

COLORADO DEPARTMENT OF REGULATORY AGENCIES
OFFICE OF POLICY AND RESEARCH

HEMODIALYSIS TECHNICIANS

1995 SUNRISE REVIEW



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1995-1996 Members**

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June 30, 1995

The Honorable Richard Mutzebaugh, Chair
Joint Legislative Sunrise/Sunset Review Committee
State Capitol Building
Denver, Colorado 80203

Dear Senator Mutzebaugh:

We have completed our evaluation of the sunrise application for licensure of **hemodialysis technicians** and are pleased to submit this written report which will be the basis for my office's oral testimony before the Sunrise and Sunset Review Committee. The report is submitted pursuant to section 24-34-104.1, Colorado Revised Statutes, 1988 Repl. Vol., (the "Sunrise Act") which provides that the Department of Regulatory Agencies shall conduct an analysis and evaluation of proposed regulation to determine whether the public needs, and would benefit from, the regulation.

The report discusses the question of whether there is a need for the regulation in order to protect the public from potential harm, whether regulation would serve to mitigate the potential harm and, whether the public can be adequately protected by other means in a more cost effective manner.

Sincerely,

Joseph A. Garcia
Executive Director

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INTRODUCTION

The Department of Regulatory Agencies (the Department) has evaluated the proposal for state certification of hemodialysis technician and R.N. training programs submitted by a dialysis patient. The proposal seeks to State certify training programs for persons involved in administering dialysis and to require the use of a certified training program in all dialysis treatment centers across Colorado. The applicant argues that patients would be protected by a certified training program, since the current training for technicians and R.N.s is at the discretion of the individual centers and, in the applicants opinion, often inadequate.

This is the third attempt of the applicant to gain State approval for certified training programs. Two previous applications were submitted and sunrise hearings were held during the 1992 and 1994 legislative interims.

In reconsidering the Department's positions on the previous two applications, the applicant's concerns and the public benefits of the proposal were evaluated. The following criteria were use in determining the Department's recommendation:

- I. Whether the unregulated practice of the occupation or profession clearly harms or endangers the health, safety or welfare of the public, whether the potential for harm is easily recognizable and not remote or dependent on tenuous argument;
- II Whether the public needs and can be reasonable expected to benefit from, an assurance of initial and continuing professional or occupational competence; and
- III. Whether the public can be adequately protected by other means in a more cost-effective manner.

Methodology

The bulk of the background material for this report was extracted from the 1992 and 1994 *Sunrise Review of Hemodialysis Technicians*, prepared by the Department. In addition, the Department contacted and interviewed the applicant, administrators and training personnel at dialysis treatment centers, patients, technicians, and representatives of ESRD Network 15. Hemodialysis licensure laws in other states were surveyed and interviews with administrators of those programs were conducted. In order to determine the number and types of complaints filed against hemodialysis technicians in Colorado, the Department contacted representatives of the ESRD Network, the Colorado Department of Public Health and Environment, and the Colorado Board of Nursing.

BACKGROUND

End-Stage Renal Disease (ESRD) occurs when an individual's kidneys lose about 95% of functional ability. In order to survive, the patient requires dialysis treatment or a kidney transplant. Dialysis removes wastes, salt, and extra water from the patient, regulates the blood for a safe level of chemicals, and assists in controlling blood pressure.

Dialysis as a life saving treatment began in the early 1960's. Currently, there are two types: peritoneal dialysis and hemodialysis. In peritoneal dialysis, wastes are filtered out of the blood across the lining of the patient's abdominal cavity. This process is usually self administered by the patient four to six times during a 24 hour period, typically in the patient's home. During hemodialysis, blood is pumped outside the body into an artificial kidney machine, called a dialyzer, which cleans the blood. Hemodialysis treatments are usually done three times a week for three to four hours at a time. For treatments, patients may go to a dialysis treatment center or learn to treat themselves at home.

Nationally, as of 1994, there were 171,391 persons receiving dialysis treatment. The number of new ESRD patients doubled from 1977 to 1987 and by the year 2000, one million people are expected to need dialysis. In 1994, 1690 Colorado residents received dialysis care. A majority of these patients will remain on dialysis for the rest of their lives with some being candidates for kidney transplants.

