V Infectious Diseases

Infectious diseases are disorders caused by organisms such as bacteria, viruses, fungi or parasites. Many organisms live in and on our bodies. They are normally harmless or even helpful, but under certain conditions, some organisms may cause disease. Some infectious diseases can be passed from person to person. Some are transmitted by bites from insects or animals; others are acquired by ingesting contaminated food or water or through environmental exposures. Signs and symptoms vary depending on the organism causing the infection, but often include fever and fatigue. Mild infections may respond to rest and home remedies, while some life-threatening infections may require hospitalization. Many infectious diseases, such as measles and chickenpox, can be prevented by vaccines. Frequent and thorough hand-washing also helps protect against many infectious diseases [26].

Reportable Diseases

- Campylobacteriosis had an increasing trend in Montgomery County, the rate in the County was consistently higher than for Maryland (Fig. 105).
- Salmonellosis had an increasing trend in Montgomery County, though fluctuated. The County rate was consistently lower than that of Maryland and the U.S. (Fig. 106).
- Vibriosis rates in Montgomery County fluctuated over time, and were lower than in Maryland but higher than the U.S. (Fig. 107).
- Legionellosis had an increasing trend in Montgomery County. The rates were consistently lower than in Maryland but higher than the U.S. (Fig. 108).
- Pertussis had a decreasing trend in Montgomery County, the rates were consistently higher than in Maryland but lower than the U.S. (Fig. 109).
- Rabies infection rates in animals fluctuated over time in Montgomery County; the rates were consistently lower than in Maryland but higher than the U.S. (Fig. 110).
- Lyme Disease infection rates fluctuated over time in Montgomery County, the rates were consistently lower than in Maryland but higher than the U.S. (Fig. 111).
- Shiga Toxin Producing E. Coli infection rates fluctuated over time in Montgomery County; the rates were consistently lower than in Maryland and the U.S. (Fig. 112).

Fig. 105. Incidence Rates, Campylobacteriosis, Montgomery County, Maryland, 2012-16

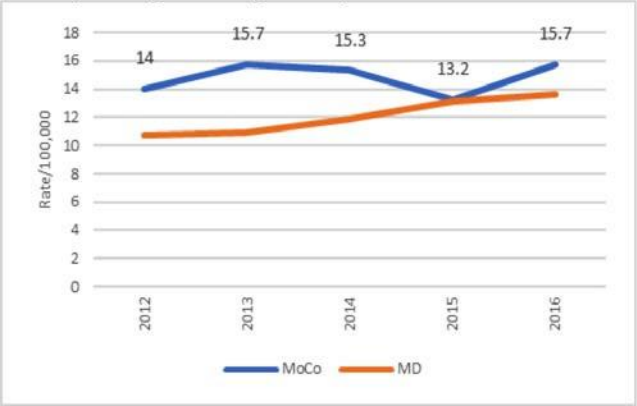


Fig. 106. Incidence Rates, Salmonellosis, Montgomery County, Maryland, and U.S., 2012-16

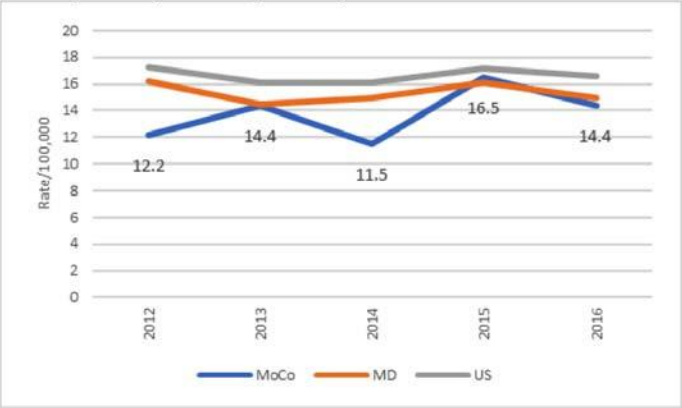


Fig. 107. Incidence Rates, Vibriosis, Montgomery County, Maryland, and U.S., 2012-16

Fig. 108. Incidence Rates, Legionellosis, Montgomery County, Maryland, and U.S., 2012-16

