

THE APPLICATION OF LAMINAR AIRFLOW TO SURGICAL OPERATING ROOMS

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Dr. John Whitcomb, pioneer in the application of laminar airflow to surgical operating rooms, was unable to participate in this conference. Dr. Whitcomb kindly provided us with the following summary of his experiences.

The effort and cooperation of the Sandia Corporation, Envirco and the entire staff of the Bataan Memorial Hospital, all of Albuquerque, New Mexico, made it possible to design and install our first, vertical, laminar airflow operating room (Figure 1). This room has been in continuous operation since 3 January 1966, and this note reports on our infection rate and clinical surveillance program in this facility.

Clinical Surveillance Program: For the past 54 months we have been recording our rate of surgical wound infection and the following table gives these results.

VERTICAL LAMINAR FLOW OPERATING ROOM
(October 1966 - March 1971)
(54 Months)

<u>Room No.</u>	<u>Operations</u>	<u>Infections</u>	<u>% Rate</u>
1 (Laminar flow)	3,408	27	0.79
2 (Control)	4,162	39	0.93
3 (Control)	4,091	46	1.14

These figures are collected on a monthly basis as a confidential report form that lists the operations done for a specific month by a specific surgeon. The surgeon is asked to grade the operation as a clean or contaminated procedure and then to state the outcome of the wound healing. Tabulation of these figures is done by the operating room secretary. Notations are never entered in the patient's clinical chart; we feel that this form of reporting gets the fullest cooperation from our surgical staff.

Horizontal Laminar Flow Operating Room: New construction has just been completed at the Bataan Memorial Hospital and we are now ready to put into use our first, horizontal, laminar flow operating room. It is a large 20 ft x 26 ft room with the filter bank across the narrow, inner wall. The room will be used for orthopedic surgery concerned with prosthetic implants and for open-heart surgery.

Figure 2 is a photograph of the room taken from the entry way.



Figure 1 - First Vertical Laminar Flow Operating Room, Bataan Memorial Hospital, Albuquerque

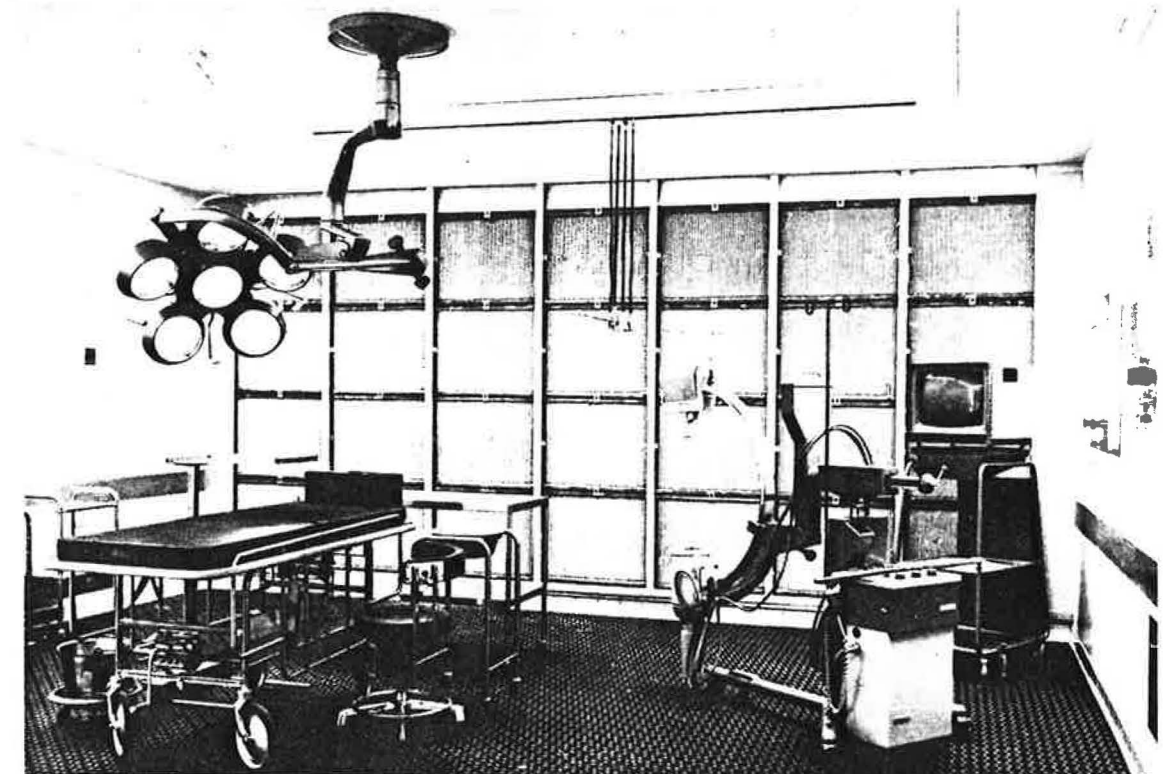


Figure 2 - New Horizontal Laminar Flow Operating Room at Bataan Memorial Hospital

Mr. Sivinski:

Good morning, ladies and gentlemen. If you will take your seats, we will begin.

We did have a lavalier type microphone here yesterday which is not here today, and the only reason it might become important is because we will have two speakers who will give very short talks from this area this morning.

Two of the people on the panel would like to make a statement. This is how we will start out this morning. Dr. Amstutz and Dr. Leinbach have very short presentations; we will then move the panel members up onto the stage for the forum. We will then address the questions which were given to us yesterday and some of those which were given to us this morning. When I asked you to leave the questions yesterday, you answered in spades. We certainly had more questions than we can even begin to cope with this morning, so what we have done--with your permission--is that we have doled them out to the people on the panel who had some degree of competence to answer them. We tried to lump them into generic type questions and hopefully each author will get a chance to answer at least two of the generic type questions. By the time we get around twice to each one of the speakers, we believe that we will have answered 99.9% of the questions, at least in general, that you people have asked, and if we have additional time, then we will begin to go through the others in detail. We decided this was really probably the way we could most profitably spend the time this morning. We may not necessarily use the question the way you worded it, but hopefully you will see your question in the generic one that the panelist is trying to answer from the group this morning.

Dr. Amstutz is here this morning, and we will start out with a short presentation by him. Dr. Harlan C. Amstutz is the Professor in Chief of Orthopedic Surgery of the UCLA College of Medicine in Los Angeles. He has just come back from a meeting that has some bearing on what we are trying to do here and I understand he might make a comment or two about it during the course of his talk this morning.

Dr. Amstutz.

ASEPSIS AND THE OPERATING ROOM

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