Request for Certification

The sunrise application for certification of hemodialysis technician and R.N. training programs was submitted by a dialysis patient. The applicant requests that either the Colorado Department of Public Health and Environment (CDPHE) or the Colorado Board of Nursing (BON) certify training programs for hemodialysis technicians and R.N.s. The applicant suggests that one of these agencies adopt rules and regulations prescribing the minimum training standards for persons employed either as hemodialysis technicians or as an R.N. providing care to dialysis patients. Each center would be required to make available to the CDPHE or the BON its training program and tests for review and approval. Facilities would be prohibited from training any new technicians or R.N.s until its training program and tests had been approved. The applicant argues that certified training programs are necessary because, in the applicants opinion, technicians are not trained properly and do not follow proper procedures when administering dialysis.

Scope of Practice

The profession of hemodialysis technicians was identified in the 1976 Federal Register, "Conditions for Coverage of Suppliers of ESRD services." At that time, the Register stated further study was needed to define allowable practices within the profession. This study has never been done and no information has been provided by the federal government on appropriate practice standards for technicians.

There are two types of hemodialysis technicians: equipment technicians, and patient care technicians. Equipment technicians perform maintenance work on dialyzers. Patient care technicians are directly responsible for patient care. This report focuses only on patient care technicians since they are directly responsible for patients. At dialysis centers, hemodialysis patient care technicians, Licensed Practical Nurses (L.P.N.s), or Registered Nurses (R.N.s) work directly with the patient. In some instances, a hemodialysis technician could be an unlicensed person, an L.P.N. or an R.N.

**Work Setting
and
Supervision**

Under authority provided in the delegatory clause of the Nurses Practice Act (§12-38-132, C.R.S.), an R.N. may delegate various tasks included in the practice of professional nursing. Under this authority, technicians perform the following functions: prepare necessary supplies, including the dialyzer; collect patient data before treatment, which includes blood pressure, pulse, weight and temperature; inspect access areas to the blood stream; administer local anesthesia and perform venipuncture (inserting needles into blood vessels); monitor the patient during treatment; respond appropriately to dialysis related emergencies; document actions and results; draw lab samples; and sanitize equipment and stations.

In Colorado, 20 hemodialysis treatment centers currently operate pursuant to §25-1-107(1)(I)(II), C.R.S., under oversight by the CDPHE. Regulations promulgated by CDPHE require that one R.N., with at least one year of experience in the area of dialysis, be in attendance in a dialysis center at all times. This R.N. is referred to as the “charge nurse.”

The facilities must comply with numerous regulations promulgated by both the CDPHE and the Federal Health Care Financing Administration (HCFA). These regulations address the safety and emergency preparedness of a center and staff, the cleanliness and infection control practices of a center, the appropriateness of the patient treatment area, the character of patient/staff interaction, and patient grievance protocols. While these regulations do not provide a standard training program for centers to follow, the regulations do require that all personnel be properly trained.

Twenty-eight hospitals also provide dialysis services for inpatients. These facilities operate under the hospital’s license rather than a dialysis center license.

Number of Practitioners

Industry members estimate the number of technicians at 250 with about 60 technicians being members of the National Association of Nephrology Technologists (NANT). The industry also estimates that approximately 200 nurses provide hemodialysis care with 100 nurses being certified by the American Nephrology Nurses Association (ANNA). There is no evidence to show that the number of technicians would be decreased if the technicians were trained under a certified training program since new technicians already participate in training.

Private Certification

At this time, there are two national certification exams offered: one by the Board of Nephrology Examiners, Inc. (BONENT) and one by the American Nephrology Nurses Association (ANNA). BONENT's tests are offered to hemodialysis technicians or nurses and to peritoneal dialysis nurses. ANNA's exam can only be taken by nephrology nurses with a current R.N. license. Both tests evaluate technical knowledge in the area of dialysis. The technician certifying test offered by BONENT has historically been taken by a small number of technicians because being nationally certified had no impact on career or pay rates. Recently, in Colorado, several dialysis facilities have recognized the importance of knowledgeable technicians by establishing salary differentials based on a technician's successful completion of a national certification process. For example, Renal Treatment Centers (RTC), owner of five facilities in Colorado, offers an exam review course for technicians, pays the exam fee, and provides a salary increase of approximately \$1,000 a year to technicians who become certified.

Education and Training

The CDPHE licenses each hemodialysis center in Colorado, but does not require a specific training regiment for technicians in individual centers. As a result, the training that a technician receives varies at each center (see Appendix B).

