Results

A total of 397 participants completed our survey resulting in a partially representative sample of the university undergraduate population (table 1). The demographic sample represented by our data is consistent with prior surveys performed by the university student health center (SHC). Additionally, the proportions of white $t(1) = 0.30195$, $p = 0.5827$ and non-white $t(1) = 1.1076$, $p = 0.2926$ participants were not significantly different between our responses and the university's reported statistics on the race of undergraduate students. The university does not collect data on student gender identity (only sex) or sexual orientation, so these demographics from our sample could not be compared (Enrollment Profiles, 2020).

Table 1: Demographics of study sample (this is a screenshot until we move this to word)

	Race		Sexual Orientation		Gender Identity			Total*
	White	NonWhite	Heterosexual	NonHeterosexual	Men	Women	NonCis	
Main School of Study								
Architecture	3	0	3	0	0	3	0	3
Business	36	6	36	6	17	24	0	42
Liberal Arts	78	18	58	38	15	78	3	96
Professional Advancement	2	0	1	1	1	1	0	2
Science and Engineering	115	22	97	40	38	95	5	137
Public Health	43	10	39	14	3	47	4	53
School Year								
1st	65	12	51	26	21	54	1	77
2nd	73	16	64	25	18	66	7	89
3rd	62	11	48	25	16	55	2	73
4th	77	17	71	23	19	73	2	94
Housing and International								
International	5	3	6	2	1	7	0	8
On Campus	151	34	126	59	44	134	8	185
Off Campus	123	20	106	37	30	111	2	143
Membership and Application								
CEMS Member	42	15	44	13	20	34	2	57
Non CEMS Member	235	105	190	150	54	214	10	340
Applied to CEMS	93	28	88	33	32	77	5	121
Never Applied to CEMS	184	68	146	106	42	171	7	252
Total*	277	120	234	163	74	248	12	397

*Total values indicate the total number of respondents meeting the indicated criterium and are not necessarily the sums of values in a given row or column because many questions were not mutually exclusive and/or multiple selections were allowed.

In our sample, 28 people had called CEMS for themselves, 87 had called for someone else, and 265 had never called for CEMS. Additionally, 31 people had considered calling CEMS for themselves, 137 had considered calling for someone else, and 224 had never considered calling for CEMS. Of the people who considered calling for themselves or someone else, the most common reasons for deciding not to call were because they thought it was unnecessary (91), fear of administrative involvement (70), and fear of police involvement (50) (figure 1).

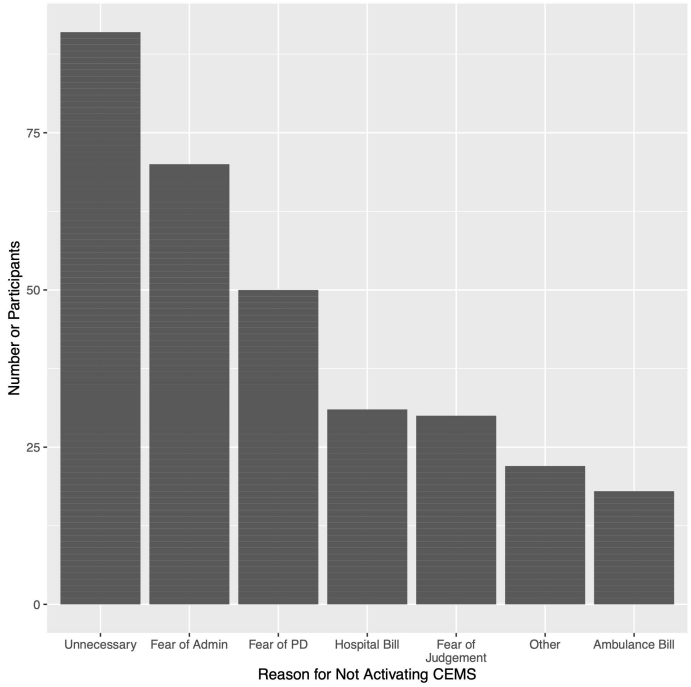

Figure 1: Number of responses citing different reasons for not calling CEMS during an emergency