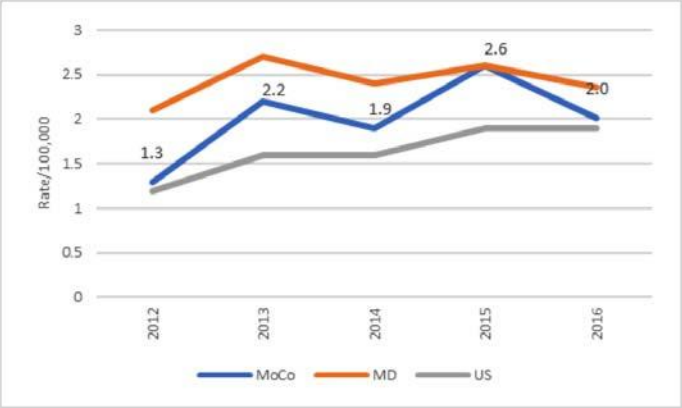


Fig. 109. Incidence Rates, Pertussis, Montgomery County, Maryland, and U.S., 2012-16

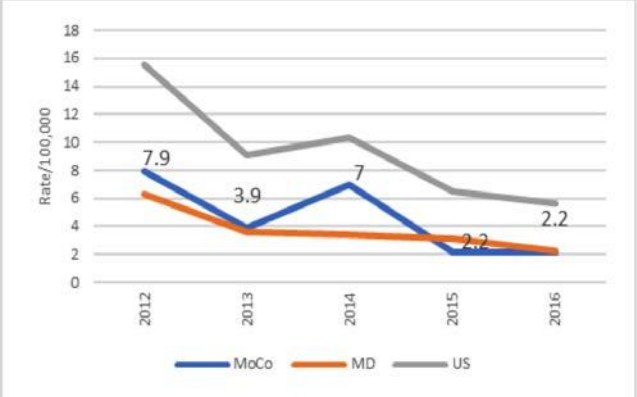


Fig. 110. Incidence Rates, Rabies-Animal, Montgomery County, Maryland, and U.S., 2012-16

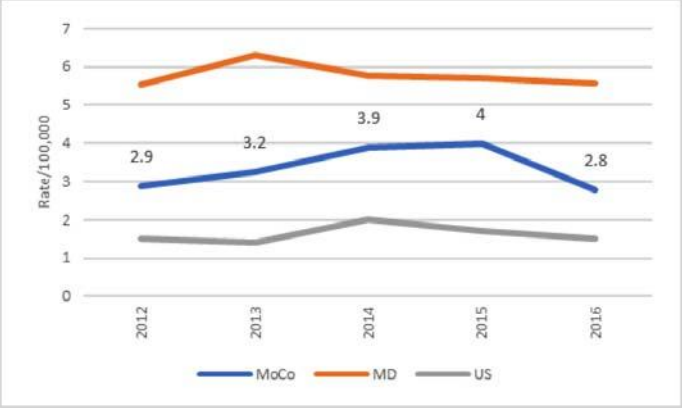
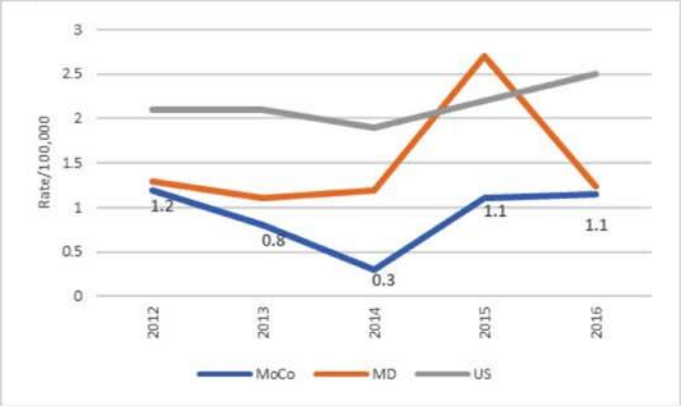


Fig. 111. Incidence Rates, Lyme Disease, Montgomery County, Maryland, and U.S., 2012-16

Fig. 112. Incidence Rates, Shiga Toxin Producing E. Coli, Montgomery County, Maryland, and U.S., 2012-16



Tuberculosis

- Tuberculosis rates fluctuated over time in Montgomery County; the rates were consistently higher than Maryland and the U.S. (Fig. 113).
- Among population subgroups, Asian/PI had the highest tuberculosis rates, followed by NH-Black, NH-White, and Hispanic; males have higher rates than females (Fig. 114).
- Age 65+ had the highest Tuberculosis rates, followed by age 18-34, and age 35-64 (Fig. 115).

