

## Supplementary Online Content

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**eTable 1.** Chief Complaint Keywords and Discharge Diagnosis Codes Included in Definitions for Emergency Department Visits Related to Mental Health

**eTable 2.** Changes in Mental Health–Related Emergency Department Visits for Adults Aged 18 to 64 Years in Selected Periods Before and During the COVID-19 Pandemic, by Sex and Age, US, February 10, 2019, to August 14, 2021

**eAppendix 1.** Detailed Footnotes for Figure 2 Mental Health–Related, Anxiety, and Depressive Disorder US Emergency Department Visits, by Race and Ethnicity

**eAppendix 2.** Detailed Footnotes for Figure 3 Bipolar, Schizophrenia Spectrum, and Trauma- and Stressor-Related Disorder US Emergency Department Visits, by Race and Ethnicity

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1.** Chief Complaint Keywords and Discharge Diagnosis Codes Included in Definitions for Emergency Department Visits Related to Mental Health

<p><b>Description:</b>                  The purpose of these syndromes is to identify visits among persons who experienced any mental health challenge, including specific disorders, in emergency departments and ambulatory healthcare settings. This includes capturing visits where there are acute mental health crises (i.e., the sole or primary reason for the visit is only related to mental health) as well as visits where mental disorders are present (defined as coded in the discharge diagnosis or mentioned in the chief complaint text) but may not be the sole reason for the visit.</p> <p>This definition uses <i>International Classification of Diseases, Ninth Revision, Clinical Modification</i> codes (ICD-9-CM), <i>International Classification of Diseases, Tenth Revision, Clinical Modification</i> codes (ICD-10-CM), Systematized Nomenclature of Medicine (SNOMED) codes, and free text reason for visit (chief complaint terms).</p> <p>-- Not shown: Non-decimal versions of all discharge diagnosis codes were included.                  -- Not shown: Common misspellings of chief complaint terms were included.</p>		
Definition	Chief Complaint Search Terms	Diagnosis Codes
CDC Mental Health v1	<p>*Also includes chief complaint terms from the conditions listed below*</p> <p>Grief (include misspellings)                      Grieve (include misspellings)                      Bereave (include misspellings)                      Psych                      Mental health                      Mental evaluation                      Mental problem                      Mentally                      Mental illness                      Reactive attachment                      Auditory hallucination                      Visual hallucination                      Hearing voice                      Evaluation hallucination                      History of hallucination                      Hallucinations patient                      Hallucinations unspecified                      Seeing thing                      Delusion (include misspellings)                      Paranoia (include misspellings)                      Trichotillomania                      Dissociative disorder                      Dissociative conversion                      Dissociative identity                      Dissociative and conversion                      Dissociative tendency                      Dissociative episode                      Dissociative conversion                      Dissociative behavior                      Dissociative amnesia                      Dissociative attentive                      Experiencing dissociation                      Dissociative (when used with depress,</p>	<p>*Also includes ICD-10-CM, ICD-9-CM, SNOMED codes from the conditions listed below*</p> <p>296.90; 296.99; 297.0; 297.1;                      297.2; 297.3; 297.8; 297.9; 298.0;                      298.1; 298.2; 298.3; 298.4; 298.8;                      298.9; 300.10; 300.11; 300.12;                      300.13; 399.14; 300.15; 300.81;                      300.82; 300.89; 300.7; 307.80;                      307.89; 300.9                      648.40, 648.41, 648.42,                      648.43, 648.44                      V62.82                      F22; F23; F28; F29; F39; F44;                      F45; F48; F53.1; F54; F63.3;                      F93.8; F93.9; F94; F98.9                      F99; Z63.4                      413307004; 74732009;                      231538003; 268664001;                      48500005; 191667009;                      41526007; 18193002;                      224965009;                      74506000</p>

