MEMBERS PRESENT: Chairman Robinson
Vice Chairman Prengaman
Mr. Brady
Mr. Chaney
Mr. Dini
Mr. DuBois
Mr. Jeffrey (late)
Mr. Kovacs
Mr. Rusk

MEMBERS ABSENT: Mr. Bennett (excused)
Mr. Bremner (excused)

GUESTS PRESENT: See attached guest lists.

Chairman Robinson called the meeting to order at 2:10 p.m. and asked for a committee introduction of the following:

BDR 57-1854 - regulation of health plans (AB 668)
BDR 20-54 (ACR) - urging alleviation of housing problems (ACR 43)
BDR 51-1899 - confectionery definition of adulteration (AB 667)
BDR 56-1667 - acquisition of real property
BDR 54-1985 - architects registration fees (AB 666)

Dr. Robinson explained that BDR 56-1667 is an act which is exactly opposite to one that previously passed out of committee.

Mr. Dini moved for a committee introduction and referral back to committee of the above measures excluding BDR 56-1667, seconded by Mr. Kovacs, and carried unanimously by the members present with Mr. Bennett, Mr. Bremner and Mr. Jeffrey absent at the time.

When Mr. Brady asked if there was a deadline for introduction of bills, Dr. Robinson indicated that this next weekend would be the deadline unless it was a bill to correct another bill.

Dr. Robinson informed guests that testimony on SB 231 would be limited to one hour, one-half hour for proponents and one-half hour for opponents.

SB 231: Changes various provisions of law governing physical therapists and their assistants.

Pat Conn, Chairman of the Nevada State Board of Physical Therapy Examiners, testified in favor of SB 231 by reading her prepared testimony which is attached as EXHIBIT A. In discussing SB 231 with the Medical Association, Ms. Conn indicated that their only objection was the word "psychologist" on page 8, line 25, and Ms. Conn asked that this be deleted from the bill.

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In response to Mr. Kovacs question as to how many physical therapists were in the State of Nevada, Ms. Conn said that there were approximately 130 licensed in the state but only about 80 actively working at present with the balance either inactive or practicing in other states.

Jack Close, a Physical Therapist in Las Vegas and co-director of the Physical Therapy Department at Desert Springs Hospital, said that much dialogue and compromise has taken place on this bill in order to protect the residents of the State of Nevada who desire physical therapy under the guidelines of this legislation. He related that the Hospital Association which previously opposed this bill is now in favor of the bill in its second reprint form. He noted that physical therapists have been accused of wanting to do everything from surgery to X-ray, but this is not the intent; it is only to do what they are trained to do. He indicated that the educational program for a physical therapist is a minimum of a bachelor degree and distributed a list of schools and universities offering accredited bachelor and master degree courses which is attached as EXHIBIT B pages 1 through 9.

Mr. Close testified that most remaining opposition is reference to "joint mobilization" which he defined as "movement of a joint," stating that physical therapists have been moving joints since the profession was originated some fifty years ago. He noted that they have agreed to the addition of "(without chiropratic adjustment)" on line 13, page 1 of the bill because they feel they do do things differently than a chiropractor does, but they are attempting to move joints every time a patient is exercised, and if they are prevented from moving joints, it will mean the end of their profession.

Further, Mr. Close said that referrals are being expanded to include dentistry for jaw therapy, but a dentist, as well as any physician, can only refer patients according to his specialty.

When Dr. Robinson asked if all patients must be referred by a doctor, Mr. Close replied affirmatively with the exception of emergency treatment if a medical doctor is not present.

Dr. Robinson asked if physical therapy treatment is established by the physician, and Mr. Close said that treatment formerly was prescribed by a physician but recently with the increase in ability and skill of the physical therapists a physician will write "evaluate and treat as indicated." In his department they would then provide the evaluation and recommended treatment to the physician who would usually concur.

In answer to Dr. Robinson's question about physical therapist assistants, Mr. Close indicated that this assistant was created by the national association and this program is

certified by the association in conjunction with the American Medical Association. He noted that this assistant can do the technical aspects of the profession such as hot or cold packs, massage or ultrasound; that this frees the physcial therapist for specific types of exercise, certain joint movements and other professional treatment.

When Mr. Kovacs asked if passage of this bill would improve quality of service or provide more availability, Mr. Close responded that expansion of the referral base into a physical therapy clinic will increase availability of the services; quality is maintained by peer review. He noted that this bill includes a requirement of continuing education which they feel is necessary in their rapidly changing profession.

Mr. Buzz Moore, practicing Physical Therapist in Reno with four others, pointed out that the minimum requirement for application to a physical therapy school is three years of college, but he did not know of anyone who had been accepted in the last few years without a bachelor's degree; that therapy schools have two year or more programs. As private praticing physical therapists he and his associates do not see any patients without medical referral, but they do participate in athletic contests as volunteers for screening programs for athletes in schools in conjunction with orthopedic surgeons who are team physicians. He concluded by saying that physical therapists do not want to be chiropractors, they do not practice chiropratics, they do not tell them how to run their law, but the physical therapists feel they should be able to administer and practice their own profession.

In response to Mr. Kovacs question, Mr. Moore stated that all their patients are referrals from physicians; that sometimes the physician will seek their advice as to what treatment should be given.

Mr. Rick Pugh, Executive Director of the State Medical Association, reaffirmed their support for SB 231 with the exclusion of "psychologist" on page 8.

Mr. Wayne Steed, registered physical therapist and Director of the Physical Therapy Department of Sunrise Hospital, said there was controversy and accusations that physcial therapists are trying to set themselves up as primary physicians; that the confusion stems from accusations of trying to diagnose. He noted that it categorically states in the bill on page 1, line 17, "Does not include: (a) The diagnosis of physical disabilities;" however, they do evaluate which is misconstrued as diagnosing. He referred to a manual which includes rules and regulations that must be followed by his department which requires evaluating of a patient upon referral, establishing of goals, performance of regular and frequent reassessments, and periodic assessments of the quality and pertinance of the care provided. He concluded by saying that they can only do this if they have some baseline information which is the

basis for an initial evaluation; physical therapists do not treat without referral and do not diagnose, but once a patient has been referred and the diagnosis has been made, they can then proceed with an evaluation.

Mr. David Hagen, lobbyist for the Chiropratic Association, introduced Dr. Clyde Porter, Dr. Robert Jackson, and Dr. Sam Ellis to speak in opposition to SB 231. He indicated that Dr. Porter would address education of the physical therapist.

Dr. Porter referred to a series of curricula for physical therapists offered by several schools which is attached as EXHIBIT C. He noted that none of these give specifics on test and measurement that go beyond evaluation; that on page 1, line 8, "interpretation" constitutes diagnosis. He then referred to the AMA guidelines which are included in EXHIBIT C on page 9 which he said would delineate what a physical therapist does, how he practices and under what auspices. He further stated that nowhere in these curricula in EXHIBIT C is training in joint mobilization indicated, but that chiropractors all receive at least 400 hours of training in spinal manipulation.

Dr. Porter noted that EXHIBIT C also contains curricula for medical and chiropratic courses for comparison and pointed out that, as diagnosis is implied, manipulation is implied, he would hope for proper training of physical therapists if they are going to perform these on the public. He said there is no evidence of education in the art and science of joint mobilization as there is for chiropractors and osteopaths; as the very definition of chiropratic in Nevada embodies manipulation of the joints and spine, as the degrees of chiropractors, osteopaths, medical doctors and dentists are levied to those educated to perform diagnosis and treatment, the implications and ramifications of the changes in the physical therapy laws of Nevada warrant no other alternative but complete removal of these proposed changes for the health and safety of the people of Nevada.

Dr. Porter directed the committee's attention to page 16 of EXHIBIT C and pointed out that Arkansas, California, Connecticut are all offering bachelor degree programs in physical therapy and that standard curricula is from 17 to 22 months of training; that all medical and chiropractic curricula constitute a minimum of five years in chiropractic schools plus two years in preprofessional chiropractic training.

When Mr. Brady inquired if a patient could go directly to a chiropractic doctor, Dr. Porter responded that chiropractors are primary care physicians not requiring referral.

Mr. Rusk commented that over the years the Medical Association has objected to certain areas of chiropractic medicine, but at the same time they do not object to physical therapists primarily

because they work with the patient that is referred to them which is a control factor. Mr. Rusk pointed out that joint mobilization is limited by the parenthetical phrase "without chiropractic adjustment" and questioned Dr. Porter's concern

Dr. Porter said that if that is going to be included, perhaps the State Board of Chiropractors should be allowed to enter physical therapists' offices to determine whether or not this type of treatment is being performed.

When Mr. Rusk asked if he was not satisfied with the expertise of referral by a primary physician, Dr. Porter replied negatively. In response to Mr. Rusk's comment, Dr. Porter indicated that chiropractors did have the same education as primary physicians; that the only difference in chiropractic training and medical training was in the field of surgery and drugs and that there is no hospital residency requirement.

Mr. Hagen said that Dr. Jackson would now go through the bill line by line outlining their objections.

Dr. Jackson said that on page 1, line 13 it might be clearer to specify "without spinal manipulation" because lines 17 and 18 prohibit diagnosis and the use of X-rays; that without proper physical diagnosis and X-rays to determine safety, to manually manipulate the spine could cause great harm to patients.

Mr. Conn responded affirmatively to Mr. Rusk's question as to whether joint mobilization included spinal manipulation.

Dr. Jackson continued by saying that the next concern of the educational community was on page 6, line 5, it states that the examination must include a written portion, and he felt that for the protection of the public oral and practical for demonstration of proficiency should be included. On lines 38 through 49 he knew of no provider group who allows a student or anyone without a license to practice in any office. He commented on page 7 they were pleased to see the requirement of continuing education for license renewal but he thought that there should be a statement requiring subjects in the normal physical therapy curriculum. He noted pleasure that "psycologist" was to be deleted on page 8 but displeasure with lines 27 and 28 that allow examination at an athletic event if no physician is in attendance.

In discussion the committee felt that an examination by a physical therapist would certainly be better than no examination at all.

Dr. Jackson said that on page 10, line 12, they felt that the word "direct" should be left in the bill.

Mr. Hagen referred to page 5, lines 3 through 5, saying that this could be construed as meaning that the physical therapy board

could inspect a chiropractic or medical facility where physical therapy is being performed, and although he knew that this was not the intent of the legislature, he felt this section of the bill should be rewritten.

Dr. Sam Ellis, a Chiropractic Physician in private practice in Las Vegas, President of the Chiropractic Association of Nevada, indicated great concern with SB 231 because it does not give adequate protection to the consumers of Nevada; that passage of this bill will plunge the healing arts of the state into a miasma of legalisms and subvert the attention of the health care practitioner from his business. He said that "joint mobilization" in effect grandfathers in all types of people who have no experience with joint mobilization, joint manipulation, whatsoever; that it allows a physical therapist whose experience may just be transitory, whose experience may be an eight or ten hour seminar, to perform this on the public legally. He noted that it was ironic that for years chiropractors pioneered and developed the art of joint and spinal manipulation long before the physical therapist ever came upon the scene; that there are some 16 books by the medical profession on the efficacy of spinal manipulation all derived from the original work of the chiropracters who have brought this science to practical and therapeutic knowledge. He concluded by saying that joint mobilization, the protection of the chiropractic profession, and the protection of the public are in the hands of this legislature, and that the legislature will in its wisdom take appropriate action to safeguard and protect the health consumers of the state.