Fig. 113. Incidence Rates, Tuberculosis, Montgomery County, Maryland, and U.S., 2012-16

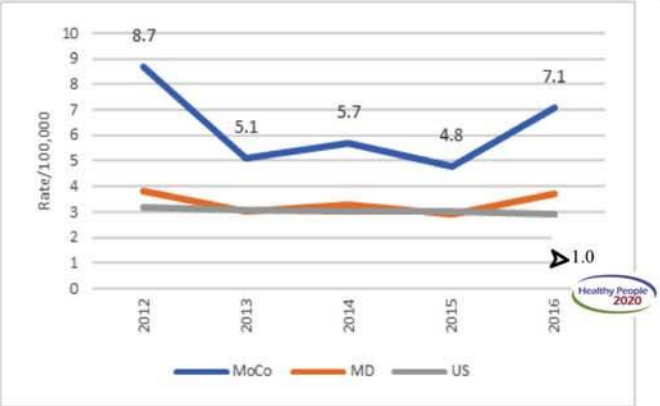


Fig. 114. Incidence Rates by Sex and Race/Ethnicity, Tuberculosis, Montgomery County, 2012-16

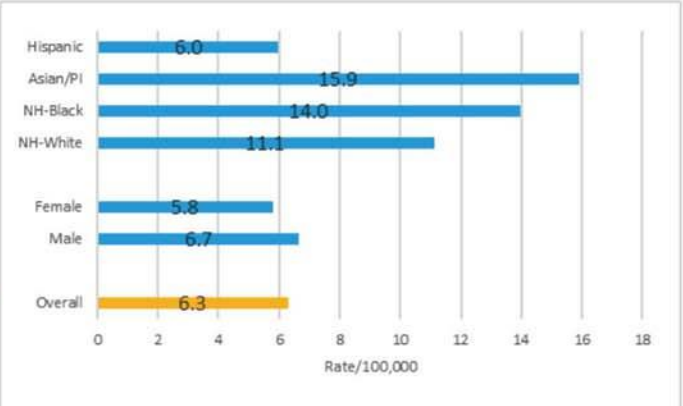
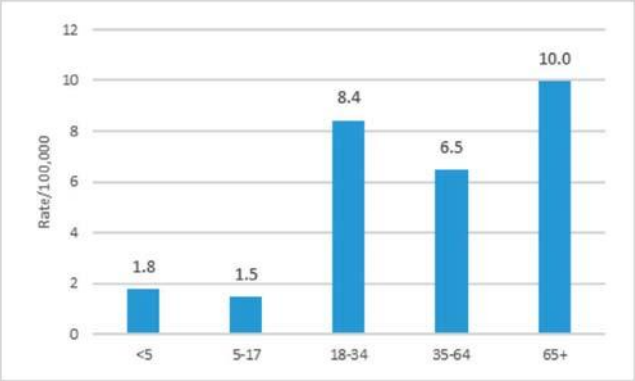


Fig. 115. Incidence Rates by Age, Tuberculosis, Montgomery County, Maryland, and U.S., 2012-16



Sexually Transmitted Infections (STI)

Table 21. Incidence by Sex and Race/Ethnicity, Selected Infectious Diseases, Montgomery County, 2014-16

	Total	Sex		Race/Ethnicity			
		Male	Female	NH-White	NH-Black	Asian/PI	Hispanic
Chlamydia	9,166	2,869	6,297	534	1,223	134	760
Gonorrhea	1,364	906	458	83	404	21	94
Syphilis	102	99	3	30	38	6	11
HIV	492	309	183	71	292	N/A	155

- Chlamydia infection rates increased over time in Montgomery County; however, the rates in the County were consistently lower than in Maryland and the U.S. (Fig. 116).
- Among population subgroups, NH-Black had the highest chlamydia infection rates, followed by Hispanic, NH-White and Asian/PI; females had higher rates than males (Fig. 117).
- Ages 20-24 had the highest chlamydia infection rates, followed by ages 15-19, and ages 25-44 (Fig. 118).

