staff (15 minutes) | **numstaffmid** | numeric | 8 | 3.64 % | |
| Number of people other than patients or staff (15 minutes) | **numothermid** | numeric | 21 | 3.64 % | |
| People_midpoint | **numpeoplemid** | numeric | 26 | 5.45 % | |
| Number of windows fully open | **numwinfullopen** | numeric | 6 | 3.64 % | |
| Number of windows partially open | **numwinpartopen** | numeric | 8 | 0.00 % | |
| Number of windows closed | **numwinclosed** | numeric | 11 | 0.00 % | |
| | **numwinopen** | numeric | 9 | 3.64 % | |
| | **numwintotal** | numeric | 15 | 3.64 % | |
| Number of doors fully open (doors leading to external corridor or separate room, | **numdoorfullopen** | numeric | 5 | 0.00 % | |
| Number of doors partially open (doors leading to external corridor or separate r | **numdoorpartopen** | numeric | 4 | 0.00 % | |
| Number of doors closed (doors leading to external corridor or separate room, not | **numdoorclosed** | numeric | 7 | 0.00 % | |

| Label | Variable | Class | # unique values | Missing | Description |
|---|---|---|---|---|---|
| | numdoortotal | numeric | 10 | 0.00 % | |
| | numdooropen | numeric | 6 | 0.00 % | |
| Total number of fans | totfan | numeric | 19 | 1.82 % | |
| Number of fans in operation | numfanon | numeric | 15 | 40.00 % | |
| Number of air conditioning units in operation | numacon | numeric | 6 | 1.82 % | |
| Room width (feet, convert inches to decimal) | roomwidth | numeric | 39 | 23.64 % | |
| Room length (feet, convert inches to decimal) | roomlength | numeric | 40 | 23.64 % | |
| Room height (feet, convert inches to decimal) | roomheight | numeric | 29 | 0.00 % | |
| Room area (ft cub) | roomarea | numeric | 38 | 32.73 % | |
| End time | endtime | character | 32 | 0.00 % | |
| Ambient temperature at end (C) | tempend | numeric | 48 | 1.82 % | |
| $CO_2$ level at end of collection (ppm) | co2end | numeric | 54 | 1.82 % | |
| Ambient humidity at end | humidityend | numeric | 41 | 1.82 % | |
| Number of COVID patients (endpoint) | numcovidend | numeric | 20 | 1.82 % | |
| Number of non-COVID patients (endpoint) | numnoncovidend | numeric | 7 | 1.82 % | |
| Number of staff (endpoint) | numstaffend | numeric | 8 | 1.82 % | |
| Number of people other than patients or staff (endpoint) | numotherend | numeric | 22 | 1.82 % | |
| People_end | peopleend | numeric | 31 | 1.82 % | |
| $CO_2$ level at 5 minutes (ppm) | co2_5min | numeric | 53 | 3.64 % | |
| $CO_2$ level at 10 minutes (ppm) | co2_10min | numeric | 51 | 5.45 % | |
| $CO_2$ level at 15 minutes (ppm) | co2_15min | numeric | 50 | 5.45 % | |
| $CO_2$ level at 20 minutes (ppm) | co2_20min | numeric | 52 | 7.27 % | |
| $CO_2$ level at 25 minutes (ppm) | co2_25min | numeric | 52 | 5.45 % | |
| Notes: | notes | character | 49 | 12.73 % | |
| | _id | numeric | 55 | 0.00 % | |
| | submittime | character | 51 | 0.00 % | |
| | fixco2 | numeric | 5 | 0.00 % | |
| | co2startnew | numeric | 54 | 0.00 % | |
| | co2_5minnew | numeric | 51 | 3.64 % | |
| | co2_10minnew | numeric | 51 | 5.45 % | |
| | co2_15minnew | numeric | 49 | 5.45 % | |
| | co2_20minnew | numeric | 52 | 7.27 % | |

| Label | Variable | Class | # unique values | Missing | Description |
|---|---|---|---|---|---|
| | **co2_25minnew** | numeric | 52 | 5.45 % | |
| | **co2endnew** | numeric | 55 | 1.82 % | |
| | **co2average** | numeric | 55 | 0.00 % | |
| Wash location | **washlocation** | character | 3 | 0.00 % | |
| Sample type (Test/neg control) | **sampletype** | character | 1 | 0.00 % | |
| Collection site | **collectionsite** | character | 5 | 0.00 % | |
| Room type | **roomtype** | character | 14 | 0.00 % | |
| SARS-CoV-2 (Detected/undetected) | **result** | character | 3 | 0.00 % | |
| N1-Ct value | **n1ctvalue** | character | 16 | 0.00 % | |
| N1-quantity/reaction | **n1quantityreaction** | numeric | 17 | 70.91 % | |
| N1-quantity/sampleX10 | **n1quantitysamplex10** | numeric | 17 | 70.91 % | |
| Batch number | **batchnumber** | character | 12 | 0.00 % | |
| Collection date | **collectiondate** | character | 14 | 0.00 % | |
| RNA extraction Date | **rnadate** | numeric | 1 | 100.00 % | |
| Comments: | **comments** | character | 1 | 0.00 % | |

# Variable list

## sampleid

*Sample ID*

- The variable is a key (distinct values for each observation).

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## colldate

*Date of collection*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 21 |
| Mode | "2020-12-06" |
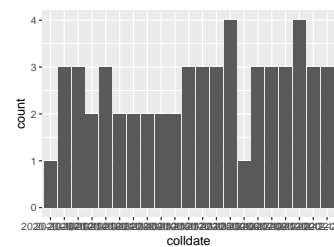


- Observed factor levels: "2020-10-07", "2020-10-12", "2020-10-14", "2020-10-18", "2020-10-21", "2020-10-28", "2020-11-08", "2020-11-10", "2020-11-15", "2020-11-17", "2020-11-23", "2020-11-25", "2020-11-30", "2020-12-06", "2020-12-07", "2020-12-08", "2020-12-13", "2020-12-20", "2020-12-22", "2020-12-27", "2020-12-29".

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## outdoorco2

*Outdoor CO2 level on date of collection (ppm)*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 15 |
| Median | 406 |
| 1st and 3rd quartiles | 399.5; 410 |
| Min. and max. | 388; 556 |
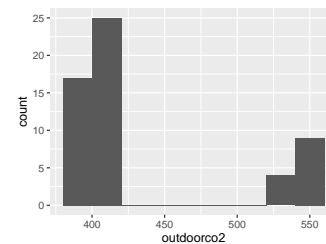


## hosp

*Hospital name*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 7 |
| Mode | "Dhaka Medical College and Hospital" |
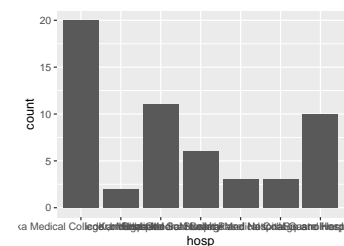


- Observed factor levels: "Dhaka Medical College and Hospital", "icddr,b Hospital", "Kurmitola General Hospital", "Mugda Medical College and Hospital", "Shaheed Suhrawardy Medical College and Hospital", "Sheikh Rasel National Gastroliver Institute", "Square Hospital".

