First Quarter/2005
Volume 24, No. 1

West Virginia EPI-LOG

Statewide Disease Facts & Comparisons

A quarterly publication of the West Virginia Division of Surveillance and Disease Control

New meningococcal vaccine licensed

On January 17, 2005 sanofi pasteur, the vaccines business of the Sanofi-Aventis Group, announced that the U.S. Food and Drug Administration (FDA) has licensed Menactra™ (Meningococcal [Groups A, C, Y and W-135] Conjugate Vaccine) for protection against meningococcal disease in adolescents and adults aged 11-55 years. Menactra vaccine is the first quadrivalent conjugate vaccine licensed in the U.S. for the prevention of meningococcal disease and is designed to offer protection against four serogroups of Neisseria meningitidis (A, C, Y, W-135), the bacterium that causes meningococcal infection.

The U.S. Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP) currently recommends that Menactra, also known as MCV4, be routinely administered for 11-12 year olds, 15 year olds, and 18 year olds residing in dormitories. MCV4 will be available through West Virginia's Vaccines for Children (VFC) program beginning in July, 2005.

*(See **Vaccine**, page 4)*

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WEST VIRGINIA Department of Health & Human Resources
West Virginia Bureau for Public Health

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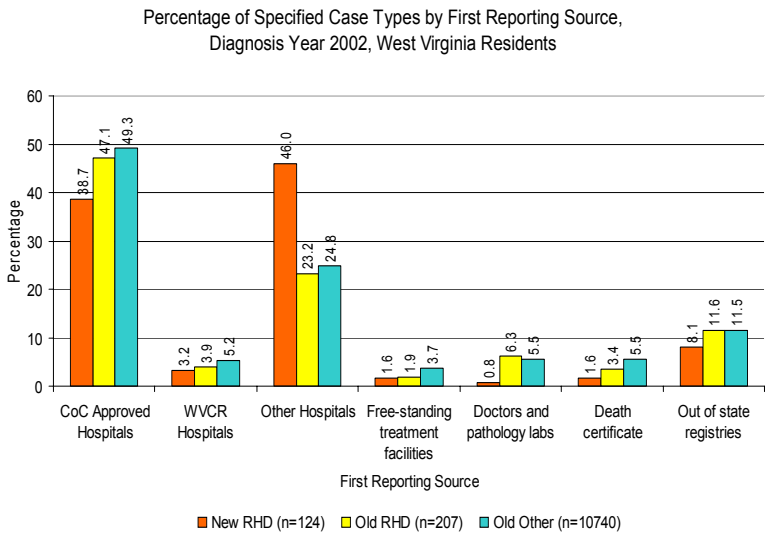
West Virginia Cancer Registry assists in CDC audit of hematological diseases

The Third Edition of the World Health Organization's International Classification of Diseases for Oncology (ICD-O-3) was released in 2000 for use with diagnoses starting in 2001 and included changes of certain hematologic disorders, including polycythemia vera, chronic myleproliferative disorder, essential thrombocythemia and refractory anemia, from borderline to malignant. These changes reflect the increased understanding of cytogenetics in leukemia including the importance of distinguishing between de novo leukemias and those that arise out of other disorders. Because the new RHDs tend to be diagnosed and treated on an outpatient basis, CDC and other agencies are concerned about the completeness and quality of the new RHD data. National Program of Cancer Registries (NPCR) states were invited to submit proposals for inclusion in the audit. West Virginia, Arkansas and Nebraska were selected.



As a part of its proposal, the West Virginia Cancer Registry (WVCR) undertook an extensive analysis of the new RHDs. For diagnosis year 2001, 107 of the new RHDs were reported for West Virginia residents and 124 were reported for diagnosis year 2002. As shown in the upper chart on this page, the new RHDs differ from both old RHDs as well as other old reportable malignancies (only 3 "new other" malignancies were reported in West Virginia residents for 2002; they will not be further discussed here) with respect to the first reporting source. For example, nearly half (46.0%) of the new RHDs were reported by hospital-based registries in non-Commission on Cancer (CoC) approved facilities, compared to less than one-quarter of old RHDs (23.2%) and old other malignancies (24.8%). Conversely, although nearly half (49.3%) of the old other malignancies and old RHDs (47.1%) were initially reported by C0C-approved facilities, less than 2 in 5 (38.7%) of the new RHDs were. (Note: "WVCR hospitals" refers to hospitals at which WVCR staff abstract. WVCR staff also abstract the free-standing facilities, pathology lab reports and physician reports.)