	depression, psych, dysthymic, anxiety, anxious, traumatic stress, PTSD, adjustment disorder, mental, attention deficit, bipolar, schizophrenia, schizoaffective, schizotypal – and associated misspellings of all terms)	
<b>CDC Anxiety Disorders v1</b>	Anxiety (include misspellings) Anxious Panic Phobia	300.00; 300.01; 300.02; 300.09; 300.20; 300.21; 300.22; 300.23; 300.29; 313.0 309.24; 309.28  F40; F41; F43.22; F43.23; F93.0  197480006; 126943008; 21897009; 69479009; 109006; 61387006; 70997004; 191709001
<b>CDC Depressive Disorders v1</b>	Depression Dysthymic Dysthymia Mood disorder Mood disturbance	296.20; 296.21; 296.22; 296.23; 296.24; 296.25; 296.30; 296.31; 296.32; 296.33; 296.34; 296.35; 300.4; 309.0; 309.1; 296.90; 296.99; 309.28  F32 (except F32.5); F33 (except F33.42); F34.1; F34.9; F43.21; F43.23; O90.6  35489007; 310497006; 370143000; 712823008; 57194009
<b>CDC Bipolar Disorders v1</b>	Bipolar Manic Cyclothymic Mania Hypomania Hypermania	296.00; 296.01; 296.02; 296.03; 296.04; 296.05; 296.40; 296.41; 296.42; 296.43; 296.44; 296.45; 296.50; 296.51; 296.52; 296.53; 296.54; 296.55; 296.60; 296.61; 296.62; 296.63; 296.64; 296.65; 296.7 296.80; 296.81; 296.82; 296.89  F30.1; F30.2; F30.3; F30.8; F30.9; F31.0; F31.1; F31.2; F31.3; F31.4; F31.5; F31.6; F31.7 (only include: F31.70, F31.71, F31.73, F31.75, F31.77); F31.8; F31.9; F34.0  191627008; 371596008; 83225003; 231494001; 284513006; 268619003
<b>CDC Schizophrenia Spectrum Disorders v1</b>	Schizophrenia (include misspellings) Schizotypal (include misspellings) Schizoaffective (include misspellings)	295.00; 295.01; 295.02; 295.03; 295.04; 295.10; 295.11; 295.12; 295.13; 295.14; 295.20; 295.21; 295.22; 295.23; 295.24; 295.30; 295.31; 295.32; 295.33; 295.34; 295.40; 295.41; 295.42; 295.43;

		<p>295.44; 295.50; 295.51; 295.52; 295.53; 295.54; 295.60; 295.61; 295.62; 295.63; 295.64; 295.70; 295.71; 295.72; 295.73; 295.74; 295.80; 295.81; 295.82; 295.83; 295.84; 295.90; 295.91; 295.92; 295.93; 295.94</p> <p>F20; F21; F25</p> <p>58214004; 268617001; 64905009; 191526005; 68890003</p>
<b>CDC Trauma and Stressor-related Disorders v1</b>	<p>Traumatic stress PTSD (including misspellings) Adjustment disorder Reaction to acute stress Acute stress reaction Acute stress crisis Acute stress eval Acute stress behavior (including misspellings for behavior) Behavior acute stress Behavior acute stress Reaction to severe stress Severe stress reaction Severe stress crisis</p>	<p>308.0; 308.1; 308.2; 308.3; 308.4; 308.9; 309.81; 309.89; 309.9; 309.0; 309.1; 309.24; 309.28; 309.29; 309.3; 309.4</p> <p>F43</p> <p>67195008; 47505003; 17226007; 57194009; 271952001</p>
<b>CDC Attention-Deficit/Hyperactivity Disorders v1</b>	<p>Attention deficit Hyperactivity Attention problems</p>	<p>314.00, 314.01; 314.9; 314.2</p> <p>F90 (include all in this series)</p> <p>406506008 35253001</p>
<b>CDC Disruptive Behavioral and Impulse-Control v1</b>	<p>Conduct disorder Oppositional defiant (with spelling mistakes for “defiant”) Antisocial personality Disturbance of conduct Impulse control disorder Explosive disorder</p>	<p>309.3; 309.4; 312.00; 312.01; 312.02; 312.03; 312.10; 312.11; 312.12; 312.13; 312.20, 312.21; 312.22; 312.23; 312.4; 312.81; 312.82; 312.89; 312.9; 312.30; 312.31; 312.39; 313.81; 314.2; 301.7</p> <p>F43.24; F43.25; F91.0; F91.1; F91.2; F91.3; F91.8; F91.9; F63.81; F63.1; F63.2; F63.9; F63.0; F63.89; F60.2</p> <p>54319003; 18941000; 430909002; 26665006</p>
<b>CDC Obsessive-Compulsive Disorders v1</b>	<p>Obsessive compulsive Compulsive disorder</p>	<p>300.3</p> <p>F42</p> <p>191736004</p>

<p><b>CDC Eating Disorders v1</b></p>	<p>Pica  Bulimia (including misspellings)  Binge eating (including misspellings of binge)  Binge-eating  Eating disorder  Rumination disorder  Binging or purging  Binging and purging  Weight loss or anorexia  Anorexia nervosa (including misspellings of anorexia)  Anorexic (including misspellings of anorexic)  Being treated for anorexia (including misspellings of anorexia)  Treatment for (including misspellings of anorexia)  Weight loss (including misspellings of weight; include when used with anorexia)  Loss of weight (including misspellings of weight; include when used with anorexia)  Weight loss (including misspellings of weight; include when used with anorexia)  Loss of weight (including misspellings of weight; include when used with anorexia)  Eating disorder  Anorexia history (including misspellings of anorexia)  History of anorexia (including misspellings of anorexia)  History anorexia (including misspellings of anorexia)  Mental anorexia (including misspellings of anorexia)  Mental (when used with anorexia)  Psych (when used with anorexia)</p>	<p>307.1; 307.50; 307.51; 307.52;  307.53; 307.54; 307.59    F50.00; F50.01; F50.02; F50.2;  F50.8; F50.82; F50.89; F50.9;  F98.21; F98.29;  F98.3    72366004; 56882008; 7800400;  32721004</p>
<p><b>CDC Tic Disorders v1</b></p>	<p>Neurological tic  Tic disorder  Behavioral tic  Facial tic  Face tic  Tic like phenomenon  Verbal tic  Motor tic</p>	<p>307.20; 307.21; 307.22; 307.23    F95; G25.69    568005; 5158005</p>