When Mr. Chaney asked if the suggested changes that were made at this meeting were proposed at the Senate hearing, Mr. Hagen replied that they were but he did not know why they were not included.

Mr. Kovacs commented that there were really only three or four minor points of contention other than joint mobilization and wondered if this were negotiable. Dr. Ellis said that whatever the physical therapists wanted to do for their internal policing was their business, but they would like to know why #6 on page 5 is written like it is because they feel it is a direct threat to their office.

When Dr. Robinson asked if there had been any attempt to inspect physical therapist's offices to see if they were wrongly using joint manipulation, Dr. Porter responded that the board has had some minor complaints, that they only respond to specific complaints and there were none at this time.

Dr. Eugene Scrivner, State Board of Examiners and lobbyist for the State Board, said that he had been practicing joint manipulation for thirty years, not just on the spine but every joint in the body; that chiropractors are doctors, not just spinal technicians.

When Mr. Rusk asked what joint mobilization Dr. Scrivner did outside of chiropratic adjustment, Dr. Scrivner said that he can do joint manipulation on all joints in the human body. Mr. Rusk then asked if he meant that joint manipulation can not be done without chiropractic adjustment, and Dr. Scrivner said that many people do joint manipulation but the law specifically says that the primary health physician is allowed to do this because of the education requirements. He added that in an oral, practical examination applicants must show him the type of treatment they are using on a joint, orthopedic tests, neurological tests on all joints. When a patient comes to him, Dr. Scrivner said that it is his job to analyze the case, diagnose the case and treat that case; if a fracture is discovered, they know their limitations and would send that patient to an orthopedic physician.

Ms. Conn distributed to the committee a definition of "interpret" attached as EXHIBIT D and a definition of diagnosis attached as EXHIBIT E. She noted that the definition of interpret is not included in a medical dictionary so that she did not feel that this can be a part of diagnosis.

Mr. Buzz Moore read a letter from Dr. Laurence McClish, an orthopedic surgeon in Reno attached as EXHIBIT F. He related that this past week he had a call from an orthopedic surgeon asking for an interpretation of an injured knee; this patient had been sent to him by a chiropractor in Carson City; he then received a call from this chiroprator asking for his interpretation of the test. He stressed that most medical doctors would be amazed to hear that their education is comparable to the chiropractors.

Mr. Rusk commented that in testimony on another bill when a medical doctor was asked if he recognized the chiropractic profession, he answered not in the area of diagnostic ability. He further noted that it was not a fair comparison in education to only compare course hours, that requirements for entrance into medical school are far more stringent in many cases.

When Mr. Kovacs asked if he had any objections to requiring oral and practical examinations for physical therapists, Mr. Moore stated that they have oral and practical examinations during their clinical affiliation program constantly. Mr. Close commented that the bill states that examinations are at the discretion of the board and felt that this decision should be left up to the board.

When Mr. Kovacs referred to the opposition to page 5, lines 3 through 6, Ms. Conn submitted new language for this section which is attached as EXHIBIT G. She added that they have no desire to inspect any office other than licensed physical therapists.

Mr. Kovacs then asked if they would have any objections to not deleting the word "direct" on page 10, line 12, and

Ms. Conn said that direct implies being right there looking over the shoulder and, therefore, they would prefer that "direct" remain deleted.

When Mr. Brady asked how many therapists work in hospitals, Mr. Moore stated that out of the 80 working licensed physical therapists about 75 percent work in hospitals.

Mr. Randy Jacobe, a physcial therapist employed by the Reno Orthopedic Clinic, said that he is currently employed by nine orthopedic surgeons and that after a patient's limb has been immobilized for a period of time, it is his job, when the doctor says that it is healed, to evaluate the patient and measure his range of motion for limitations; from this evaluation he sets up a treatment protocol based on his expertise. He noted that one part of gaining range of motion is joint mobilization; that joint mobilization is like stretching a hamstring.

When Mr. Rusk asked when he might get into spine mobilization, Mr. Jacobe said there are physical therapists who are very knowledgeable in spinal mobilization; that these therapists are trying to take a spine that is in disfunction and make it functional.

Mr. Close commented that after X-rays have been taken and diagnosis made by the physician, a patient could be referred to him for spinal manipulation to regain mobility.

When Dr. Robinson asked how he would answer the argument that this bill will grandfather in those who have not had training, Mr. Moore said that physicians would not refer a patient to someone who had not had training and Mr. Close commented that physicians know the areas of expertise of physical therapists.

Ms. Conn submitted the definitions of mobilization and manipulation which are attached as EXHIBIT H. She also submitted manual therapy courses and two university course curricula showing what is being taught which are attached as EXHIBIT I.

When Mr. Kovacs asked if there had ever been a time that a physical therapist had referred a patient back to a chiropractor, Mr. Close said that if a chiropractor refers a patient to him, he requires signature by a medical doctor. Mr. Kovacs reiterated his question and Mr. Moore responded that he would refer the patient back to the medical doctor, but he would never refer a patient to a chiropractor.

Mr. Jacobe interjected that he respected the chiropractic profession and could not understand the backbiting; that he did not see why these two professions could not work together.

Dr. Ellis commented that he did not feel that the problem of grandfathering was correctly addressed; that it is never the intent of the law to leave people's health to the whim of an

individual practioner. He further stated that they do feel that the crux of the bill is joint manipulation, health protection for the consumer and that the question of the grandfather clause has not been adequately answered.

Mr. Brady said that he has had experience on both sides and that if there has been any misrepresentation he felt that it was by the chiropractors. He stated that he had never heard physical therapists make any rash claims, they work in hospitals, they work under the supervision of the doctors. He wondered if chiropractors should be under the supervision of doctors.

Dr. Ellis stated that it has been definitely established by the courts that chiropractic is not the practice of medicine; that it is a separate and distinct entity and provides a service. Mr. Brady commented that they have made medical claims at this hearing.

Laura Mason, a Registered Nurse, said that she has worked with all three professions, medical doctors, chiropractors and physical therapists. She said that joint mobilization is not defined enough in the bill; that chiropractors are only saying that joint mobilization is something that they do that physical therapists are not trained to do.

Wayne Steed said that chiropractors should define their terms; that originally they claimed only chiropractic adjustment, something that no one else was doing; now suddenly they are assimilating all the traditional medical terms such as manipulation, mobilization that have been a part of the osteopathic profession for years. He added that now they are applying the chiropractic definition to the traditional medical terms and saying that physical therapists cannot do what they have been doing for many years and doing it well.

Dr. Robinson requested that the secretary make copies of the minutes of the Senate hearings on SB 231 and distribute them to committee members for their review. He then closed the hearing on SB 231 and directed attention to AB 585.

AB 585: Prohibits certain practices relating to overdraft charges on checking accounts.

Jane Ham, Assemblyman from Clark County, said that this bill was requested by a constituent who had a loan and his checking account at the same bank; that when he failed to make his loan payment, the bank took the money from his checking account. She said that the bank was allowed to do this under NRS 104.4401 but the bank never notified her constituent that they had taken this money from the checking account; therefore, he continued to write checks unaware that his account was overdrawn. Mrs. Ham said that AB 585 would require a bank to notify a customer of any deduction from his account other than for payment of the customer's check or pursuant to written authorization from the customer. She added that this notice

Library Note:

During the examination of this set of minutes, page 10 of this meeting was found to be missing. The page is also missing from the microfiche.

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Mr. Sevigny addressed part two of the bill which pertains to merger or consolidation of banks. He noted that there are three parts of the law: One dealing with state banks merging with another state bank which gives authority to the banking division to determine whether or not there is a community need for consolidation; another deals with consolidation of state banks with national banks and where the national bank is the surviving bank, there are no parameters for determination of community need or monopolization. He felt that the State Banking Division would be a better judge than the Federal Government whether there would be a monopoly in Nevada, and this section of the bill gives this authority to the division; the third part covers the merger of two national banks and this is not a problem.

Mr. DuBois asked if the superintendent of banks was the sole judge of whether a merger was needed or not, what recourse would the banks have. Mr. Sevigny stated that the banks always have recourse through the State Board of Finance or, more importantly, recourse through the courts.

When Mr. Prengaman questioned the makeup of the State Board of Finance, Mr. Jim Wadhams, Director of the State Board of Commerce, said that the State Board of Finance consists of the governor, the treasurer, the controller, and two people from the general public in the financial industry.

In response to Dr. Robinson's question, Mr. Sevigny said that interstate banking is definitely coming; that First National Bank would not have changed their name to First Interstate Bank if they did not feel strongly that interstate banking was on its way.

When Mr. Kovacs commented that community need must have been determined for thrift companies and savings and loans, Mr. Sevigny said that they determine community need for branch offices also. He said that in the merger of Bank of Nevada and First National Bank they had no determination and this is what this bill will correct.

Dr. Robinson read a letter from Jack J. Pursel with enclosed suggested amendments to SB 492 which is attached as EXHIBIT J. He asked the committee to review these amendments.

Mr. Sevigny said that he would review these amendments and report back to the committee.

Mr. Jim Wadhams, Director of Commerce, said that this authority is not unique; that there is a similar act relating to insurance companies and the insurance commissioner has this power.

When Mr. DuBois asked if the Superintendent of Banks has this power in other states, Mr. Sevigny replied that almost all states have some parameters for exercising control over mergers in any situation; that most states have far greater control than SB 492 would allow.

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Dr. Robinson opened the hearing on AB 589.

AB 589: Encourages breeding of race horses and greyhounds in Nevada.

Don Perry, a Nevada greyhound breeder, said that he races his dogs at the Las Vegas Downs racetrack and that when the Nevada Racing Act was enacted it was to encourage agriculture and the breeding of horses and greyhounds and produce an additional source of revenue for the state. He noted that the Nevada Racing Commission at present allows a person to run his dogs if he has been a resident of the state for three years and, at the same time, has been in the greyhound business; that greyhound breeders feel that this is too long a time to have been in business and no other business has such requirements. He indicated that AB 589 would change this requirement to one year residency and one year of raising greyhounds.

Another part of the bill according to Mr. Perry would regulate the amount paid to the greyhound kennels and the horse breeders and increase this amount from 3 to 5 percent. He read a letter from Stanley Margolis, British American Kennels, containing complete financial statements which is attached as EXHIBIT K.

Mr. Perry indicated that dog racers have a contract with the track and in the past some tracks have gone to court to enforce the contract and have won; that some tracks have withheld the dogs' papers which prevents owners from running their dogs at any other track.

Mr. Perry noted that if the top kennel at Las Vegas Downs is losing approximately $21,000 in three months, no new kennels will come to Nevada; these kennels need relief. He said that the dogmen are the ones who are putting on the show and the racetrack is nothing without them. He stated that the City of Henderson is making 1 percent, the state 3 percent, and the track is making money from admission, parking, programs and concessions.