Moreover, as seen in the lower chart on this page, cases of the new RHDs are more likely than cases of old RHDs or old other malignancies to be diagnosed at the initial reporting facility but treated elsewhere.

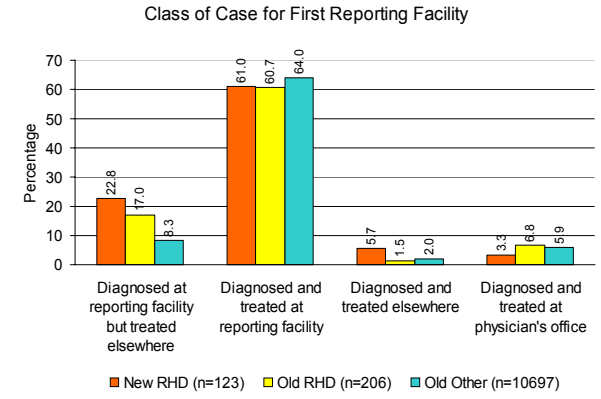


Table 1 (see page 3) summarizes other differences among the new RHD, old RHD and old other malignancies as they are reported to the West Virginia Cancer Registry. As may be seen, almost all (99.2%) of the new RHDs were reported by only one facility/reporter. There was a greater lag between diagnosis and reporting for new RHDs, and the initial reporting facility was more likely to be in the case home county for new RHDs. The latter is consistent with the observed older mean age of new RHD

*(See **RHD**, page 3)*

(**RHD**, *continued from page 2)*

cases, as in West Virginia, older persons are more likely to be seen in facilities closer to their homes (51.7% of West Virginians 80 years of age or older who were diagnosed with any malignancy in 2002 were seen in a facility in their home county) than are children and youth (13.2% of 0 to 19 year-olds were seen in a facility in their home county) or even middle aged (43.1% of 50 to 64 year-olds were seen in their home county) persons.

TABLE 1: Comparison of New RHD, Old RHD and Old Other Malignancies Diagnosed in 2002 and Reported to the West Virginia Cancer Registry

	New RHDs	Old RHDs	Old Others
Percentage provided by only one reporter/reporting facility	99.2	84.1	78.6
Mean number of days from diagnosis until report received by WVCR	373.6	357.9	348.1
Percentage for which initial reporting facility is in case county of residence at diagnosis (excluding cases for which death certificate, physician or path lab is first source)	61.3	40.1	44.6
Mean age at diagnosis in years	70	61.8	65.7

Table 2 (below) summarizes the reported treatments. Less than one-sixth (16.1%) of the cases of new RHDs had reported treatments, compared to nearly three-quarters (72.7%) of old other malignancies. While this is consistent with the observation that new RHDs are more likely to be diagnosed at the reporting facility but treated elsewhere, the magnitude of the difference in reporting facilities does not seem to be sufficient to account for the entire difference and the likely role of outpatient treatment at primary providers (e.g., phlebotomy) should be considered.

TABLE 2: Clomparison of Treatment Information for New RHD, Old RHD and Old Other Malignancies Diagnosed in 2002 and Reported to the West Virginia Cancer Registry

	New RHDs	Old EHDs	Old Others
Percentage with any treatment reported	16.1	41.5	72.7
Percentage with chemotherapy reported	8.9	40.1	19.2
Percentage with biologic response modifier reported	3.2	4.0	1.4
Percentage with "other" treatment reported (e.g. phlebotomy)	5.6	2.0	0.3

