



Epidemiologic Notes & Reports

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Vaccine Supply Shortages

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The National Immunization Program (NIP) provided the Advisory Committee on Immunization Practices (ACIP) a status report on the vaccine supply for the United States. The salient points of this presentation are summarized below. Comments on recommendations and other programmatic issues which may have been affected by the current vaccine supply situation are included.

Aventis Pasteur is now the only national producer of tetanus and diphtheria toxoids (Td) vaccine. All decisions about the Td supply are made by Aventis Pasteur. Tetanus is the limiting factor in production of the following: diphtheria and tetanus toxoids and acellular pertussis (DTaP); Td; tetanus toxoid (TT); diphtheria and tetanus toxoids (DT); diphtheria and tetanus toxoids and acellular pertussis with Haemophilus influenzae type B (DTaP/Hib).

Td demand exceeds supply. It takes about 11 months to produce Td. NIP has been assured that Aventis Pasteur is capable of meeting national emergencies. A return to the routine recommended schedule for Td boosters may occur in late 2002.

Current Td Recommendations

Current recommendations for Td use are: 1) persons traveling to a country where the risk for diphtheria is high; 2) persons requiring tetanus vaccination for prophylaxis in wound management; 3) persons who have received fewer than 3 doses of any vaccine containing Td; and 4) pregnant women who have not been vaccinated with Td during the preceding 10 years. For persons with three or more doses of tetanus toxoid-containing vaccine and severe or contaminated wounds, Td should be given only if five or more years have passed since the last dose of tetanus toxoid-containing vaccine. Td boosters for adolescents and adults (who do not fall into at least one of the four categories listed above) should be deferred.

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Since thimerosal preservative was removed from DTaP vaccine, production has been less efficient. Priority should be given to vaccinating infants with the initial three DTaP doses, since pertussis is most severe among children less than one year of age. The fourth dose of DTaP should be deferred and, if deferring the fourth DTaP dose still does not provide enough vaccine to vaccinate infants with three DTaP doses, then the fifth DTaP dose can be deferred. A return to the routine recommended schedule for DTaP may not occur in 2002.

Rapid implementation in the public sector, demand exceeding manufacturing projections, and Good Manufacturing Practice issues have contributed to the pneumococcal conjugate vaccine (Prevnar) shortage. Supply fluctuations are anticipated to continue. Wyeth-Lederle states production for 2002 will soon meet the demand, although inventory may not be sufficient to return to the routine recommended schedule for Prevnar before mid-year 2002.

The ACIP is also recommending prioritizing the use of limited supplies of varicella vaccine. The ACIP recommends that, while the shortage persists, all vaccine providers in the United States should delay vaccination of children 12 to 18 months. Until the shortage is over, varicella should be given at the 18-24 month visit. The reason behind the shortage is unclear. The duration of the shortage is uncertain, but likely to last until early summer.

Although, to date, the Kentucky Immunization Program has not experienced a shortage of measles, mumps and rubella (MMR) vaccine, other states have. Merck predicts a significant supply increase during the spring of 2002. No adjustments to the routine recommended

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schedule for MMR, in Kentucky, are anticipated at this time. However, if providers are unable to obtain sufficient amounts of MMR vaccine to implement fully ACIP recommendations for MMR vaccination, ACIP recommends that they defer the second dose of measles containing vaccine. Because of the severity of measles in young children, providers should not delay administration of the first dose of the MMR series.

Haemophilus influenzae type B (Hib), hepatitis B (HEP B) and combination HEP B/Hib may experience some delays through May. Some shortages may be from one manufacturer and not another. No changes are anticipated for recommendations related to these vaccines.

If providers have insufficient quantities of vaccines, supply and administration should be managed as mentioned above. When routine immunizations are deferred, a Provisional Immunization Certificate may be issued. The Provisional Immunization Certificate should be issued for no more than one year. The Centers for Disease Control and Prevention (CDC) recommends that health-care providers and/or clinic personnel record the names of patients whose immunizations are delayed during the shortage. When supplies are restored, these patients should be notified to return to their health-care provider for vaccination.

Announcing:

45th Annual Maternal & Child Health Conference

The Kentucky Department for Public Health, Division of Adult and Child Health, would like to announce dates for the 2002 Maternal and Child Health Conference. This annual conference will be held in Louisville at the Galt House on Wednesday and Thursday, September 18 and 19. Please mark your calendars.



All those who attended last year's conference will receive registration information in June. If you did not attend last year, please call Marie Withrow at 502-564-2154, or email her at marie.withrow@mail.state.ky.us to be put on the mailing list.