When Mr. Dini questioned the purpose of the bill, Mr. Perry said that the bill will allow the people of the State of Nevada who raise greyhounds to race their dogs here which will bring in more dog people which will help the economy. He added that the second part of the bill raises the purse money so that the dogmen can survive. He commented that four contracts have been pulled out already because they could not stand to lose any more money.

In response to Dr. Robinson's question, Mr. Perry replied that at the present time 18 percent of all money wagered is withheld from the bettors; of this 18 percent, 4 percent goes to the state, 14 percent goes to the racetrack; out of this 14 percent the racetrack pays the dog people 3 percent which they would like raised to 5 percent.

In response to another question from Dr. Robinson, Mr. Perry stated that the Racing Rules and Regulations require three years of residency in the state and three years in the business or raising, racing or training greyhounds.

When Dr. Robinson asked if the same was required for horses, Mr. Duane Goble, Executive Secretary of the Nevada Racing Commission, stated that at this time there is no requirement for horse breeders.

When Mr. Rusk asked how many greyhounds were involved at British American Kennels, Mr. Perry indicated that each kennel is allowed to submit papers on 42 dogs; that there were 20 kennels at the Las Vegas track but there are only 18 now. Mr. Rusk asked if any other kennels were planning to leave, and Mr. Perry said that many are awaiting the outcome of this bill.

Mr. Rusk commented that it would seem to be in the track's best interest to make this a profit making venture and wondered if the free market would eventually work this problem out through normal attrition.

When Dr. Robinson questioned what the percentage was in other states, Mr. Perry replied that in Massachusetts it is 3 percent, Arizona is 2½ percent but the handle in these states is much larger.

Leda Carver from Fallon said that she has been raising greyhounds for years in the state and racing out of state until the track opened here in Nevada. She indicated that she has been forced to sign a contract with the track here so that she cannot move her dogs out; that the handle is so low that it will not pay the feed bill.

When Mr. Prengaman inquired about the fiscal note, Mr. Goble said that it is very difficult to estimate the fiscal impact because so many variables are involved, such as not knowing how many greyhounds will be able to compete or what the purse structure will be. He said that he made a rough estimate of $5,000 the first year.

Mr. Bill Eddy said that he had a greyhound farm in Sandy Valley and that he was about wiped out by the loss of money in racing his greyhounds. He suggested the possibility of a sliding scale so that when the handle increases, which is expected in a few years, the percentage can be lowered accordingly. He said that the greyhound people must have help.

Mr. David Funk, Vice President and Managing Director of Las Vegas Downs, spoke in opposition to AB 589 because he said that this legislation would destroy in one day what has taken years to create. He related that the major portion of the financing necessary to get greyhound and horse racing off the ground came from the Nevada Public Employee's Retirement

System amounting to $4 million, an additional $1½ million was raised from within the stockholders of Las Vegas Downs, and within the next few weeks an additional $1½ million will be committed to by the stockholders of his company. He indicated that all these investments were made because the State of Nevada has one of the most healthy racing acts of any state in the nation, but AB 589 will kill any possibility of racing ever making it on its own. He said that AB 343 which would increase the number of days of horse racing was passed by this committee, but AB 589 is contrary to what AB 343 is attempting to establish; that if the racing is ever to become successful, it must be given the same opportunity that every other new business has, to grow in an orderly manner and create a strong financial base. In discussion in the hearing on AB 343 the horsemen spoke against a breeder's award because they felt racing should have a chance to become successful before any breeder's awards are given and that most of the dogmen feel the same way.

Mr. Funk continued by saying that racing in this state will be successful because 450 stockholders are dedicated, because over 200 employees are dedicated, and because many greyhound and horse people are dedicated to making it work. He said that the passage of AB 589 will cause an overabundance of greyhounds making it impossible for any track operator or greyhound breeder to succeed. He reiterated that the passage of AB 589 will be the death of all racing in Nevada.

Mr. Funk indicated that he had no knowledge of this bill, that none of the people advocating the passage of the bill ever took the time to come to his office to air their problems. He noted that the State Racing Commission is not making any money nor is the track making any money but have lost more money than the breeders. He said that business is beginning to increase which will improve business for everyone.

In response to Mr. Rusk's question, Mr. Funk said that when people want to be released from their contracts he does so and that he has several kennels asking for bookings. He indicated that he did not plan to replace the kennels that have left so that those remaining will have a chance to have a greater share of the pie.

When Mr. Prengaman asked how many kennels have left, Mr. Funk said that two or three since January have moved out and that he knew of one other that was having problems and would probably pull out this month.

When Mr. DuBois asked how many dogs are bred in Nevada, Mr. Funk indicated that more than half of the dogs that race at Las Vegas Downs are bred in Nevada, but when they opened the track there were not enough kennels in the state and some had to be brought in from Oregon, Arizona, Colorado and other places.

When Mr. DuBois asked how the purse here compared with other tracks in the country, Mr. Funk said that it is one of the highest as it is now, but because they are not handling as much money at the present time as other racetracks, the purses are not as large; that this is because it is a brand new business in Nevada and, as any other new business, takes time to establish. He noted that the entire racing industry is based upon a percentage and as business improves so will everyone's financial situation; that the last few weeks have indicated a upward trend.

In discussion the proponents of AB 589 indicated that four or five kennels had pulled out, that one kennel had trouble obtaining a contract, and that attempts had been made to discuss their problems with Mr. Funk unsuccessfully. These allegations were denied by Mr. Funk.

Since there was no further testimony on AB 589, Dr. Robinson reopened the hearing on AB 585.

AB 585: Prohibits certain practices relating to overdraft charges on checking accounts.

Mr. George Aker, President of Nevada National Bank, thanked the committee for holding the bill for his testimony. He said that he had spoken with Assemblywoman Ham on this issue. He testified that this bill was essentially created to be sure that banks would send notice to customers when they charged the customers account in any situation where the charge was not by a regular check or a preauthorized charge to the account. He indicated that to his knowledge all banks in the state are now sending notice to customers when a charge is made; that they have no disagreement with the requirement that notices be given. Mr. Aker said that they have great difficulty with line one on page 2 which says that if there is a deduction the bank must give the depositor notice; that if the depositor negotiates a check currently dated before the sixth day following, the check may not be dishonored or the depositor charged a fee. In banking he noted there is a two day reclamation period, the common occasion for charging an account a fee and sending notice; that every subsequent check that comes in would normally be returned to the bank that accepted that check in deposit. He said that AB 585 would preclude the bank from dishonoring that check and returning it to the bank that had accepted it for deposit; that the difficulty would be if they noticed a charge for an overdraft fee against the account, the customer would then know that the bank would be forced to honor every single check that came in during the next six day period; that the bank would have no control over the checks that would draw the account further into overdraft. He said that, in his opinion, the six day requirement would be totally unworkable.

Dr. Robinson commented that the genesis of the bill was that people were not notified of overdraft because a payment was

extracted from their account; that most people do not realize that the bank is allowed to do this. Mr. Aker responded that every time a bank opens a checking, savings or new transaction account, the rules are given to the depositor as part of the opening packet. He indicated that in his bank during his seven years with them, notices have been sent; that the sequence for notice is, if a check would overdraw an account, notice would be prepared on swing shift and be put in the mail the next day, so that within one to two days a customer would have individual notice of overdraft. He commented that it his understanding that all banks do this also, but he could not testify to this. At the request of Assemblywoman Ham, he said that he had called another bank and had received assurance that they did notify all customers of overdraft. He indicated that the bill also applied to savings accounts and new transaction accounts, such as NOW accounts, and the same procedure for notification of overdraft is followed for these accounts.

When Dr. Robinson asked what notice was given for offset against a loan payment, Mr. Aker said that first delinquent notices are sent, and if still unpaid, notice of offset is sent. He noted that offset happens infrequently, but when it does, the entire loan balance is in jeopardy; that in the case of offset there is formal notice to the borrower that the bank has elected to offset the outstanding balance against positive funds that are in his account.

Dr. Robinson commented that he was speaking only of his bank, and Mr. Aker said, as former President of The Nevada Bankers Association, he was speaking for this association.

Mr. Scott Brenecke, an apartment owner, said that when he deposits his monthly rental check, he is assuming that all of these checks are good. If there is a two day reclamation period, he wondered why it takes 18 days on an in-state check and 22 days on an out-of-state check before he receives notice of a bad check. Mr. Aker stated that every bank operates under the two working day reclamation period, and it is then a physical function of where the check must be presented. He exemplified a check which must be sent to New York which would first be sent to San Francisco, then to New York, then to the drawer bank and then take that many days to come back for notification. He noted that each one of these stops has the two day reclamation period.

Mrs. Ham said that she did not realize the flaw in AB 585 when it came from the bill drafter, and said if there was any way to amend this bill to help the depositor who does not receive notice of overdraft, she certainly would be in favor of it. She said if it cannot be amended this way, she would be willing to withdraw the bill.

Dr. Robinson indicated that the best solution was for Mrs. Ham to withdraw her bill, and he would send a letter to the

Commissioner of Banking asking him, either by regulation or notice to the banks, to notify all banks that it is the intent of the legislature that all customers be immediately notified of offset procedures. This letter of intent is attached as EXHIBIT L.

Dr. Robinson directed attention to AB 1 and explained that this bill was requested by a constituent of the sponsor.

AB 1: Prohibits possession or sale of intoxicating liquor which is more than 60 percent alcohol by volume.

Since there was no one present to testify for or against AB 1, Dr. Robinson said that the committee would take action on this bill later in the meeting.

The next bill to be discussed was AB 598.

AB 598: Imposes additional requirements on importers, suppliers and wholesalers of liquor.

Mr. Arthur Senini, President of the Wine & Spirit Wholesalers of Nevada, read his prepared testimony which is attached as EXHIBIT M. He said that representatives of the Nevada Beer Wholesalers Association and Northern Nevada Retailers Association were present and that the industry supports AB 598.

Mr. Renny Ashleman, an attorney representing Duluth Imports, said that after working with other attorneys and the Legislative Counsel Bureau on amendments to this bill, they felt this was the best way to address the problem and urged passage. He said that the bill primarily establishes a more orderly method of regulating the industry so that there are various governmental focal points where if someone wishes to inquire into the importation of liquor it can be done; that an ordinance requires this in Clark County but they feel it should be done on a statewide basis. He noted that it would assist in tax collection and in orderly marketing, but would not have any adverse effect on business in the State of Nevada.

When Mr. Brady questioned the problem addressed by this bill, Mr. Ashleman indicated that there have been some problems in other states that do not have this legislation with people who operate a fly-by-night operation bringing in a carload of a selected item and dumping it causing a loss of tax revenue and undercutting of a local businessman.

Mr. E. Williams Hammer, Deputy Attorney General representing the Attorney General's Office, said that he was present to provide information to the committee. He informed the committee that this type of legislation, sometimes called primary source legislation, otherwise called designation legislation, has in litigation in California been found to be in violation of the Sherman Antitrust Law; that an appeal was made to the

California Supreme Court who refused to hear the case; that at present there is an attempt to take it to the United States Supreme court. He said that he wanted the committee to be aware of the fact that it could have antitrust impact.

