

VGM Professional Careers Series

CAREERS

IN HEALTH CARE



BARBARA MARDINLY SWANSON

VGM Professional Careers Series

CAREERS

IN HEALTH CARE

BARBARA MARDINLY SWANSON



VGM Career Horizons
NTC/Contemporary Publishing Group

Library of Congress Cataloging-in-Publication Data

Swanson, Barbara Mardinly.

Careers in health care / Barbara Swanson. — 4th ed.

p. cm. — (VGM professional careers series)

Includes index.

ISBN 0-658-00071-3 (cloth) — ISBN 0-658-00072-1 (pbk.)

1. Allied health personnel—Vocational guidance—United States. 2. Medical personnel—Vocational guidance—United States. I. Title. II. Series.

R697.A4S93 2000

610.69—dc21

00-20061

CIP

Cover photograph copyright © PhotoDisc

Published by VGM Career Horizons

A division of NTC/Contemporary Publishing Group, Inc.

4255 West Touhy Avenue, Lincolnwood (Chicago), Illinois 60712-1975 U.S.A.

Copyright © 2000 by NTC/Contemporary Publishing Group, Inc.

All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of

NTC/Contemporary Publishing Group, Inc.

Printed in the United States of America

International Standard Book Number: 0-658-00071-3 (cloth)

0-658-00072-1 (paper)

CAREERS

IN HEALTH CARE

DEDICATION

This book is dedicated, with love and thanks, to my wonderful, amazing family.

ABOUT THE AUTHOR

Barbara Mardinly Swanson is a professional writer with a lifelong interest in health care and extensive knowledge of the American health care system and the services it provides. It is her abiding respect for medical professionals that motivated her to write this book.

Previous books by Barbara Swanson include *Tax Shelters: A Guide for Investors and Their Advisors* (Dow Jones-Irwin, 1982), which she co-authored with her husband, Robert E. Swanson. Her essays and poetry have appeared nationally. She is a graduate of Smith College.

PREFACE

This book was written because more than ever, students, parents, teachers, guidance counselors, new graduates, men and women seeking new careers, individuals reentering the workforce, and consumers of health care services want, need, and deserve correct, complete, current, and readable information about the myriad career options that exist in the health field today. In addition to the noble profession of physician, there are dozens of other vital and challenging ways to contribute in the health field, and it is on these professions that *Careers in Health Care* focuses.

For each career covered in this book, the following questions have been carefully researched and answered: What is the theory behind the work? What does the work entail? What is the workday like? How many men and women are in the profession? What education and training are necessary? What certification and licensure requirements exist? What personal qualities and abilities are important to success and satisfaction? What salaries and promotions may be anticipated? What, if any, drawbacks are inherent to the work? And, finally, what does the future of the profession look like?

To the thousands of health care professionals I have interviewed in the course of researching the material for this and the three previous editions of this book, who so generously and graciously shared their knowledge and time, including the good people of the American Medical Association and at CAAHEP, and to the folks at the U.S. Department of Labor, goes my sincere appreciation. And special thanks go to Roy Pollack, M.D.; Celia Ores, M.D.; David Ores, M.D.; Youngick Lee, M.D.; Lonna Yegen, M.D.; James J. Pedicano, M.D.; Goldie Alfasi-Siffert, Ph.D.; and the late Robert H. Ringewald, M.D.; for their guidance and encouragement.

Barbara Mardinly Swanson

INTRODUCTION

From television, movies, or perhaps from personal experience, we've all glimpsed the drama of the modern hospital—the fast pace of the emergency room, the methodical intensity of the operating room, the dozen pairs of educated hands setting to work to provide essential care. In a hospital there are many educated people working together to improve lives, to save lives.

Every medical recovery and every medical discovery is the product of teamwork. There are no nonessential jobs in health and medicine. And not all of the drama in modern medicine and health care takes place in the operating room. There is drama—and challenge and satisfaction, too—in the occupational therapy room of a community rehabilitation clinic, in a rural home where a nurse-midwife is helping to deliver a baby, or in a laboratory looking through an electron microscope.