We found that the likelihoods of different actions varied dramatically between CCCs (figure 2A). All one way ANOVAs with pairwise Tukey post-hoc tests on the mean differences between actions for each CCC were significant below the 95% confidence threshold except for the difference between the likelihood of calling 911 and taking other transportation for medical treatment for an ingestion emergency $F(3) = 61.28$, $p = 0.948$ (See table S2 for all pairwise comparisons). The most likely action during a minor trauma was treating yourself, and all other actions had very low likelihoods. Participants were most likely to treat themselves during a minor medical emergency or psychiatric emergency, followed by taking other transportation, calling CEMS, and calling 911. The most likely action during an ingestion injury is to call CEMS followed by moderate likelihoods of other actions. During a cardiovascular or vascular emergency, participants were most likely to call 911, followed by calling CEMS, taking other transportation, and treating themselves.

When grouped by action instead of CCC, these action likelihoods can also be compared using one way ANOVAs with Tukey post hoc tests to identify differences between CCCs (figure 2B). There was no significant difference between the likelihoods of calling 911 $F(4) = 976.4$, $p = 0.791$ or calling CEMS $F(4) = 558.6$, $p = 0.137$ for minor traumatic injuries and for minor medical injuries. However, all other pairwise comparisons between CCCs for likelihoods of calling 911 and CEMS were significant below the 95% confidence threshold. See table S3 for all pairwise comparisons. Similar trends were observed in the likelihoods of calling 911 and CEMS. Respondents were most likely to call for cardiovascular/vascular emergencies followed by ingestion,

psychiatric, and traumatic/medical injuries. Limited differences were noted between the likelihoods of taking other transportation for medical care between CCCs. No significant differences were noted when the likelihood of taking other transportation for medical care during cardiovascular/vascular emergencies was compared to minor medical (comparison d: $F(4) = 52.49$, $p = 0.479$), psychiatric (comparison c: $F(4) = 52.49$, $p = 0.504$), or ingestion emergencies (comparison b: $F(4) = 52.49$, $p = 0.617$). Additionally, no significant difference was found between the likelihoods of taking other transportation during psychiatric and ingestion emergencies (comparison a: $F(4) = 52.49$, $p = 0.999$). All differences between the likelihoods of treating oneself during different CCCs were significant below the 95% confidence threshold.