In response to Mr. DuBois' question, Mr. Hammer indicated that the chances are slim that the U.S. Supreme Court will hear this case, thus the decision of the California Court will stand and legislation such as AB 598 will be held in California to be in violation of the antitrust law.

When Mr. Rusk asked Mr. Hammer to point out the language in the bill which could be in violation of the antitrust laws, Mr. Hammer read a portion of the California law: "A licensed importer shall not purchase or accept delivery of any brand of distilled spirits unless he is designated by an authorized importer of such brand by the brand owner or his authorized agent. Such distilled spirits imported into California shall come to the rest at the warehouse of the licensed importer or an authorized warehouse for the account of such licensed importer before sale and delivery to a retail licensee." He then read a portion of AB 598: "A supplier of liquor may sell to an importer into this state only if: Their commercial relationship is of definite duration or continuing indefinite duration; and the importer is granted the right to offer, sell and distribute within this state or any disgnated area thereof such of the supplier's brands of packaged malt beverages, distilled spirits and wines, or all of them as may be specified. The supplier shall file with the department a written notice indicating the name and address of each designated importer. Each importer shall file with the department a written acceptance of the designation." He said that the operative language on page 2, line 3 would tie this up with California statutes is Section 4: "A person who holds an importer's license or permit may purchase a liquor only from the supplier of that liquor." Mr. Hammer then read a portion of the California court decision: "This statute goes much farther than to merely allowing manufacturer to determine to whom it will sell. It allows the manufacturer to forbid others to sell to a disfavored importer. We are not concerned with any contractual channel of distribution a brand owner might create or use. We are concerned with the state provided authority to prevent trade among others. In this respect, it is irrelevant that the statute gives brand owners the power to restrain intra-brand competition rather than inter-brand competition." He read another portion: "We conclude that the business and professions code section 23.672 is invalid unless the state action exception to the Sherman Act and to the United States Constitution's 21st Amendment authorizes a delegation of such authority to the state." He noted that the court then goes on to rule that the state action exemption is not available and that a previous case the 21st amendment, repealing prohibition, is not applicable. He indicated that under the manner the U. S. Supreme Court looks at Sherman Act violations today and the state action exemption, legislation such as this, if attacked, would be held to be in violation.

A member of the audience mentioned that this same type of legislation has just been successfully approved and passed by the court in the State of Kansas.

When Dr. Robinson questioned if the bill could be amended so as not to be in violation, Mr. Hammer said that with respect to the inventory maintenance requirements of importers and distributors he could see no problem with legislation in that area. Dr. Robinson then asked if this would be a state or federal decision, and Mr. Hammer indicated that this is a federal right, and as such, any action between private parties would be brought in a federal court; however, a California decision was brought in a California court to test the validity of the California statute and was not an action between private parties. When Dr. Robinson asked who brought suit, Mr. Hammer replied that the suit was brought by a group of companies within the liquor industry.

Mr. Ashleman said that he was Special Deputy Attorney General for antitrust matters and that he has conferred with most of the attorneys for the major trade councils involved in spirits. He said that there is litigation such as this all over the country and that our legislation is closer to that of Kansas; that the industry and the best experts that they could hire on the matter concluded that there is more than a reasonably good prospect of upholding this legislation.

Dr. Robinson said that the Speaker spent a great deal of time on this bill and that it has been returned to the bill drafter twice in order to be sure that it was not in violation.

Mr. Rusk felt that Mr. Daykin should give his opinion on this bill. Dr. Robinson said that he would request Mr. Daykin's opinion.

Mr. Scott Brenecke said that the Apartment Association had met with Mr. Vergiels and other Assemblymen and completely rewritten AB 554. He distributed these amendments to AB 554 which are attached as EXHIBIT N.

Dr. Robinson said that since there was a quorum present, the committee would take action on a few bills.

AB 1: Prohibits possession or sale of intoxicating liquor which is more than 60 percent alcohol by volume.

Mr. Jeffrey moved to INDEFINITELY POSTPONE AB 1, seconded by Mr. Rusk. The motion was carried unanimously by the members present with Mr. Chaney, Mr. DuBois, Mr. Bennett, Mr. Prengaman and Mr. Bremner absent at the time of the vote.

AB 580: Requires public utilities to offer seasonal rates for interruptible electricity for irrigation pumps.

Mr. Rusk moved to adopt amendment No. 900 to AB 580 (EXHIBIT O) and DO PASS as AMENDED.

Mr. Jeffrey commented that they are doing this at present in Clark County and did not see any need for this bill. Mr. Kovacs noted that testimony from the affordable energy group indicated there would not be much saving realized.

There was no action taken on AB 580 at this time.

AB 288: Imposes certain financial requirements for protection of subcontractors and employees on construction projects.

Dr. Robinson read the amendments to AB 288 attached as EXHIBIT P. He said that he had a phone call from a contractor who at one time had twenty subcontractors working for him; that sending 60 registered letters a day would be very costly and time consuming.

Mr. Kovacs indicated that the amendments take care of this problem and that the bill addresses problems that the subcontractors have been having.

Mr. Kovacs moved to adopt amendment No. 595 on AB 288 and DO PASS as AMENDED, seconded by Mr. Dini. Dr. Robinson voted no and Mr. Chaney, Mr. DuBois, Mr. Bennett, Mr. Prengaman and Mr. Bremner were absent. The motion died for lack of a majority.

AB 190: Removes requirements for evidence of insurance and associated penalties.

Mr. Dini moved to INDEFINITELY POSTPONE AB 190, seconded by Mr. Kovacs. The motion was carried unanimously by the members present with Mr. DuBois, Mr. Chaney, Mr. Bennett, Mr. Prengaman and Mr. Bremner absent at the time of the vote.

AB 554: Requires landlords to hold tenants' security deposits in separate interest-bearing accounts.

Mr. Scott Brenecke referred to the amendments to AB 554 that are attached as EXHIBIT N indicating that the first part of the amendments delete the whole bill. He said that the penalties that are referred to are similar to what they are doing in Washoe County at present. He said that No. 3 is the section that they are most interested in; that this section will allow for mandating for pass-through of the tax rebate package whereas now there is no method for mandating this for out-of-state owners without going to court. He noted that presently a tenant would have to go to small claims court in the state where the owner resides in order to get his share of the tax rebate or security deposit refund. He said that owners in the state are getting a bad name from the out-of-state owners who are not following the laws which means that tenants are not receiving equity or fair treatment. He said that the owners association would like to tighten the laws.

The committee felt they would like to see the reprinted bill before taking any action.

AB 496: Authorizes parties to an automobile insurance policy to exclude named persons from coverage.

Mr. Dini moved DO PASS on AB 496, seconded by Mr. Jeffrey, and carried unanimously by members present with Mr. DuBois, Mr. Chaney, Mr. Bennett, Mr. Prengaman and Mr. Bremner absent at the time of the vote.

Since there was no further business, the meeting was adjourned at 6:40 p.m.

Respectfully submitted,

Patricia Hatch

Patricia Hatch
Secretary

61st SESSION NEVADA LEGISLATURE

ASSEMBLY COMMERCE COMMITTEE

LEGISLATION ACTION

DATE May 13, 1981

SUBJECT AB 1: Prohibits possession or sale of intoxicating liquor which is more than 60 percent alcohol by volume.

MOTION: INDEFINITELY POSTPONE

Do Pass ____ Amend ____ Indefinitely Postpone XX Reconsider ____

Moved By Mr. Jeffrey Seconded By Mr. Rusk

AMENDMENT: _____

Moved By _____ Seconded By _____

AMENDMENT: _____

Moved By _____ Seconded By _____

	MOTION		AMEND		AMEND	
VOTE:	Yes	No	Yes	No	Yes	No
BENNETT	absent					
BRADY	X					
BREMNER	absent					
CHANEY	absent					
DINI	X					
DUBOIS	absent					
JEFFREY	X					
KOVACS	X					
PRENGAMAN	absent					
RUSK	X					
ROBINSON	X					
TALLY:	6	0				

ORIGINAL MOTION: Passed XX Defeated ____ Withdrawn ____

AMENDED & PASSED _____ AMENDED & DEFEATED _____

AMENDED & PASSED _____ AMENDED & DEFEATED _____

Attached to Minutes May 13, 1981

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61st SESSION NEVADA LEGISLATURE

ASSEMBLY COMMERCE COMMITTEE

LEGISLATION ACTION

DATE May 13, 1981

SUBJECT AB 190: Removes requirements for evidence of insurance and associated penalties.

MOTION: INDEFINITELY POSTPONE

Do Pass ____ Amend ____ Indefinitely Postpone XX Reconsider ____

Moved By Mr. Dini Seconded By Mr. Kovacs

AMENDMENT: _____

Moved By _____ Seconded By _____

AMENDMENT: _____

Moved By _____ Seconded By _____

	MOTION		AMEND		AMEND	
VOTE:	Yes	No	Yes	No	Yes	No
BENNETT	absent					
BRADY	X					
BREMNER	absent					
CHANEY	absent					
DINI	X					
DUBOIS	absent					
JEFFREY	X					
KOVACS	X					
PRENGAMAN	absent					
RUSK	X					
ROBINSON	X					
TALLY:	6	0				

ORIGINAL MOTION: Passed XX Defeated _____ Withdrawn _____

AMENDED & PASSED _____ AMENDED & DEFEATED _____

AMENDED & PASSED _____ AMENDED & DEFEATED _____

Attached to Minutes May 13, 1981

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61st SESSION NEVADA LEGISLATURE

ASSEMBLY COMMERCE COMMITTEE

LEGISLATION ACTION

DATE May 13, 1981

SUBJECT AB 496: Authorizes parties to an automobile insurance policy to exclude named persons from coverage.

