

2023 Beach Cohort Study

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2024-01-30

As of 2024-01-30, we have recruited 623 individual participants from 401 households (mean household size = 1.55). Of these participants, 11 participated in the study more than once. A summary of participant responses is highlighted below.

Among 401 households and 623 individual participants that have completed the beach survey 7 or more days ago (and have had an opportunity to complete the follow-up), the **individual participant response rate** is 79.61%.

Recruitment Stats by Beach

```
# A tibble: 2 x 5
  beach      Num_households Num_participants Num_days Participants_per_day
  <chr>          <int>          <int>      <int>          <dbl>
1 Marie Curtis      266            421        24            17.5
2 Sunnyside        139            202        11            18.4
```

Recruitment Stats by Weekends/Holidays vs. Weekdays

```
# A tibble: 2 x 5
  weekend_holiday Num_households Num_participants Num_days Participants_per_day
  <chr>          <int>          <int>      <int>          <dbl>
1 No            215            320        23            13.9
2 Yes           189            303        12            25.2
```

Sociodemographics

Characteristic	N = 623 ¹
age1	
0-4	42 (6.8%)
5-9	69 (11.1%)
10-14	31 (5.0%)
15-19	80 (12.9%)
20-39	236 (38.0%)
40-59	125 (20.1%)
60+	38 (6.1%)
Unknown	2
gender	
woman/girl	383 (62.3%)
man/boy	224 (36.4%)
fluid/trans	8 (1.3%)
Unknown	8
education2	
high school or less	58 (9.7%)
college/trades	100 (16.8%)
bachelors	203 (34.1%)
post-graduate	235 (39.4%)
Unknown	27
residence	
AB	7 (1.1%)
BC	3 (0.5%)
MB	2 (0.3%)
NL	2 (0.3%)
NS	1 (0.2%)
ON	597 (95.8%)

Characteristic	N = 623 ¹
QC	5 (0.8%)
US	6 (1.0%)
ethnicity	
Arab	53 (8.8%)
Black	15 (2.5%)
East Asian	37 (6.1%)
Indigenous	6 (1.0%)
Latin	42 (6.9%)
Multiple ethnicities	45 (7.4%)
South Asian	46 (7.6%)
Southeast Asian	42 (6.9%)
White	319 (52.7%)
Unknown	18
¹ _n (%)	

Baseline health and beach activities

Characteristic	N = 623 ¹
base_agi	10 (1.6%)
base_resp	31 (5.0%)
base_ear	1 (0.2%)
base_eye	9 (1.4%)
base_skin	14 (2.2%)
cond_GI	22 (3.5%)
cond_resp	15 (2.4%)
cond_skin	
No	623 (100.0%)
cond_allergy	42 (6.7%)

