

## An interview with Warren Sturgis, RBP, FBPA

President of the Association, Schmidt Laureate, Fellow, Award Winning Producer—as important as these are to describe Warren Sturgis, none of them really have anything to do with how I met him. Like following the brook to the parent lake, I came to him through his films. The clarity and purposefulness of his vision makes his productions as valuable today as when they were conceived—some of them as much as 25 years ago. We still use several of them in our curriculum at Ohio State, as do medical schools all over the world. As soon as you can, see one of Warren's films—but in the meantime, please meet the acknowledged Dean of medical cinema producers—Warren Sturgis.

*C. Allen Shaffer, RBP, AIMBI*

*AS: You began your career as a medical student—then what happened?*

*WS: Medical school and I mutually and amicably agreed to part company in 1938—a decision I was never to regret. Little could I have foretold right then, however, that the three factors in my life—educational and family background, photographic hobby and two years medical study would combine as they did to lead me into the field of my life work—medical audiovisual education. As I now look back, there were two distinct aspects of this occupation which required almost equal amounts of my time and effort. One was actual production, working on the numberless films on a wide variety of subjects which came under my purview over the years. The other line of interest to be pursued was keeping abreast of progress in the movement surrounding use of films and their integration into the whole process of medical education. As a corollary to these interests, there was my pleasure through personal involvement in a number of ways, in working toward the goals of BPA and sharing information and ideas with other members.*

*AS: How would you define this profession of yours—medical communication?*

*WS: I think it was well defined by Dr. Eric W. Martin (formerly Director of Communication of Lederle Laboratories) as “the art and science of transferring medical images and concepts from the mind of one person who has the information to the minds of those who need it. How to achieve this transfer most efficiently is the job of the medical communicator, who acts as a bridge between the transmitter and the receiver of medical knowledge; he functions as a mental midwife in the birth of modern approaches to health care.”*

*AS: How did you first hear of medical photography and media production?*

*WS: While at Harvard Medical School I had viewed color footage of surgery made by an orthopedist. I had been impressed on the spot. Here was a new medium for instruction, whereby many students at once could see and learn from procedures realistically presented.*

With this impression still in the back of my mind, news later came to me quite by accident that a photographer at Massachusetts General Hospital was filming a research study, visually recording reaction times of Myasthenia Gravis patients after injections of the then new drug, prostigmin. I have always believed the news was a bit of true serendipity, as it presented the prospect of combining the three basic factors of my interests: photography, medicine, and education—the underlying purpose. I became a partner in this project, and thus was involved in my first medical filming. From then on I knew I would be devoted to this occupation or, as I think it can be rightfully termed—profession, throughout my active life; a conclusion which proved to be quite true.

*AS: What were some of your first projects?*

*WS: I sought out first professors at the medical school as potential clients. I was imbued at the outset with the con-*



Warren Sturgis pictured here with C. Allen Shaffer.

viction that most aspects of medical science could benefit by a visual approach to communication of techniques or principles. Happily some of those approached were receptive to my ideas, and continuing the partnership that had been set up we produced films on subjects like training of diabetic patients, principles of operating room asepsis, epidemiologic routines to combat diphtheria, and of course a few standard surgical procedures. Probably the most intriguing memory of those years is that of being pressed into service as the obstetrician in the film "Normal Delivery on District," when the hospital resident assigned by the professor was taken ill at the last moment.

*AS: Was this work in BW or color?*

WS: By now all shooting was done in color, and my old Filmo had been supplanted by the new Cine-Special. When sound could be added to 16mm prints, this innovation was widely adopted. In the case of most technical films, voice-over narration was recorded in a studio.