There is room in the health field for almost every ability, talent, and interest. Are you artistically inclined? Then you might consider a career as an art therapist or as a medical illustrator. Are you mechanically oriented? Biomedical engineering might offer the challenges you seek. Do you enjoy working with your hands? Manual arts therapy calls for such dexterity, and so do careers in orthotics, prosthetics, and dental and ophthalmic laboratory technology. Are you interested in music? Or dance? Or gardening? Then you may find your place in music therapy or dance therapy or horticultural therapy. Do you like to write? Americans today are thirsty for medical and health-related information, and opportunities in medical writing are booming. Does photography interest you? Biological photography is a fascinating field. If you have ever considered becoming a librarian, health sciences librarianship might be the perfect specialty for you. If you love working with children, a career as a child life specialist can offer very special rewards. If you would like to work in the exciting atmosphere of a hospital but do not want direct patient care responsibility, a position as a dietitian or as a technician in the laboratory might be ideal. If you do want patient contact but do not plan to become a physician, you might consider becoming a nurse, or a surgical

technologist, or an extracorporeal perfusionist, or a physician assistant. Are sports your love? The demand for certified athletic trainers is growing fast. The options go on and on—there is even a place for magicians in medicine.

As the new millennium unfolds, one cannot help but wonder what life-enhancing and life-extending medical and health care breakthroughs await us. Soon—perhaps as soon as 2001—all of human DNA (all 120,000 or so genes) will be deciphered. Since almost every disease, mental and physical, has a genetic component, the ramifications are extraordinary. The torrent of new information and new insights will surely result in new cures, treatments, therapies, preventive interventions, and ethical considerations.

The possibilities are great and growing greater every day as new medical technologies and techniques are developed. Last year, Americans spent two trillion dollars on health care—that is 15 percent of the nation's total output of goods and services. The demand for medical services has never been greater, and the opportunities for serving are more diverse and, in most cases, more plentiful than ever before. Simultaneously, scrutiny of medical services has never been greater because the health care reform movement emphasizes cost containment in addition to successful medical outcomes.

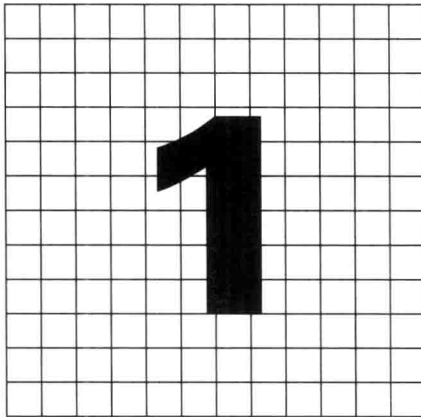
The men and women who bring their intellect, talent, and dedication to the health care field do very important work in our society. Good luck as you seek your special place among them on the health care team.

CONTENTS

About the Author	x
Preface	xi
Introduction	xii
1. Anesthesiologist Assistant	1
2. Art Therapist	4
3. Biological Photographer	8
4. Biomedical Communicator	12
5. Biomedical Engineer	16
6. Biomedical Equipment Technician	21
7. Cardiovascular Technology Personnel	26
8. Certified Athletic Trainer	30
9. Child Life Specialist	34
10. Cytotechnologist	39
11. Dance/Movement Therapist	42
12. Dental Assistant	47

13. Dental Hygienist	52
14. Dental-Laboratory Technician	55
15. Diagnostic Medical Sonographer	58
16. Dietetics Professions	62
17. Electroneurodiagnostic Technologist	68
18. Emergency Medical Technician	72
19. Food Technologist	77
20. Genetic Counselor	80
21. Health Advocate	84
22. Health Information Management Personnel	88
23. Health Sciences Librarian	95
24. Health Sociologist	98
25. Histologic Technician and Histotechnologist	101
26. Home Care Aide	105
27. Horticultural Therapist	109
28. Medical Assistant	113
29. Medical Illustrator	118
30. Medical Social Worker and Psychiatric Social Worker	122
31. Medical Technologist and Medical Laboratory Technician	127
32. Music Therapist	133
33. Nuclear Medicine Technologist	137
34. Nurse	142
35. Nurse-Midwife	156
36. Nursing Aide and Psychiatric Aide	161