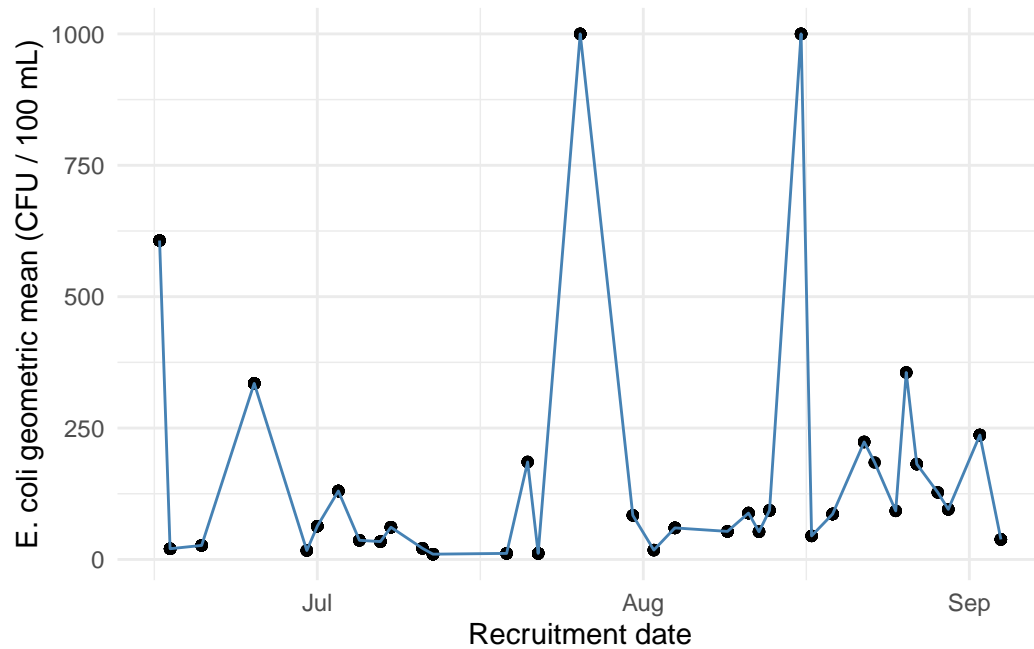
Characteristic	N = 623 ¹
cond_immune	13 (2.1%)
cond_none	498 (79.9%)
prev_act1	282 (45.3%)
beach_exp_algae	222 (35.6%)
beach_exp_sunscreen	395 (63.4%)
beach_exp_repellent	10 (1.6%)
beach_exp_food	331 (53.1%)
¹ _n (%)	

Water and sand exposures

Characteristic	N = 623 ¹
water_contact	430 (69.0%)
water_act_swim	215 (34.5%)
water_act_surf	3 (0.5%)
water_act_kite	
No	623 (100.0%)
water_act_wind	
No	623 (100.0%)
water_act_wake	
No	623 (100.0%)
water_act_ski	1 (0.2%)
water_act_paddle	30 (4.8%)
water_act_snorkel	4 (0.6%)
water_act_dive	6 (1.0%)
water_act_wade	263 (42.2%)
water_act_sail	1 (0.2%)

Characteristic	N = 623 ¹
water_act_boat	23 (3.7%)
water_act_fish	4 (0.6%)
water_act_canoë	6 (1.0%)
water_act_kayak	16 (2.6%)
water_act_other	5 (0.8%)
water_exp_body	197 (31.6%)
water_exp_head	99 (15.9%)
water_exp_mouth	68 (10.9%)
sand_contact	308 (49.4%)
sand_mouth1	70 (11.2%)
sand_act_dig	300 (48.2%)
sand_act_bury	35 (5.6%)
¹ _n (%)	

E. coli Levels by Recruitment Date



Illness Outcomes (Excluding those with Baseline Symptoms)

Characteristic	N = 496 ¹
agi3	14 (2.8%)
respiratory3	31 (6.2%)
ear_infection3	11 (2.2%)
eye_infection3	8 (1.6%)
skin_infection3	15 (3.0%)
illness_any	59 (11.9%)
¹ _n (%)	

AGI Severity

Characteristic	N = 14 ¹
misswork	
0	9 (64.3%)
1	5 (35.7%)
misswork_days	
1	1 (7.1%)
2	1 (7.1%)
3	3 (21.4%)
NA	9 (64.3%)
med_antibiotics	2 (14.3%)
med_otc	8 (57.1%)
med_none	5 (35.7%)
healthcare1	
0	12 (85.7%)
1	2 (14.3%)
blood_stool1	
0	14 (100.0%)
stool_test1	
0	13 (92.9%)
1	1 (7.1%)
emergency	
0	12 (85.7%)
1	2 (14.3%)
hospital	
0	2 (14.3%)
NA	12 (85.7%)
¹ _n (%)	

Outcomes by Water and Sand Exposure Status - excluding those with same outcomes at baseline

Any Water Contact

Characteristic	No, N = 157 ¹	Yes, N = 339 ¹
agi3	2 (1.3%)	12 (3.5%)
respiratory3	8 (5.1%)	23 (6.8%)
ear_infection3	1 (0.6%)	10 (2.9%)
eye_infection3	2 (1.3%)	6 (1.8%)
skin_infection3	2 (1.3%)	13 (3.8%)
illness_any	14 (8.9%)	45 (13.3%)
¹ _n (%)		