*AS: How did you become interested in BPA?*

WS: Through photographic contacts I made at this time I met Ferd Harding, photographer at Boston's Children's Hospital, who first told me about BPA. The advantages of belonging to an organization of one's peers, where experience was shared with others through meetings and journal papers, were so obvious that I joined as a member in 1939. As so well documented by Lou Gibson, we know how Ralph Creer arranged a gathering of medical photographers at Yale Medical School in 1930 where our association was formed, with Ralph as first President. Prominent in promoting the principles and reputation of the new organization was Louis Schmidt from New York's Rockefeller Institute, who became BPA's second President and for whom our top award is named.

*AS: The next few years were wide ranging for you—both commercial and government work, but all medically related if I recall?*

WS: I myself moved to New York City before long, engaged as a medical con-

sultant in the production department of The March Of Time, which was then producing monthly documentary films on subjects of current interest for national distribution. The experience gained from working in a large commercial production outfit made my year with MOT an invaluable experience. However, when I had the opportunity of heading my own department, I went to the American Film Center. Chief among the projects with which I was entrusted was an entire production for the Tennessee Valley Authority, titled "Malaria Control in the TVA," one of the most interesting and diversified subjects I have ever tackled. We covered methods of disease prevention, ecologic and environmental problems, public health surveys, etc. I went high, hanging out the open window of a Piper Cub for aerial photos, and low to include cinemacography illustrating the life cycle of the anopheles mosquito. The picture ended with a final on-camera endorsement of the program by the then Surgeon General of the U.S., Dr. Thomas Parran.

*AS: What did wartime bring for Warren Sturgis?*

WS: In 1941, with war seemingly inevitable, I decided to join the Armed Services and the Navy commissioned me an Ensign in their Medical Corps to make training films—although of what the officials were not quite sure. Nevertheless, at the old Naval Hospital in Washington I was given a modicum of film equipment, and a couple of corpsmen were assigned to make up my unit. A few first-aid films were made at the start, and we participated in a series on V.D. prevention. Our unit was loaned to the American Red Cross, for whom I directed "Liberty's Lifestream," narrated live by Eric Severeid, and distributed widely for the purpose of increasing blood donations.

Occasional surgical films were requested; I well remember that my first one in that ancient operating room was a disaster. Summoned "on the double" to photograph a hypophysectomy, and hurriedly pushing my camera-laden tripod into position, its front leg caught in a deep furrow of the old tiles and the Cine-Special catapulted forward and down onto the floor barely missing the patient!

In the spring of 1942 I filmed the

dedication by President Roosevelt of the new Naval Medical Center in Bethesda, Maryland. Here my department was expanded in personnel and activities, since it had become obvious that hurry-up training for all Navy personnel was a necessity. My unit now included a film editor and an artist to execute graphics and simple animation. With better facilities now we produced films on patient care for medical corpsmen, and many clinical and surgical procedures for Officers of the Medical and Dental School. In addition to other resources, the research facilities of the Navy's Photo Lab at Anacostia were made available to us for some high-speed studies of the effects of trauma.