*Footnotes.* In developing the syndrome definitions noted above for mental health, a team of scientists with cross-cutting expertise in mental disorders – including a practicing psychiatrist – reviewed all ICD-9, ICD-10 and SNOMED codes related to mental disorders. Codes related to mental disorders that are non-specific to mental health, for example, related to substance use, developmental disabilities, or dementia, were excluded. Mental health-related codes were further classified into the aforementioned categories based on previous literature and with expert judgement based on best alignment with the *Diagnostic and Statistical Manual of Mental Disorders, version 5 (DSM-5)*. For individual disorder categories where the sample size in national syndromic surveillance data was too minimal to meaningfully include an individual syndrome definition, codes were placed in the “All Mental Health” definition (e.g., reactive attachment disorder). Terms and codes that were non-specific and unable to differentiate between specific

mental disorders (e.g., psychosis; hallucinations) were also included in the “All Mental Health” but not specific individual disorder syndromes to improve syndrome specificity.

**eTable 2.** Changes in Mental Health–Related Emergency Department Visits for Adults Aged 18 to 64 Years in Selected Periods Before and During the COVID-19 Pandemic, by Sex and Age, US, February 10, 2019, to August 14, 2021

	Mental Health during the COVID-19 Pandemic, after Delta variant onset Index Period: July 18–Aug. 14, 2021							Mental Health during the COVID-19 Pandemic, following a COVID-19 case peak Index Period: Feb. 14, 2021–Mar. 13, 2021						
	Total ED visit counts for MH	ED visits for MH per 100,000 ED visits <sup>c</sup>	Index period compared to MH in the COVID-19 Pandemic, prior to Delta variant period (Apr. 18–May 15, 2021)		Index period compared to pre-pandemic MH (July 14, 2019–Aug. 10, 2019)		Total ED visit counts for MH	ED visits for MH per 100,000 ED visits <sup>c</sup>	Index period compared to MH during a COVID-19 case peak (Dec. 27, 2020–Jan. 23, 2021)		Index period compared to pre-pandemic MH (Feb. 10, 2019–Mar. 9, 2019)			
			% Change in ED counts for MH <sup>d</sup>	Visit ratio (95% CI) <sup>e</sup>	% Change in ED counts for MH <sup>d</sup>	Visit ratio (95% CI) <sup>e</sup>			% Change in ED counts for MH <sup>d</sup>	Visit ratio (95% CI) <sup>e</sup>	% Change in ED counts for MH <sup>d</sup>	Visit ratio (95% CI) <sup>e</sup>		
<b>All mental health</b>	<b>Sex</b>													
	Females	135,357	6615	-3.0%	0.86 (0.86, 0.87)	-20.2%	0.78 (0.77, 0.78)	138,098	8527	1.5%	1.04 (1.03, 1.04)	-9.0%	1.11 (1.10, 1.12)	
	Males	113,676	6848	-3.6%	0.85 (0.84, 0.85)	-13.5%	0.82 (0.81, 0.83)	117,899	8957	1.3%	1.04 (1.03, 1.04)	-0.9%	1.11 (1.10, 1.12)	