Any Sand Contact

Characteristic	No, N = 252 ¹	Yes, N = 244 ¹
agi3	9 (3.6%)	5 (2.0%)
respiratory3	11 (4.4%)	20 (8.2%)
ear_infection3	6 (2.4%)	5 (2.0%)
eye_infection3	3 (1.2%)	5 (2.0%)
skin_infection3	7 (2.8%)	8 (3.3%)
illness_any	26 (10.3%)	33 (13.5%)
¹ _n (%)		

Household Follow-up Contact Preference

Characteristic	N = 402 ¹
preference	
pref_email	287 (71.4%)
pref_phone	18 (4.5%)

Characteristic	N = 402 ¹
pref_text	97 (24.1%)

¹n (%)

Compare Sociodemographics of those who Completed Follow-up Survey vs. Not

Characteristic	No, N = 127 ¹	Yes, N = 496 ¹
age1		
0-4	6 (4.8%)	36 (7.3%)
5-9	18 (14.4%)	51 (10.3%)
10-14	7 (5.6%)	24 (4.8%)
15-19	25 (20.0%)	55 (11.1%)
20-39	44 (35.2%)	192 (38.7%)
40-59	17 (13.6%)	108 (21.8%)
60+	8 (6.4%)	30 (6.0%)
Unknown	2	0
gender		
woman/girl	76 (61.8%)	307 (62.4%)
man/boy	47 (38.2%)	177 (36.0%)
fluid/trans	0 (0.0%)	8 (1.6%)
Unknown	4	4
education2		
high school or less	20 (16.5%)	38 (8.0%)
college/trades	27 (22.3%)	73 (15.4%)
bachelors	29 (24.0%)	174 (36.6%)
post-graduate	45 (37.2%)	190 (40.0%)
Unknown	6	21
residence		

Characteristic	No, N = 127 ¹	Yes, N = 496 ¹
AB	0 (0.0%)	7 (1.4%)
BC	0 (0.0%)	3 (0.6%)
MB	1 (0.8%)	1 (0.2%)
NL	0 (0.0%)	2 (0.4%)
NS	0 (0.0%)	1 (0.2%)
ON	126 (99.2%)	471 (95.0%)
QC	0 (0.0%)	5 (1.0%)
US	0 (0.0%)	6 (1.2%)
ethnicity		
Arab	16 (13.1%)	37 (7.7%)
Black	2 (1.6%)	13 (2.7%)
East Asian	8 (6.6%)	29 (6.0%)
Indigenous	1 (0.8%)	5 (1.0%)
Latin	8 (6.6%)	34 (7.0%)
Multiple ethnicities	12 (9.8%)	33 (6.8%)
South Asian	14 (11.5%)	32 (6.6%)
Southeast Asian	10 (8.2%)	32 (6.6%)
White	51 (41.8%)	268 (55.5%)
Unknown	5	13
base_agi	2 (1.6%)	8 (1.6%)
base_resp	10 (7.9%)	21 (4.2%)
base_ear	0 (0.0%)	1 (0.2%)
base_eye	2 (1.6%)	7 (1.4%)
base_skin	4 (3.1%)	10 (2.0%)
water_contact	91 (71.7%)	339 (68.3%)
water_act_swim	52 (40.9%)	163 (32.9%)
water_act_wade	49 (38.6%)	214 (43.1%)

Characteristic	No, N = 127 ¹	Yes, N = 496 ¹
water_exp_body	45 (35.4%)	152 (30.6%)
water_exp_head	25 (19.7%)	74 (14.9%)
water_exp_mouth	8 (6.3%)	60 (12.1%)
sand_contact	64 (50.4%)	244 (49.2%)
sand_act_dig	61 (48.0%)	239 (48.2%)
sand_act_bury	7 (5.5%)	28 (5.6%)
sand_mouth1	12 (9.4%)	58 (11.7%)
¹ _n (%)		