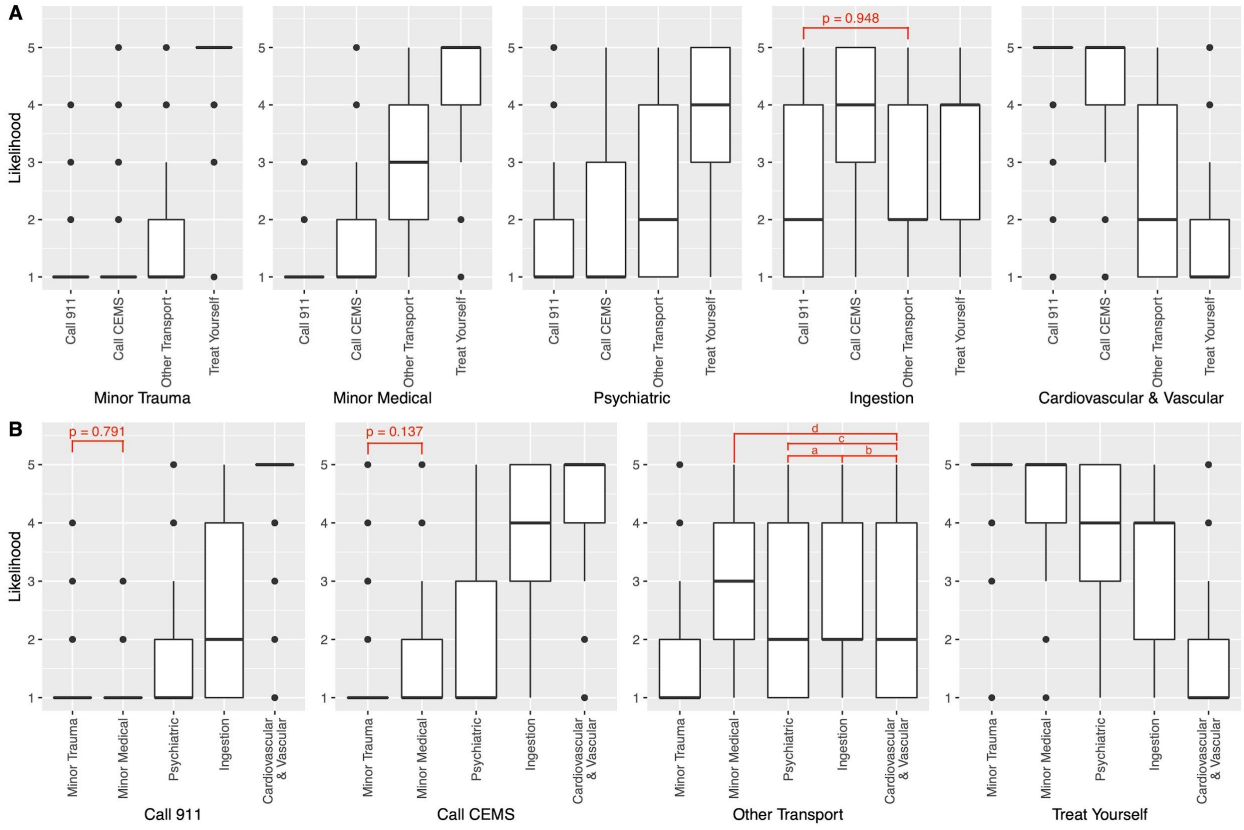

Figure 2: A) Likelihoods of individual actions grouped by CCC. Pairwise one way ANOVAs with Tukey post-hoc tests between the likelihoods of actions within CCCs are significant at the 95% confidence threshold except unless otherwise indicated (see table S2 for all pairwise comparisons). B) Action likelihoods grouped for different CCCs grouped by action. Same data shown in part A with different grouping and statistical comparisons. Pairwise one way ANOVAs with Tukey post-hoc tests between the mean likelihoods of actions in different CCCs are significant at the 95% confidence threshold except unless otherwise indicated (see table S3 for all pairwise comparisons). a: $p = 0.999$, b: $p = 0.617$, c: $p = 0.504$, d: $p = 0.479$

Factors reducing the likelihood of activating CEMS during an emergency were similar across CCCs (figure 3). However, because this question was only shown to

participants who stated they were less than ‘likely’ or ‘very likely’ to call CEMS, some chief complaints received fewer responses than others. The principal factors reducing the likelihood of calling CEMS during minor medical and minor traumatic emergencies were not believing CEMS would be necessary (trauma: 188, medical: 112) followed by fear of police involvement (trauma: 80, medical: 80), and fear of administrative involvement (trauma: 68, medical: 71). For psychiatric emergencies, the most common factors reducing the likelihood of calling CEMS are fear of police involvement (121) followed closely by fear of administrative involvement (119), and concerns about being treated by someone they might know (97). For ingestion injuries, the most common factors reducing likelihood of calling CEMS are fear of administrative involvement (71) followed by fear of police involvement (69). Fewest responses were received regarding cardiovascular and vascular injuries: the most common factors reducing likelihood of calling CEMS were ease of calling 911(33) and a distrust of CEMS treating this kind of emergency (20).