Generally, training structures can be described as follows. The extent of training a technician receives depends on how much experience the individual brings to the job. A very experienced person may receive two to four weeks of training, while an inexperienced person undergoes six weeks to two months of training. The educators in a center test technicians on both the theoretical and practical applications of hemodialysis. Technicians who pass the theory portions of the test are paired with an experienced R.N. for approximately one week and then are paired with another technician until able to perform duties on their own. Some centers may offer further training, encourage continuing education, and retest everyone for competency on a yearly basis. Some provide incentives and bonuses for persons who receive national certification.

Under a grant provided by AMGEN Inc., Medical Media Inc. in Madison, Wisconsin developed a comprehensive core curriculum for patient care hemodialysis technicians. This curriculum is available to all facilities. AMGEN Inc. is a pharmaceutical company that manufactures the drug EPOGEN which stimulates the development of red blood cells during dialysis.

**Rules,
Regulations,
Standards and
Statutes**

Federal Response to ESRD. The Medicare ESRD program was established in 1973 to help cover the expenses ESRD patients incur. This program is very costly with 1991 Health Care Financing Administration (HCFA) data estimating the annual Medicare expenditure for a dialysis patient at \$38,400 a year. In 1991, the estimated total spent on ESRD services by both public and private payers was \$8.59 billion. The federal government paid approximately \$6.15 billion or 72 percent. Current allowable charges in Colorado are between \$119 and \$138 per dialysis treatment per patient. Funding allowances have not increased in several years and have actually decreased in certain areas.

In order for a center to be eligible for Medicare payments, administrators and staff must comply with regulations at 42 CFR Part 405.2100, Subpart U. The CDPHE administers these federal regulations through surveys of each center. In 1995, HCFA developed a patient-centered and outcome-oriented survey protocol for state departments of health to follow when certifying and recertifying dialysis treatment centers, and when conducting investigations concerning dialysis centers.

In 1978, Congress addressed ESRD related issues by creating an ESRD Network made up of oversight organizations with responsibility for designated areas of the country. This was an effort by Congress to divide the country into groups of states and establish regional ESRD Network organizations to provide information, oversight and data collection to all dialysis patients in a given area. In 1984, Congress worked to consolidate the 32 network organizations in the U.S. to 18. Finally, with the Omnibus Budget Reconciliation Act of 1987, 18 network organizations were defined with functions to be performed. The 18 ESRD Networks are funded by the federal government through HCFA. These network organizations provide oversight to dialysis treatment facilities in all fifty states and the U.S. territories. Defined legislative responsibilities include the following:

- encourage the use of treatment settings most compatible with the successful rehabilitation of patients;

- encourage self-dialysis or transplantation for the maximum practical number of patients who are medically, socially, and psychologically suitable for such treatment;
- encourage patient and staff participation in vocational rehabilitation programs;
- provide a patient grievance mechanism;
- collect, validate, and analyze data concerning ESRD patients and their treatment;
- provide accurate, timely data to local, state, and federal government agencies and to the public; and
- develop criteria and standards relating to quality and appropriateness of patient care.

One of the most important functions of the Network organizations was laid out in Section 9335 of PL 99-509, Obra 1987, which amended section 1881 © of the Social Security Act. This Section requires ESRD Networks to implement procedures to resolve patient grievances by acting as a facilitator. Each dialysis center must inform patients of the grievance protocol and their rights and responsibilities as set forth in the ESRD Federal Regulations of June 3, 1976. Upon receiving a complaint, the ESRD Network must investigate, and if a concern is valid, the proper licensing authority within the state is notified. Because of the limited number of complaints and the resolution of these complaints, it has not been possible to evaluate the effectiveness of this reporting requirement in Colorado.

Colorado. In Colorado, all ESRD facilities must be inspected and licensed by the state prior to beginning operation. The CDPHE subsequently conducts a survey of each center in accordance with federal regulations. Currently, the federal government provides funding for center surveys to be conducted approximately every four years. As discussed earlier, in 1995 HCFA released a new survey protocol aimed at patient care and outcome. Complaints against dialysis facilities reported to the CDPHE are investigated by the Division of Health Facilities' Investigation Unit. There have been approximately nine complaints filed with the CDPHE since 1991. These complaints are discussed further on page--

The Nurse Practice Act, §12-38-132, C.R.S., states that an R.N. may delegate various tasks included in the practice of professional nursing. This allows the nursing staff in dialysis facilities to delegate specific tasks to technicians, yet the nurse remains ultimately responsible for the care provided. The nurse's license is at risk if tasks are delegated to untrained or incompetent individuals. In addition, §12-38-117, C.R.S., states the following under grounds for discipline:

(e) Has willfully or negligently acted in a manner inconsistent with the health or safety of a person under his care; and

(f) Has negligently or willfully practiced nursing in a manner which fails to meet generally accepted standards for such nursing practice;

These sections authorize the Colorado Board of Nursing to investigate any complaint against a nurse for practicing nursing beyond the nurse's scope of knowledge. Nurses are held responsible for deciding the range of their knowledge and ability and deciding their practice limitations on the basis of this information. If a consumer believes care is being provided inadequately, the consumer has an option to report such concerns to the Colorado Board of Nursing for investigation.