	Male/Female Ratio <sup>f</sup>				1.04 (1.03, 1.04)		1.04 (1.03, 1.04)				1.05 (1.04, 1.06)		1.05 (1.04, 1.06)	
	<b>Age</b>													
	Aged 18-24	36,365	6401	-6.7%	0.83 (0.82, 0.84)	-12.6%	0.85 (0.84, 0.87)	37,945	8741	6.0%	1.07 (1.06, 1.09)	-3.0%	1.21 (1.19, 1.22)	
	Aged 25-49	142,927	7012	-2.4%	0.86 (0.85, 0.86)	-15.9%	0.81 (0.80, 0.81)	144,811	9085	0.6%	1.03 (1.03, 1.04)	-4.4%	1.13 (1.12, 1.14)	
Aged 50-64	70,408	6363	-3.3%	0.87 (0.86, 0.88)	-21.9%	0.75 (0.74, 0.76)	73,872	8097	0.8%	1.02 (1.01, 1.03)	-8.6%	1.04 (1.03, 1.05)		
<b>Anxiety disorders</b>	<b>Sex</b>													
	Females	76,454	3736	-3.0%	0.86 (0.86, 0.87)	-19.4%	0.78 (0.78, 0.79)	77,633	4793	0.5%	1.03 (1.02, 1.04)	-7.2%	1.14 (1.12, 1.15)	
	Males	45,649	2750	-3.9%	0.85 (0.83, 0.86)	-14.9%	0.81 (0.80, 0.82)	47,891	3638	0.5%	1.03 (1.01, 1.04)	0.9%	1.13 (1.12, 1.15)	
	Male/Female Ratio <sup>f</sup>				0.74 (0.73, 0.74)		0.74 (0.73, 0.74)				0.76 (0.75, 0.77)		0.76 (0.75, 0.77)	
	<b>Age</b>													
	Aged 18-24	17,422	3066	-6.4%	0.83 (0.81, 0.85)	-13.2%	0.85 (0.83, 0.87)	17,738	4086	3.7%	1.05 (1.03, 1.07)	-0.5%	1.24 (1.21, 1.27)	
	Aged 25-49	70,168	3443	-2.8%	0.85 (0.85, 0.86)	-17.5%	0.79 (0.78, 0.80)	71,179	4466	-0.5%	1.02 (1.01, 1.03)	-4.4%	1.13 (1.12, 1.14)	
Aged 50-64	34,873	3151	-3.1%	0.87 (0.86, 0.88)	-20.3%	0.76 (0.75, 0.77)	36,983	4054	1.2%	1.03 (1.01, 1.04)	-5.6%	1.07 (1.06, 1.09)		
<b>Depressive disorders</b>	<b>Sex</b>													
	Females	41,597	2033	-7.1%	0.83 (0.82, 0.84)	-33.1%	0.65 (0.64, 0.66)	45,973	2839	1.0%	1.03 (1.02, 1.04)	-17.2%	1.01 (1.00, 1.03)	
	Males	30,923	1863	-3.7%	0.85 (0.83, 0.86)	-27.1%	0.69 (0.68, 0.70)	33,312	2531	1.3%	1.04 (1.02, 1.05)	-12.7%	0.98 (0.96, 0.99)	
	Male/Female Ratio <sup>f</sup>				0.92 (0.90, 0.93)		0.92 (0.90, 0.93)				0.89 (0.88, 0.90)		0.89 (0.88, 0.90)	
	<b>Age</b>													
	Aged 18-24	10,814	1903	-9.5%	0.80 (0.78, 0.82)	-22.9%	0.75 (0.74, 0.77)	12,213	2814	7.8%	1.09 (1.07, 1.12)	-11.1%	1.11 (1.08, 1.13)	
	Aged 25-49	37,328	1831	-4.2%	0.84 (0.83, 0.85)	-31.5%	0.66 (0.65, 0.66)	40,385	2534	0.4%	1.03 (1.02, 1.05)	-16.2%	0.99 (0.98, 1.00)	
Aged 50-64	24,532	2217	-6.2%	0.84 (0.83, 0.86)	-32.3%	0.65 (0.64, 0.66)	26,865	2945	-0.5%	1.01 (0.99, 1.03)	-16.0%	0.95 (0.94, 0.97)		
<b>Bipolar disorders</b>	<b>Sex</b>													
	Females	16,650	814	-5.3%	0.84 (0.83, 0.86)	-27.7%	0.70 (0.69, 0.72)	17,872	1103	1.6%	1.04 (1.02, 1.06)	-12.1%	1.07 (1.05, 1.10)	
	Males	12,688	764	-7.4%	0.81 (0.80, 0.83)	-23.0%	0.73 (0.71, 0.75)	14,051	1068	3.1%	1.05 (1.03, 1.08)	-3.8%	1.08 (1.05, 1.10)	
	Male/Female Ratio <sup>f</sup>				0.94 (0.92, 0.96)		0.94 (0.92, 0.96)				0.97 (0.95, 0.99)		0.97 (0.95, 0.99)	
<b>Age</b>														