## samploc

*Sampling location*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 10 |
| Mode | "COVID general ward" |
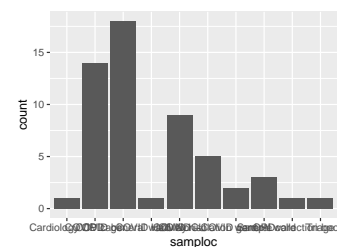


- Observed factor levels: "Cardiology OPD", "COVID cabin", "COVID general ward", "COVID Hallway", "COVID ICU", "COVID isolation ward", "Non-COVID general ward", "OPD", "Sample collection booth", "Triage".

## loctype

*Type of sampling space*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 6 |
| Mode | "Open ward" |
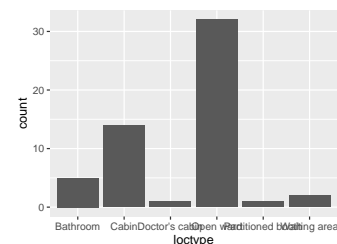


- Observed factor levels: "Bathroom", "Cabin", "Doctor's cabin", "Open ward", "Partitioned booth", "Waiting area".

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## starttime

*Start time*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 36 |
| Mode | "13:00:00.000+06:00" |
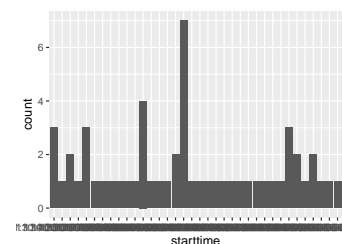


- Observed factor levels: "11:30:00.000+06:00", "11:34:00.000+06:00", "11:40:00.000+06:00", "11:58:00.000+06:00", "12:00:00.000+06:00", "12:16:00.000+06:00", "12:17:00.000+06:00", "12:18:00.000+06:00", "12:21:00.000+06:00", "12:24:00.000+06:00", "12:27:00.000+06:00", "12:30:00.000+06:00", "12:36:00.000+06:00", "12:47:00.000+06:00", "12:51:00.000+06:00", "12:53:00.000+06:00", "13:00:00.000+06:00", "13:04:00.000+06:00", "13:15:00.000+06:00", "13:20:00.000+06:00", "13:22:00.000+06:00", "13:25:00.000+06:00", "13:27:00.000+06:00", "13:28:00.000+06:00", "13:33:00.000+06:00", "13:35:00.000+06:00", "13:41:00.000+06:00", "13:50:00.000+06:00", "13:55:00.000+06:00", "14:00:00.000+06:00", "14:03:00.000+06:00", "14:04:00.000+06:00", "14:17:00.000+06:00", "14:44:00.000+06:00", "15:00:00.000+06:00", "15:10:00.000+06:00".

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## tempstart

*Ambient temperature at start (C)*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 42 |
| Median | 27 |
| 1st and 3rd quartiles | 25.15; 29.05 |
| Min. and max. | 22.5; 31.8 |
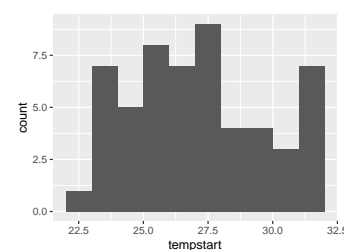
## humiditystart

*Ambient humidity at start*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 53 |
| Median | 63.3 |
| 1st and 3rd quartiles | 58.8; 71.5 |
| Min. and max. | 51.5; 83.8 |
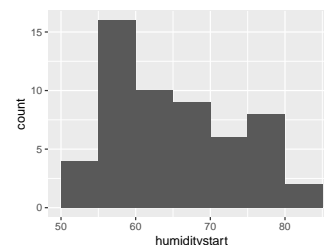


## co2start

*CO2 level at start of collection (ppm)*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 53 |
| Median | 770 |
| 1st and 3rd quartiles | 566.5; 928.5 |
| Min. and max. | 426; 1731 |
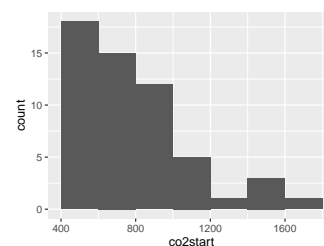


## numcovidstart

*Number of COVID patients*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 18 |
| Median | 3 |
| 1st and 3rd quartiles | 1; 6.5 |
| Min. and max. | 0; 62 |
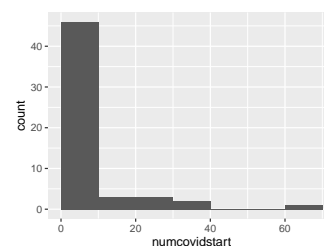


## numnoncovidstart

*Number of non-COVID patients*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 5 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 0 |
| Min. and max. | 0; 40 |
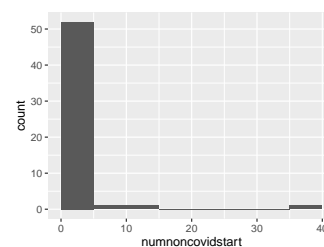
## numstaffstart

*Number of staff*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 8 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 2 |
| Min. and max. | 0; 17 |
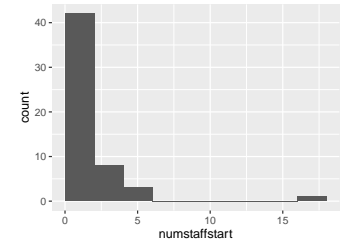


## numotherstart

*Number of people other than patients or staff (visitors, etc.)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 20 |
| Median | 3 |
| 1st and 3rd quartiles | 2; 13 |
| Min. and max. | 0; 71 |
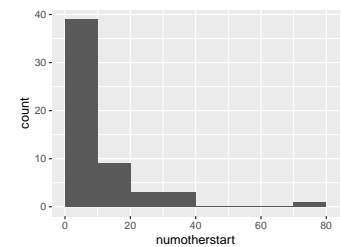


## nummasksstart

*Number of people wearing masks*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 53 (96.36 %) |
| Number of unique values | 2 |
| Median | 29 |
| 1st and 3rd quartiles | 18.5; 39.5 |
| Min. and max. | 8; 50 |
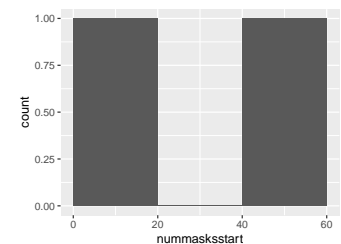