OTHER REGULATION

to concerns about the quality of care provided by patient care technicians by establishing a mechanism for certifying training programs and technicians. California certifies patient care technicians pursuant to the Hemodialysis Technician Training Act of 1987. This Act established minimum training standards for all facilities in the State. The program includes 80 hours of theory and direct observation of a qualified worker. Upon completion, the newly qualified hemodialysis technician or a licensed nurse must be directly supervised by an R.N. for a minimum of three treatments prior to performing independently. A hemodialysis center will then continue to provide continuing education at least semiannually. Under the Act, duties of a hemodialysis technician are limited. The technician cannot administer blood, blood products, antibiotics, albumin, insulin or mesylate, draw arterial blood gases, or initiate patient home education, which is provided by an R.N. During 1994, the California General Assembly enacted a bill that expanded the roll of the technician and provided the Board of Nursing with disciplinary power. This bill also clarified the roll of technicians. Technicians may perform a venipuncture and arterial puncture, and administer local anesthetics, heparin, and sodium chloride solutions. The board has not received any formal complaints against technicians.

New Mexico's program was implemented in March of 1990 primarily in response to the realization that patient care technicians were practicing nursing without a license. The law encouraged each center to create its own training program that would meet established minimum standards (N.M. Stat. Ann. Article III, Sec. B (1989)). These minimum standards include the participation in 80 hours of classroom study and a minimum of 160 hours of supervised clinical experience by each technician. R.N.s, with a current expertise in hemodialysis and a minimum of nine contact hours annually of continuing education in dialysis, supervise the training of all technicians. The legislation provided for a Hemodialysis Technician Training Program Advisory Committee which reviews applications for certification, conducts annual program evaluations, consults on training programs, and reports suggested changes in training programs to the Board of Nursing.

The New Mexico Board of Nursing reports that ten of the twenty-three centers in New Mexico have requested certification. The Board additionally reports that it has no authority to penalize those centers which have chosen not to participate in the certification process. During the 1993 legislative session, New Mexico's law makers established a program to certify hemodialysis technicians who initiate treatment, administer heparin, perform arterial punctures and inject anesthetics.

Two other states, Arkansas and Mississippi, have chosen to use only R.N.s in the daily roles of patient care hemodialysis technicians. They report that this decision was made because unlicensed technicians performing these functions would be in direct conflict with their Nurse Practice Acts. In Mississippi, L.P.N.s may also provide patient care, but they must be certified by the state and participate in a state certified training program.

Benefits from Regulation

The applicant suggests that certified training programs would benefit the public by:

- promoting safe and effective care of patients;
- establishing minimal standards for the evaluation and certification of technicians and R.N. training programs;
- facilitating continued certification and improvement of certified technician and R.N. training programs; and
- granting recognition and verification that a technician and R.N. training program meets the minimal standards and regulations as determined by a board such as the Colorado Board of Nursing.

If all Colorado facilities implement certified training programs, an employer of technicians and R.N.s may benefit from the knowledge that technicians and R.N.s trained at another center would possess certain skills and knowledge. However, the Department cannot assume that technicians and R.N.s would be better trained and supervised under a certified training program since the evidence does not indicate that they are currently inadequately trained or supervised.

PUBLIC HARM

The procedure of hemodialysis holds inherent risks to the patient as does many medical procedures. Treatments administered by inadequately trained persons may increase the potential for harm to the patient. The Department collected information from the Network 15, the Colorado Board of Nursing, and the CDPHE to help determine the actual harm occurring to dialysis patients.

ESRD Network. The ESRD Network received one formal grievance in 1993 concerning a Colorado center. Grievances filed with the Network are confidential, however, the Department was told that the grievance was not against a technician. The Network did not receive any formal grievances against Colorado facilities in 1991, 1992 or 1994. A representative of the Network stated that they receive and resolve many informal complaints. Many of the informal complaints concern issues such as, the patient is discouraged by lifestyle changes dialysis treatment has required or the patient does not like the personality of their care giver.