Fig. 116. Incidence Rates, Chlamydia, Montgomery County, Maryland, and U.S., 2012-16

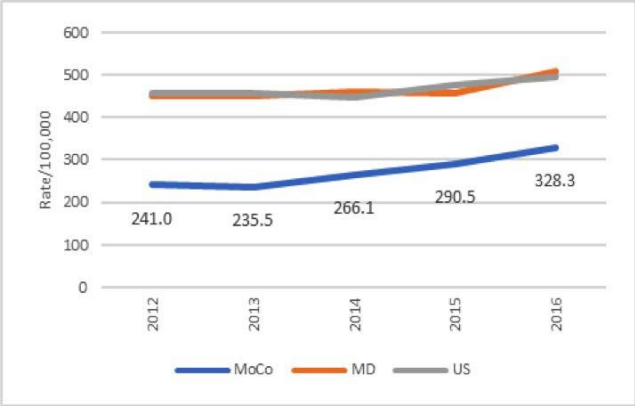


Fig. 117. Incidence Rates by Sex and Race/Ethnicity, Chlamydia, Montgomery County, 2012-16

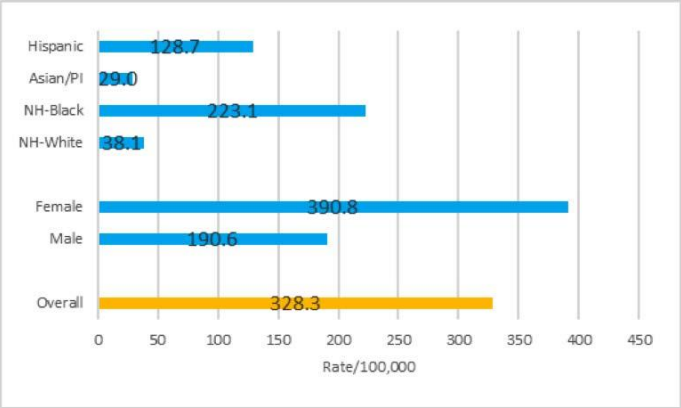
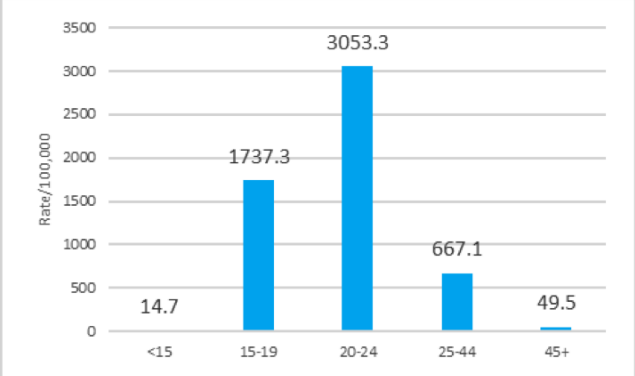
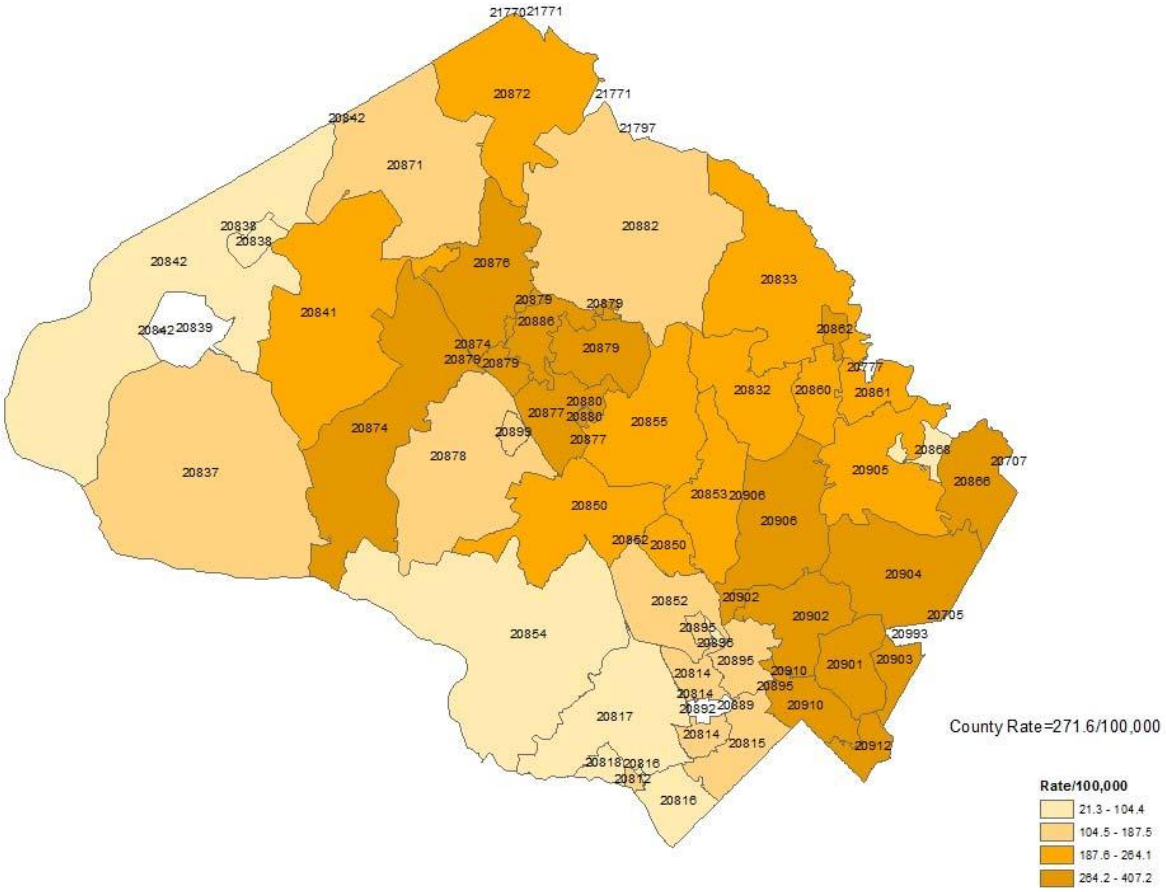