Topics this year will include low birth weight and prematurity, mental health issues for women and children, family health, children with special health care needs, childhood nutrition/weight management, early childhood development, and other topics relating to improved health outcomes for women and children in Kentucky.

Emergency Responder Safety Is Focus of New Report

Many emergency response workers do not believe they are adequately prepared to respond to a major disaster such as the World Trade Center Attack or the anthrax scare, according to a new report of worker input funded by the Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Safety and Health (NIOSH).

The report shows a need for research, training, and other strategic approaches to help protect emergency responders in terrorist attacks. The recommendations are based on lessons learned from last September's attacks on the World Trade Center and the Pentagon and on the 1995 bombing of the Alfred P. Murrah Federal Building in Oklahoma City.

The report summarizes discussions from a two-day workshop held in December 2001 in New York City.

The report highlights the need for a research agenda to outline comprehensive personal protective technology and improved federal education and training programs and other activities pertaining to the health and safety of emergency responders in rescue, recovery, and restoration efforts.

According to the recommendations included in the report, important areas for research and planning include:

- Development of guidelines for selection and use of appropriate personal protective equipment in long-duration disaster response and bio-terrorism response.
- Research and planning to effectively outfit all responders at sites of large-scale incidents with appropriate personal protective equipment, and to facilitate standardization and inter-operability

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Hospital Discharges to Home Health Agencies in Kentucky

By
Tricia Williams, MPA

The following analysis of information about discharges to home health care was made from year 2000 hospitalization data collected by the Health Policy Development Branch, Division of Epidemiology & Health Planning, Kentucky Department for Public Health.

During 2000, there were more than 500,000 admissions to Kentucky hospitals. Of those, 32,539 (6.14%) were discharged to home health services. Overall, Kentucky home health agencies served 99,130 patients during 2000¹, the lowest number of patients served in the last six years. Of all home health patients served, 34% had been discharged from the hospital to home health care².

Gender of Patients

Of patients discharged from the hospital to home health care, almost 60% were women. (Table 1.)

Table 1.

Gender	Number of Patients	Percentage of Patients
Female	19,153	58.9%
Male	13,386	41.1%

Age of Patients

As expected, most of the patients discharged from the hospital to home health care were elderly. Almost half (49.61%) were over age 70. Children made up only 4.52% of these cases, and most of those were under age 4. (Table 2.)

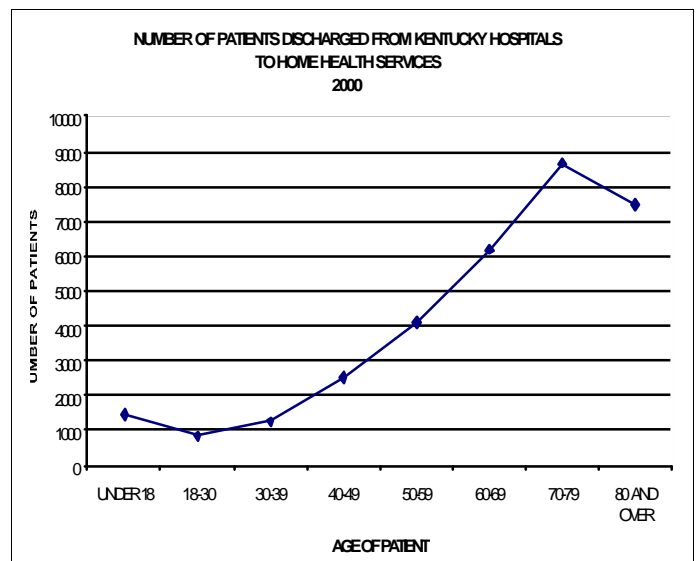
Table 2.

Age Group	Number of Patients	Percentage of Patients
Under 18	1,467	4.52
18-29	840	2.58
30-39	1,252	3.84
40-49	2,535	7.79
50-59	4,118	12.66
60-69	6,182	19.00
70-79	8,660	26.61
80 and Over	7,485	23.00
TOTAL	32,539	100.00

On average, males in this population were younger than females, but remained hospitalized for a longer period of time before being discharged to home health care. The average age of female patients discharged to home health services was 67 and the average stay was 7.48 days. For males, the average age was 61.7 years and the average length of stay was 8.06.

The following age distribution chart shows that the number of patients discharged to home health services increases as patient age increases (with the largest number of cases in the 70-79 age group), until a decrease occurs in the over 80 group. (Figure 1.)

Figure 1.



There are at least two explanations for the decrease among those 80 and over. During 2000 fewer persons in that age group were hospitalized than in the 70-79 group. While persons between 70 and 79 accounted for 85,844 admissions, those 80 and over numbered 70,691 for the year. Additionally, patients 80 and over were discharged to long-term care facilities more often than those in any other category (30% of patients 80 and older). At the same time, 12.5% of patients 70-79 were discharged to long-term care.