MOTION: DO PASS

Do Pass XX Amend ____ Indefinitely Postpone ____ Reconsider ____

Moved By _____ Seconded By _____

AMENDMENT: _____

Moved By _____ Seconded By _____

AMENDMENT: _____

Moved By _____ Seconded By _____

	MOTION		AMEND		AMEND	
VOTE:	Yes	No	Yes	No	Yes	No
BENNETT	absent					
BRADY	X					
BREMNER	absent					
CHANEY	absent					
DINI	X					
DUBOIS	absent					
JEFFREY	X					
KOVACS	X					
PRENGAMAN	absent					
RUSK	X					
ROBINSON	X					
TALLY:	6	0				

ORIGINAL MOTION: Passed XX Defeated ____ Withdrawn ____

AMENDED & PASSED _____ AMENDED & DEFEATED _____

AMENDED & PASSED _____ AMENDED & DEFEATED _____

Attached to Minutes May 13, 1981

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ASSEMBLY COMMERCE COMMITTEE

GUEST LIST

DATE: 5-13-81

PLEASE PRINT YOUR NAME	PLEASE PRINT WHO YOU REPRESENT	I WISH TO SPEAK FOR	AGAINST	BILL NO.
Pat Conn, Chairman	Nevada State Board of Physical Therapy Examiners	✓		SB 231
Jack Close	Myself & So. Dist of NPTA	✓		SB 231
Wayne Steed	Southern member of APTA	✓		SB 231
Lawrence P. Mooney	SELF & NEVADA P.T. ASSN	✓		SB 231
Pleasie Moore	NORTHERN P.T. ASSOC.	✓		SB 231
D. EMSwiler	STATE BOARD OF CHIROPRACTIC EXAMINERS		✓	SB 231
Don. Perry	Dog Man	✓		AB 589
Bill Elliott	Dog Man	✓		AB 589
Lita Carson	Greyhound Breeder	✓		AB 589
Richard H Pugh	Nevada State Medical Assn.	✓ (Amend)		AB-231
Joseph B. Johnson, JR	NEVADA CHIROPRACTIC ASSN OF NEV		✓✓	SB-231
SAMUEL H. ELLIS D.C.	PRESIDENT CHIRO-ASS'N OF NEV		✓	SB231
David Hogan	CAN		✓	SB 231
DR. Clyde Porter	CAN Chiro. Board Ex.		✓	SB 231
David J. Funk	Las Vegas Downs		✓	AB-589
Arthur Senini	Clinic: Sports-Wills of Nev	✓		AB598
Bill Foreman	Nev Chiropractors Assn		✓	SB231

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ASSEMBLY COMMERCE COMMITTEE

GUEST LIST

DATE: 5-13-81

PLEASE PRINT YOUR NAME	PLEASE PRINT WHO YOU REPRESENT	I WISH TO SPEAK- FOR	AGAINST	BILL NO.
C.O. WATSON	Vice President Sparks Area C. of C.	X		AB1
C O WATSON	— —	X		AB 598
E. W. HANMER	ATTORNEY GENERAL	comment		AB 598
JANE HAM	ASSEMBLYMAN, CLARK CO.	X		AB585
RANDY JACOBE	Northern Dist. APTA	X		AB 598
LAURIE MASON, R.N.	SELF		X	SB 231
GLENN NICHOLAS, D.C.	CHIROPRACTOR		X	SB 231
SCOTT BORENECKE	WNDPT DSSA			

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EXHIBIT A

Nevada State Board of Physical Therapy Examiners

1001 Mountain St. Suite 1-D
Carson City, Nevada 89701
May 13, 1981
Telephone 882-3221

To The Assembly Committee on Commerce

As the Chairman of the Nevada State Board of Physical Therapy Examiners, I wish to speak in favor of SB 231. The original Physical Therapy Practice Act was passed about 25 years ago. There has been little change in this law during the intervening years. The Board of Physical Therapy Examiners is constantly working with the law and has found many areas that are in great need of change so that is why we initiated this Bill to update the law governing the practice of Physical Therapy in the State of Nevada.

Over two years of work has gone into this Bill. We corresponded with every Physical Therapist in this State for their input. We obtained laws from most of the statesin the U.S. and studied them very thoroughly. We held open hearings (two in Reno, and two in Las Vegas) to discuss every portion of the Physical Therapy Practice Act. The Board's representative from the Attorney General's office was present at all of these meetings to advise us.

Many of the changes regard simple word changes and omission of outdatedor redundant parts of the law. We have sought to better define, regulate and control the practice of Physical Therapy. We have set up hearing proceedures and revised the grounds for disciplinary action and penalties.

I feel that the Senate Committee on Commerce and Labor has been very diligent in its effort to answer all objections to this Bill and have made amendments acceptable to this Board.

I request your support for SB 231 and thank-you for the opportunity to appear before this committee today.

Sincerely,

Pat Conn

Pat Conn, RPT
Chairman

95 programs

EXHIBIT B

AMERICAN PHYSICAL THERAPY ASSOCIATION
1156 - 15th Street, NW, Washington, D.C. 20005

Department of Educational Affairs

KEY

(1A) Bachelor's Degree Course.
(1B) Accepts candidates for 2nd Bachelor's Degree.
(2) Certificate Course.
(3) Bachelor's degree available from affiliating college or university.
(4) Accepts women students only.

ACCREDITED BACHELOR DEGREE AND CERTIFICATE PROGRAMS

ALABAMA

Tuskegee Institute (1A)
Curriculum in Physical Therapy
School of Allied Sciences
Tuskegee, AL 36088
(Theodore F. Childs, Ed.D.)
205 - 727-8687

University of Alabama
in Birmingham (1A, 1B)
Division of Physical Therapy
University Station
Birmingham, AL 35294
(Marilyn Gossman)
205 - 934-3566

University of South Alabama (1A, 1B)
Department of Physical Therapy
Division of Allied Health Professions
2000 Brookley Center, Rm. 210
Mobile, AL 36688
(Walter Gault)
205 - 433-6986

ARIZONA

Northern Arizona University (1A, 1B)
Physical Therapy Program
College of Public & Environmental Service
Box 15105
Flagstaff, AZ 86011
(Richard Borden)
602 - 523-4092

ARKANSAS

University of Central Arkansas (1A, 1B)
Department of Physical Therapy
c/o Central Baptist Hospital
12th and Marshall Streets
Little Rock, AR 72201
(Venita Lovelace-Chandler)
501 - 227-3523

CALIFORNIA

California State University
at Fresno (1A)
Physical Therapy Program
School of Professional Studies
Allied Health Professions
Fresno, CA 93740
(E. Joan Turnquist, Ph.D.)
209 - 487-2022

California State University
at Long Beach (1A)
Physical Therapy Department
School of Allied Arts & Sciences
Long Beach, CA 90840
(Ray J. Morris)
213 - 498-4072

California State University
at Northridge (1A, 1B)
Curriculum in Physical Therapy
Health Science Department
Northridge, CA 91324
(Mary E. Bennett)
213 - 885-2475

#2 - Bachelor and Certificate Programs

CALIFORNIA

Children's Hospital of Los Angeles (2, 3)
School of Physical Therapy
Box 54700
Los Angeles, CA 90054
(Gertrude E. McDowell)
213 - 660-2450 ext. 2268

Loma Linda University (1A, 1B)
Department of Physical Therapy
School of Allied Health Professions
Loma Linda, CA 92350
(Edd J. Ashley, Ed.D.)
714 - 796-7311 ext. 2981

University of California,
San Francisco (2)
School of Medicine
Curriculum in Physical Therapy
San Francisco, CA 94143
(Irene Gilbert, Ph.D.)
415 - 666-2093

COLORADO

University of Colorado (1A)
Curriculum in Physical Therapy
Health Science Center
4200 E. Ninth Ave., Box C243
Denver, CO 80262
(Elizabeth Barnett)
303 - 394-8466/8594

CONNECTICUT

Quinnipiac College (1A)
Physical Therapy Program
School of Allied Health & Natural Sciences
515 Sherman Avenue
Hamden, CT 06518
(Harold Potts)
203 - 288-5251 ext. 264

University of Connecticut (1A)
Program in Physical Therapy
School of Allied Health Professions
U 101
Storrs, CT 06268
(Joseph Smey)
203 - 486-4736

DELAWARE

University of Delaware (1A)
Physical Therapy Program
Allied Health Professions
School of Life and Health Sciences
049 McKinly Laboratory
Newark, DE 19711
(Barbara Cossoy)
302 - 738-2849

DISTRICT OF COLUMBIA

Howard University (1A)
Department of Physical Therapy
College of Allied Health Sciences
Annex #I, Rm. B-29
6th & Bryant Sts., NW
Washington, DC 20059
(Gloria Lawson)
202 - 636-7613 ext. 15

FLORIDA

Florida International University (1A)
Department of Physical Therapy
School of Technology
Tamiami Trail
Miami, FL 33199
(Burton Dunevitz)
305 - 552-2266

University of Florida (1A, 2)
Department of Physical Therapy
J. Hillis Miller Health Center
POB J-185
Gainesville, FL 32610
(William Gould, Ph.D.)
904 - 392-2631

GEORGIA

Emory University (2)
Graduate Programs in Physical Therapy
Division of Allied Health Professions
2040 Ridgewood Drive, NE
Atlanta, GA 30322
(Ruth A. Kalish, Ph.D.)
404 - 329-6138/6139

Georgia State University (1A)
Department of Physical Therapy
School of Allied Health Sciences
University Plaza
Atlanta, GA 30303
(Marylou R. Barnes, Ed.D.)
404 - 658-3092

#3 - Bachelor and Certificate Programs

GEORGIA

Medical College of Georgia (1A, 1B)
Department of Physical Therapy
School of Allied Health Sciences
Augusta, GA 30901
(Bella J. May, Ed.D.)
404 - 828-2141

ILLINOIS

Northwestern University (1A, 1B)
Programs in Physical Therapy
Medical School
345 E. Superior St., Rm. #1323
Chicago, IL 60611
(Sally C. Edelsberg)
312 - 649-8160

University of Health Sciences (1A)
Department of Physical Therapy
Chicago Medical School
School of Related Health Sciences
Bldg. 51, V.A. Medical Center
Chicago, IL 60064
(Virginia Daniel)
312 - 473-9200 ext. 310

University of Illinois
Medical Center (1A)
Curriculum in Physical Therapy
College of Associated Health Professions
1919 W. Taylor St.
Chicago, IL 60612
(Harry Knecht, Ed.D.)
312 - 996-7764

INDIANA

Indiana University (1A, 1B)
Physical Therapy Program
Division of Allied Health Sciences
School of Medicine
1100 West Michigan St.
Indianapolis, IN 46223
(Dennis Dipert)
317 - 264-8913

IOWA

University of Iowa (2)
Physical Therapy Education Program
Oakdale Campus
Oakdale, IA 52319
(Gary Soderberg, Ph.D.)
319 - 353-4785

KANSAS

University of Kansas Medical Center (1A)
College of Health Sciences & Hospital
Division of Physical Therapy
Rainbow Blvd. at 39th
Kansas City, KS 66103
(Jessie Ball, Acting Director)
913 - 588-6795

Wichita State University (1A, 1B)
Department of Physical Therapy
College of Health Related Professions
Box 43
Wichita, KS 67208
(Scott Minor)
316 - 689-3604

KENTUCKY

University of Kentucky
Medical Center (1A, 1B)
Department of Physical Therapy HP-500
College of Allied Health Professions
Lexington, KY 40536
(Richard McDougall)
606 - 233-5839

LOUISIANA

Louisiana State University
Medical Center (1A)
Department of Physical Therapy
Allied Health Professions Annex
2100 Perdido St.
New Orleans, LA 70112
(John Burke, Ph.D.)
504 - 568-6591

MARYLAND

University of Maryland (1A)
Department of Physical Therapy
School of Medicine
32 South Greene St.
Baltimore, MD 21201
(Clarence Hardiman, Ph.D.)
301 - 528-7721 ext. 20

#4 - Bachelor and Certificate Programs

MASSACHUSETTS

Boston University (1A)
Department of Physical Therapy
Sargent College of Allied Health Professions
One University Road
Boston, MA 02215
(Catherine Perry, Ed.D.)
617 - 353-2720

Northeastern University (1A)
Department of Physical Therapy
Boston-Bouve College
360 Huntington Ave.
Boston, MA 02115
(Christopher E. Bork, Ph.D.)
617 - 437-3160