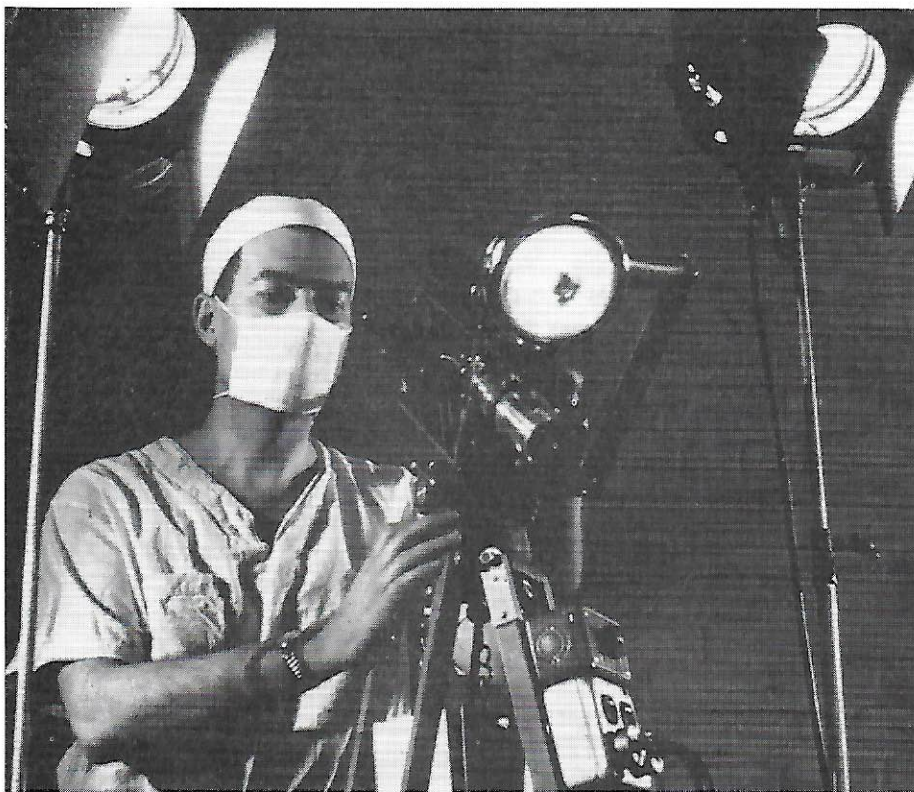
The teaching film program of the Navy's BuMed continued to expand in its many Naval Hospitals, and I made several trips to survey and report on the activities in other installations. On one detached duty assignment my unit was involved in a series of procedures for treating wounds, filmed on a destroyer off Portland, Maine. Another trip took me to a Marine Corps base in Virginia to direct a project termed "The Medical Department in Amphibious Assault."

Meanwhile, in Washington, Ralph Creer was organizing units of medical army photographers (called "MAMAS") for overseas duty. This gave both of us the chance of arranging mutual staff visits back and forth, and thus sharing in each other's experiences and ideas.

*AS: After the war, your concepts for promoting medical cinematography received a "mixed review" as you travelled around—did some not like the idea?*

WS: I found that the thought of "teaching with film" was still too new for most of the institutions I visited. In Chicago I luckily met Merv LaRue, fellow BPA member and long-time active participant in medical film production. I helped Merv in setting up the projection program for the American College of Surgeons, which had espoused the idea of films for teaching purposes as far back as 1912. Meanwhile, the surgical supply house of Davis & Geck was working to provide films for selection by the College. (These efforts led to the "Cine Clinics" at ACS Meetings, sponsored by D. & G. from 1950.) Film Re-





Warren Sturgis early in his career as a medical cinematographer/producer.

view Departments were now being organized by many of the associations, chief among which was that of the American Medical Association to which Ralph Creer came as Director, a position he held for many years.

*AS: How did your company, Sturgis-Grant Productions, get its start?*

WS: Returning to New York, and while waiting like Mr. Micauber for something to turn up, a medical project was fortuitously dropped in my lap. It seems that a large pharmaceutical house (Schering) was prepared to sponsor a film on the menstrual cycle, with my brother who was a Professor of Gynecology at Harvard as technical advisor. Was I interested? How could I be otherwise than excited at the prospect; I had no trouble securing the enthusiastic interest of Dwinell Grant, an expert animation artist I knew, and thus a company was formed which became Sturgis-Grant Productions.

The company operation began with the use of my old Cine Special; even for animation it was tied down to a jerry-built stand. Since our first film, "The Physiology of Normal Menstruation"

was 90% animation, Grant took charge of this production. A third staff member, recruited for his experience, took care of the books. Since this one project was obviously not enough on which to build a company, my job was to go out and beat the bushes to secure more clients. We printed a promotional leaflet of our aims at the time, which actually remained the same through the life of the company; "To advise, assist and work with members of the medical and allied professions, and the technical or commercial organizations connected with them, in the production of audiovisual aids of the highest quality at a reasonable cost."

