

*Updates and Information from Rex Healthcare and Rex
Outreach*

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**New chart
report for
microbiology**

Beginning in February 1998, **inpatient** charts will have a new cumulative microbiology report printed on blue paper. The report will include all of the microbiology data for the current admission combined in one report. A new microbiology report will be printed each day any culture ordered on that patient has been updated. These reports will be printed and distributed in the evening along with the pink general lab reports.

The reports will be sent to the appropriate nursing stations. Patient care personnel will be responsible for removing and discarding the previously charted blue microbiology pages and replacing them with the new pages. The date the report was printed can be seen at the bottom of the page and should be monitored to verify that the chart has the most up to date report.

The format of the new microbiology chart report is similar to the reports you get through inquiry on the hospital information system. The reports will include all results and will list the interpretation of antibiotic susceptibility results for individual bacteria as follows:

susceptible - the infection may be appropriately treated with the dosage of antimicrobial agent recommended for that type of infection and infecting species.

intermediate - treatment may require higher than the usually attainable blood and tissue levels of the antibiotic. Clinical efficacy may be achieved in body sites where the drugs are physiologically concentrated (e.g., quinolones and beta-lactams in urine) or when a higher than normal dosage is used.

resistant - the bacteria are not inhibited by the usually achievable systemic concentration of the agent with normal dosage.

The new chart report will not include the MIC (minimal inhibitory

concentration). These numbers are available from the laboratory in those instances when the clinician wishes to determine the level of resistance and needs to use this information to adjust the dosage. To get the MIC results telephone extension 3051. A special report will be provided for that culture only.

Note: Outpatient microbiology reports will not change.

Please let us know if you have any comments or additional recommendations for this report.

*Karl T. Kleeman, PhD
Sheila McMahan, MT(ASCP)*

Laboratory Accreditation Status

Several months ago, the physician office laboratories owned by Rex Healthcare were awarded accreditation for laboratory services by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). This accreditation is effective until March 15, 1999. Rex Hospital Laboratory and all point-of-care testing in the hospital are accredited by the College of American Pathologists (CAP). The hospital will be undergoing its next CAP laboratory inspection in August, 1998.

Karen Sanderson

March Teleconference on Using Critical Pathways

On March 17 at 2:00PM in the Laboratory Conference Room, the laboratory will host an ASCP teleconference, *Using Critical Pathways to Demonstrate the Laboratory's Impact on Patient Outcomes*. The teleconference speaker is Dr. Lemuel J. Bowie, Director of Clinical Laboratories for Evanston Hospital in Evanston, Illinois. He shares Evanston Hospital's experience using critical pathways to track the impact of laboratory testing. Critical pathways can be used to quantify both financial and quality outcomes, and document the laboratory's contribution to cost reductions and quality improvement. He outlines the process for developing these pathways, the support required, and the critical factors for success. There is no charge for attending this teleconference and visitors are welcome. ASCP suggests that participants should have a working familiarity with financial management tools (e.g. budgets, cost accounting) for laboratories. For more information, contact Karen Sanderson at 783-3396.

Karen Sanderson

CSF and Urine Bacterial Antigen Tests Discontinued

In the September, 1997 issue of the Laboratory Bulletin, we provided data related to the lack of clinical utility for direct bacterial antigen tests on CSF and urine.

Bacterial antigen tests have been used to supplement standard procedures

for the diagnosis of bacterial meningitis. Published data have shown that these tests add little or nothing to what can be learned from a combination of CSF chemistry, cell count, and Gram stain for the diagnosis of bacterial meningitis¹. In addition, false positive tests may lengthen hospital stays, prolong antibiotic therapy, and in some cases lead to clinical complications¹.

In a paper published in June of 1995, Dr. Reller and associates from Duke reported on a 10 month review of bacterial antigen tests on CSF performed at Duke and a private specialty pediatric hospital. They reported that "All latex true-positive cerebrospinal fluid samples showed the causative microorganism by Gram stain. Detailed chart review of the 57 positive samples showed that the latex result was false-positive in 31 (54%), true positive in 22 (38%), and indeterminate in 4 (7%). Therapy was not altered on the basis of any of the true-positive LA results. The 31 false-positive results led to additional cost, prolonged hospitalization, and some clinical complications." They conclude that their retrospective study does not support the current use of Latex rapid bacterial antigen detection tests².

Based on this review of the literature and data collected at Rex, Rex Laboratory will no longer offer bacterial antigen tests on CSF or urine.

In special cases where the CSF cell count is abnormal and the Gram stain is negative, if warranted, bacterial antigen tests may be ordered as and will be sent to Wake Medical Center for testing.

¹*Clinically Relevant, Cost-Effective Clinical Microbiology*, Michael L Wilson, MD, **American Journal of Clinical Pathology**, February, 1997.

²*Rapid Bacterial Antigen Detection Is Not Clinically Useful*, Barth Reller et al, **Journal of Clinical Microbiology**, June, 1995.

Karl T. Kleeman, PhD

Robert B. Brainard, Ph.D. Announces Retirement

January, 1998 will be the final month for Dr. Brainard at the Rex Laboratory. Bob has been with Rex since 1971, when Dr. Albert Chasson hired him away from Iowa State University to assist with the implementation and maintenance of Technicon SMA 12/60 Autoanalysers and other emerging technologies. He soon involved himself with all aspects of the Chemistry Laboratory. In addition to maintaining the Technicon, he studied the market availability of other instrumentation, worked on the contract terms, unpacked the instruments, did the initial functional studies, developed the quality control program, verified the normal ranges, and trained the technical staff. For many of the instruments, he was responsible for maintenance, troubleshooting and repair. In the area of manual chemistry, he implemented and documented the procedures, reviewed the quality control and trained personnel. In fact, he retained technical proficiency of a few manual tests, especially the more esoteric, such as the lecithin/ sphingomyelin ratio. His biochemical and research

background facilitated the adaptation of chemical procedures to the new automated environment.

Over time, Dr. Brainard developed expertise in other areas as the laboratory's functions have evolved. He has monitored laboratory safety for the laboratory as a whole and served on the hospital safety committee for many years. Compliance with Federal and Accreditation Standards has been a focus of attention, specifically CLIA, OSHA, and CAP. More recently he took it upon himself to assist in the development of a hospital-wide point of care testing program and continues to monitor the quality of the work being performed. He was instrumental in the development of flow cytometry services, thin layer chromatography, gas chromatography, and radioisotope methodologies at Rex. He played key roles in the administration of the Same Day Surgery Laboratory and the Cancer Center Laboratory.

It is clear that Bob's involvement with the scientific aspects of Laboratory Medicine have been important and essential. However, we shall miss most his dry humor, sage philosophy and his Midwestern ethics. He leaves a legacy of integrity, dedication to duty, loyalty to the hospital, dogged determination and quiet insight. We shall miss Bob; we have profited substantially because of his presence and his high moral standards.

The entire staff of the Rex Hospital Laboratory

For further information, call the Laboratory (783-3040). Telephone extensions are: Pathologists' Direct Line (3201), Dr. Brainard (3056), Dr. Kleeman (3063), Sharon Logue (Lab Director 3055), Robin Ivosic (Core Lab Manager 3053), Linda Lompa (Blood Services Manager 785-4770), Kimberly Skelding (Customer Services Manager 3318), Rex Outreach (783-3040), Karen Sanderson (Lab Compliance Specialist 3396).