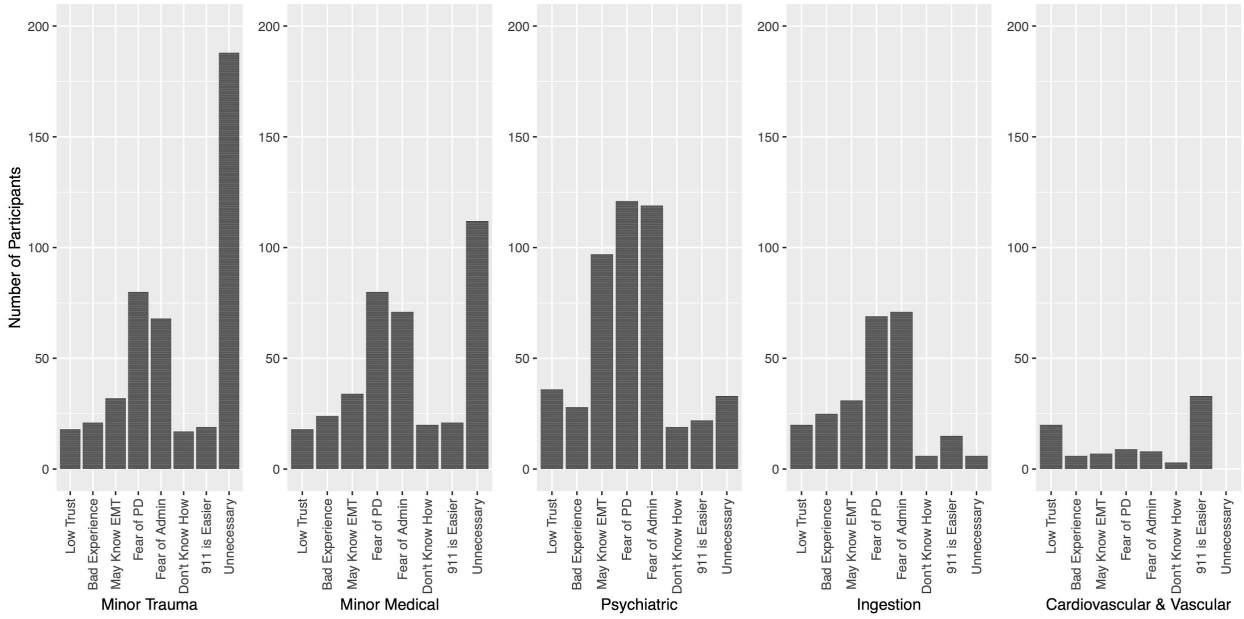

Figure 3: Number of responses citing different factors reducing the likelihood of calling CEMS by CCC

The most likely action during an emergency (the greatest sum of an action likelihood across all CCCs) is treating oneself, followed by taking other transportation or activating CEMS. The least likely action was to call 911 (figure 4). All one way ANOVAs with pairwise Tukey post-hoc tests on the mean differences between sums of action likelihoods across all CCCs were significant below the 95% confidence threshold except for the difference between the likelihood of calling CEMS and taking other transportation for minor medical emergencies $F(3) = 310$, $p = 0.317$ (see table S1 for statistics of all pairwise comparisons).