Colorado Department of Public Health and Environment. In 1994, the CDPHE received three complaints against dialysis facilities. After an investigation, two of the complaints were ruled "not valid" and the third complaint was "ruled valid with cause." None of the 1994 complaints related to technicians or their duties. In 1993, two complaints filed by the same individual concerning the same matter (the waiting room at a center was cold because of the proximity to an outside entrance) were ruled "valid." Six complaints were filed in 1992. Four of the complaints involved the cleanliness of the facilities and the abilities of the technicians. Two of these complaints were ruled "unable to verify" and two were ruled "not valid." One complaint concerned the age of dialysis machines used in a center and was ruled "not valid." The sixth complaint concerned the death of a patient in the Poudre Valley center and the individual providing dialysis care. An investigation revealed that registered nurses were providing the patient care and not technicians. Two nurses were on duty for the three patients receiving treatment. The CDPHE determined that the death was not the fault of the individuals providing care (see Appendix C).

Colorado Board of Nursing. In 1993, the Colorado Board of Nursing received one complaint against a dialysis center. The board's administrator is not aware of any other complaints ever filed with the board concerning dialysis facilities or nurses employed in these facilities. The 1993 complaint was investigated and dismissed by the BON. Dismissed complaints are not public information.

RECOMMENDATIONS

regulations, complaints filed with various agencies, and the 1992 and 1994 Department recommendations, the Department recommends that training programs for hemodialysis technicians and R.N.s not be certified. There is no indication that certified training programs would provide additional protection to dialysis patients and benefit the public. The Department has determined that the existing level of federal and state regulation, provisions of the Nurses Practice Act, and cooperation among the dialysis centers provide adequate protection to dialysis patients.

Discussion

Pursuant to Section 24-34-104.1, C.R.S., the applicants must prove the benefit to the public of their proposal for regulation according to specific criteria. Summarized below is the Department's evaluation and findings according to each of the criteria.

1. Whether the unregulated practice of the occupation or profession clearly harms or endangers the health, safety or welfare of the public, whether the potential for harm is easily recognizable and not remote or dependent on tenuous argument;

There is no question that hemodialysis is a life threatening procedure if administered improperly, however, there is no evidence to indicate that the risk would be decreased by creating a certified training program for technicians and R.N.s. The evidence does not show that the training technicians and R.N.s receive is inadequate and thereby places the patient at risk. Complaints filed with the BON, CDPHE, and the Network 15 do not indicate that technicians or R.N.s are causing harm to patients. In the case of the death at the Ft. Collins hemodialysis center, registered nurses were providing the patient care and not technicians. At the center, two nurses were on duty for the three patients receiving treatment. The CDPHE determined that the death was not the fault of the individuals providing care (see Appendix C).

After reviewing
current rules and

In addition, technicians and R.N.s currently work in a highly regulated setting. Dialysis facilities must meet numerous federal and state rules and regulations. Nurses who supervise the technicians are licensed and may be held accountable for inadequate care provided by a technician under their supervision. Physicians, who prescribe dialysis and often visit with patients in the facilities, are also licensed. Other similar professions which have no state certification or requirements in order for an individual to practice include the following: nurse aids (except those working in nursing homes), nursing assistant, surgical assistance, and medical technicians.

2. Whether the public needs and can be reasonable expected to benefit from, an assurance of initial and continuing professional or occupational competence;

As stated above, technicians work under the supervision of an R.N. in a highly regulated environment. The benefit of state certified training programs for these technicians and R.N.s is not clear since evidence does not show that training is now inadequate. California and New Mexico have had limited success with their certified training programs. Both states now certify technicians as well as training programs.

3. Whether the public can be adequately protected by other means in a more cost-effective manner.

Current Colorado statutes provide protection for dialysis patients. Nurses who delegate tasks to a technician are ultimately responsible for that technician's performance. If a technician is not following correct procedures, the delegating nurse may be held accountable and disciplined by the BON. Under federal and state regulations, the administrators of a center must ensure that the individuals providing care are adequately trained, and that the center meets regulations addressing: the safety and emergency preparedness of the center and staff, the cleanliness and infection control practices of the center, the appropriateness of the patient treatment area, the character of patient/staff interaction, and patient grievance protocols. If the center is found deficient in these or a number of other areas, the center may lose its certification to receive Medicare payments.