Medical Diagnostic Category (MDC)

All patients were classified into one of 25 medical diagnostic categories (MDC). The most frequent medical diagnostic designation was diseases and disorders of the circulatory system (22.9%). That

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diagnostic category was followed in frequency by diseases and disorders of the respiratory system (16.7%) and diseases of the musculoskeletal system and connective tissue (11.8%). (Table 3.)

Table 3.

Medical Diagnostic Category	Number of Patients	Percentage of Patients
Disease & Disorders of the Nervous System	2,008	6.17
Disease & Disorders of the eye	26	0.08
Disease & Disorders of the ear, nose, mouth	288	0.89
Disease & Disorders of respiratory system	5,446	16.74
Disease & Disorders of circulatory system	7,459	22.92
Disease & Disorders of digestive system	2,789	8.57
Disease & Disorders of hepatobiliary	693	2.13
Disease & Disorders of musculoskeletal system & connective tissue	3,839	11.80
Disease & Disorders of skin, subcutaneous tissue & breast	1,259	3.87
Endocrine, nutritional & metabolic disease	1,494	4.59
Disease & Disorders of kidney and urinary	1,437	4.42
Disease & Disorders of male reproductive	116	0.36
Disease & Disorders of female reproductive	223	0.69
Pregnancy, childbirth & the puerperium	165	0.51
Newborns & other neonates with condition originating in perinatal period	911	2.80
Disease & Disorders of blood, blood forming organs, immunology disorders	321	0.99
Myeloproliferative disease & disorders, poorly differentiated neoplasm	587	1.80
Infectious & parasitic diseases, systemic or unspecified sites	1,079	3.32
Mental diseases & disorders	262	0.81
Alcohol/drug use & alcohol/drug induced	59	0.18
Injuries, poisonings & toxic effects of drugs	398	1.22
Burns	63	0.19
Factors influencing health status & other contacts with health services	1,449	4.45
Multiple significant trauma	129	0.40
Human Immunodeficiency virus infections	39	.12
TOTAL	32,539	100.02*

*Total > 100.00% due to rounding.

Payor Source

Medicare most often paid for hospital visits of patients who were discharged to home health care. The program was the primary payor for more than 61% of these patients. Medicaid paid for 9.7% of these hospital visits; patients paid for hospital visits themselves in 2.51% of the cases. (Table 4.)

Table 4.

Payor	Number of Patients	Percentage of Patients
Medicare	19,959	61.34
Medicaid	3,157	9.70
Commercial Insurance	7,505	23.06
Self Pay	816	2.51
Other	604	1.86
Workers Compensation	277	0.85
Other Federal Program	162	0.50
CHAMPUS*	59	0.18
TOTAL	32,539	100.00

*Currently Tricare/CHAMPUS.

Hospital Comparison

Hospitals that owned home health agencies discharged their patients to home health services 34.3% more often than hospitals that did not own them. Hospitals owning home health agencies discharged 6.73% of total discharges to home health services. Hospitals that did not own these services discharged 5.01% of total discharges to home health agencies. (Table 5.) Analysis of frequencies of discharges produces an odds ratio of 1.38 (95%CI, 1.34 to 1.41) indicating that hospitals that own home health agencies are 1.38 times more likely to discharge a patient to home health services than are those hospitals that do not own home health agencies. This difference does not necessarily indicate inconsistencies in patient care. Further analysis is needed to determine why these differences exist.

Table 5.

Hospital Type	Total Discharges	Discharges to Home Health	% of Total to Home Health
Owns Home Health Service	342,466	23,078	6.73
Does Not Own Home Health Service	188,869	9,426	5.01
All Hospitals	529,774	32,539	6.14

References

- 2000 Kentucky Home Health Services Report, Health Policy Development Branch, Kentucky Department for Public Health.
- 2000 Kentucky Hospital Discharge Data, Health Policy Development Branch, Kentucky Department for Public Health.

Campaign Targets Antimicrobial Resistance Prevention

The Centers for Disease Control and Prevention (CDC) has launched a new campaign aimed at clinicians to prevent antimicrobial resistance in healthcare settings. Entitled "Prevent Antimicrobial Resistance," the effort centers around four key strategies:

- 1) preventing infection
- 2) diagnosing and treating infection effectively
- 3) using antimicrobials wisely
- 4) preventing transmission of drug-resistant pathogens

Within these strategies are 12 specific action steps (derived from evidenced-based guidelines and recommendations already developed by CDC and other organizations) that clinicians can take now to prevent antimicrobial resistance in hospitalized adults. In the future, CDC will announce similar action steps for clinicians who care for dialysis patients, emergency room patients, obstetrical patients, critical care patients, patients in long-term care facilities, and pediatric patients.