Fig. 118. Incidence Rates by Age, Chlamydia, Montgomery County, 2012-16



Map 14. Incidence Rates by Zip Code, Chlamydia,
Montgomery County, 2012-16



- Gonorrhea infection rates had an overall increase over time in Montgomery County, similar to that in Maryland and the U.S.; however, the rates in the County were consistently lower than Maryland and the U.S. (Fig. 119).
- Among population subgroups, NH-Black had the highest gonorrhea rates, followed by Hispanic, NH-White and Asian/PI; males have higher rates than females (Fig. 120).
- Age 20-24 had the highest gonorrhea rates, followed by age 15-19, and age 25-44 (Fig. 121).

Fig. 119. Incidence Rates, Gonorrhea, Montgomery County, Maryland, and U.S., 2012-16

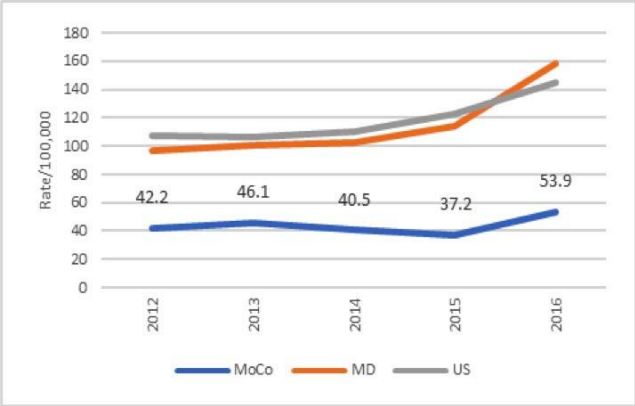


Fig. 120. Incidence Rates by Sex and Race/Ethnicity, Gonorrhea, Montgomery County, 2012-16