## numpeoplestart

*People_start*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 30 |
| Median | 9.5 |
| 1st and 3rd quartiles | 4; 25.75 |
| Min. and max. | 0; 104 |
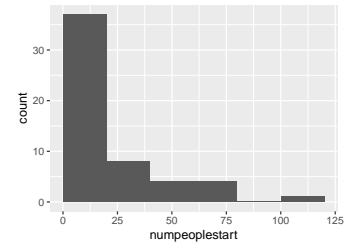


## numnasal

*Number of patients using nasal cannula*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 4 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 0 |
| Min. and max. | 0; 5 |
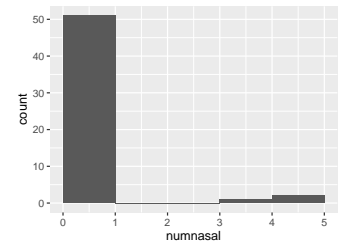


## numoxymask

*Number of patients using oxygen masks*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 8 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 2 |
| Min. and max. | 0; 11 |
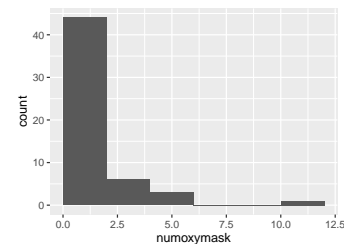


## numcpap

*Number of patients using CPAP (non-invasive ventilation)*

- The variable only takes one (non-missing) value: "0". The variable contains 0 % missing observations.

## numintub

*Number of patients intubated*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 3 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 0 |
| Min. and max. | 0; 2 |
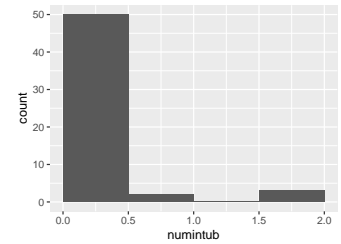


## distpatient

*Distance of air sampler from nearest patient (feet, convert inches to decimal)*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 41 |
| Median | 6 |
| 1st and 3rd quartiles | 4.34; 7.8 |
| Min. and max. | 2; 999 |
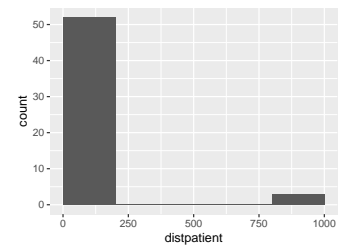


## distwindow

*Distance of air sampler from nearest window (feet, convert inches to decimal)*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 40 |
| Median | 15.92 |
| 1st and 3rd quartiles | 11.71; 989.5 |
| Min. and max. | 0; 999 |
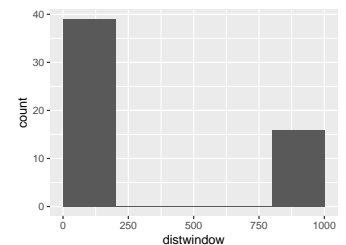


## nearwindowopen

*Is the nearest window open or closed?*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 3 |
| Mode | "Closed" |
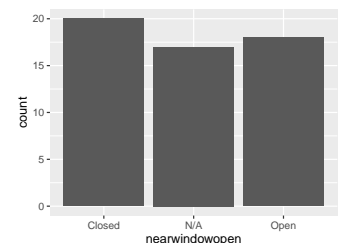


- Observed factor levels: "Closed", "N/A", "Open".

## distdoor

*Distance of air sampler from nearest door (feet, convert inches to decimal)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 51 |
| Median | 15.05 |
| 1st and 3rd quartiles | 11.58; 21.38 |
| Min. and max. | 0; 68.5 |
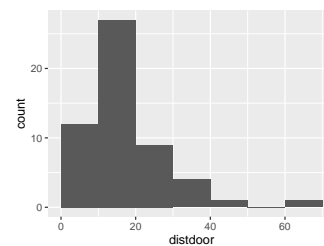


## neardooropen

*Is the nearest door open or closed?*

| Feature | Result |
| --- | --- |
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 2 |
| Mode | "Open" |
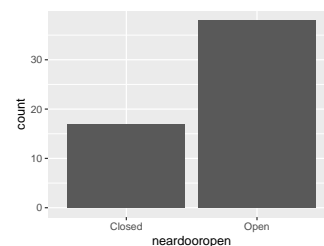


- Observed factor levels: "Closed", "Open".

## numcovidmid

*Number of COVID patients (15 minutes)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 3 (5.45 %) |
| Number of unique values | 19 |
| Median | 3 |
| 1st and 3rd quartiles | 1; 7 |
| Min. and max. | 0; 62 |
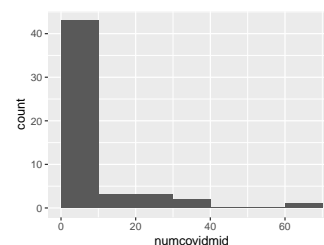


## numnoncovidmid

*Number of non-COVID patients (15 minutes)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 2 (3.64 %) |
| Number of unique values | 4 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 0 |
| Min. and max. | 0; 13 |
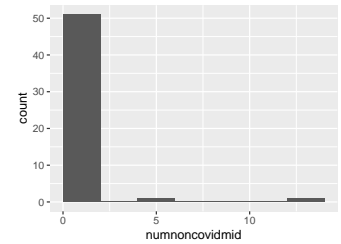


## numstaffmid

*Number of staff (15 minutes)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 2 (3.64 %) |
| Number of unique values | 7 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 1 |
| Min. and max. | 0; 12 |
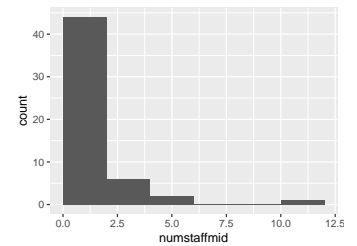


## numothermid

*Number of people other than patients or staff (15 minutes)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 2 (3.64 %) |
| Number of unique values | 20 |
| Median | 3 |
| 1st and 3rd quartiles | 1; 9 |
| Min. and max. | 0; 41 |
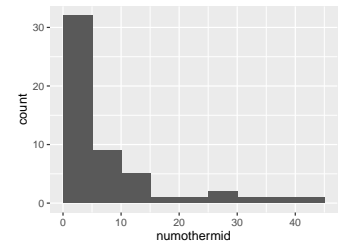