The action steps for clinicians who provide care for hospitalized adults include:

Action Step 1: Vaccinate

- Get influenza vaccine
- Give influenza / S. pneumonia vaccine to at-risk patients before discharge

Action Step 2: Get the catheters out

- Use catheters only when essential
- Remove catheters when no longer essential

Action Step 3: Target the pathogen

- Culture the patient
- Target empiric therapy to likely pathogens
- Target definitive therapy to known pathogens

Action Step 4: Access the experts

- Consult infectious diseases experts for patients with serious infections

Action Step 5: Practice antimicrobial control

- Engage in local antimicrobial control efforts

Action Step 6: Use local data

- Know your antibiogram

Action Step 7: Treat infection, not contamination

Action Step 8: Treat infection, not colonization

Action Step 9: Know when to say "no" to vanco(myacin)

Action Step 10: Stop antimicrobial treatment

- When infection is treated or unlikely

Action Step 11: Isolate the pathogen

- Use standard infection control precautions
- Contain infectious body fluids (airborne/droplet/contact precautions)
- When in doubt, consult infection control experts

Action Step 12: Break the chain of contagion

- Stay home when you are sick
- Keep your hands clean
- Set an example!

Antimicrobial resistant infections in healthcare settings are a major threat to patient safety. Each year in the United States an estimated 2 million hospitalized people acquire infections that result in more 90,000 deaths. More than half of these infections are caused by bacteria that are resistant to at least one of the antimicrobials commonly used to treat those infections, according to CDC. "We are confident that this campaign will help prevent the emergence and spread of antimicrobial resistance in healthcare settings and make healthcare in the United States even safer than it is today," said Dr. Julie Gerberding, director of CDC's program to promote healthcare quality.

Emergency Responder Safety Report

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- of protective equipment among emergency responder organizations.
- Development of guidelines and procedures to enforce the use of personal protective equipment at large-scale disaster sites, and to establish effective site management as early as possible in disaster response.
- Identifying ways to provide useful, real-time safety and health information to responders at incident sites, and to ensure appropriate training on the use of personal protective equipment.

More than 150 participants, representing fire fighters, fire fighting special operations, emergency medical services, law enforcement, construction and other trade services, and health and safety professionals (including state and federal agencies) took part in the workshop.

The report will be accessible from the NIOSH website at www.cdc.gov/niosh.

*—Courtesy of the Centers for Disease Control and Prevention
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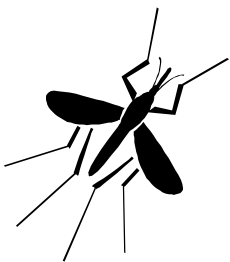
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RETURN SERVICE REQUESTED

Division of Laboratory Services Discontinues Testing for Beta Hemolytic Streptococci

Effective May 15, 2002, testing for Beta Hemolytic Streptococci Group A (Strep Throat) will no longer be provided by the Division of Laboratory Services (DLS). Rapid tests and culture (if needed) are available for testing at the local level. These tests can provide results for patient management. The number of specimens received at the DLS for Strep A testing has declined to a point that it is no longer deemed feasible or cost effective to continue offering the test.



West Nile Virus Surveillance

West Nile virus was identified in birds, horses, or mosquito pools in 12 Kentucky counties in 2001. To view the distribution of positive West Nile specimens, go to the KDPH web page on West Nile virus at http://chs.state.ky.us/publichealth/west_nile_virus.htm. Surveillance of dead birds, mosquito pools, and horse cases for West Nile virus will continue in 2002 to document the movement of the virus. Human cases of any suspected arboviral encephalitis are reportable diseases and testing of acute and convalescent samples is necessary for diagnosis.

Suspected Human Cases—Serology samples may be sent to the KDPH Division of Laboratory Services for West Nile virus, St. Louis Encephalitis virus, LaCrosse virus, and Eastern Equine Encephalitis virus testing. For assistance with submissions call 502-564-4446, ext. 4484.

The University of Kentucky Livestock Disease Diagnostic Center (UKLDDC) is providing West Nile virus testing on equine tissues from suspected neurological cases, on dead birds, and on the mosquito pools collected from designated areas of the state.

To report or submit dead birds, please call the Division of Fish and Wildlife Resources at 1-800-858-1549, ext. 352. The division will assess whether the specimen should be tested and then provide information on submission of the specimen.

For West Nile information, contact Sue Billings, DVM, MSPH, or Cathy Mahl, RS, in the Division of Epidemiology and Health Planning at 502-564-3418.