37. Occupational Therapist and Occupational Therapy Assistant	164
38. Ophthalmic Laboratory Technician	169
39. Ophthalmic Medical Personnel	172
40. Optician	175
41. Optometric Technician and Optometric Assistant	178
42. Orientation and Mobility Specialist for the Blind or Visually Impaired	181
43. Orthoptist	184
44. Orthotist, Prosthetist, and Orthotic-Prosthetic Technician	187
45. Perfusionist	192
46. Pharmacist	196
47. Physical Therapist and Physical Therapist Assistant	200
48. Physician Assistant	205
49. Pulmonary Function Technologist	211
50. Radiation Therapist	214
51. Radiographer	218
52. Rehabilitation Counselor	222
53. Respiratory Therapist	228
54. Social and Human Service Assistant	233
55. Specialist in Blood Bank Technology	236
56. Speech-Language Pathologist and Audiologist	241
57. Surgical Technologist	245
58. Therapeutic Recreation Specialist	249
Index	252



ANESTHESIOLOGIST ASSISTANT

also known as
**Anesthesiology Physician Assistant,
Type B**

Anesthesiologist assistants (AAs) are health care professionals who have successfully completed an accredited program of academic and clinical training and are qualified to work under the supervision of an anesthesiologist (a physician with special residency training in anesthesiology). AAs assist in administering anesthetics to patients undergoing surgery.

Anesthesiologist assistants are to anesthesiologists what primary care physician assistants are to primary care physicians (i.e., family practitioners, pediatricians, etc.)—that is, they are *dependent* practitioners participating in a medical care team. Specific responsibilities may vary from site to site depending on the particular practice guidelines in individual hospitals and individual states. Although some AAs may participate in the pre-anesthetic evaluation, more commonly they are involved in assisting the anesthesiologist in reviewing the data available from the surgical and medical teams. In collaboration with the anesthesiologist, they participate in the induction and maintenance of anesthesia and in monitoring the patient's status during the surgical procedure.

More specifically, AAs' responsibilities may include: pretesting and calibrating anesthesia delivery systems and monitors; collecting pre-operative data and performing physical examinations; inserting venous, arterial, and other invasive catheters; administering drugs for the induction and maintenance of anesthesia; administering and monitoring regional anesthesia; airway management (including intubation, fiberoptics); administering cardiovascular drugs as support therapy; providing safe transition from operating room to recovery room; performing functions in the intensive care unit and pain unit; and participating in administrative affairs, research, and clinical instruction.

It has been the general plan that the anesthesiologist has been available in the hospital (although often not always present in the room) during all portions of the case. As a general rule, both the AA and the anesthesiologist are present at the beginning and the end of the case and at the time of major changes in the patient's status.

SETTING, SALARIES, STATISTICS

Anesthesiologist assistants work wherever anesthesiologists work: in hospitals, clinics, outpatient surgical facilities, and academic settings. AAs currently practice in thirteen states, with other states being added as the population of AAs increases. The greatest concentration of AAs is in the two states that currently have educational programs—Georgia and Ohio. There are only approximately 700 AAs at this time. Men and women are equally represented in this profession.

Salaries for anesthesiologist assistants begin in the \$60,000 to \$80,000 range.

HOW TO BECOME AN ANESTHESIOLOGIST ASSISTANT

Formal educational requirements for this field are only about fifteen years old. A master's degree specializing in anesthesia is required, and this degree is offered by only two universities at this time: Emory and Case Western Reserve, which established their programs only twenty-five years ago. Both of these programs are accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), which accredits most allied health education programs in the United States and which, in 1994, became the successor to the American Medical Association's Committee on Allied Health Education and Accreditation (CAHEA). CAAHEP is an independent body. Last year, thirty-five men and women graduated from these programs.