## numpeoplemid

*People_midpoint*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 3 (5.45 %) |
| Number of unique values | 25 |
| Median | 8 |
| 1st and 3rd quartiles | 2.75; 19 |
| Min. and max. | 0; 104 |
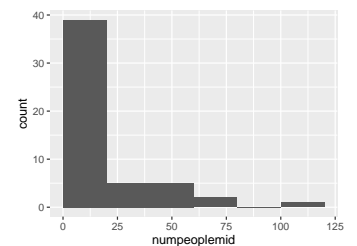
## numwinfullopen

*Number of windows fully open*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 2 (3.64 %) |
| Number of unique values | 5 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 0 |
| Min. and max. | 0; 11 |
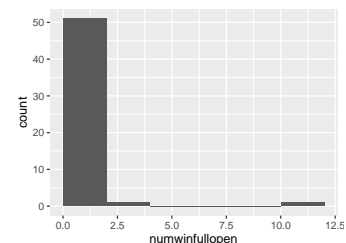


## numwinpartopen

*Number of windows partially open*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 8 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 1 |
| Min. and max. | 0; 8 |
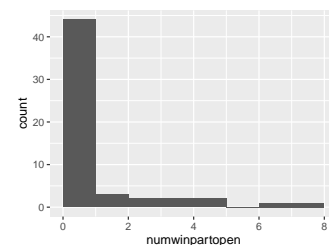


## numwinclosed

*Number of windows closed*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 11 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 3.5 |
| Min. and max. | 0; 20 |
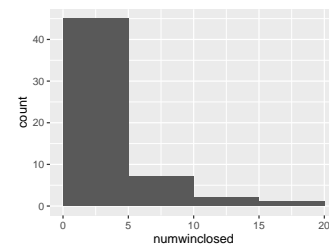


## numwinopen

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 2 (3.64 %) |
| Number of unique values | 8 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 1 |
| Min. and max. | 0; 19 |
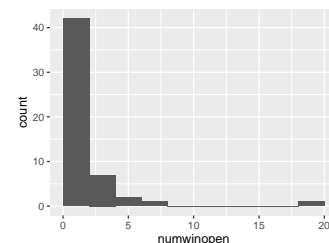
## numwintotal

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 2 (3.64 %) |
| Number of unique values | 14 |
| Median | 1 |
| 1st and 3rd quartiles | 0; 6 |
| Min. and max. | 0; 34 |
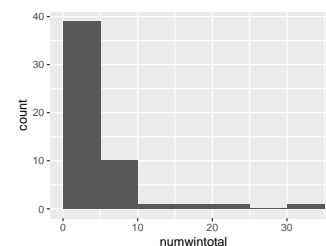


## numdoorfullopen

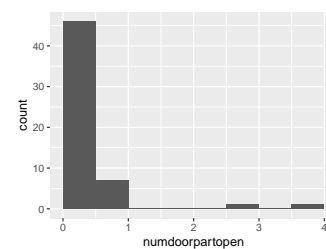*Number of doors fully open (doors leading to external corridor or separate room,*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 5 |
| Median | 1 |
| 1st and 3rd quartiles | 1; 1 |
| Min. and max. | 0; 4 |
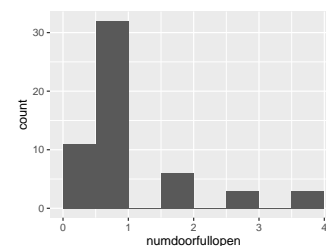


## numdoorpartopen

*Number of doors partially open (doors leading to external corridor or separate r*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 4 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 0 |
| Min. and max. | 0; 4 |



## numdoorclosed

*Number of doors closed (doors leading to external corridor or separate room, not*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 7 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 1 |
| Min. and max. | 0; 82 |
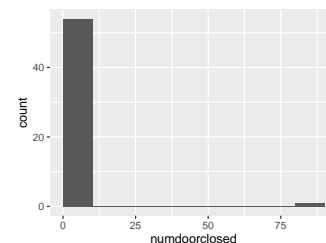
## numdoortotal

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 10 |
| Median | 1 |
| 1st and 3rd quartiles | 1; 2 |
| Min. and max. | 0; 85 |
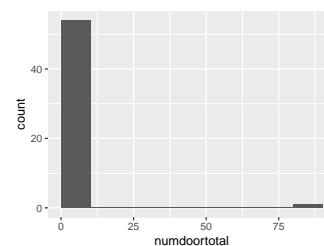


## numdooropen

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 6 |
| Median | 1 |
| 1st and 3rd quartiles | 1; 2 |
| Min. and max. | 0; 7 |
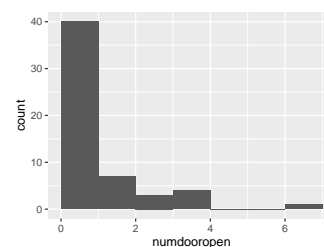


## totfan

*Total number of fans*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 18 |
| Median | 2 |
| 1st and 3rd quartiles | 0; 6.75 |
| Min. and max. | 0; 61 |
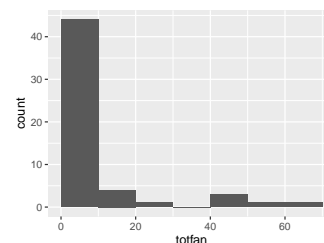


## numfanon

*Number of fans in operation*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 22 (40 %) |
| Number of unique values | 14 |
| Median | 2 |
| 1st and 3rd quartiles | 0; 6 |
| Min. and max. | 0; 49 |
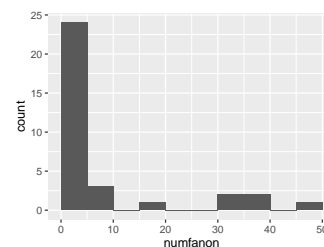
## numacon

*Number of air conditioning units in operation*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 5 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 1 |
| Min. and max. | 0; 4 |
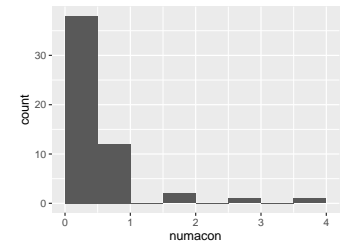


## roomwidth

*Room width (feet, convert inches to decimal)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 13 (23.64 %) |
| Number of unique values | 38 |
| Median | 20.24 |
| 1st and 3rd quartiles | 14; 23.12 |
| Min. and max. | 4.33; 88.92 |
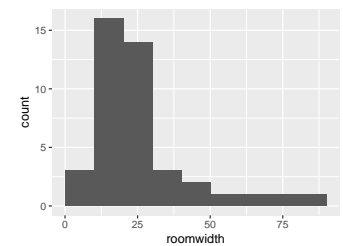