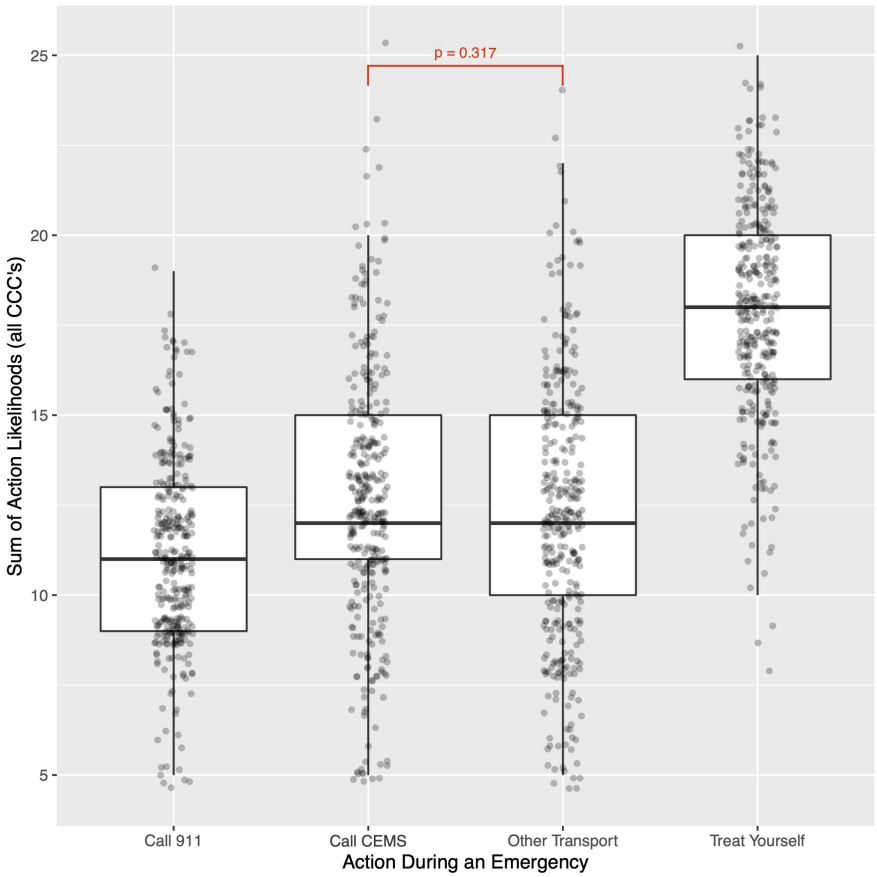

Figure 4: Sum of action likelihoods during an emergency. Differences significant unless stated otherwise

Participants were about as likely to call CEMS as 911 during minor medical, minor traumatic, and psychiatric emergencies (figure 5). Participants were more likely to call CEMS than 911 for ingestion emergencies and more likely to call 911 over CEMS for cardiovascular and vascular injuries. All pairwise differences between indices of calling CEMS over 911 were significant below the 95% confidence threshold except when minor trauma is compared to minor medical $F(4) = 89.48$, $p = 0.672$ and psychiatric $F(4) = 89.48$, $p = 0.086$, and the difference between minor medical and psychiatric emergencies $F(4) = 89.48$, $p = 0.753$. See table S4 for full statistics of all pairwise comparisons.

