

COLOR TV TO TRAIN MEDICAL STUDENTS

New System, Aimed at Better Surgical Teaching, Installed at Kansas University

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KANSAS CITY, Kan., Nov. 24—

A color television system for daily undergraduate and post-graduate medical instruction will be placed in operation next week by the University of Kansas School of Medicine at the Medical Center here.

Dr. Paul W. Schafer, Professor and Chairman of the Department of Surgery, said center officials believed the color system was the first of its kind permanently installed in any medical school in the world. He recalled that there had been demonstrations of color TV from operating rooms at medical conventions but said the school was unaware of any permanent installations.

After two years of experimenting with black and white TV, which had been installed with state funds, the Medical Center converted to color to insure better surgical teaching of both students and teachers. The conversion to color cost approximately \$15,000 in private funds. The original black and white closed system cost \$27,000, including redesigning school facilities and some equipment.

A demonstration for faculty members, other physicians and surgeons, educators, technical personnel and electronic engineers from this region will be given Thursday. The following day the first of regularly scheduled medical programs will be televised.

A tentative program for the winter quarter of 1951-52, extending through Feb. 19, has been made flexible to permit the viewing of any cases of unusual interest.

Details Sharply Lined

Dr. Schafer described the color system as a milestone in the history of education, medical or otherwise. He said many surgical topics could be illustrated only in life rather than by dead models or lantern slides and that color made possible fine differentiation of tissues. In addition, he pointed out, viewers easily can distinguish nerves from arteries or tendons, as they cannot in the varying shades of gray produced in black and white.

He said plans already were under way to project television on a theatre-sized screen in an auditorium.

"We've felt our way for two years," he said. "There have been many problems to solve and these involve not only equipment installation but changes in the whole surgical curriculum to best utilize TV."

The equipment at the Medical Center is the result of cooperation among the university, Remington Rand, Inc., the Columbia Broadcasting System, whose TV color system is used, and the Wilmot-Castle Light Company.

Dr. Schafer said many medical schools had requested information on the University's system and requested trained personnel. Several schools, he said, were using results at the university as the basis for new installations.

The one TV camera at the university is mounted on a specially constructed operating-room light above the surgical table in the largest surgical amphitheatre of the school. It can be turned to any angle and has a three-lens turret. Each lens can be focused from a master control room.

Voices Also Carried

Monitoring equipment is housed in an adjacent room, from which radiates a coaxial cable, laid in conduits, to teaching areas of the medical center. These include two large auditoriums in the outpatient building and a conference room.

The receivers are twelve-inch console type with magnifiers, which enables thirty to forty students to view the operative field. The receiver also reproduces the voice of the operating surgeon. His audience can ask questions on the two-way sound system.

An additional installation using headsets enables the teachers at the transmitting and receiving

ends to communicate privately. Thus the instructor at the receiving end can guide the operating surgeon.

A further extension of this "private line" or "silent cable" to the surgical offices of the center permits "academic monitoring" by older professors of surgery when newer instructors are operating and lecturing.

This was designed to promote better teaching. Students will not be aware of any suggestions or criticism from the surgical offices.

Junior medical students studying surgery will be required to attend an hour and a half session of color TV teaching each morning for five days a week of the eleven weeks spent on surgery. An elective program will continue until noon for students free to attend.

The first surgical post-graduate course has been scheduled for January. School officials believe that color TV is particularly suited for post-graduate work because new operative techniques may be shown to surgeons.

The center has on its staff two

electronic engineers and several technicians to operate the TV system. More will be needed, Dr. Schafer said, as the techniques are refined and more equipment is put into operation. He said it was hoped eventually to have a four-camera system.

While the engineers have been learning to master their new work, the surgeon-teachers have become experienced in their new teaching role. They also have learned how to keep their hands and instruments from obstructing the camera's view.