	Aged 18-24	3,562	627		-6.1%	0.83 (0.80, 0.87)		-19.0%	0.79 (0.76, 0.83)		3,870	892		6.1%	1.07 (1.03, 1.12)		-6.8%	1.16 (1.11, 1.21)
	Aged 25-49	17,282	848		-6.2%	0.82 (0.81, 0.84)		-26.3%	0.71 (0.69, 0.72)		18,825	1181		2.6%	1.05 (1.03, 1.08)		-9.0%	1.08 (1.06, 1.10)
	Aged 50-64	8,616	779		-6.0%	0.84 (0.82, 0.87)		-26.9%	0.70 (0.68, 0.72)		9,315	1021		0.1%	1.01 (0.99, 1.04)		-8.9%	1.04 (1.01, 1.06)
Schizophrenia spectrum disorders	<b>Sex</b>																	
	Females	8,819	431		-4.4%	0.85 (0.83, 0.88)		-19.1%	0.79 (0.77, 0.81)		9,570	591		3.3%	1.05 (1.02, 1.08)		-0.8%	1.21 (1.18, 1.25)
	Males	16,415	989		-7.3%	0.82 (0.80, 0.83)		-13.7%	0.82 (0.80, 0.83)		18,474	1404		1.2%	1.03 (1.01, 1.06)		8.5%	1.22 (1.19, 1.24)
	Male/Female Ratio <sup>f</sup>					2.29 (2.24, 2.35)			2.29 (2.24, 2.35)						2.38 (2.32, 2.43)			2.38 (2.32, 2.43)
	<b>Age</b>																	
	Aged 18-24	2,214	390		-8.1%	0.82 (0.77, 0.86)		-16.5%	0.82 (0.77, 0.86)		2,487	573		3.1%	1.04 (0.99, 1.10)		1.7%	1.27 (1.20, 1.34)
	Aged 25-49	15,534	762		-6.2%	0.82 (0.81, 0.84)		-12.4%	0.84 (0.82, 0.86)		17,157	1076		1.6%	1.04 (1.02, 1.07)		9.4%	1.29 (1.27, 1.32)
Aged 50-64	7,561	683		-6.2%	0.84 (0.82, 0.87)		-21.1%	0.76 (0.73, 0.78)		8,463	928		2.1%	1.04 (1.00, 1.07)		-1.6%	1.12 (1.09, 1.15)	
Trauma and stressor-related disorders	<b>Sex</b>																	
	Females	10,757	526		-8.6%	0.82 (0.79, 0.84)		-26.3%	0.72 (0.70, 0.74)		11,514	711		5.5%	1.08 (1.05, 1.11)		-5.7%	1.15 (1.12, 1.18)
	Males	8,116	489		-3.3%	0.85 (0.83, 0.88)		-22.7%	0.73 (0.71, 0.75)		8,794	668		4.1%	1.06 (1.03, 1.10)		-1.4%	1.11 (1.07, 1.14)
	Male/Female Ratio <sup>f</sup>					0.93 (0.90, 0.96)			0.93 (0.90, 0.96)						0.94 (0.91, 0.97)			0.94 (0.91, 0.97)
	<b>Age</b>																	
	Aged 18-24	2,871	505		-14.5%	0.76 (0.72, 0.80)		-24.3%	0.74 (0.71, 0.78)		3,292	758		7.0%	1.08 (1.03, 1.14)		-1.4%	1.23 (1.17, 1.29)
	Aged 25-49	11,231	551		-4.6%	0.84 (0.82, 0.86)		-24.9%	0.72 (0.70, 0.74)		11,830	742		2.7%	1.06 (1.03, 1.08)		-6.3%	1.11 (1.08, 1.14)
Aged 50-64	4,880	441		-4.8%	0.85 (0.82, 0.89)		-24.5%	0.72 (0.70, 0.75)		5,281	579		8.7%	1.10 (1.06, 1.15)		0.4%	1.14 (1.10, 1.18)	
Attention-deficit/hyperactivity disorders	<b>Sex</b>																	
	Females	2,956	144		-9.9%	0.80 (0.76, 0.84)		-30.1%	0.68 (0.65, 0.71)		3,078	190		4.7%	1.07 (1.02, 1.12)		-16.9%	1.02 (0.97, 1.07)
	Males	3,091	186		-5.3%	0.83 (0.79, 0.87)		-31.0%	0.65 (0.62, 0.68)		3,219	245		1.6%	1.04 (0.99, 1.09)		-11.3%	0.99 (0.95, 1.04)
	Male/Female Ratio <sup>f</sup>					1.29 (1.23, 1.36)			1.29 (1.23, 1.36)						1.29 (1.22, 1.35)			1.29 (1.22, 1.35)
	<b>Age</b>																	
	Aged 18-24	1,935	341		-11.4%	0.79 (0.74, 0.84)		-34.3%	0.64 (0.61, 0.68)		2,046	471		5.4%	1.07 (1.00, 1.14)		-19.6%	1.00 (0.94, 1.06)
	Aged 25-49	3,346	164		-6.1%	0.83 (0.79, 0.87)		-31.5%	0.66 (0.63, 0.69)		3,551	223		2.8%	1.06 (1.01, 1.11)		-11.5%	1.05 (1.00, 1.10)
Aged 50-64	797	72		-2.8%	0.87 (0.79, 0.96)		-13.1%	0.83 (0.76, 0.92)		740	81		0.5%	1.02 (0.92, 1.13)		-9.8%	1.03 (0.93, 1.13)	
Disruptive behavioral and impulse disorders	<b>Sex</b>																	
	Females	920	45		4.7%	0.93 (0.85, 1.02)		-10.6%	0.87 (0.80, 0.95)		886	55		-4.9%	0.97 (0.89, 1.06)		-1.0%	1.21 (1.10, 1.33)
	Males	1,969	119		-4.1%	0.84 (0.79, 0.90)		-15.7%	0.80 (0.75, 0.85)		2,234	170		5.0%	1.07 (1.01, 1.14)		14.2%	1.28 (1.20, 1.36)
	Male/Female Ratio <sup>f</sup>					2.64 (2.44, 2.85)			2.64 (2.44, 2.85)						3.10 (2.87, 3.35)			3.10 (2.87, 3.35)
	<b>Age</b>																	
	Aged 18-24	618	109		-11.5%	0.79 (0.71, 0.88)		-29.6%	0.69 (0.62, 0.76)		760	175		11.8%	1.13 (1.02, 1.26)		7.5%	1.34 (1.21, 1.48)
	Aged 25-49	1,762	86		4.0%	0.91 (0.86, 0.98)		-4.7%	0.91 (0.86, 0.97)		1,795	113		-0.1%	1.03 (0.96, 1.10)		12.9%	1.34 (1.25, 1.43)
Aged 50-64	518	47		-5.5%	0.85 (0.75, 0.96)		-20.6%	0.76 (0.68, 0.85)		576	63		-2.4%	0.99 (0.88, 1.11)		2.5%	1.16 (1.04, 1.31)	
Obsessive-compulsive disorders	<b>Sex</b>																	
	Females	684	33		-7.2%	0.83 (0.75, 0.92)		-25.1%	0.73 (0.66, 0.80)		729	45		6.4%	1.09 (0.98, 1.21)		1.5%	1.24 (1.12, 1.38)
	Males	582	35		-3.0%	0.85 (0.76, 0.96)		-21.8%	0.74 (0.66, 0.83)		631	48		-0.2%	1.02 (0.91, 1.14)		18.8%	1.33 (1.19, 1.50)
	Male/Female Ratio <sup>f</sup>					1.05 (0.94, 1.17)			1.05 (0.94, 1.17)						1.07 (0.96, 1.18)			1.07 (0.96, 1.18)