Simmons College (1A, 2, 4)
Program in Physical Therapy
300 The Fenway
Boston, MA 02115
(Claire McCarthy)
617 - 734-6000 ext. 3114

MICHIGAN

University of Michigan (1A, 1B)
Curriculum in Physical Therapy
1018 Fuller Ave.
Ann Arbor, MI 48104
(Richard E. Darnell, Ph.D.)
313 - 764-7177

Wayne State University (1A)
Department of Physical Therapy
College of Pharmacy and Allied Health Professions
Detroit, MI 48202
(Roberta Cottman)
313 - 577-1432

MINNESOTA

Mayo Foundation (2, 3)
School of Health Related Sciences
Physical Therapy Program
200 First Street, SW
Rochester, MN 55901
(Gordon K. Barnes)
[illegible] - 282-2511

College of St. Scholastica (1A, 1B)
Physical Therapy Program
1200 Kenwood Ave.
Duluth, MN 55811
(Varick Olson)
218 - 723-6123

University of Minnesota (1A, 1B)
Course in Physical Therapy
860 Mayo Memorial Bldg., Box 388
420 Delaware Street, S.E.
Minneapolis, MN 55455
(John D. Allison)
612 - 373-9038

MISSISSIPPI

University of Mississippi Medical Center (1A)
Department of Physical Therapy
2500 N. State Street
Jackson, MS 39216
(Neva Greenwald)
601 - 987-4882

MISSOURI

St. Louis University Medical Center (1A)
Department of Physical Therapy
1504 S. Grand Blvd.
St. Louis, MO 63104
(Irma Reubling)
314 - 664-9800 ext. 505

University of Missouri Medical Center (1A)
School of Health Related Professions
Physical Therapy Curriculum
206 Rusk Rehabilitation Center
Columbia, MO 65201
(Gerald W. Browning, Ph.D.)
314 - 882-7103

Washington University (1A, 1B)
Program in Physical Therapy
School of Medicine
660 South Euclid Avenue
St. Louis, MO 63110
(Steven J. Rose, Ph.D.)
314 - 454-2598

NEBRASKA

University of Nebraska Medical Center (1A)
Division of Physical Therapy Education
College of Medicine
42nd & Dewey Ave.
Omaha, NE 68105
(Virginia M. Nieland, Program Director)
402 - 541-4259

NEW JERSEY

Kean College of New Jersey/
College of Medicine & Dentistry
of New Jersey (1A)
Physical Therapy Program
School of Allied Health Professions
100 Bergen St.
Newark, NJ 07103
(Katherine LeGuin)
201 - 456-5272

NEW MEXICO

University of New Mexico (1A)
Division of Physical Therapy
Allied Health Sciences Center
Albuquerque, NM 87131
(William O'Brien, Ph.D.)
505 - 277-5755

NEW YORK

Daemen College (1A)
Physical Therapy Curriculum
4380 Main St.
Amherst, NY 14226
(Richard Schweichler)
716 - 839-3600

Hunter College (1A)
Physical Therapy Program
School of Health Sciences
440 East 26th Street
New York, NY 10010
(Robert Ayers)
212 - 481-4469

Ithaca College (1A, 1B)
Division of Physical Therapy
Albert Einstein College of Medicine
Jacobi Hospital, Rm. #2N4
Pelham Parkway South
Bronx, NY 10461
(Justin Alexander, Ph.D.)
212 - 597-1292 (Bronx campus)
607 - 274-3342 (Ithaca campus)

New York University (1A)
Department of Physical Therapy
Basic Science Building
433 First Avenue
New York, NY 10010
(Arthur Nelson, Ph.D.)
212 - 481-5089

Russell Sage College (1A, 4)
Department of Physical Therapy
Troy, NY 12180
(Nancy Farina)
518 - 270-2266

State University of New York
at Buffalo (1A, 1B)
Department of Physical Therapy
617 Kimball Tower
Buffalo, NY 14214
(Kathryn Sawner, Acting Director)
716 - 831-3342

State University of New York
Downstate Medical Center (1A, 1B)
Physical Therapy Program, Box 16
450 Clarkson Ave.
Brooklyn, NY 11203
(Joan Pfitzenmaier)
212 - 270-1226

State University of New York
at Stony Brook (1A, 1B)
Department of Physical Therapy
School of Allied Health Professions
Health Sciences Center
Stony Brook, NY 11794
(Jay Schleichkorn)
516 - 246-5000

State University of New York
Upstate Medical Center (1A, 1B)
Physical Therapy Program
College of Health Related Professions
750 East Adams St.
Syracuse, NY 13210
(Mr. Pat Van Beveren, Acting Director)
315 - 473-5101

NORTH CAROLINA

East Carolina University (1A, 1B)
Department of Physical Therapy
School of Allied Health & Social Professions
Greenville, NC 27834
(George Hamilton)
919 - 757-6961 ext. 235

University of North Carolina (1A, 1B)
Division of Physical Therapy
Department of Medical Allied Health Professions
Wing C, 221 H
Chapel Hill, NC 27514
(Charles P. Schuch, Acting Director)
919 - 966-4709

NORTH DAKOTA

University of North Dakota (1A, 1B)
Department of Physical Therapy
School of Medicine
Grand Forks, ND 58201
(Henry Wessman)
701 - 777-2831

OHIO

Cleveland State University (1A, 1B)
Physical Therapy Department
Department of Health Sciences
24th at Euclid Ave., Rm. 607, Fenn Tower
Cleveland, OH 44115
(Mary E. Miles)
216 - 687-3566

Ohio State University (1A, 1B)
Division of Physical Therapy
School of Allied Medical Professions
1583 Perry Street
Columbus, OH 43210
(Frank M. Pierson)
614 - 422-5921

OKLAHOMA

University of Oklahoma (1A)
Department of Physical Therapy
Health Sciences Center
PO Box 26901
Oklahoma City, OK 73190
(Martha Ferretti)
405 - 271-2131

OREGON

Pacific University (1A, 2)
Department of Physical Therapy
2043 College Way
Forest Grove, OR 97116
(Jean Baldwin, Ph.D.)
503 - 357-6151 ext. 360/362

PENNSYLVANIA

Temple University (1A, 1B)
Department of Physical Therapy
College of Allied Health Professions
3307 North Broad St.
Philadelphia, PA 19140
(Hyman L. Dervitz)
215 - 221-4815/6

University of Pennsylvania (1A, 2)
Department of Physical Therapy
Nursing Education Bldg.
420 Service Dr. SX
Philadelphia, PA 19104
(E. Jane Carlin, Sc.D.)
215 - 243-5807

University of Pittsburgh (1A, 1B)
Department of Physical Therapy
School of Health Related Professions
101 Pennsylvania Hall
University Drive C
Pittsburgh, PA 15261
(Rosemary Scully, Ed.D.)
412 - 624-6690/2914

PUERTO RICO

University of Puerto Rico (1A)
College of Health Related Professions
Medical Sciences Campus
GPO Box 5067
San Juan, PR 00936
(Yolanda Diaz Buso)
809 - 753-4859/4858

SOUTH CAROLINA

Medical University of South Carolina (1A)
Physical Therapy Program
171 Ashley Ave.
Charleston, SC 29403
(Nancy Patton, Ph.D.)
803 - 792-2961

#7 - Bachelor and Certificate Programs

TENNESSEE

University of Tennessee (1A)
Center for the Health Sciences
Department of Physical Therapy
800 Madison Ave.
Memphis, TN 38163
(Ann B. Hightower)
901 - 528-5888/9

TEXAS

University of Texas
Health Science Center at Dallas (1A, 1B)
Department of Physical Therapy
School of Allied Health Sciences
5323 Harry Hines Blvd.
Dallas, TX 75235
(Donna El-din)
214 - 688-2850

University of Texas at San Antonio (1A)
Physical Therapy Program
Allied Health & Life Sciences
San Antonio, TX 78285
(Barbara Melzer)
512 - 691-4476

Texas Women's University (1A)
School of Physical Therapy
Box #22487, TWU Station
Denton, TX 76204
(Carolyn Rozier, Ph.D.)
817 - 387-5530

University of Texas Medical Branch (1A)
Department of Physical Therapy
School of Allied Health Sciences
Galveston, TX 77550
(Eugene Rembe)
713 - 765-2901

UTAH

University of Utah (1A)
College of Health
Physical Therapy Program
HPR N-200, West 121
Salt Lake City, UT 84112
(Carolee Moncur)
801 - 581-8681

VERMONT

University of Vermont (1A)
Department of Physical Therapy
School of Allied Health Sciences
305 Rowell Bldg.
Burlington, VT 05401
(Sam Feitelberg)
802 - 656-3252

VIRGINIA

Virginia Commonwealth University (1A)
Department of Physical Therapy
Medical College of Virginia, Box 224
1201 E. Broad St.
Richmond, VA 23298
(Susanne Hirt)
804 - 786-0234

WASHINGTON

University of Puget Sound (1A)
Physical Therapy Program
Tacoma, WA 98416
(Suzanne L. Olsen)
206 - 756-3180

University of Washington (1A, 1B, 5)
Division of Physical Therapy
Department of Rehabilitation Medicine
RJ-30
Seattle, WA 98195
(JoAnn McMillan)
206 - 545-7408

WEST VIRGINIA

West Virginia University
Medical Center (1A)
Division of Physical Therapy
Room 1195---BSB
Morgantown, WV 26506
(Sandy Burkart)

304 - 293-3610/11

WISCONSIN

Marquette University (1A)
Program in Physical Therapy
2611 W. Wisconsin Ave.
Milwaukee, WI 53233
(Richard Jensen, Ph.D.)
414 - 224-7161/7194

#8 - Bachelor and Certificate Programs

University of Wisconsin (1A)
Courses in Physical Therapy
1308 West Dayton St.
Madison, WI 53706
(Mary Jane Meng)
608 - 262-2046

University of Wisconsin at LaCrosse (1A)
Department of Physical Therapy
243 Crowley Hall
LaCrosse, WI 54601
(A. J. Santiesteban, Ph.D.)
608 - 785-8470

#9 - Master's Degree Programs

ACCREDITED MASTER'S DEGREE PROGRAMS

The following programs offer an entry level master's degree which does not require an undergraduate degree in physical therapy.