## roomlength

*Room length (feet, convert inches to decimal)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 13 (23.64 %) |
| Number of unique values | 39 |
| Median | 25.45 |
| 1st and 3rd quartiles | 18.98; 43.13 |
| Min. and max. | 6.5; 109 |
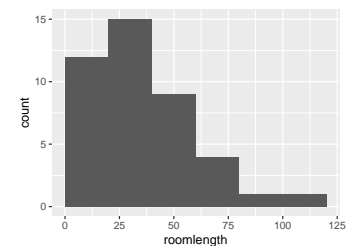


## roomheight

*Room height (feet, convert inches to decimal)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 29 |
| Median | 10.33 |
| 1st and 3rd quartiles | 8.53; 11.25 |
| Min. and max. | 7.53; 14.25 |
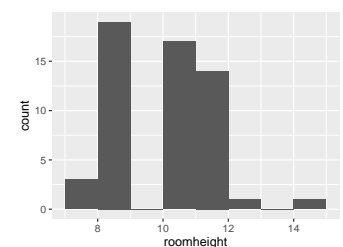
## roomarea

*Room area (ft cub)*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 18 (32.73 %) |
| Number of unique values | 37 |
| Median | 4663.04 |
| 1st and 3rd quartiles | 2901.23; 11748.59 |
| Min. and max. | 288.49; 73852.51 |
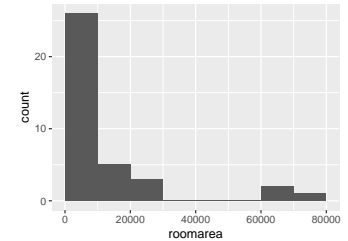


## endtime

*End time*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 32 |
| Mode | "13:30:00.000+06:00" |
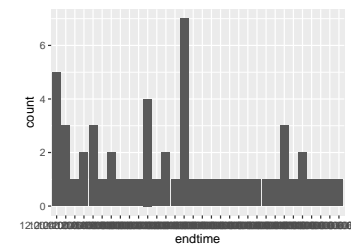


- Observed factor levels: "", "12:00:00.000+06:00", "12:04:00.000+06:00", "12:10:00.000+06:00", "12:30:00.000+06:00", "12:46:00.000+06:00", "12:47:00.000+06:00", "12:51:00.000+06:00", "12:54:00.000+06:00", "12:57:00.000+06:00", "13:00:00.000+06:00", "13:06:00.000+06:00", "13:22:00.000+06:00", "13:23:00.000+06:00", "13:30:00.000+06:00", "13:34:00.000+06:00", "13:45:00.000+06:00", "13:50:00.000+06:00", "13:56:00.000+06:00", "13:58:00.000+06:00", "14:03:00.000+06:00", "14:05:00.000+06:00", "14:11:00.000+06:00", "14:20:00.000+06:00", "14:25:00.000+06:00", "14:30:00.000+06:00", "14:33:00.000+06:00", "14:34:00.000+06:00", "14:47:00.000+06:00", "15:14:00.000+06:00", "15:30:00.000+06:00", "15:46:00.000+06:00".
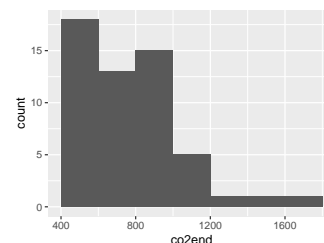
## tempend

*Ambient temperature at end (C)*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 47 |
| Median | 63.25 |
| 1st and 3rd quartiles | 57.35; 70.75 |
| Min. and max. | 50.1; 81.6 |
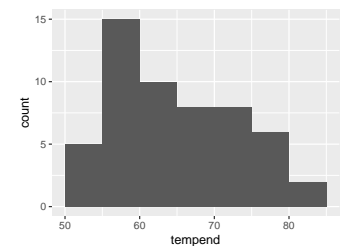
## co2end

*CO2 level at end of collection (ppm)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 53 |
| Median | 746.5 |
| 1st and 3rd quartiles | 555; 885 |
| Min. and max. | 404; 1604 |



## humidityend

*Ambient humidity at end*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 40 |
| Median | 25.9 |
| 1st and 3rd quartiles | 24; 29.37 |
| Min. and max. | 21.4; 32 |
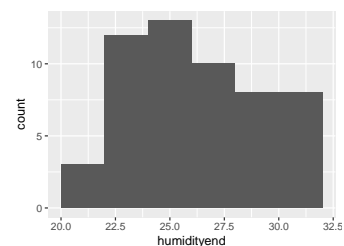


## numcovidend

*Number of COVID patients (endpoint)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 19 |
| Median | 3 |
| 1st and 3rd quartiles | 1; 6.75 |
| Min. and max. | 0; 62 |
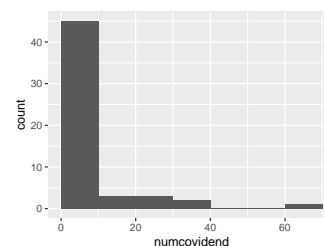


## numnoncovidend

*Number of non-COVID patients (endpoint)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 6 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 0 |
| Min. and max. | 0; 31 |
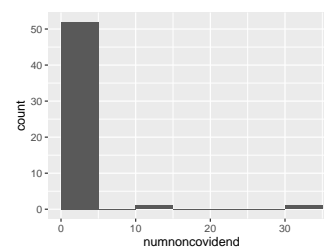
## numstaffend

*Number of staff (endpoint)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 7 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 1.75 |
| Min. and max. | 0; 11 |
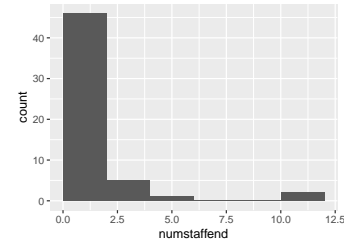


## numotherend

*Number of people other than patients or staff (endpoint)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 21 |
| Median | 3 |
| 1st and 3rd quartiles | 0; 11.75 |
| Min. and max. | 0; 40 |
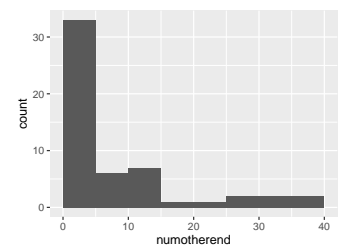


## peopleend

*People_end*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 30 |
| Median | 7.5 |
| 1st and 3rd quartiles | 2.25; 22 |
| Min. and max. | 0; 103 |
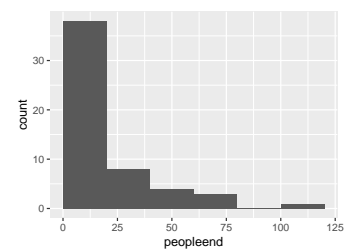