	<b>Age</b>																	
	Aged 18-24	223	39		-18.6%	0.72 (0.61, 0.86)		-25.7%	0.73 (0.61, 0.86)		250	58		-4.9%	0.96 (0.81, 1.15)		-7.8%	1.15 (0.97, 1.36)
	Aged 25-49	723	35		-0.6%	0.87 (0.79, 0.97)		-24.0%	0.73 (0.66, 0.80)		775	49		8.4%	1.11 (1.01, 1.23)		12.8%	1.33 (1.20, 1.48)
	Aged 50-64	330	30		-6.5%	0.84 (0.72, 0.97)		-20.5%	0.76 (0.66, 0.88)		348	38		0.9%	1.02 (0.88, 1.19)		19.2%	1.35 (1.16, 1.58)
	<b>Sex</b>																	
	Females	608	30		-12.9%	0.78 (0.70, 0.87)		-13.6%	0.84 (0.75, 0.94)		712	44		6.1%	1.08 (0.97, 1.20)		12.7%	1.38 (1.24, 1.53)
	Males	149	9		-6.3%	0.82 (0.66, 1.03)		-6.9%	0.88 (0.71, 1.10)		153	12		10.9%	1.13 (0.90, 1.43)		4.8%	1.17 (0.94, 1.47)
	Male/Female Ratio <sup>f</sup>					0.30 (0.25, 0.36)			0.30 (0.25, 0.36)					0.26 (0.22, 0.31)			0.26 (0.22, 0.31)	
	<b>Age</b>																	
	Aged 18-24	245	43		-17.2%	0.73 (0.62, 0.87)		-5.4%	0.92 (0.78, 1.10)		334	77		12.5%	1.14 (0.97, 1.33)		22.8%	1.53 (1.30, 1.79)
	Aged 25-49	375	18		-8.8%	0.80 (0.70, 0.92)		-15.5%	0.81 (0.71, 0.93)		397	25		5.0%	1.08 (0.94, 1.24)		2.9%	1.22 (1.06, 1.40)
	Aged 50-64	141	13		-10.2%	0.81 (0.64, 1.01)		-13.5%	0.83 (0.66, 1.04)		138	15		0.0%	1.01 (0.80, 1.28)		11.3%	1.26 (0.99, 1.61)
	<b>Sex</b>																	
	Females	109	5		-18.1%	0.73 (0.57, 0.94)		9.0%	1.06 (0.81, 1.39)		122	8		25.8%	1.28 (0.98, 1.68)		34.1%	1.64 (1.25, 2.15)
	Males	152	9		-21.2%	0.69 (0.56, 0.86)		-15.6%	0.80 (0.64, 0.99)		153	12		-3.8%	0.98 (0.79, 1.23)		0.7%	1.13 (0.90, 1.41)
	Male/Female Ratio <sup>f</sup>					1.72 (1.34, 2.20)			1.72 (1.34, 2.20)					1.54 (1.22, 1.96)			1.54 (1.22, 1.96)	
	<b>Age</b>																	
	Aged 18-24	91	16		-19.5%	0.71 (0.54, 0.94)		13.8%	1.11 (0.82, 1.50)		104	24		60.0%	1.62 (1.19, 2.21)		73.3%	2.16 (1.57, 2.97)
	Aged 25-49	119	6		-21.2%	0.69 (0.55, 0.88)		-20.7%	0.76 (0.60, 0.97)		139	9		-8.0%	0.95 (0.75, 1.19)		-4.8%	1.13 (0.89, 1.42)
	Aged 50-64	53	5		-17.2%	0.74 (0.52, 1.07)		3.9%	1.00 (0.68, 1.46)		33	4		-19.5%	0.82 (0.52, 1.29)		-21.4%	0.89 (0.57, 1.41)

