Connecticut Department of Public Health
HIV Surveillance Program

QuickStats

December 24, 2014

HIV Resistance Surveillance

- The CT Molecular HIV Surveillance Project collects and analyzes, with CDC support, nucleotide sequences to characterize resistance profiles by different demographic attributes. Implementation of Molecular HIV Surveillance began in 2009 and was completed by 2010.
- As of March 2014, 762 HIV nucleotide sequences have been collected for newly diagnosed cases during years 2010-2013.
- For cases diagnosed during 2013, 24 (13.8%) had a resistant mutation to one or more antiretroviral drug classes, 2 (1.1%) had resistance against 2 classes, and 1 (0.6%) against 3 classes. 4 (2.3%) had a mutation associated to protease inhibitor drugs, 5 (2.9%) against nucleoside reverse transcriptase inhibitors, and 19 (10.9%) against non-nucleoside reverse transcriptase inhibitors. 17.6% of females and 12.9% of males had been infected with a strain resistant to 1 or more antiretroviral drug classes. 24.2% individuals aged 50-59 were affected by a resistant strain associated with one or more drug classes.
- The HHS panel on antiretroviral guidelines for adults and adolescents recommends HIV genotype resistance testing as part of baseline evaluation and entry into care, regardless of the decision for immediate ART treatment. '**Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents'** can be found at http://aidsinfo.nih.gov/contentfiles/lvguidelines/adultandadolescentgl.pdf.

Connecticut Molecular HIV Surveillance (MHS) analysis, 2010–2013: Number and Percent of New Diagnoses of HIV Disease with MHS Genotyping Results[1], by TDRM and Selected Demographic Characteristics

		Any TDRM		1-Class TDRM		2-Class TDRM		3-Class TDRM		PI TDRM		nRTI TDRM		NNRTI TDRM	
	Total	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Total	762	133	17.5	115	15.1	13	1.7	5	0.7	35	4.6	52	6.8	69	9.1
Sex															
Male	593	97	16.4	85	14.3	7	1.2	5	0.8	27	4.6	37	6.2	50	8.4
Female	169	36	21.3	30	17.8	6	3.6	0	0	8	4.7	15	8.9	19	11.2
Age at Diagnosis															
13–19	28	4	14.3	3	10.7	0	0	1	3.6	2	7.1	2	7.1	2	7.1
20–29	211	33	15.6	32	15.2	1	0.5	0	0	8	3.8	7	3.3	19	9
30–39	168	30	17.9	24	14.3	5	3	1	0.6	5	3	13	7.7	19	11.3
40–49	193	36	18.7	31	16.1	4	2.1	1	0.5	10	5.2	16	8.3	16	8.3
50–59	116	21	18.1	17	14.7	3	2.6	1	0.9	9	7.8	9	7.8	8	6.9
≥60	46	9	19.6	8	17.4	0	0	1	2.2	1	2.2	5	10.9	5	10.9
Race/Ethnicity															
Back	281	59	21	49	17.4	6	2.1	4	1.4	17	6	23	8.2	33	11.7
Hispanic	211	34	16.1	30	14.2	4	1.9	0	0	8	3.8	11	5.2	19	9
White	258	38	14.7	34	13.2	3	1.2	1	0.4	9	3.5	17	6.6	17	6.6
Other	12	2	16.7	2	16.7	0	0.0	0	0.0	1	8.3	1	8.3	0	0.0
Transmission Category															
MSM	375	62	16.5	58	15.5	1	0.3	3	0.8	18	4.8	20	5.3	31	8.3
Male IDU	38	5	13.2	3	7.9	2	5.3	0	0	1	2.6	3	7.9	3	7.9
MSM & IDU	13	4	30.8	4	30.8	0	0	0	0	1	7.7	2	15.4	1	7.7
Male Heterosexual	75	13	17.3	10	13.3	2	2.7	1	1.3	4	5.3	4	5.3	9	12
Male Other/Unknown	92	13	14.1	10	10.9	2	2.2	1	1.1	3	3.3	8	8.7	6	6.5
Female IDU	24	6	25	5	20.8	1	4.2	0	0	1	4.2	3	12.5	3	12.5
Female Heterosexual	80	18	22.5	14	17.5	4	5	0	0	3	3.8	9	11.3	10	12.5
Female Other/Unknown	65	12	18.5	11	16.9	1	1.5	0	0	4	6.2	3	4.6	6	9.2

[1]Limited to cases with sequences that can be assessed using CDC mutation list, i.e., those that include all positions on CDC list and belong to subtypes A, B, C, D, F, and G and circulating recombinant forms CRF01-AE and CRF02-AG

Table abbreviations: TDRM, Transmitted drug-associated mutation; PI, protease inhibitor; nRTI; nucleoside reverse transcriptase inhibitor; NNRTI, non-nucleoside reverse transcriptase inhibitor; NH/Other PI, Native Hawaiian and other Pacific Islanders; MSM, Men who have sex with men; IDU, Injection drug user.