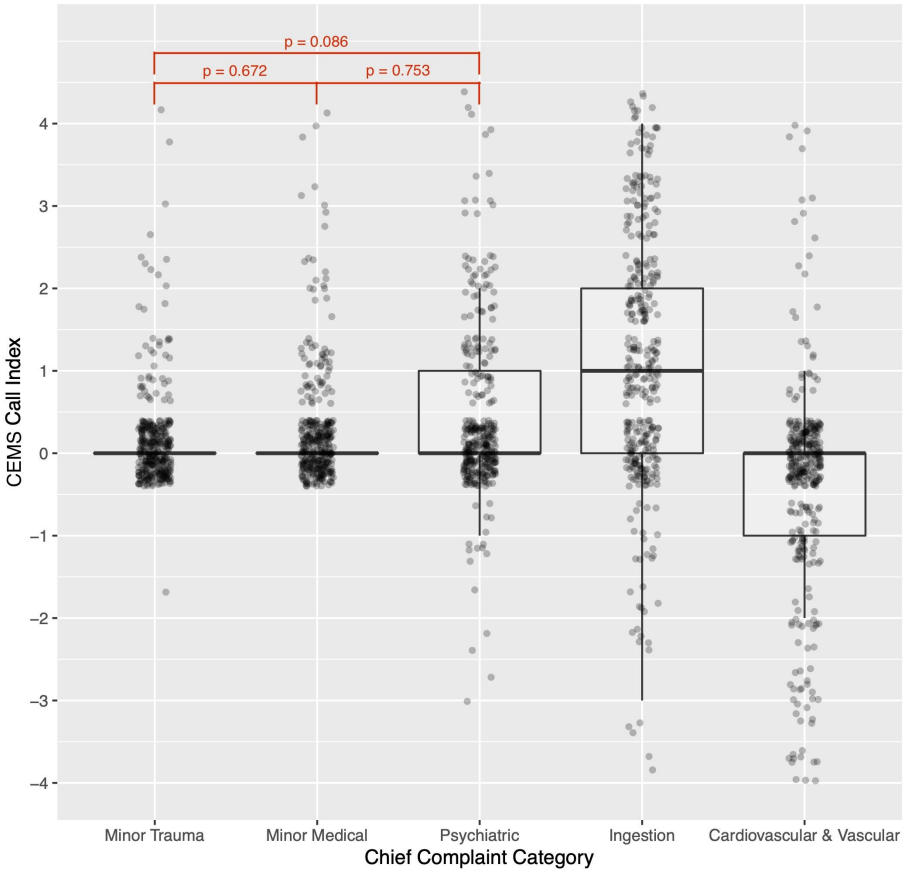

Figure 5: CEMS call indices for each CCC. Pairwise differences were significant unless otherwise noted. For statistics on all pairwise comparisons, see table S4.

A number of variables were identified with a significant predictive effect on the sum of action likelihoods for all CCCs (table 2). Being non-white significantly increases the odds of calling CEMS by 1.797. Identifying as non-heterosexual significantly changes the odds of calling for CEMS by 0.604, calling 911 by 0.522, and treating oneself by 0.766. Not identifying as a man significantly changes the odds of participants taking other transportation for medical care by 0.893. Holding a more positive opinion of CEMS members significantly increased the odds of calling CEMS by 1.207 and slightly (but significantly) increased the odds of calling for 911 by 1.050. Having applied to CEMS for membership significantly changed the odds of activating CEMS by 0.616.

We found considerable differences among variables with significant predictive effects on participants' likelihood of calling CEMS between CCCs (table 3). Being non-white significantly increases the odds of calling CEMS for a cardiovascular or vascular injury by 2.162 over white respondents. Identifying as non-heterosexual significantly changes the odds of calling CEMS for psychiatric emergencies by 0.480. Having a more positive opinion of CEMS members significantly increases the odds of calling CEMS for ingestion by 1.139, cardiovascular or vascular by 1.222, minor medical by 1.087, and psychiatric emergencies by 1.178. Having applied to CEMS for

membership significantly changed the odds of activating CEMS for minor medical emergencies by 0.557 and psychiatric emergencies by 0.593.

Table 2: Logistic model of the variables affecting the sum of action likelihoods for all CCCs. Values are odds ratios with parenthetical standard errors. Binary predictor variables include “Non-white”, “Non-heterosexual”, “Live on campus”, and “Applied.”

	Dependent variable: Action			
	Call CEMS	Call 911	Treat Yourself	Take Other Transportation
	(1)	(2)	(3)	(4)
Non-white	1.797· (0.267)	0.892 (0.268)	0.930 (0.268)	0.695 (0.265)
Non-heterosexual	0.604· (0.222)	0.522·· (0.224)	0.766· (0.223)	1.648 (0.217)
Non-man	1.289 (0.238)	0.976 (0.239)	1.996 (0.241)	0.893·· (0.234)
School year	0.972 (0.147)	0.976 (0.155)	1.028 (0.147)	1.076 (0.142)
Live on campus	0.977 (0.329)	0.788 (0.336)	0.700 (0.331)	0.925 (0.314)
Positive index	1.207··· (0.025)	1.050· (0.022)	1.013 (0.023)	0.964 (0.022)
Applied	0.616· (0.217)	0.910 (0.215)	1.020 (0.212)	0.928 (0.210)
Observations	324	325	325	325
Note:				·p<0.05; ··p<0.01; ···p<0.001

Table 3: Logistic model of the variables affecting likelihood of calling CEMS for each CCC. Values are odds ratios with parenthetical standard errors. Binary predictor variables include “Non-white”, “Non-heterosexual”, “Live on campus”, and “Applied.”

