

8. Substance Abuse Appendix Data Tables

This chapter presents data on the following indicators related to substance abuse:

8.1. Substance Abuse

- Hospital emergency room visit rate, age adjusted for all ages and age specific for ages 0-19 and ages 20 and over (2004-2008)
- Hospital discharge rate, aged adjusted for all ages and age specific for ages 0-19 and ages 20 and over (2005-2009)
- Number of admissions to state-funded substance abuse programs (2010)
- Crude rate of admissions to state-funded substance abuse programs (2010)

Presented for each indicator is an explanation of the indicator, the data, the source of the data, a Healthy People 2020 objective when available, and a comment on whether there are any statistically significant differences between each community in CHNA 18 and Massachusetts.

A note on determining statistical significance:

The 95% confidence interval (95% CI) is a range of values that has a 95% chance of including the observed percentage. Observed rates are subject to statistical variation; even if the observed percentages are identical in two populations, the populations may differ because of random variation. The confidence interval describes the precision of the observed rate as an estimate of the underlying risk, with a wider interval indicating less certainty about this estimate. The width of the interval reflects the size of the population and the number of cases; smaller populations with fewer cases lead to wider confidence intervals.

The **statistical significance** of differences between rates can be estimated based on whether the confidence intervals overlap. For example, if the 95% confidence intervals for the birth rate for a community and state do not overlap, it is safe to conclude that the rates are statistically different (i.e., the difference is very unlikely to be due to sampling error).

8.1 Substance Abuse

Emergency Room Visit Rate and Hospital Discharge Rate: For all ages, this is the age-adjusted rate for hospital emergency room visits related to alcohol and other substance abuse. This is the number of visits per 100,000 persons. Age adjustment is a statistical method that takes into account age-distribution differences between populations by taking the 2000 US population distribution and applying it to the other time periods under consideration. This assures that changes in the emergency room visit rate are not merely reflections of any changes in the population age distribution.

For ages 0-19 and 20+, this is the age-specific rate, which is the number of visits in this age group per 100,000 people in this age group.

This hospital discharge rate is calculated the same as the emergency room visit rate, now taking the number of hospital discharges for alcohol and other substance abuse per 100,000 persons.

Number of Admissions to Substance Abuse Programs: This is the number of individuals admitted to state funded substance abuse programs in 2010

Crude Rate for Admissions to Substance Abuse Programs: This is an overall measure of occurrence for the population. In this case, this is the number of admissions per 100,000 individuals in the population

	Emergency Room Visit Rate (95% CI) 2004-2008	Hospital Discharge Rate (95% CI) 2005-2009
Brookline		
Ages 0-19	439.03 (382.67 - 495.39)	23.94 (10.75 - 37.13)
20+	323.88 (300.64 - 347.12)	239.09 (219.10 - 259.08)
All Ages	351.10 (328.29 - 373.92)	190.36 (174.30 - 206.43)
Dedham		
Ages 0-19	292.48 (229.27 - 355.70)	35.51 (13.50 - 57.51)
20+	503.97 (457.68 - 550.26)	606.14 (555.49 - 656.78)
All Ages	493.45 (450.95 - 535.96)	473.92 (433.64 - 514.21)
Dover		
Ages 0-19	188.56 (99.01 - 278.11)	NA*
20+	354.82 (270.63 - 439.00)	182.65 (122.20 - 243.11)
All Ages	365.13 (268.18 - 462.08)	158.02 (91.39 - 224.66)
Needham		
Ages 0-19	236.08 (188.16 - 284.01)	40.66 (20.74 - 60.58)
20+	235.04 (205.46 - 264.61)	244.97 (214.76 - 275.18)
All Ages	294.10 (259.75 - 328.45)	212.63 (183.66 - 241.60)
Newton		
Ages 0-19	287.57 (255.03 - 320.11)	26.15 (16.32 - 35.98)
20+	322.86 (302.99 - 342.73)	207.74 (191.79 - 223.70)
All Ages	312.18 (295.05 - 329.30)	155.36 (143.43 - 167.28)
Waltham		
Ages 0-19	461.19 (407.58 - 514.79)	30.92 (17.02 - 44.82)
20+	803.72 (767.71 - 839.73)	468.33 (440.81 - 495.86)
All Ages	695.14 (665.59 - 724.68)	363.50 (342.10 - 384.91)
Wellesley		
Ages 0-19	321.89 (266.85 - 376.92)	NA*
20+	259.23 (226.74 - 291.71)	123.19 (100.78 - 145.59)
All Ages	276.81 (243.62 - 310.00)	114.15 (89.50 - 138.79)
Weston		
Ages 0-19	223.47 (152.49 - 294.44)	NA*
20+	136.77 (100.97 - 172.57)	114.71 (81.94 - 147.49)
All Ages	223.30 (167.67 - 278.93)	111.15 (73.19 - 149.10)

