
Supplemental Table 1. EMA Items

Affect

How ANGRY do you feel?

How SAD do you feel?

How BORED do you feel?

How RESTLESS do you feel?

Environmental Conditions

Is it CROWDED right now?

Is it NOISY right now?

Delusions

Do you think someone is SPYING or trying to HURT you?

Do you think someone is INSERTING IDEAS into your head?

Do you think you have SPECIAL POWERS or GIFTS that other people do not?

Substance Cravings

How strongly do you feel like using DRUGS?

How strongly do you feel like using ALCOHOL?

How strongly do you feel like SMOKING?

Withdrawal Symptoms

Do you have an UPSET STOMACH?

Are you having any HOT flashes or COLD flashes?

Do your BONES or MUSCLES hurt?

Suicidal Ideation

Are you thinking of ENDING YOUR LIFE?

Violent Ideation and Behavior

Are you thinking of HARMING someone?

Since the last time we asked, have you THREATENED anyone?

Since the last time we asked, have you been PHYSICALLY AGGRESSIVE towards anyone?

Since the last time we asked, have you DAMAGED anything, like furniture, or clothing?

Supplemental Table 2. Results of multivariate non-linear mixed models of violent ideation and behaviors including all predictors significant in the bivariate models.

	Ideation		Behavior			
	Thinking of Harming		Damaged Property		Threatened Someone	
	OR	95% CI	OR	95% CI	OR	95% CI
Passively Sensed Features						
Smartphone detection						
Physical activity (min)	1.65	.77 - 3.53				
Physical activity (variability)	1.07	.49 - 2.32				
Self-Report						
Suicidal ideation	3.39^a	1.19 - 9.70	2.22	.46 - 10.73		
Being spied upon	1.43	.52 - 3.98	2.91	.52 - 16.16		
Thought insertion	3.10^a	1.02 - 9.41	1.86	.24 - 14.44		
Special powers	.41	.13 - 1.27				
Cravings						
Drugs	1.04	.34 - 3.25	1.72	.25 - 11.82		
Alcohol	1.49	.47 - 4.73	1.04	.14 - 7.99	1.51	.45 - 5.07
Cigarettes	2.44	.70 - 8.44	1.95	.31 - 12.39	1.38	.40 - 4.85
Withdrawal symptoms						
Hot/Cold flashes			4.63^a	1.16 - 18.53	2.49	.92 - 6.73
Affective state						
Angry	1.25	.54 - 2.87	1.79	.38 - 8.54	2.90	.98 - 8.55
Sad	1.56	.58 - 4.23			2.14	.62 - 7.42
Restless	3.19^a	1.24 - 8.18	1.74	.32 - 9.60		
Ward conditions						
Noisy	2.46^a	1.11 - 5.47				

^a p<.05

Figure 1A. Bluetooth beacons installed on the inpatient unit.

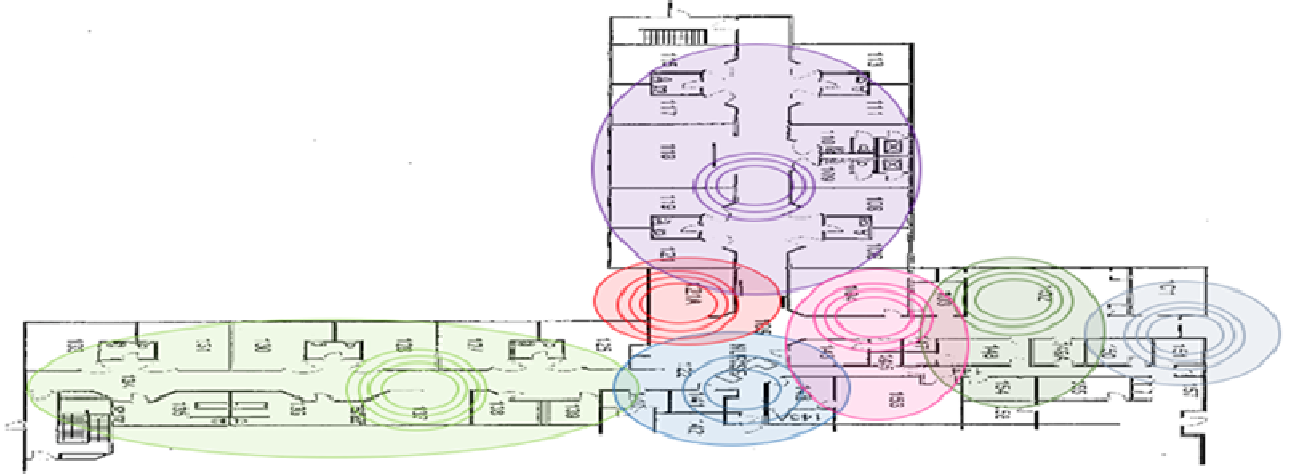


Figure 1B. Smartphones receiving beacon signals and recording participants' location.