## co2_5min

*CO2 level at 5 minutes (ppm)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 2 (3.64 %) |
| Number of unique values | 52 |
| Median | 710 |
| 1st and 3rd quartiles | 570; 909 |
| Min. and max. | 403; 1654 |
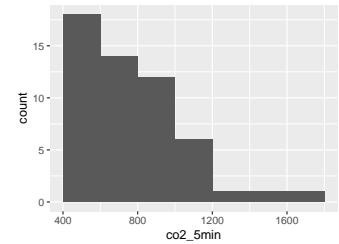


## co2_10min

*CO2 level at 10 minutes (ppm)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 3 (5.45 %) |
| Number of unique values | 50 |
| Median | 711 |
| 1st and 3rd quartiles | 558.25; 918.25 |
| Min. and max. | 408; 1619 |
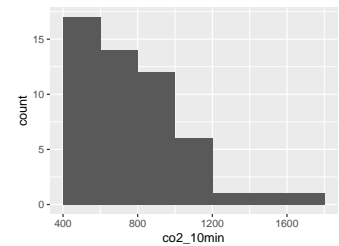


## co2_15min

*CO2 level at 15 minutes (ppm)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 3 (5.45 %) |
| Number of unique values | 49 |
| Median | 716 |
| 1st and 3rd quartiles | 564; 901.5 |
| Min. and max. | 406; 1607 |
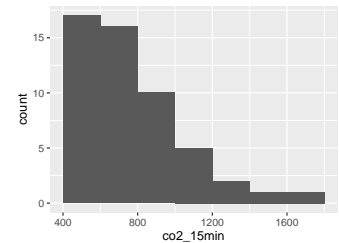


## co2_20min

*CO2 level at 20 minutes (ppm)*

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 4 (7.27 %) |
| Number of unique values | 51 |
| Median | 722 |
| 1st and 3rd quartiles | 547.5; 918.5 |
| Min. and max. | 405; 1611 |
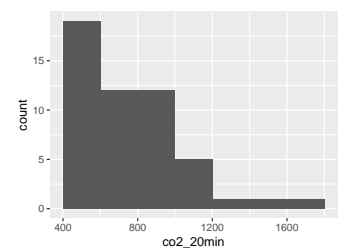
## co2_25min

*CO2 level at 25 minutes (ppm)*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 3 (5.45 %) |
| Number of unique values | 51 |
| Median | 746 |
| 1st and 3rd quartiles | 561.25; 911 |
| Min. and max. | 409; 1607 |
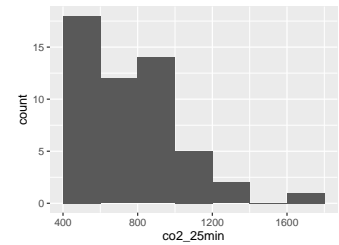


## notes

*Notes:*

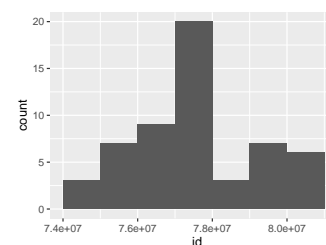| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 7 (12.73 %) |
| Number of unique values | 48 |
| Mode | "12th floors, Room 1202" |
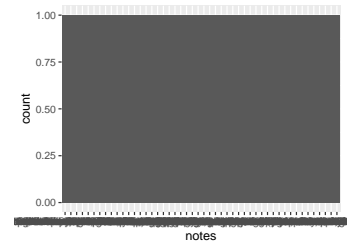


- Observed factor levels: "12th floors, Room 1202", "13th floor, room 1301", "2 patients fed with intranasal canal.", "Bathroom of previous room. CO2 meter malfunctioned", "Cabin 15 (8th floor, new)", "Cabin 18 (new location), room has 8' 10" x 9' 1" washroom", "Cabin 29 (8th floor), 9' 2" x 3' 6" washroom included", "Cabin 46, suspected COVIDZ but not confirmed, 9' 2" x 3' 2" washroom included.", "Children's OPD, highly dynamic flux of people, doctor's rooms partially sectioned off (top parts open)", "CO2 higher than usual value at same point. Room 323.", "Continuous flux of people", "COVID Med OPS, 2nd building", "Flux of people", "Isolation ward 601 unit V", "Isolation ward 601 unit VI", "Isolation ward 601, unit II Room 02", "Isolation ward 607", "Left side of 5th floor, other side recorded, room showed large variation in CO2", "Male ward @ 8th floor, another unit. Should we count number of ppl with oxygen masks who remove them", "Male ward @ 8th floor, unit 2", "Medicine OPD, Can't distinguish patients from visitors, constant flux", "Midpoint and door data not collected", "Midpoint and door data not taken", "Non rectangular room. All nasal cannula are high flow. Central AC.", "Partitioned room", "People left in the middle for lunch, recently turned on fan hence CO2 decrease, large continuous ventilation shafts 39.75 x 2.67 feet. Rectangular room, 6th floor 'non acute child ward'", "Rectangular room", "Rectangular room with 6' x 5' 5" washroom", "Rectangular room with 7' 2" x 6' 6" washroom", "Rectangular room with a 8' 10" x 6' washroom", "Rectangular room, 'non acute female ward'", "Respiratory med OPD, line of patients outside at the door but not entering.", "Right side of 5th floor, room with large variation in CO2, other side recorded too", "Room 1110", "Room 1205", "Room 1208", "Room 1307. Rectangular room with a 9.75 x 6.5 feet washroom", "Room 1309. Rectangular with a 9.75 x 6.5 feet washroom.", "Room 513, internal washroom of 6.75 by 6 squared feet.", "Room 518", "Room 519", "Room was a post op, turned into COVID ICU. 6th floor.", "Small partitioned booth for Cardiology OPD. Ground floor open area, flux of people. Considered top of partitions as windows.", "Small room, closed door opened intermittently, some CO2 measurements couldn't be taken", "Sudden gust of wind in the middle of the experiment as it started raining", "Top left portion was blank, not homogeneous distribution of people", "Washroom of previous COVID ICU sampled (51_MM_R2), constant flux of people", "Washroom of previous room, opens up to 4 small stalls, biosampler on doorstep, constant flux of people".
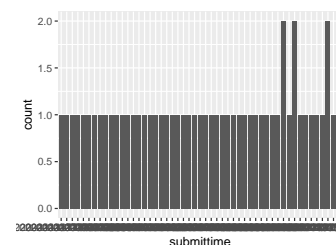
## _id

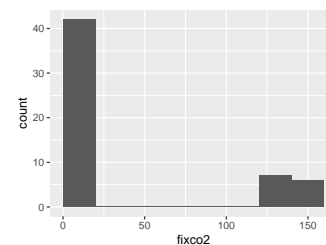| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 55 |
| Median | 77675222 |
| 1st and 3rd quartiles | 76978218.5; 78831553.5 |
| Min. and max. | 74480967; 80463536 |