<sup>a</sup>NSSP collects free-text reason for visit (chief complaint), discharge diagnosis, and patient demographic details. Diagnosis information is collected using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes; International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes; and Systematized Nomenclature of Medicine (SNOMED) codes. Emergency department visits associated with any MH-related visit and specific mental disorders were identified by querying ED visits data from the National Syndromic Surveillance Program (NSSP) using keyword syndromes developed by CDC in partnership with state and local health departments (eTable 1); <sup>b</sup>To reduce artifactual impact from changes in reporting patterns, analyses examining trends in MH-related ED visits by sex and age were restricted to facilities with a coefficient of variation  $\leq 40$  and average weekly discharge diagnosis  $\geq 75\%$  from January 2019–August 2021. <sup>c</sup>Rate of ED visits for MH outcome = (number of ED visits for MH outcome/number of total ED visits in the time period of interest for the subpopulation of interest)  $\times 100,000$ ; <sup>d</sup>Percent change in visits was calculated as the difference in total visits between the index period and the comparison period, divided by the total visits during the comparison period, times 100 ((ED visits for MH outcome during index period–ED visits for MH outcome during comparison period)/ED visits for MH outcome during comparison period $\times 100\%$ ); <sup>e</sup>Visit ratios = Proportion ED visits for MH outcome during the index period, divided by the proportion of ED visits for MH outcome during the comparison period ((ED visits for MH outcome {index period}/all ED visits {index period})/(ED visits for MH outcome {comparison period}/all ED visits {comparison period})); <sup>f</sup>Male to female visit ratios = (proportion of ED visits for MH outcome during index period for males/proportion of ED visits for MH outcome during index period for females). Ratios  $>1$  indicate a higher proportion of ED visits for MH outcome during the surveillance period for males compared with females.

**eAppendix 1.** Detailed Footnotes for Figure 2 Mental Health–Related, Anxiety, and Depressive Disorder US Emergency Department Visits, by Race and Ethnicity