ALABAMA

University of Alabama in Birmingham
Division of Physical Therapy
Birmingham, AL 35294
(Marilyn Gossman)
205 - 934-3566

CALIFORNIA

Stanford University
Division of Physical Therapy
School of Medicine
Room TA 103
Palo Alto, CA 94305
(Helen Blood, Ed.D.)
415 - 497-5795

University of Southern California
Department of Physical Therapy
Rancho Los Amigos Center
[illegible]933 Erickson Ave.
[illegible]ney, CA 90242
(Helen Hislop, Ph.D.)
213 - 923-5591

MASSACHUSETTS

Boston University
Department of Physical Therapy
Sargent College of Allied Health Professions
University Road
Boston, MA 02115
(Catherine Perry)
617 - 353-2720

NEW YORK

Columbia University (5)
Courses in Physical Therapy
College of Physicians & Surgeons
630 West 168th Street
New York, NY 10032
(Ruth Dickinson, Acting Director)
212 - 694-3781

NORTH CAROLINA

Duke University Medical Center
Department of Physical Therapy
POB 3965
Durham, NC 27710
(Robert Bartlett)
919 - 684-3135

TEXAS

Texas Women's University
School of Physical Therapy
Box #22487, TWU Station
Denton, TX 76204
(Carolyn Rozier, Ph.D.)
817 - 387-5530

WASHINGTON

University of Washington
Division of Physical Therapy
CC 814 University Hospital
Seattle, WA 98105
(JoAnn McMillan)
206 - 543-3116

U.S. ARMY MEDICAL DEPARTMENT

U.S. Army-Baylor University
Program in Physical Therapy
Academy of Health Science
U.S. Army
Ft. Sam Houston, TX 78234
(Betty Landen, Col. AMSC)
512 - 221-5187/4457

Write:

Commander USAMEDDPERSA
ATTN: SGPE-PDM, Major Cronin
1900 Half Street, SW
Washington, DC 20324

EXHIBIT C

Medical students or other graduate students may pursue the M.S. in HSR concurrently with a five-year Medical School Program or another graduate program and receive both degrees coterminously.

For additional information, address inquiries to the Program Administrator, Health Services Research Division, Department of Family, Community and Preventive Medicine, School of Medicine, Stanford University, Stanford, California 94305.

NEURO- AND BIOBEHAVIORAL SCIENCES PROGRAM

The School of Medicine offers an interdepartmental program leading to the Ph.D. in Neuro- and Biobehavioral Sciences. The Program is designed to provide broad, comprehensive, and rigorous training for a limited number of highly qualified graduate students.

Three categories of students are eligible for the Program: (1) non-medical graduate students; (2) postdoctoral fellows who, after completion of the M.D. degree and the approved internship, wish to enter residency training in neurology and to undertake a minimum of nine quarters of nonclinical academic work above and beyond the required three years of clinical training; (3) medical students having sufficient background, including a baccalaureate degree, to enable them to meet the course requirements of the Program concurrent with the medical curriculum and, after completion of the M.D. Program, they only need add the amount of time (two to three years) necessary to produce an acceptable thesis. The timing of their program may be adjusted to fit in with their special circumstances.

For further information regarding the Neuro- and Biobehavioral Sciences Program contact Eric M. Shooter, Ph.D., Department of Neurobiology, Stanford Medical School, Stanford, California 94305.

SOCIAL SCIENCES—HEALTH SERVICES

Program Advisor: CLIFFORD R. BARNETT, Ph.D., Pediatrics and Anthropology Departments.

The Departments of Anthropology and Sociology at Stanford have much to offer the medical student in concepts, methodology, and findings relevant to socio-medical research and the development of health care systems. Students who opt for a five-year M.D. Program may pursue a combination of course work and research leading to the master of arts degree in anthropology or sociology. Course work and research are tailored to advance the special interests of the student (e.g., adapting medical care to special populations in the U.S. and overseas; non-Western curing systems; population control; community psychiatry; and social and cultural factors in disease etiology and prevention). The degree program usually can be completed during two years of part-time work (including one full-time summer). Students may also pursue work in anthropology and sociology without committing themselves to a graduate degree program. For additional information, contact Clifford R. Barnett, Ph.D., Professor, Anthropology, and Professor (by courtesy), Pediatrics.

DIVISION OF PHYSICAL THERAPY

Director: HELEN BLOOD, Ed.D.

Adjunct Professors: HELEN BLOOD, BARBARA E. KENT

Assistant Professor: JOHN M. MEDEIROS

Clinical Instructors: HAZEL V. ADKINS, KATHLEEN BICE, DONNA J. BUREE, LINDA FREEMAN, FRANCES LUPI, MARGARET V. PETERSON, FRANCES L. PATTON, ROSALIE LOPOPOLO, ROBERT SIMPSON, PAULA SKINNER, DIANA STRUDM

The Division of Physical Therapy in the Stanford University of School of Medicine offers a master's degree curriculum for students entering the field of physical therapy. The program encompasses two academic years (6 quarters) and a summer internship

DR. ARTHUR KORNBERG, M.D., PROFESSOR OF BIOCHEMISTRY AND NOBEL LAUREATE, ON THE WARDS AS IN THE LABORATORY, THE ENCOURAGEMENT OF INVESTIGATION PERVADES MEDICAL EDUCATION AT STANFORD

between the two, and includes basic courses required for state licensure. Students must complete courses required for state licensure, one of the three advanced study areas and research requirements.

Most classes are held at the Stanford Medical Center. Students have three- and three-week periods of directed clinical experience at Stanford Hospital and affiliated health facilities in California during the first year, a full-time assignment during the Summer Quarter, and a four-week advanced internship in the spring of the second year.

Requirements for admission are a baccalaureate degree, completion of prerequisite courses, filing of an application including scores from the Aptitude Test of the Graduate Record Examinations by January 15, and, upon request of the Division, a personal interview. Applicants will be considered without regard to race, color, creed, religion, sex, age, or national origin.

Students are admitted Autumn Quarter each year. Dates for registration and general information will be found in the University Bulletin *Information*.

Basic prerequisites are courses in human anatomy, human physiology, chemistry, physics, psychology, sociology, and statistics. Mathematics, biology, and courses in oral and written communication are highly recommended. Each student's academic background will be reviewed on an individual basis for admission.

As part of the physical therapy program, students will enroll in required courses offered by other departments in the Medical School and other schools in the University. Electives related to the student's program may be selected primarily in the second year.

The curriculum is accredited by the American Physical Therapy Association.

For more information see the Stanford University Bulletin *Courses and Degrees*.

Stanford Univ - 1978-9

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SCHOOL OF MEDICINE

Dean: Clayton Rich

The School of Medicine was established as a department of the University in 1908 when the Cooper Medical College in San Francisco was acquired by Stanford University. Until 1959 clinical teaching and some teaching of the basic medical sciences were carried out in San Francisco, while the remainder was conducted on the University campus near Palo Alto.

In 1953 the Trustees of the University determined that the School of Medicine should be consolidated on the University campus in new facilities. Following the development of a new program of medical education and the construction of the Stanford Medical Center buildings for teaching, research and patient care activities, the School began its operation at Stanford in September 1959.

The current goals of the School of Medicine are stated as follows:

To continue its exceptionally strong participation in the intellectual life of the University as a whole, including joint interdisciplinary research and teaching involving the interfaces between the physical and social sciences and medicine.

To maintain a intensive, individualistic program of medical education which emphasizes scientific knowledge and professional excellence at the medical student, graduate, and postgraduate levels.

To preserve present strong commitments to fundamental research and the education of medical scientists, to develop greater commitments to research related to the scientific basis of professional practice of medicine.

The School believes that the goals of the Stanford Plan of Medical Education are best achieved if each student can plan his or her curriculum within a flexible educational system in which the diversity of students' career goals and educational backgrounds is recognized. Accordingly, in 1968 curricular changes were introduced which provided each student with maximum flexibility in formulating an individualized curriculum that best takes into account the student's past experience and future career goals. Under this plan, students may omit courses or areas in which they have already have adequate knowledge. In addition, students are encouraged to take advantage of particular offerings on the University campus as well as in the School of Medicine. The duration of the ... completed appropriate graduate work or include as many as eighteen quarters for students who include extensive research experience. Students interested in combined M.D.-Ph.D. programs must first apply for admission to the M.D. Program. Subsequent and separate application to a specific department is then required for candidacy for the Ph.D.

Provided an applicant to medical school has completed the basic courses in physics, chemistry and biology, the choice of an undergraduate major may reflect other interests, including the arts and humanities. Course work in mathematics and the behavioral sciences is highly recommended because of its importance in understanding medicine. Extracurricular activities and breadth of interests and experiences play an important role in the selection of students from among those applicants having superior academic records. The general requirements for admission are in the *Medical School Bulletin*. For application materials write: Chairman, Committee on Admission, Stanford University School of Medicine, Stanford, California 94305.

ALLIED MEDICAL SCIENCES

DIVISION OF PHYSICAL THERAPY

Emeriti: Lucille Daniels, *Professor*; Sarah ... *Associate Professor*

Director: Helen Blood

Associate Professors: Helen Blood, Barbara ...

Assistant Professor: John Medeiros

Senior Lecturer: Katherine F. Shepard

Lecturers: Valerie Coon, Rochelle Parker, Gay L. Raymond, Katharine B. Robertson, Terry L. Sanford, Linda VanHoesen

Clinical Associate Professor: Catharine Graham

Clinical Instructors: Hazel V. Adkins, Kathleen ..., Joan M. DuVal, Linda Freeman, ..., Frances ..., Patton, Robert Simpson, Paula ..., Diana ...

Panel of Consultants: John ... Beil, Clinical Associate Professor; David S. Burton, Assistant ...; ... Clinical Associate ...

OFFERINGS AND FACILITIES

The Division of Physical Therapy in the Stanford University School of Medicine offers a Master's degree curriculum for students entering the field of physical therapy. The program encompasses two academic years (6 quarters) and a summer internship between the two, and includes basic courses required for state licensure. Students must complete the courses required for state licensure, one of the three advanced study areas—Administration and Community Health, Curriculum Development and Instruction, Approaches to Neuro-muscular Dysfunction, and research requirements.

Classes are held at the Stanford Medical Center, which houses physical therapy lecture, laboratory, seminar and research rooms. Students have a two- and three-week period of directed clinical experience during the first year, a ten to twelve week internship during the summer quarter, and a four week advanced internship during the spring of the second year at Stanford Medical Center and/or affiliated health care facilities in California. This clinical experience provides the opportunity for students to move toward the full utilization of their knowledge and skills in the planning and implementing physical therapy programs.

The curriculum is accredited by the American Physical Therapy Association and the Council on Medical Education of the American Medical Association.

ADMISSION

Requirements for admission are a baccalaureate degree, completion of prerequisite courses, filing of an application including scores from the Aptitude Test of the Graduate Record Examination. The application must be completed by January ... letters of recommendation and ... The last possible Graduate Record Examination that can be taken to meet this deadline is the prior December. Upon request of the Division, a personal interview, and completion of supplementary admission tests and forms may be required. Applicants will be considered without regard to race, color, creed, religion, sex, age or national origin.

Students are admitted autumn quarter ... Dates for registration ... will be found in the ... *Bulletin* ... the University.

TRAINEESHIPS, SCHOLARSHIPS, AND LOANS

... the Division of Physical Therapy ... limited and vary from year to year.

The Marian Williams Memorial Scholarship is awarded each year by the Committee, and a few private agencies offer special scholarships for physical therapy students.

The Western States (including Hawaii and Alaska) without a physical therapy program provide part of the tuition of legal residents through WICHE (Western Interstate Commission for Higher Education).

The Stanford *Information Bulletin* lists the long-term loan policies of the University and the details of the National Defense Student Loan Program.

PREREQUISITES AND OTHER COURSES

Basic prerequisites are courses in human anatomy, human physiology, chemistry, physics, psychology (2), sociology, and statistics. Mathematics, biology, and course work in oral and written communication are highly recommended. Each student's academic background will be reviewed on an individual basis for admission.