Applicants to a program must have premedical undergraduate backgrounds but may have college degrees in one of several areas. Typically, they are degrees in biology or chemistry or a related allied health area such as respiratory therapy, nursing, or medical technology. The age of students entering these programs ranges from those who are immediately out of college to those who have been out of college and have been working in other areas for ten to fifteen years. Over the years, approximately ten to fifteen percent of the graduates of the two programs have gone on for further graduate medical education, and the overwhelming majority of those who have gone to medical school have done residencies in anesthesiology.

Since 1992, a national certification examination for anesthesiologist assistants has been available. This examination is given by the National Commission on the Certification of Anesthesiologist Assistants (NCCAA) in collaboration with the National Board of Medical Examiners, which is the group that also assists with the national examination for primary care physician assistants.

A practicing AA who has successfully completed an educational program accredited by CAAHEP and passed this examination is designated an Anesthesiologist Assistant—Certified (AA-C). He or she, thereafter, must submit continuing education credits or certification renewal, as well as successfully complete a Continued Demonstration of Quality exam every six years.

Anesthesiologist assistants are regulated by different legislation depending on the state in which they are practicing. In some states, AAs are, by definition, qualified to be licensed as physician assistants (PAs) and, therefore, practice within

mandates set forth in the legislation for regulations governing the PAs (see Chapter 48). For example, in Georgia AAs are defined as one type of physician assistant with a corresponding appropriate job description. In these states, an AA is called an Anesthesiologist Physician Assistant, Type B (or APA). The Board of Medicine of the National Academy of Sciences (NAS) defines three categories of physician assistant—Type A, Type B, and Type C. Type A is the designation for a primary care/generalist physician assistant. A Type B assistant is distinguished by exceptional skill in one clinical specialty or, more commonly, in certain procedures within a specialty. In this area of specialty, the assistant would have a degree of skill beyond that normally possessed by a more general Type A assistant and, perhaps, beyond that normally possessed by physicians who are not engaged in the specialty. (A Type C assistant is similar to a Type A assistant in the number of areas in which he or she can perform, but he or she cannot exercise the degree of independent synthesis of information and judgment of which a Type A is capable.)

Since each state's legislation, regulations, and definitions are different, consult the medical board of the state where you intend to practice or contact the American Academy of Anesthesiologist Assistants (AAAA).

THE FUTURE

Recent graduates are much in demand, and it appears that employment in this still relatively new profession will remain stable.

For information about anesthesiologist assistants, contact:

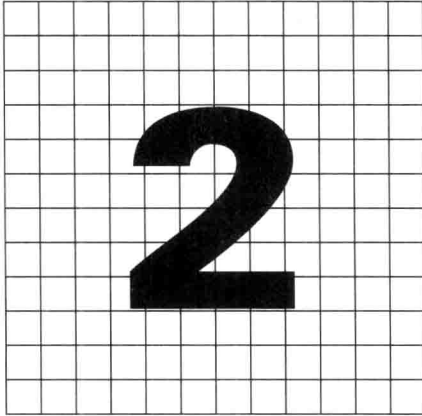
Anesthesiologist Assistant Program
Emory University
617 Woodruff Memorial Building
P.O. Box AK
Atlanta, GA 30322

Anesthesiologist Assistant Program
Case Western Reserve University
11100 Euclid Avenue, LKS 2536
Cleveland, OH 44106-5007
Msa.email@uhhs.com
www.anesth.com

American Academy of Anesthesiology Assistants (AAAA)
P.O. Box 81362
Wellesley, MA 02181-0004
www.anesthetist.org

National Commission for the Certification of AAs (NCCAA)
P.O. Box 15519
Atlanta, GA 30033-0519

ART THERAPIST



“One picture is worth more than ten thousand words” goes the Chinese proverb. For psychiatric patients whose inner turmoil has rendered them nonverbal, the pictures, patterns, and doodles they create in an art therapy session can speak volumes. Art therapy is the use of art activities as a device for nonverbal expression and communication, leading to the resolution of emotional conflicts, self-understanding, and personal growth for a wide variety of mentally and physically impaired patients. It is used as a medium for interpretation and rehabilitation with patients who are unable or unwilling to speak, as well as with those who are verbal but who use words as a defense or cover-up.