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Westwood		
Ages 0-19	233.59 (166.17 - 301.02)	NA*
20+	352.57 (300.57 - 404.57)	399.20 (343.85 - 454.55)
All Ages	443.41 (376.61 - 510.21)	363.23 (304.20 - 422.26)

CHNA 18		
Ages 0-19	328.21 (309.83 - 346.58)	26.83 (21.57 - 32.09)
20+	416.00 (404.36 - 427.63)	297.78 (287.93 - 307.63)
All Ages	387.95 (378.19 - 397.71)	220.70 (213.43 - 227.98)

Massachusetts		
Ages 0-19	270.81 (267.24 - 274.37)	44.54 (43.10 - 45.99)
20+	872.71 (869.00 - 876.42)	454.14 (451.47 - 456.82)
All Ages	702.96 (700.10 - 705.81)	338.77 (336.79 - 340.74)

*Cells are marked as NA when either: 1) Data are suppressed for confidentiality reasons, 2) The data is unavailable, or 3) The population on which the statistic is based on is too small to calculate reliable results

Source: Uniform Hospital Dataset Discharge System (UHDDS) (MassCHIP custom reports)

Admissions to State-funded Substance Abuse Programs, 2010

	Number of Admissions	Crude Rate (95% CI)
Brookline	183	324.34 (277.42 - 371.26)
Dedham	399	1684.88 (1520.95 - 1848.80)
Dover	12	212.99 (92.61 - 333.37)
Needham	67	235.55 (179.21 - 291.88)
Newton	377	452.33 (406.77 - 497.89)
Waltham	414	695.05 (628.33 - 761.77)
Wellesley	58	215.01 (159.73 - 270.29)
Weston	22	189.80 (110.57 - 269.04)
Westwood	34	244.57 (162.46 - 326.68)
Massachusetts	104,831	1589.89 (1580.35 - 1599.44)
United States	2,600,000*	842.12*

*This is an estimate for 2009

Source: Bureau of Substance Abuse Services (MassCHIP custom report); National Institute on Drug Abuse (NIDA)

Comment:

Are there any statistically significant differences between the CHNA and Massachusetts?

- Brookline
 - Emergency Room visits
 - Ages 0-19: A higher rate than CHNA 18 and Massachusetts
 - Ages 20+: A lower rate than CHNA 18 and Massachusetts
 - All ages: A lower rate than CHNA 18 and Massachusetts
 - Hospital Discharges
 - Ages 0-19: The same rate as CHNA 18 and a lower rate than Massachusetts
 - Ages 20+: A lower rate than CHNA 18 and Massachusetts
 - All ages: A lower rate than CHNA 18 and Massachusetts
 - Admissions to Substance Abuse Programs
 - A lower rate compared to Massachusetts
- Dedham
 - Emergency Room visits
 - Ages 0-19: The same rate compared to CHNA 18 and Massachusetts
 - Ages 20+: A higher rate than CHNA 18 and a lower rate than Massachusetts
 - All ages: A higher rate than CHNA 18 and a lower rate than Massachusetts
 - Hospital Discharges
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 - All ages: A higher rate than CHNA 18 and Massachusetts
 - Admissions to Substance Abuse Programs
 - The same rate as Massachusetts
- Dover
 - Emergency Room visits
 - Ages 0-19: A lower rate than CHNA 18 and the same rate as Massachusetts
 - Ages 20+: The same rate as CHNA 18 and a lower rate than Massachusetts
 - All ages: The same rate as CHNA 18 and a lower rate than Massachusetts
 - Hospital Discharges
 - Ages 20+: A lower rate than CHNA 18 and Massachusetts
 - All ages: The same rate as CHNA 18 and a lower rate than Massachusetts
 - Admissions to Substance Abuse Programs
 - A lower rate compared to Massachusetts
- Needham
 - Emergency Room visits
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- Newton
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