## submittime

| Feature | Result |
| --- | --- |
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 51 |
| Mode | "2020-12-16T16:01:10" |



- Observed factor levels: "2020-11-16T13:05:39", "2020-11-17T15:17:33", "2020-11-17T15:17:45", "2020-11-20T16:35:11", "2020-11-20T16:35:16", "2020-11-20T18:06:40", "2020-11-20T18:06:41", "2020-11-23T11:17:19", "2020-11-23T11:17:29", "2020-11-23T11:17:37", "2020-11-25T19:04:31", "2020-11-25T20:14:44", "2020-11-25T20:14:45", "2020-12-01T16:32:05", "2020-12-01T16:32:07", "2020-12-01T16:32:08", "2020-12-01T16:32:09", "2020-12-01T16:32:11", "2020-12-01T16:32:13", "2020-12-02T21:28:07", "2020-12-03T16:21:00", "2020-12-03T16:21:05", "2020-12-03T16:21:06", "2020-12-07T18:03:31", "2020-12-07T18:03:33", "2020-12-07T18:03:34", "2020-12-07T18:03:35", "2020-12-07T18:03:44", "2020-12-07T18:03:45", "2020-12-07T18:03:46", "2020-12-07T18:03:47", "2020-12-09T13:51:32", "2020-12-09T13:51:33", "2020-12-09T13:51:35", "2020-12-09T13:51:38", "2020-12-09T13:51:40", "2020-12-09T13:51:41", "2020-12-09T13:51:44", "2020-12-09T13:51:46", "2020-12-16T16:01:07", "2020-12-16T16:01:10", "2020-12-23T21:13:23", "2020-12-23T21:13:24", "2020-12-23T21:13:27", "2020-12-23T21:13:28", "2020-12-23T21:13:30", "2020-12-23T21:13:32", "2020-12-30T18:56:22", "2020-12-30T18:56:23", "2020-12-30T18:56:24", "2020-12-30T18:56:25".
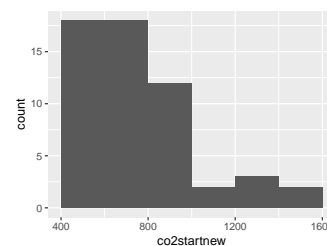
## fixco2

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 5 |
| Median | 0 |
| 1st and 3rd quartiles | 0; 0 |
| Min. and max. | 0; 146 |

## co2startnew

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 54 |
| Median | 732 |
| 1st and 3rd quartiles | 562.5; 911.5 |
| Min. and max. | 421; 1586 |



## co2_5minnew

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 2 (3.64 %) |
| Number of unique values | 50 |
| Median | 696 |
| 1st and 3rd quartiles | 565; 886 |
| Min. and max. | 403; 1509 |
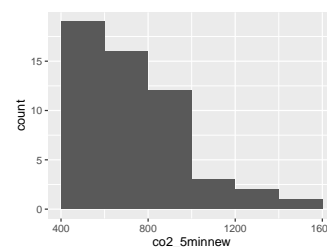


## co2_10minnew

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 3 (5.45 %) |
| Number of unique values | 50 |
| Median | 696.5 |
| 1st and 3rd quartiles | 549; 868.75 |
| Min. and max. | 408; 1474 |
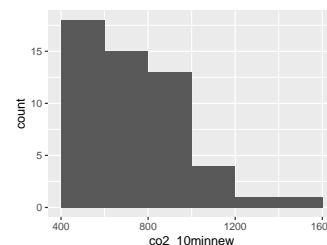


## co2_15minnew

| Feature | Result |
| --- | --- |
| Variable type | numeric |
| Number of missing obs. | 3 (5.45 %) |
| Number of unique values | 48 |
| Median | 664.5 |
| 1st and 3rd quartiles | 551.75; 869.25 |
| Min. and max. | 406; 1462 |
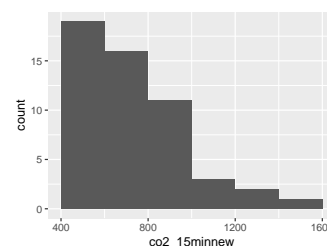
## co2_20minnew

| Feature | Result |
|---|---:|
| Variable type | numeric |
| Number of missing obs. | 4 (7.27 %) |
| Number of unique values | 51 |
| Median | 653 |
| 1st and 3rd quartiles | 523; 867.5 |
| Min. and max. | 405; 1466 |
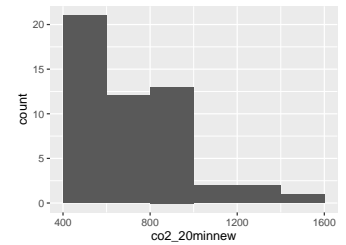


## co2_25minnew

| Feature | Result |
|---|---:|
| Variable type | numeric |
| Number of missing obs. | 3 (5.45 %) |
| Number of unique values | 51 |
| Median | 718 |
| 1st and 3rd quartiles | 533.5; 866 |
| Min. and max. | 409; 1462 |
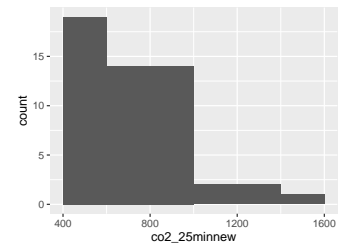


## co2endnew

| Feature | Result |
|---|---:|
| Variable type | numeric |
| Number of missing obs. | 1 (1.82 %) |
| Number of unique values | 54 |
| Median | 695 |
| 1st and 3rd quartiles | 539.5; 855.75 |
| Min. and max. | 404; 1459 |
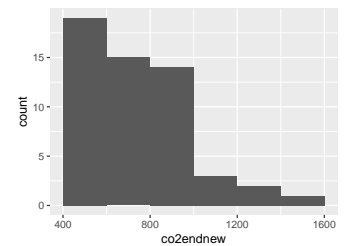


## co2average

| Feature | Result |
|---|---:|
| Variable type | numeric |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 55 |
| Median | 715.71 |
| 1st and 3rd quartiles | 545.71; 868.93 |
| Min. and max. | 409.57; 1488.29 |
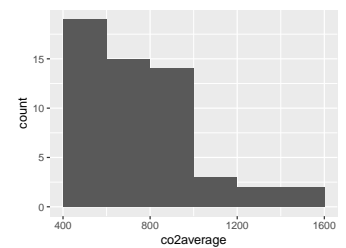
## washlocation

*Wash location*

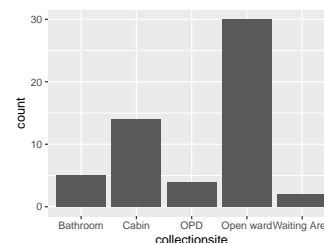| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 3 |
| Mode | "" |
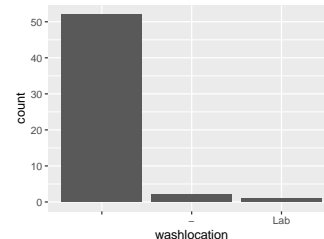


- Observed factor levels: "", "-", "Lab".