The federal ESRD Network is available to all patients who may have concerns about their center or care. The Network acts as a mediator to help patients resolve problems. In addition, private professional organizations such as, ANNA and BONENT, certify technicians and R.N.s involved in dialysis care. AMGEN Inc., a pharmaceutical company which manufactures the drug EPOGEN for use during dialysis, provided a grant to Medical Media Inc. to develop a training curriculum for technicians. This curriculum is available to all dialysis facilities. Finally, the Colorado Renal Administrators' Association is currently developing a core curriculum for training technicians which also may be utilized by facilities in Colorado.

APPENDICES

Appendix A

Training Programs at Dialysis Care Centers in Colorado

(Portions excerpted from the 1992 *Sunrise Review of Hemodialysis Technicians*)

AMI Presbyterian, Denver

The training varies depending on the prior experience of the individual hired. A very experienced individual, i.e. transferred directly from another hospital's dialysis center or licensed in another state, would undergo a two week course covering theory and clinical experience of how to set up the machines and what problems may occur. Then, the experienced individual would complete two weeks of hands on training. There are exams for the theory, and a clinical skills checklist monitored by an R.N. for the practical applications. Less experienced individuals undergo the same type of training in more detail, for a longer duration.

Community Dialysis Services

Students for the training program come from three main schools: Pikes Peak Community College, Baley Community College, and Denver Technical Institute. These students participate in a six week internship, always under the supervision of a head nurse or R.N. Then if hired, each technician has a three month probation period. They are given a manual for further training and complete a test at the end of each chapter.

Mile High Dialysis

Most patient technicians have had previous experience. If not, the individual is trained on the job with a preceptor and additional reading material is provided. Usually, the trainee works with an R.N. for one week, this depends on previous individual training. After this time, the student is paired with a technician until able to perform duties alone. Once a year everyone is retested for competency.

Willow Station Dialysis

A six to eight week training course is provided in this facility under the supervision of an R.N. or under the supervision of another technician. This course includes I.V. training. The students are given five quizzes and a final exam. Certification is posted and signed by the Inservice Director, the Medical Director, and the Director of Nursing.

Pikes Peak Dialysis Center

A six week training program is provided. A manual is used which includes a checklist of patient care technician functions. Initially, the student is paired with an R.N., and eventually is paired with a technician. A written post test is given at the end of the training period.

Porter Hospital

There is no actual course for training developed at this unit. They attempt to hire trained technicians, which can be further familiarized with the unit. They are interested in developing a training program in the future.

Rocky Mountain Kidney Center

The training is comprised of six weeks in the classroom and on the floor. Progress is checked through written materials, oral examination and checklists. The technicians are supervised by an R.N. at first then a trained technician. There is always an R.N. available on the floor.

Saint Luke's Hospital

Formal training sessions are provided depending on the amount of previous knowledge. If the person has a medical background, five weeks of theory and work with an R.N. is provided. If the student has no previous background, two months of training with an R.N. and technician is required.

Appendix B

Professional Organizations Relating to Dialysis

(Portions excerpted from the *1992 Sunrise Review of Hemodialysis Technicians*)

The National Association of Nephrology Technologists (NANT)

NANT's long rang plan is to develop a certification process with uniform education for all technologists. NANT was founded in May of 1983.

Board of Nephrology Examiners, Inc. (BONENT)

In existence since 1974, BONENT offers three nationally recognized exams for hemodialysis technicians or nurses and nursing peritoneal dialysis technicians. Cost is \$125 for each applicant and certification is valid for four years. There is an additional cost of \$25 for recertification.

American Nephrology Nurses Association (ANNA)

ANNA offers a certification examination for nephrology nurses with current R.N. license. The cost is \$150 for ANNA member and \$175 for nonmembers. Recertification is \$75/\$100 every three years through continuing education or re-examination. ANNA was founded in 1968.

National Kidney Foundation of Colorado Inc.

One of fifty affiliates, the National Kidney Foundation of Colorado has been operating since 1965. Fifty-two percent of contributions received by the foundation sponsor local research for answers to kidney and urinary tract diseases.

ESRD Network #15

The territory of ESRD Network #15 includes the states of Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming. One hundred and eleven renal facilities fall under Network #15. These facilities serve approximately 5,000 dialysis patients and 2,800 transplant patients. The Network is funded by the federal government Health Care Financing Administration (HCFA).

Appendix C

Summary for Public Viewing