*AS: I have been told that your company was one of the pioneers in this type of production—did that make it difficult to get going?*

WS: In 1948 there was not yet a great deal of competition in commercial production of medical films. It took a lot of effort, involving an immense amount of correspondence, personal interviews, and lengthy presentations of specific ideas for films before we were accepted by established medical associations, or

were able to convince the ethical pharmaceutical industry that our ideas could get their messages over effectively.

Of course a number of other photographers were now turning toward independent production plans on their own, having become converts to medical audiovisual instruction while in the services. And many individuals joined BPA, which was mounting a membership drive. But I was not alone in forming an organization for the purposes of production. Merv LaRue had been set up for some time in Chicago and Billy Burke was making fine surgical films on the West Coast, where Bob Churchill and Sy Wexler had also teamed up in a production company. In New York, the Medical Film Guild offered a wide-variety of services.

*AS: Besides the BPA, what other similarly organized activities began in those years?*

WS: Two sister organizations of ours, HESCA and AMI, were growing in importance and in membership. The three of us have joined in several three part, "federated" meetings, although a plan for formal federation never came to fruition. In our own association more and more films were being made, and being submitted to the Salon at BPA Annual Meetings. A Motion Picture Committee had been established, under which we assumed responsibility for outlining the requirements for submission and judging of these films. Many of us wrote articles on different aspects of the subject, and courses of instruction sprang up here and there. (Jack Beiter took small groups of students in Rochester, N.Y., The Calvin Company gave several two- or three-day workshops in Kansas City, and BPA Chapters put on workshop courses as we did for several years in New York City.) Then there was the Medical Film Institute (later Audiovisual Institute) under Dr. David Ruhe, which lasted but a few years as did the Film Council of America. However, several independent film councils still exist, whose programs often include medical subjects as do those of the American Medical Writers Association.

*AS: Did you maintain your interest in BPA through your busiest years?*



WS: Definitely. My work towards growth and change of our association was a continuing factor in my life from the start, as I watched us grow in stature, with the inauguration of the Certification Program; and in democratic structure, as the House of Delegates was instituted. However, one other organization with which I became affiliated, and to which I devoted much time, was ASFA—the American Science Film Association. Started many years ago by Dr. Randall Whaley, it was reborn in the decade of 1960, when it again flourished under the efforts of Dr. Whaley as its President. As a board of working trustees drawn from various scientific disciplines, we mounted national meetings and published a newsletter as well as monographs on audiovisual subjects. In 1965, we were host to the international organization, ISFA, at a five-day meeting in Philadelphia which attracted representatives from distant countries in Europe and Asia. Although a small number of directors spent much effort working for its success, ASFA regrettably had to close up shop for lack of members to provide sufficient financial support.

AS: *Did you find new ways to teach medical filmmaking?*

WS: As a member at one time of many of the varied groups I have mentioned, I found it always a challenge to discuss the educational film from my specialized angle when asked to give a paper; for by using a little ingenuity in the presentation the attention of the audience could be held. Thus for the AMI I demonstrated how animation is planned, and the steps in carrying it out. For AMWA I wrote and directed a comedy skit in the form of a dialogue about films as Shakespeare might have written it. And at one BPA Workshop, I had a detailed script on injection technique prepared in advance. With assistance from an M.D. member and volunteers from the audience, I shot the action scene-by-scene, to demonstrate how such a picture actually is constructed and then photographed. The developed film was projected and discussed the next day in a follow-up workshop to analyze the possible scheme for its editing.

AS: *I imagine many people who knew*

*only vaguely of your work asked you immediately if you "shot pictures of surgery."*

WS: Yes, of course I shot a great deal of surgery, covered practically all the operations in the book, sometimes the same type with a different approach for another surgeon. Some were important historic records, like the first portacaval shunt work of Dr. Arthur Blakemore, documentation of the early approach to correction of patent ductus arteriosus and coarctation of the aorta by Dr. George Humphreys, or the exquisite technique of ophthalmic microsurgery by Dr. Algernon Reese—all of these at New York's Columbia-Presbyterian Medical Center.