---

## sampletype

*Sample type (Test/neg control)*

- The variable only takes one (non-missing) value: "TEST". The variable contains 0 % missing observations.

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## collectionsite

*Collection site*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 5 |
| Mode | "Open ward" |



- Observed factor levels: "Bathroom", "Cabin", "OPD", "Open ward", "Waiting Area".

---

## roomtype

*Room type*

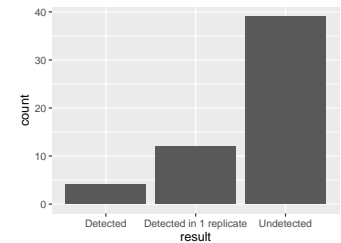| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 14 |
| Mode | "COVID general ward" |
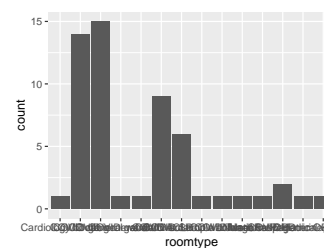
- Observed factor levels: "Cardiology booth", "COVID cabin", "COVID general ward", "COVID general ward A", "COVID general ward B", "COVID ICU", "COVID isolation ward", "COVID Sample collection", "COVID Triage", "COVID ward hallway", "Medicine OPD", "Non-COVID general ward", "Pediatric OPD", "Resp Medicine, doctor's cabin".

---

## result

*SARS-CoV-2 (Detected/undetected)*

| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 3 |
| Mode | "Undetected" |



- Observed factor levels: "Detected", "Detected in 1 replicate", "Undetected".

---

## n1ctvalue

*N1-Ct value*

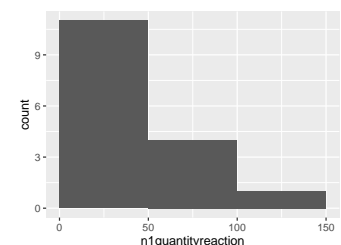| Feature | Result |
|---|---|
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 16 |
| Mode | "Undetermined" |
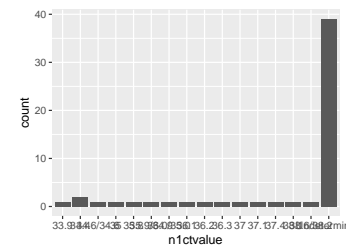


- Observed factor levels: "33.9", "34.4", "34.6/34.6", "35", "35.8", "35.9/34.9", "36.0/35.0", "36.1", "36.2", "36.3", "37", "37.1", "37.4", "38.1", "38.6/38.2", "Undetermined".

---

## n1quantityreaction

*N1-quantity/reaction*

| Feature | Result |
|---|---|
| Variable type | numeric |
| Number of missing obs. | 39 (70.91 %) |
| Number of unique values | 16 |
| Median | 29.7 |
| 1st and 3rd quartiles | 2.6; 51.1 |
| Min. and max. | 1; 147.6 |

## n1quantitysamplex10

*N1-quantity/sampleX10*

| Feature | Result |
| --- | ---: |
| Variable type | numeric |
| Number of missing obs. | 39 (70.91 %) |
| Number of unique values | 16 |
| Median | 296.75 |
| 1st and 3rd quartiles | 25.98; 511 |
| Min. and max. | 9.54; 1476 |
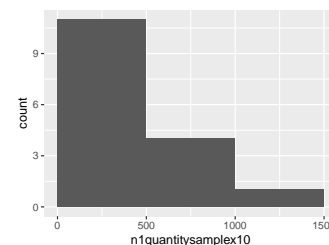


## batchnumber

*Batch number*

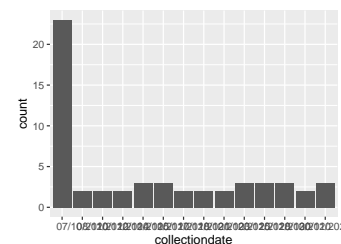| Feature | Result |
| --- | ---: |
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 12 |
| Mode | "12" |
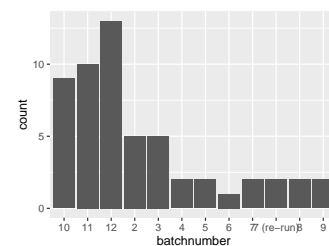


- Observed factor levels: "10", "11", "12", "2", "3", "4", "5", "6", "7", "7 (re-run)", "8", "9".

## collectiondate

*Collection date*

| Feature | Result |
| --- | ---: |
| Variable type | character |
| Number of missing obs. | 0 (0 %) |
| Number of unique values | 14 |
| Mode | "" |



- Observed factor levels: "", "07/10/2020", "08/11/2020", "10/11/2020", "12/10/2020", "14/10/2020", "15/11/2020", "17/11/2020", "18/10/2020", "21/10/2020", "23/11/2020", "25/11/2020", "28/10/2020", "30/11/2020".

## rnadate

*RNA extraction Date*

- The variable only takes one value: "NA".

## comments

*Comments:*

- The variable only takes one (non-missing) value: "". The variable contains 0 % missing observations.

---

Report generation information:

- Created by: Caitlin Hemlock (username: `caitlinhemlock`).

- Report creation time: Wed Jan 06 2021 09:42:41

- Report was run from directory: `/Users/caitlinhemlock`

- dataMaid v1.4.0 [Pkg: 2019-12-10 from CRAN (R 4.0.2)]

- R version 4.0.2 (2020-06-22).

- Platform: x86_64-apple-darwin17.0 (64-bit)(macOS Catalina 10.15.6).

- Function call: `dataMaid::makeDataReport(data = test, mode = c("summarize", "visualize", "check"), smartNum = FALSE, file = "~/Dropbox/COVID aerosols/codebook/COVID_aerosols_codebook.Rmd", replace = T, checks = list(character = "showAllFactorLevels", factor = "showAllFactorLevels", labelled = "showAllFactorLevels", haven_labelled = "showAllFactorLevels", numeric = NULL, integer = NULL, logical = NULL, Date = NULL), listChecks = FALSE, maxProbVals = Inf, codebook = TRUE, reportTitle = "COVID Aerosols - Merged Data Codebook")`