BD wasting prevalence and trajectories

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Exploring wasting prevalence and variability in Bangladesh

Using anthropometry measurements from EED subsample, combining their main study measurements and a their EED sub-study measurments (5 total measurements).

Crosstab wasting percentages over each survey round

```
## # A tibble: 5 × 3
##   meas_num  wast_perc severe_wast_perc
##      <int>      <dbl>            <dbl>
## 1        1 0.10179978      0.013498313
## 2        2 0.09792627      0.010368664
## 3        3 0.09557945      0.009557945
## 4        4 0.08683853      0.007462687
## 5        5 0.08274232      0.005910165
```

WHZ<-2 has ~10% prevalence across measurements, while WHZ<-3 has ~1% prevalence.

Plot trajectories

Plot out individual child trajectories, and smoothed average, of kids who who were ever wasted (top left), ever severely wasted (top right), ever stunted (bottom left), or ever severly stunted (bottom right)

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 4 rows containing missing values (geom_path).
```

```
## Warning: Removed 7 rows containing non-finite values (stat_smooth).
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```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
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```
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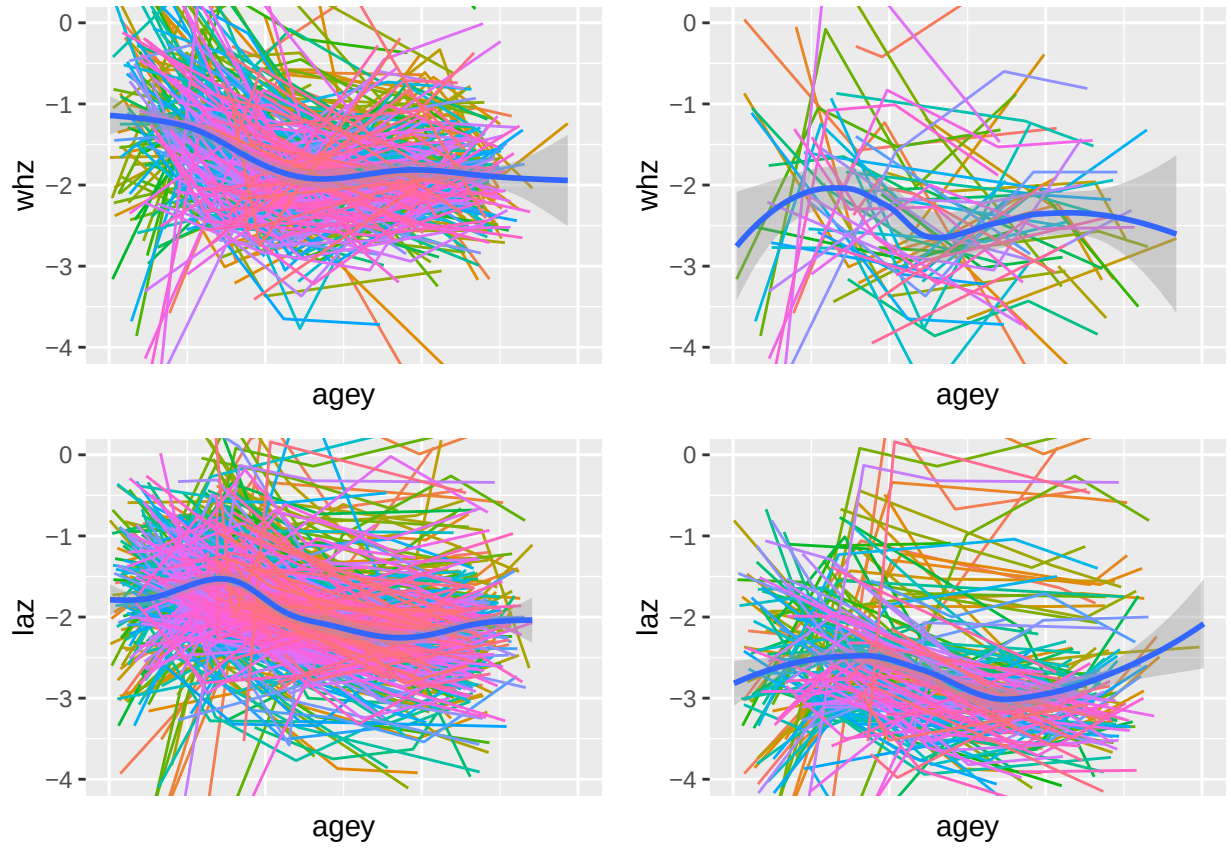
```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 4 rows containing missing values (geom_path).
```



Make table of, at each time, percentage of kids who become wasted, who recover from wasting, or who stay wasted

```
## # A tibble: 5 × 9
##   meas_num n_wast   per_wast n_become_wast per_become_wast
##      <int>  <int>      <dbl>         <int>           <dbl>
## 1        1    181 0.10179978             0             NaN
## 2        2    170 0.09792627            90       0.5324790
## 3        3    160 0.09557945            86       0.5433424
## 4        4    128 0.08683853            68       0.5334213
## 5        5     70 0.08274232            41       0.5891965
##   n_recover_from_wast per_recover_from_wast n_stay_wast per_stay_wast
##                 <int>                 <dbl>       <int>         <dbl>
## 1                   0                   NaN           0     0.0000000
## 2                  96             0.5679776          80     0.4705882
## 3                  85             0.5370245          74     0.4625000
## 4                  75             0.5883323          59     0.4612504
## 5                  50             0.7185324          28     0.4004734
```

Make table of, at each time, percentage of kids who become stunted, who recover from wasting, or who stay stunted

```
## # A tibble: 5 × 9
##   meas_num n_stunt per_stunt n_become_stunt per_become_stunt
```

```
##      <int>   <int>     <dbl>          <int>            <dbl>
## 1        1     517 0.2906127              0              NaN
## 2        2     485 0.2800231            144        0.2982850
## 3        3     476 0.2841791            136        0.2893419
## 4        4     407 0.2763069            126        0.3106367
## 5        5     229 0.2716489             57        0.2503934
##   n_recover_from_stunt per_recover_from_stunt n_stay_stunt per_stay_stunt
##                  <int>                  <dbl>        <int>          <dbl>
## 1                    0                    NaN            0      0.0000000
## 2                  159              0.3293563          339      0.6997771
## 3                  127              0.2701942          333      0.7025157
## 4                  131              0.3229636          280      0.6884281
## 5                   77              0.3382508          168      0.7371221
```

Just from eyeballing the percentage of wasted/stunted children who change disease status between rounds, wasting is more variable, as expected.