	Dependent variable: CCC				
	Ingestion	Cardiovascular & Vascular	Minor Trauma	Minor Medical	Psychiatric
	(1)	(2)	(3)	(4)	(5)
Non-white	1.315 (0.265)	2.162* (0.336)	1.196 (0.407)	1.540 (0.313)	1.526 (0.302)
Non-Heterosexual	0.669 (0.229)	0.797 (0.255)	0.803 (0.355)	0.912 (0.273)	0.480** (0.259)
Non-man	1.332 (0.246)	1.230 (0.283)	0.789 (0.356)	1.080 (0.294)	1.258 (0.266)
School year	0.916 (0.151)	1.308 (0.171)	0.782 (0.232)	1.120 (0.177)	0.928 (0.172)
Live on campus	1.058 (0.339)	1.484 (0.390)	0.450 (0.519)	1.337 (0.399)	0.911 (0.384)
Positive index	1.139*** (0.024)	1.222*** (0.029)	1.069 (0.036)	1.087** (0.029)	1.178*** (0.028)
Applied	0.982 (0.223)	0.708 (0.258)	0.986 (0.321)	0.557* (0.253)	0.593* (0.231)
Observations	331	329	328	328	326
Note:					*p<0.05; **p<0.01; ***p<0.001

As suggested in the models shown in tables 2 and 3, identifying as non-white significantly increases the odds of someone calling CEMS over 911 during cardiovascular or vascular emergencies by 1.946 (table 4). Also suggested by the

model shown in table 2, people with more positive opinions of CEMS members have significantly increased odds of calling for CEMS over 911 for all CCCs (see table 4). Furthermore, living on campus significantly increases the odds of someone activating CEMS over 911 for minor traumatic injuries by 1.399, and having applied to the CEMS for membership significantly changes the odds of calling CEMS over 911 for minor medical emergencies by 1.090 and psychiatric emergencies by 0.653.

Table 4: Logistic model of variables affecting likelihood of calling CEMS over 911 by CCC. Values are odds ratios with parenthetical standard errors. Binary predictor variables include “Non-white”, “Non-heterosexual”, “Live on campus”, and “Applied.”

	Dependent variable: CEMS Call Index				
	Ingestion	Cardiovascular & Vascular	Minor Trauma	Minor Medical	Psychiatric
	(1)	(2)	(3)	(4)	(5)
Non-white	1.445 (0.278)	1.945* (0.307)	1.297 (0.453)	1.315 (0.352)	1.923 (0.325)
Non-heterosexual	0.959 (0.222)	0.847 (0.250)	1.010 (0.397)	0.952 (0.327)	1.223 (0.268)
Non-man	0.696 (0.244)	1.099 (0.270)	1.016 (0.397)	1.329 (0.341)	1.238 (0.284)
School year	0.647 (0.144)	1.054 (0.161)	1.006 (0.270)	0.858 (0.211)	1.286 (0.179)
On campus	0.258 (0.318)	1.470 (0.366)	1.339* (0.604)	0.988 (0.476)	1.485 (0.401)
Positive index	1.089*** (0.023)	1.088*** (0.027)	1.132* (0.041)	1.090* (0.034)	1.150*** (0.028)
Applied	0.913 (0.216)	0.471 (0.241)	0.579 (0.363)	1.081** (0.291)	0.653* (0.249)
Observations	329	329	328	328	325
Note:					*p<0.05; **p<0.01; ***p<0.001