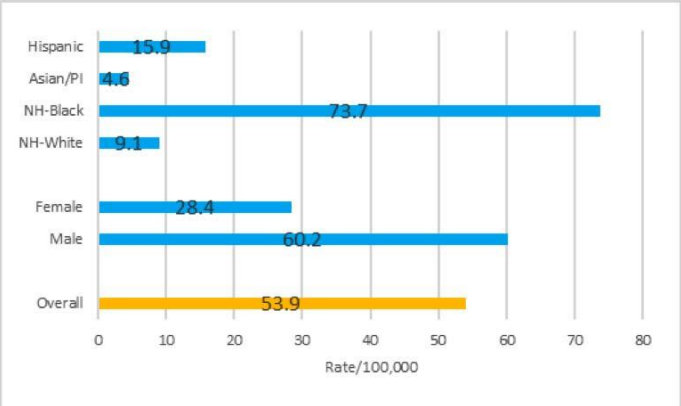
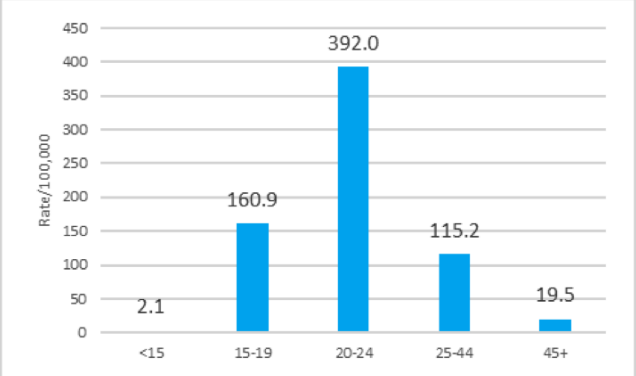
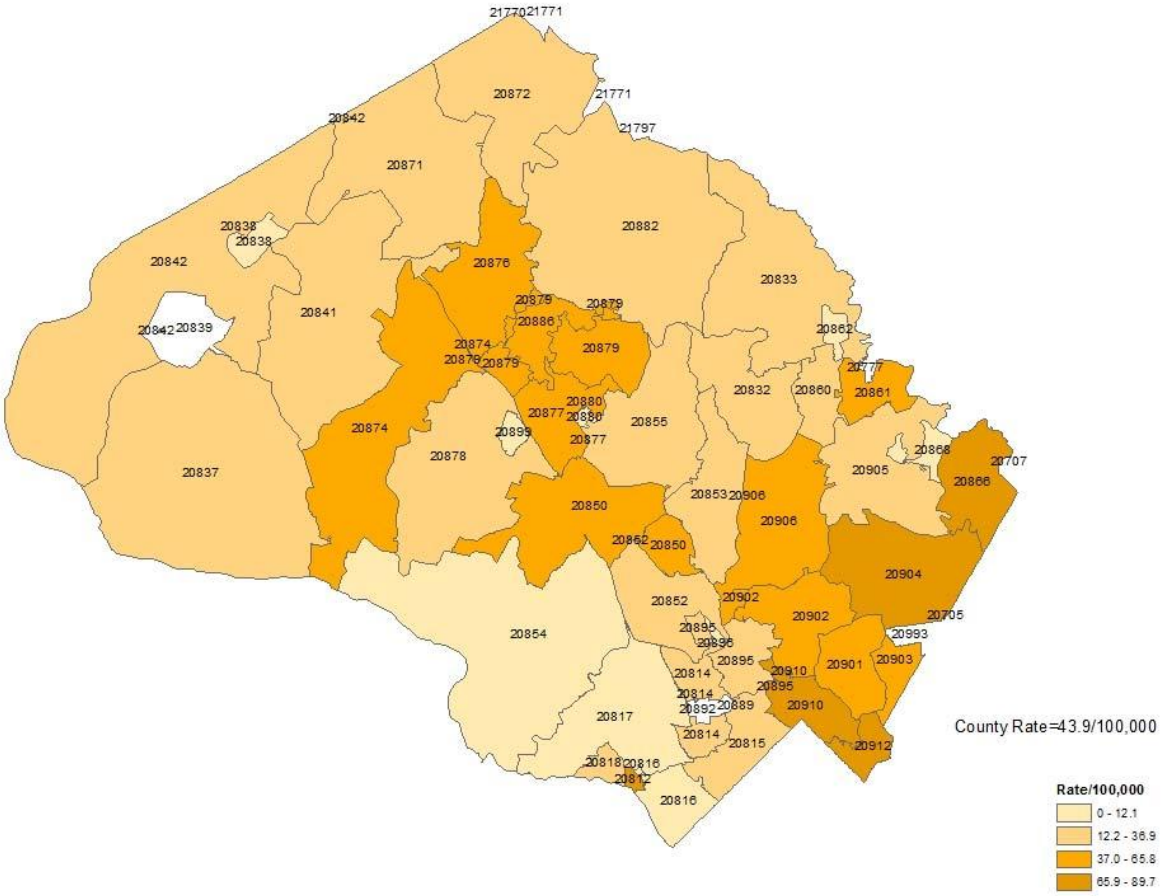