Like the other creative arts therapies (dance therapy, music therapy, psychodrama, and poetry therapy), art therapy is effective because the patient’s emotions are directly tapped and the visual expressions of the emotions—the pictures, sculptures, montages created—are often more telling than words. The feelings that are aroused and expressed when patients draw a picture of their home, family, or themselves are often more direct, more honest, and more revealing than a verbal description of their house or family or themselves can be. The colors used, the spatial arrangement of the figures included, the detail or lack of it, and the perspective, proportions, and technique are more than just the aesthetic elements of the drawing—they are reflections of how patients see the world. The patients are really drawing a map of their subconscious feelings, desires, and fears. The patients’ abilities, personalities, interests, concerns—the very nature of their emotional distress and progress—can be revealed in the artwork they create.

Art therapists are human service providers who, by virtue of their graduate-level education and extensive training in both art and psychology, are experts at involving a wide variety of patients in art activities that can help to uncover problems and bring about improvement. They may act as primary therapist or as adjunctive within the treatment team, depending on the needs of the institution and the treatment objectives of the patient.

Art therapists treat individuals, families, and groups. The vast majority (75 percent) of all patients seen by art therapists are emotionally disturbed, and individuals with physical disabilities are the second largest group (6 percent). Art therapy can also help people with mental disabilities, cancer, asthma, pain, AIDS, autism, Alzheimer's Disease, learning disabilities, hearing impairment, sight impairment, brain damage, multiple disabilities, alcohol and drug abuse, as well as individuals who have experienced sexual abuse, the elderly, and prison inmates. According to the American Art Therapy Association (AATA), approximately 40 percent of all art therapy patients are adults, 30 percent are adolescents, 22 percent are children, 6.5 percent are elderly, and 1.5 percent are infants.

Art therapists plan art activities, maintain and distribute various arts and crafts materials, provide instruction in a variety of artistic techniques, and observe and record what takes place during the art therapy session. Again, the emphasis is not on the quality of the artwork produced but on the patient's well-being. Usually, the art therapist will confer with other members of the medical health team to make the diagnosis, devise a treatment plan, and assess progress.

Art therapy offers other potential benefits. When administered to a group of patients (as when a group mural is being created), it provides an important social—and potentially socializing—opportunity. In addition, creating art can provide relaxation, pleasure, and a sense of satisfaction for anyone, but these benefits can be especially important to a patient who feels confused, victimized, or who has a low self-image.

Art therapy emerged as a profession in the 1930s. Artwork found on hospital walls and on scraps of paper found in patients' rooms early in the twentieth century piqued the curiosity of psychiatrists who collected and studied them, hoping to gain insight into the patients and their illnesses. Since then, art therapy has developed into an effective and important method of diagnosis and rehabilitation.

SETTINGS, SALARIES, STATISTICS

Art therapists work in psychiatric centers; clinics; community centers; nursing homes; drug and alcohol treatment centers; schools; halfway houses; group homes; women's shelters; prisons; development centers; residential treatment centers; general hospitals; colleges; universities; other clinical, educational, and rehabilitative settings; and in private practice. Of these settings, long- and short-term psychiatric hospitals employ the most art therapists. Community mental health centers are the second-largest employer, residential treatment centers rate third, and private practice ranks fourth. The northeastern section of the United States has the highest concentration of art therapy practitioners. Both full-time and part-time opportunities are available. Between 5,000 and 6,000 art therapists are practicing today. Approximately 1,900 of them are registered art therapists, which means that they are art therapists who have satisfied the education, experience, and other requirements of the AATA. Approximately 85 percent of all art therapists are female.

Salaries vary widely depending on credentials, employer, and state. Starting salaries are usually comparable to those paid to public school teachers holding a