U.S.=United States; ED=emergency department. This figure includes data from December 27, 2020 through August 14, 2021. Shaded areas of the graph depict time periods included in analytic index or comparison periods. From left to right, this includes a COVID-19 case peak comparison period from Dec. 27, 2020–Jan. 23, 2021; the period immediately following a COVID-19 case peak index period of Feb. 14, 2021–Mar. 13, 2021; a COVID-19 pandemic comparison period with low circulation of the Delta variant (Pre-Delta period): Apr. 18–May 15, 2021; and a COVID-19 pandemic index period with high circulation of the Delta variant (Delta period): July 18–Aug. 14, 2021. These windows were used in the temporal comparisons displayed in Table 2. Comparisons between racial and ethnic groups for ED visit rates for each MH outcome of interest were non-temporal and within the index period of interest. In the Delta period, prevalence ratios  $\geq 1.0$  with 95% confidence intervals excluding 1.0 indicated that there were the following differences between groups: (1) non-Hispanic White persons had higher prevalence of any MH-related ED visits compared to non-Hispanic American Indian or Alaska Native, non-Hispanic Asian, Hispanic, non-Hispanic Black, and non-Hispanic Native Hawaiian or Other Pacific Islander persons; (2) non-Hispanic American Indian or Alaska Native persons had higher prevalence of any MH-related ED visits compared to non-Hispanic Black, Hispanic, and non-Hispanic Native Hawaiian or Other Pacific Islander persons; (3) non-Hispanic White persons had higher prevalence of anxiety disorder-related ED visits compared to non-Hispanic American Indian or Alaska Native, non-Hispanic Asian, Hispanic, non-Hispanic Black, and non-Hispanic Native Hawaiian or Other Pacific Islander persons; (4) non-Hispanic American Indian or Alaska Native persons had higher prevalence of anxiety disorder-related ED visits compared to non-Hispanic Black and non-Hispanic Native Hawaiian or Other Pacific Islander persons; (5) non-Hispanic Black persons had lower prevalence of anxiety disorder-related ED visits compared to non-Hispanic Asian and Hispanic persons; (6) non-Hispanic White persons had higher prevalence of depressive disorder-related ED visits compared to non-Hispanic American Indian or Alaska Native, non-Hispanic Asian, non-Hispanic Black, and Hispanic persons; (7) non-Hispanic American Indian or Alaska Native persons had higher rates of depressive disorder-related ED visits compared to non-Hispanic Black and Hispanic persons; and (8) non-Hispanic Asian persons had higher prevalence of depressive-disorder related ED visits compared to Hispanic persons. No other comparisons between racial and ethnic groups showed differences. In the period after a COVID-19 case peak, prevalence ratios  $\geq 1.0$  with 95% confidence intervals excluding 1.0 comparing between racial and ethnic groups showed similar findings as to the Delta period with several exceptions: (1) non-Hispanic White persons showed no differences in prevalence of MH-related ED visits with non-Hispanic American Indian or Alaska Native persons; (2) non-Hispanic American Indian or Alaska Native persons had higher prevalence of any MH-related ED visits compared to non-Hispanic Asian persons; (3) non-Hispanic American Indian or Alaska Native persons had higher prevalence of anxiety disorder-related ED visits compared to Hispanic and non-Hispanic Asian persons; (4) non-Hispanic American Indian or Alaska Native persons had higher prevalence of depressive disorder-related ED visits compared to non-Hispanic Asian persons; (5) non-Hispanic Asian persons showed no differences in prevalence of depressive disorder-related ED visits compared to Hispanic persons; (6) non-Hispanic White persons showed no differences in prevalence of depressive disorder-related ED visits compared to non-Hispanic American Indian or Alaska Native persons.

**eAppendix 2.** Detailed Footnotes for Figure 3 Bipolar, Schizophrenia Spectrum, and Trauma- and Stressor-Related Disorder US Emergency Department Visits, by Race and Ethnicity

U.S.=United States; ED=emergency department. This figure includes data from December 27, 2020 through August 14, 2021. Shaded areas of the graph depict time periods included in analytic index or comparison periods. From left to right, this includes a COVID-19 case peak comparison period from Dec. 27, 2020–Jan. 23, 2021; the period immediately following a COVID-19 case peak index period of Feb. 14, 2021–Mar. 13, 2021; a COVID-19 pandemic comparison period with low circulation of the Delta variant (Pre-Delta period): Apr. 18–May 15, 2021; and a COVID-19 pandemic index period with high circulation of the Delta variant (Delta period): July 18–Aug. 14, 2021. These windows were used in the temporal comparisons displayed in Table 2. Comparisons between racial and ethnic groups for ED visit rates for each MH outcome of interest were non-temporal and within the index period of interest. In the Delta period, prevalence ratios  $\geq 1.0$  with 95% confidence intervals excluding 1.0 indicated that there were the following differences between groups: (1) non-Hispanic White persons had higher prevalence of bipolar disorder-related ED visits compared to non-Hispanic Black, non-Hispanic Asian, Hispanic, and non-Hispanic American Indian or Alaska Native persons; (2) non-Hispanic Black persons had higher prevalence of bipolar disorder-related ED visits compared to non-Hispanic American Indian or Alaska Native and Hispanic persons; (3) non-Hispanic White persons had higher prevalence of schizophrenia spectrum disorder-related ED visits compared to Hispanic persons; (4) non-Hispanic Black persons had higher prevalence of schizophrenia spectrum disorder-related ED visits compared to non-Hispanic American Indian or Alaska Native, non-Hispanic Asian, Hispanic, and non-Hispanic White persons; (5) non-Hispanic American Indian or Alaska Native persons had higher prevalence of trauma and stressor-related disorder ED visits compared to non-Hispanic Asian, Hispanic, and non-Hispanic Black persons; (6) non-Hispanic White persons had higher prevalence of trauma and stressor-related disorder ED visits compared to non-Hispanic Black persons. No other comparisons between racial and ethnic groups showed differences. In the period after a COVID-19 case peak, prevalence ratios  $\geq 1.0$  with 95% confidence intervals excluding 1.0 comparing rates between racial and ethnic groups showed similar findings as to the Delta period with several exceptions: (1) non-Hispanic Black persons showed no differences in prevalence of bipolar disorder-related ED visits with non-Hispanic American Indian or Alaska Native persons; (2) non-Hispanic American Indian or Alaska Native persons had higher prevalence of trauma and stressor-related disorder ED visits compared to non-Hispanic White persons; (3) non-Hispanic White persons had higher prevalence of trauma and stressor-related disorder ED visits compared to Hispanic and non-Hispanic Asian persons.