Fig. 121. Incidence Rates by Age, Gonorrhea, Montgomery County, 2012-16



Map 15. Incidence Rates by Zip Code, Gonorrhea,
Montgomery County, 2012-16



- Syphilis infection rates increased over time in Montgomery County, similar to those in Maryland and the U.S.; however, the rates in the County were consistently lower than Maryland and the U.S. (Fig. 122).
- Among population subgroups, NH-Black had the highest syphilis infection rates, followed by NH-White, Hispanic, and Asian/PI; males had much higher rates than females (Fig. 123).
- Ages 25-44 had the highest syphilis rates, followed by age 20-24, age 45+, and age 15-19 (Fig. 124).

Fig. 122. Incidence Rates, Syphilis, Montgomery County, Maryland, and U.S., 2012-16

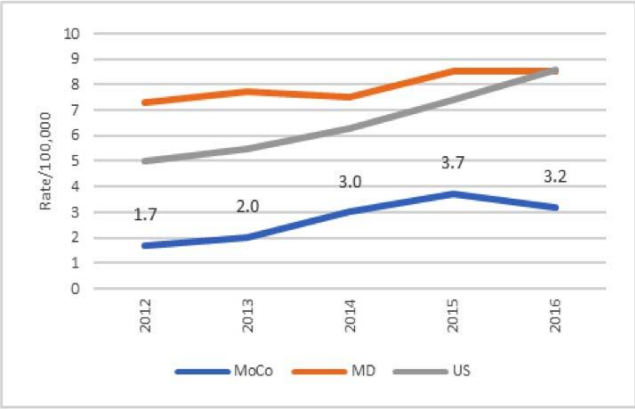


Fig. 123. Incidence Rates by Sex and Race/Ethnicity, Syphilis, Montgomery County, 2012-16

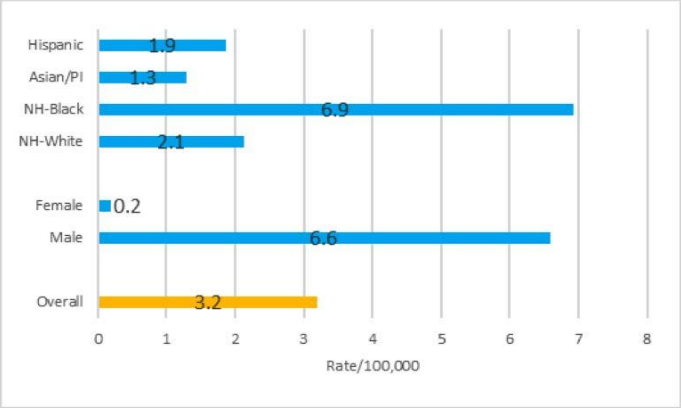
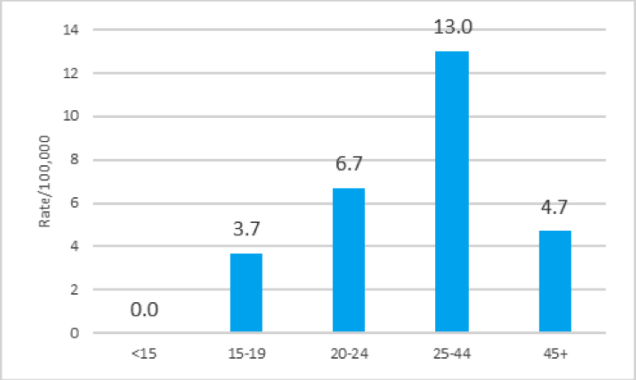


Fig. 124. Incidence Rates by Age, Syphilis, Montgomery County, 2012-16



Healthy People 2020

251.9 new Gonorrhea cases per 100,000 female population 15-44 yrs old
194.8 new Gonorrhea cases per 100,000 male population 15-44 yrs old
1.3 new Syphilis cases per 100,000 female population
6.7 new Syphilis cases per 100,000 male population

HIV

- HIV rates decreased over time in Montgomery County, similar to those in Maryland and the U.S.; the rates in the County were consistently lower than Maryland but higher than the U.S. (Fig. 125).
- Among population subgroups, NH-Black had the highest HIV rates, followed by Hispanic, and NH-White; females had higher rates than males (Fig. 126).