Now I do not in any sense want to denigrate the importance of surgical films as teaching vehicles, only to say that from the producer's standpoint I found these to be rather cut-and-dry types of production. That is, if one has good equipment, the intelligence to use it correctly and with good judgment, and takes time to become familiar with the particular procedure; the medical media producer should be able to come up with a good motion record—also provided that he or she has the surgeon's complete cooperation!

Assuming all these criteria are met, the extent of personal contribution that a producer can bring to the finished work is very little, if conscientious attention is given to achieving a correct script, and to exact editing. A film dealing with a clinical topic, on the other hand, one which delves into the pathophysiology as well as the diagnosis and treatment of some disease, will offer the writer/producer the stimulus to study that disease, and prepare an authoritative and interesting script for a film which will have widespread acceptance because of its educational value—if, at the same time, it is produced with care and imagination.

AS: *When you make a film, how much of your time is spent in the thinking stage, the writing and planning? And how much time actually in production, and in the finishing stage—in rough percentages?*

WS: Well, 50/50 probably, but that is very rough. The first stage runs from the inception of the idea, and being engaged either by a health association or

pharmaceutical company—there is the first contact with the technical advisor, a meeting of minds regarding an outline, a first draft, his or her corrections, and then perhaps two or three more drafts of the film script. This is, of course, the planning of a film on a clinical entity, not surgery—which is, as I explained, more or less cut and dry.

AS: *Now when you come to the actual production, actually through the entire film, you are working with this technical advisor—how do you secure that person's respect and cooperation?*

WS: I think the best way of establishing a cooperative relationship with the doctor is through understanding the procedure to be shown. A background of knowledge about the subject, after a lot of reading, makes for a good relationship from the start. Once you get this confidence and find that your ideas are being accepted, then you can try to be a little imaginative in how they can be worked out. If your partner is an animation artist, and as imaginative as Grant was, then he can make some sketches as a storyboard to indicate the visual effects. Of course, it doesn't always work—some of the most eminent scientists in their fields may be so locked into traditional thinking that they find it difficult to accept new methods of portraying their subjects.

AS: *Do you think these principles of mutual understanding, leading to cooperation in production, have changed as new methods of audiovisual presentation have been introduced over the years?*

WS: No, I wouldn't say so. But since you mention it, there have been certain interesting developments in such presentations that will be remembered by those of us who were active during the past decades, and (temporarily at least) engaged in "jumping on the bandwagon!"

We can recall the hullabaloo of excitement some years ago when magnetic film stripping was introduced. The simple recording method it provided was touted as a godsend for small units and low-budget departments, and we tried it for a few productions. However, while the idea was good, it proved to be short-lived because labs were not geared to



make multiple prints, and there weren't many projectors around which could use it.

Then came the loop film, which consisted of brief footage showing one action only and packaged in a cartridge to be attached to any projector, so it could be run over and over again. By watching it this way, a viewer was expected to translate the action to his or her own muscular movements. Psychologists called this "kinesthetic transfer." We got into the act (as did many producers) and planned a few series of such loops, but the enthusiasm for them seems to have died out.

Another radical change in technological hardware occurred when 8mm film and equipment came on the market, followed soon by Super 8. It was a cheaper medium to use than 16 mm, and more portable; also, later on, a sound strip could be added to the Super 8. But it never caught on for any widespread commercial use, being mainly taken up by amateurs.

*AS: I suppose it's logical now to ask you about the next medium for production, videotape and television. What are your thoughts, now that these methods seem to be supplanting film in many areas?*

*WS: I'm sorry, but I can't comment on this from personal experience. As newer producers changed over to tape in the 1970's, or began their work in this medium, I decided, considering the cost of totally new equipment, to bow out of production entirely. So I completed the film contracts that I had on hand (in 1975) and dissolved my company. Since then I have confined my professional activity to reviewing and writing critiques of new productions dealing with physical and mental health, most of which are now distributed in tape cassettes.*

*AS: Do you want to comment on the quality of these current productions?*

*WS: I would say generally the quality is excellent, whether the original photography was recorded on film, or as now, mainly on tape. The standards of acceptance by the viewing audiences have become higher, and the many production companies throughout the country seem to have understood this. Also, there*

seems to be money available from industry and some well-heeled health associations to back the really lavish productions we now see.