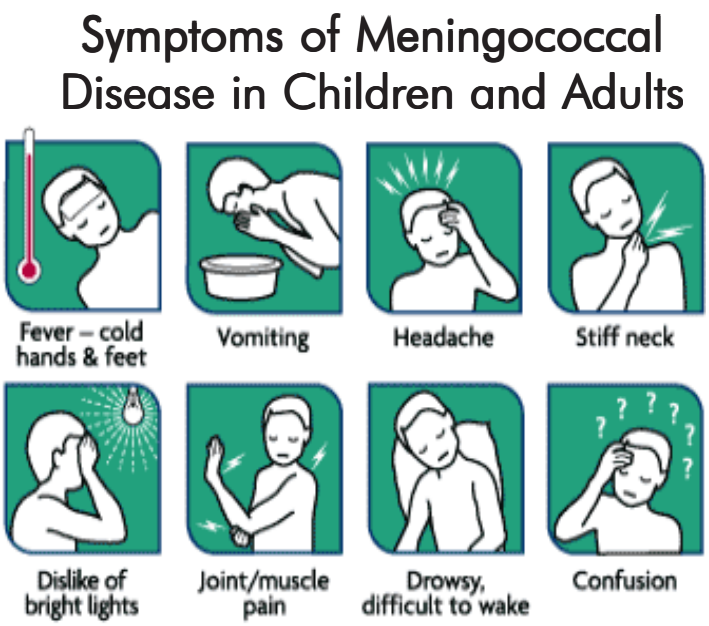
*(**Vaccine**, continued from page 1)*

Although meningococcal disease rates are highest in infants, rates begin to rise again in early adolescence and peak between the ages of 15 and 24. During the 1990s, one study reported substantially increased incidence among 15- to 24-year-olds. In addition to the increased incidence, the fatality rate was over 22 percent in this age group, over five times that seen in younger persons. Up to 83 percent of the cases reported in this study were caused by the potentially vaccine-preventable serogroups that are included in Menactra vaccine.

The FDA's decision to license Menactra vaccine was based on safety and immunogenicity data from six pivotal studies, which included more than 7,500 adolescents and adults receiving Menactra vaccine. Menactra vaccine induced the production of functional antibodies specific to the capsular polysaccharides of the four serogroups (A, C, Y and W-135) found in the vaccine. All vaccine immunogenicity measurements demonstrated strong immune responses to a single dose of Menactra vaccine that were equivalent to a single dose of sanofi pasteur's Menomune®-A/C/Y/W-135 (Meningococcal Polysaccharide Vaccine, Groups A, C, Y and W-135 Combined). Additional findings demonstrated 98 to 100 percent of seronegative adolescents were found to elicit four-fold increases in antibody titers to all four meningococcal serogroups. In seronegative adults, this range was 91 to 100 percent.

The benefits of a successful conjugate vaccine include improved duration of protection, induction of immunologic memory, booster responses and reduction in nasopharyngeal bacterial carriage. These characteristics have been recognized with Haemophilus influenzae type b (Hib) and Streptococcus pneumonaie conjugate (Prevnar) vaccines. Meningococcal disease is a rare but serious bacterial infection that strikes between 1,500 and 3,400 Americans every year, causing meningitis or sepsis in the majority of cases. Approximately 10 percent of individuals who contract meningococcal disease will die. Of those who survive, up to one in five suffer permanent disabilities such as hearing loss, neurological damage and limb amputations. Meningococcal disease often begins with symptoms that can be mistaken for common viral illnesses, such as the flu. But unlike more common infections, meningococcal disease can progress very rapidly and kill an otherwise healthy young person in 48 hours or less.

Menactra vaccine is contraindicated in persons with known hypersensitivity to any component of the vaccine or to latex, which is used in the vial stopper.



*The **West Virginia EPI-LOG** is published quarterly by the West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Epidemiology & Health Promotion, Division of Surveillance and Disease Control. Graphic layout by Chuck Anziulewicz. Please call the Division of Surveillance & Disease Control at (304) 558-5358 if you need additional information regarding any article or information in this issue, or if you have suggested ideas you would like to contribute for a future issue.*