Fig. 125. Incidence Rates, HIV, Montgomery County, Maryland, and U.S., 2012-16

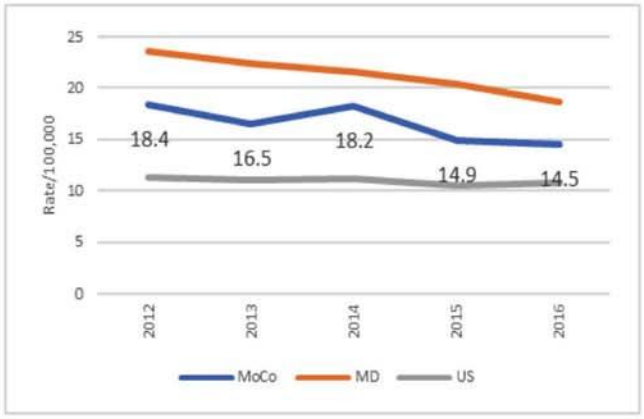
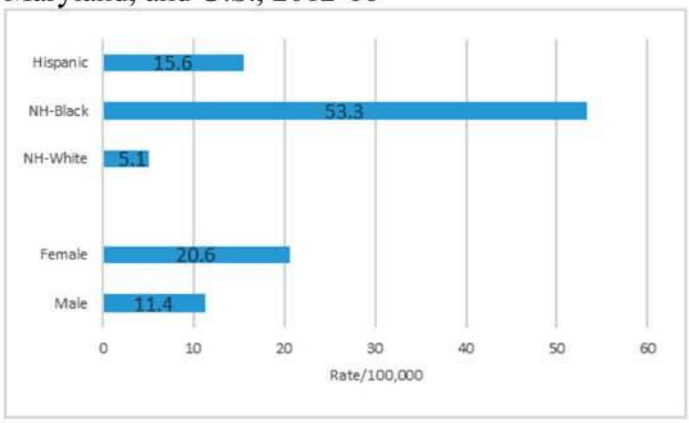


Fig. 126. Incidence Rates by Sex and Race/Ethnicity, HIV, Montgomery County, Maryland, and U.S., 2012-16



Immunization

- Maryland had higher coverage rates for all required childhood immunizations than the U.S.; data at the County level are not available (Table 22).
- Maryland had lower coverage rates for HPV immunization among adolescents aged 13-17 years old than the U.S. since 2014; data at the County level are not available (Table 23).
- Among population subgroups, Hispanic group had the highest coverage for adolescent HPV immunization, followed by NH-Black, Asian/PI, and NH-White (Table 23).

Table 22. Immunization Coverage for Selected Vaccines by Age 24 Months, Maryland and U.S., 2014

	3+DTaP	3+Polio	1+MMR	3+Hib	3+HepB	1+Var	3+PCV	1+HepA	Rotavirus	Combined 3-vaccine series
MD	96.9±2.9	96.8±2.9	94.5±3.3	96.9±2.9	92.4±4.0	92.6±4.4	93.3±4.7	86.2±5.7	81.9±6.6	81.5±7.1
US	94.0±0.8	92.5±0.9	89.5±1.0	91.9±0.9	90.9±0.9	88.9±1.0	92.1±0.9	81.6±1.2	71.7±1.6	78.5±1.3

Table 23. Coverage with >=1 HPV Vaccine for Adolescents Aged 13-17 Years, Maryland and U.S., 2014-16

		2013	2014	2015	2016
MD		45.7 (44.3-47.1)	50.6 (49.3-52.0)	56.1 (54.9-57.4)	60.4 (59.2-61.6)
US	All	42.0 (34.5-49.8)	52.3 (45.3-59.1)	60.3 (53.7-66.7)	64.5 (58.1-70.5)
	NH-White				54.7 (53.3-56.1)
	NH-Black				65.9 (62.6-69.2)
	Asian/PI				62.5 (55.9-69.1)
	Hispanic				69.8 (66.7-72.9)

- Source: National Immunization Survey (NIS), Center for Disease Control and Prevention https://www.cdc.gov/vaccines/imz-managers/coverage/nis/child/index.html

50.7% (95% CI: 45.8-55.6) adults age 18+ have flu vaccination in last 12 months in Montgomery County, as compared to 42.9% (95% CI: 40.9-44.8) in Maryland.