I do have a word of caution, however, for BPA members who consider that because they have acquired a camcorder they can just go out and shoot a subject in documentary fashion "off the cuff," and then think that they have made a film. I find little merit in a lot of this unplanned, unedited, raw footage of indifferent quality made only because it was simple and cheap to accomplish.

*AS: I know you have received a number of awards for the clarity and educational content of your films. Would you tell us about this?*

*WS: Naturally it was a source of satisfaction when one of our films received an ACS award, or a blue ribbon at the American Film Festival, or was accepted for showing at the AMA or by CINE. A BPA film award, or recognition at one of the many other competitions abroad was to be treasured. But, regardless of these, the most satisfactory award for me upon completing a project was the pleasant relationship and friendship often established with an outstanding scientist who acted as my client's technical advisor.*

*AS: But what does make a good film? Give us your three top items in "The Sturgis Cookbook of Medical Film."*

*WS: Well, first I would say that the subject should have validity of some sort or other. Not that it needs to be the most important subject in medicine, but a subject which is important enough to have taken the time and best energies of the intelligent people who are called on to produce the film as well as of the audience for which it is made.*

*AS: That's not a popular notion now; we find we have to dissuade people from putting the trivial on tape or film.*

*WS: Of course, an occasional scientist may have developed a little personal technique which he or she wants recorded. It may not be anything to show at a national meeting, but it may be worth documenting just as a historical record.*

A second criterion for a good film almost goes without saying; it should be

as technically excellent as possible under the circumstances of its production. While you would wish for perfection, that's not always possible. Sometimes a shot of poor quality has to be left in, because editing it out would leave a critical gap in the story being told.

Finally, of course, above all else the film must honestly depict the subject, both visually and in the accompanying narration. It must be objective in telling the truth, and nothing but the truth. Notice that I've left out the words "the whole truth" from this well-known phrase, because no motion picture can portray its subject in encyclopedic fashion!

*AS: How would you like your own work to be remembered in the history of medical cinema?*

*WS: In concrete terms, only a few specific films of the era have a place in history. The run-of-the-mill pictures played a definite role, and were important for a purpose when they were produced. Because of the reception in the field of those we followed up, we know that they achieved a relative degree of success in communicating the message of the sponsor. However, surgical techniques and recommended therapies for disease always change so rapidly that most of their portrayals have become obsolete.*

Nevertheless, a few visual records of importance should be preserved—the unusual dexterity of outstanding surgeons of the period, or the initial successes achieved with a new family of drugs, like the antibiotics, or the steroids. In addition, some teaching materials in the basic sciences still do have a place in school curricula. I am thinking of those we produced in embryology, where the data on which they were based continues to be valid. Other than these two categories, the beautifully executed artwork or the ingenious photographic skill used in telling a story, although perhaps representing enormous efforts and expense, deserve little place in perpetuity save as curios of a particular period in the annals of medicine.

*AS: And how about you yourself? Do you want to be remembered as a film producer or as a teacher of medicine?*

*WS: By now you probably know my an-*

swer. Despite my mentioning in this discussion some of the technical aspects of film production rather generally, I believe I have dwelt more on my personal role in the development of the medium through my active years giving my own ideas of its place in the sphere of medical education. So I can say that,

in helping to provide history with a few memorable pieces—as well as a large number of those mainly useless but possibly interesting curios, and in adding my two-cents worth of thoughts to the deliberations of certain educational associations, I am gratified to have been part, in a small way, of the development

of medical communication in the third quarter of this century.

*AS: On behalf of all our readers, thank you!*