As part of the physical therapy program, students will enroll in required courses offered by the Division, other departments in the Medical School, and other schools in the University. Electives related to the student's program may be selected primarily in the second year.

Graduate students from other departments may attend courses in the Division with the consent of the instructor. Any one of the following courses may not be offered if an insufficient number of students enroll.

COURSES

... GRX

220. Human Motion and Therapeutic Procedures I—Functional anatomy, biomechanics, body motion, analysis and practice of therapeutic exercise procedures, tests for and evaluation of physical disability, prosthetics and orthotics, and basic medical lectures in specialty areas with emphasis on problems of patient care. ... Aut (Kent, Staff)
MW ... 11:50, F ...

221. Human Motion and Therapeutic Procedures II—Continuation of Human Motion and Therapeutic Procedures I. Prerequisite: 220. (16 units, Win (Kent, Staff))
MW ..., F ...

222. Human Motion and Therapeutic Procedures III—Continuation of Human Motion and Therapeutic Procedures II. Prerequisite: ...

...rophysiological Basis of Human Mo... ...Basic neuroanatomical and neuro... ...physiological principles of normal and ... ...motor control, pre- and postnatal ... ...practice ... concepts and related ... ...clinical treatment principles ... ...and adult neurological patient; evalu... ...treatment, and program planning for p... ...with neuromotor disabilities.
...units, Win, Spr (Robertson, Staff)
...

...rophysiological Basis of Human Mo... ...II—Continuation of Neurophysiological ... ...Human Movement I. Prerequisite: 225
...units, Spr (Staff)
...

...rophysiological Basis of Human Mo... ...III—Continuation of Neurophysiological ... ...Human Movement II. Prerequisite: 22...
...Staff
...

Physical Agents—Introduction to the principles underlying the use of ... ...rotherapy, massage, and hydrotherapy ... ...ice of essential techniques.
...units, Aut (Robertson, Staff)
MW ...

Physical Agents—Introduction to kine... ...ic electromyographic techniques, fun... ...techniques.
...Win (Robertson, Staff)
MW ...

Kinesiology Electromyography—Anal... ...human movement using electromyographic ...niques.
...units, Aut (Robertson) by arrangement

Clinical Electromyography—Clinical ap... ...of electromyographic procedures and ...niques.
...units, Win, Spr (Robertson)
...by arrangement

Clinical Medicine—Lectures, demonstra... ...and discussions presented by pathologists, ...ologists, and medical and surgical ...ists with emphasis on abnormalities, ...l by disease or trauma, which produce or ...bute to disorders of movement.
...units, Spr (Downs) TTh 1:15-3:05

Directed Clinical Experience in Physical ...apy I—Students are assigned for a select... ...full time during a portion of the quarter ...lth care facilities for clinical laboratory ...ies ethics and selected basic skills.
...units, Aut, Staff by arrangement

Experience in Physical Therapy I. Prerequisite: 22...
2-4 units, Aut, Staff by arrangement

247. Internship in Physical Therapy—Students are assigned to treatment facilities for full time clinical experience. Prerequisite: 22..., 227, 244, 245, 250.
3-9 units, Aut, Staff by arrangement

248. Advanced Internship in Physical Therapy—A practicum related to the Advanced Study Area planned by the student advisor and preceptor from an approved clinical facility. Prerequisites: 244, 245, 247 and 2 quarters of clinical study.
3 units, Staff by arrangement

250. Social and Psychological Aspects of Illness and Disability—Special problems related to response to illness and disability; patient-therapist relationships; emphasis on total needs of the patient as related to his unique life style.
3 units, Spr (Shepard, MW 1:15-...
...

251. Early Childhood Screening—Lecture hours on organization of public health clinics, screening processes, and cultural considerations in child development followed by field experience in three public health clinics.
2 units, Summer, by arrangement

257. Organizational Behavior and Physical Therapy—Interpersonal and inter-professional relationships, leadership styles, groups dynamics and related areas and the application to physical therapy.
3 units, Aut (Shepard) by arrangement

258. Special Topics—Current issues and problems related to developing physical therapy knowledge, techniques and practice.
2-5 units, Win (Staff) TTh 3:15-5:05

259. Organization and Delivery of Health Care—Basic concepts of organization and delivery of physical therapy in relation to total health care; includes budgeting, supervision, consultation, and regulation.
3 units, Aut (Sanford) MW 10:00-11:50

ADVANCED STUDY AREAS

Courses 244, 245, 247 and their prerequisites must be satisfactorily completed before enrollment in the Advanced Study component of the program. Courses listed between 260 and 283 are related to the Advanced Study Areas. Students must select and complete courses in one of the following areas:

Administration and Community Health: 260, 261, and 262.

Curriculum development and Instruction: 277, 278, ...

260. Administration and Community Health in Physical Therapy I—Program planning, budgeting, cost ... techniques, systems ... community strategies ... legal and political implications on care. Includes project and field work.
4 units, Aut (Shepard) by arrangement

261. Administration and Community Health II—Continuation of Administration and Community Health I. Prerequisite: 260.
4 units, Win ... by arrangement

262. Administration and Community Health III—Continuation of ... and Community Health Care.
2 units, Spr ...

263. Advanced Approaches to Neuromuscular Dysfunction I—... speech, development, ... to neurological dysfunction; ... physiological and functional ... pathology; patient evaluation; ... and treatment approaches.
4 units, Aut (Rawson) by arrangement

266. Advanced Approaches to Neuromuscular Dysfunction II—Continuation of 263.
4 units, Win (Rawson) by arrangement

267. Advanced Approaches to Neuromuscular Dysfunction III—Continuation of 263 and 266.
2 units, Spr (Rawson) by arrangement

270. Advanced Approaches to Musculoskeletal Dysfunction I—Advanced kinesiology and biomechanics; analysis of selected ... and treatment procedures for patients with musculoskeletal dysfunction.
4 units, Aut (Staff) by arrangement

271. Advanced Approaches to Musculoskeletal Dysfunction II—Continuation of 270.
4 units, Win (Staff) by arrangement

272. Advanced Approaches to Musculoskeletal Dysfunction III—Continuation of 270 and 271.
2 units, Spr (Staff) by arrangement

275. Curriculum Development and Instruction in Physical Therapy I—Learning theory; objectives, content and evaluating of courses and curricula; directed teaching in selected areas.
4 units, Aut (Shepard) by arrangement

276. Curriculum Development and Instruction in Physical Therapy II—Continuation of ...

277. Curriculum Development and Instruction in Physical Therapy III—Continuation of 275 and 276.
2 units, Spr (Shepard) by arrangement

278. Directed Teaching—Practicum in teaching physical therapy in professional, academic, and clinical education programs and/or physical therapists assistant curricula.
1-4 units, Win, Spr (Shepard, Staff) by arrangement

283. Individual Work.
1-5 units, any quarter (Staff) by arrangement

RESEARCH COURSES

Research requirements of the Division must be satisfied by completing 291.

290. Seminar in Research—Basic principles of research with emphasis on material applied to physical therapy.
1-3 units, any quarter (Staff) by arrangement

291. Research.
1-10 units, 1977-78, any quarter (Staff) by arrangement
1-5 units, 1978-79, any quarter (Staff) by arrangement

BIOCHEMISTRY

Chairman: I. Robert Lehman

Professors: Robert L. Baldwin, Paul Berg, Daniel S. Hogness, A. Dale Kaiser, Arthur Kornberg, I. Robert Lehman, George R. Stark

Associate Professor: Ronald W. Davis

Assistant Professors: Douglas Brutlag, James Lehman

Consulting Professor: Abraham White

Senior Lecturer: Carl Rhodes

OFFERINGS AND FACILITIES

The Department of Biochemistry, located in the Stanford Medical Center on the University campus, is part of the Graduate Division of the University and a department of the Medical School. An introductory course series in general biochemistry, Biochemistry 200-201, is taught by the entire staff as well as a number of guest lecturers. The sequence consists of both basic lectures, intended to provide all students with a rigorous background in biochemistry, and special lectures enabling students with particular interests to ... in depth. Medi...

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[illegible] Limitations Within a Department [illegible] may be counted toward the A.B. degree [illegible] at least 1[illegible] in the College. [illegible] A.B. degree.

[BACHE]LOR OF SCIENCE WITH MAJORS IN THE SCIENCES

[illegible] departments in the Division of Natural Sciences and Mathema[tics] [illegible] that many entering [illegible] work for the A.B. or B.S. degree, each department has [illegible] the student will not have to [illegible] the second year. Each department [illegible] ready to [illegible] students to [illegible] and to suggest a schedule that will make it possible to complete the [illegible]

[BACHELOR OF] ARTS AND BACHELOR OF SCIENCE IN [ENGINEERING]

[illegible] that can work concurrently [illegible] a bachelor of arts degree [illegible] philosophy, or religion. Additional [illegible] upon the engineering discipline in which the student is enrolled. [illegible] The minimum requirement for the degree is 160 units.

[illegible] requirements listed for the bachelor of science degree, an [illegible] engineering curriculum the following requirements must also be met: [illegible] logic, or linguistics, 4 units; humanities, 4 units each in arts [illegible] history other than United States, 4 units; major field, 2[illegible] upper [illegible] units.

[illegible] Three-Two Plan will be under the direct and continuous guidance of the [De]partment of [Engin]eering and the LAS Advisement Office.

[BACH]ELOR OF SCIENCE WITH OTHER MAJORS

Dentistry

[illegible] for the degree

[illegible] REQUIREMENTS 96 units

[illegible] include the courses in chemistry, English, physics, and biology re[quired for] admission to the School of Dentistry of the University of Southern California.

*[GENERAL] EDUCATION REQUIREMENTS AS LISTED FOR THE A.B. DEGREE**

General Requirements (5 courses)

Humanities (3 or 4 courses)*

Social Sciences (3 or 4 courses)*

[NATURA]L SCIENCES

[illegible]

[illegible] total [illegible] units in Letters, Arts, and Sciences [illegible] 25 units [illegible] 12 or more on the upper division level, must be taken in the College after [illegible] Upper division units earned in the School of Dentistry may not be used [illegible] this requirement.

MAJOR REQUIREMENTS [illegible] (Dentistry)

The major requirement [illegible] for the B.S. degree is met by completing in the School of Dentistry all the [illegible] first and second year of the D.D.S. curriculum.

[illegible]

A total of 12[illegible] [occupa]tional therapy courses are open only to students with senior standing who have been [illegible] the department. Supplementary application to the department is required and must be [illegible] by January 2.

*GENERAL EDUCATION REQUIREMENTS AS LISTED FOR THE A.B. DEGREE**

Group A, General Requirements, 5 courses

Group B, Humanities [illegible]

Group C, Natural Sciences [illegible] courses

Group D, Social Sciences [illegible] courses

*See General Education [illegible]

[illegible]

Biol Sci 3[illegible] or [illegible]

Biol Sci 312

Psych 2[illegible]

Psych 3[illegible] or Psych [illegible]

Psych [illegible]

One additional [illegible] biology

OCCUPATIONAL [THERAPY]

Occ Ther [illegible] 41[illegible] 42[illegible] [illegible] 484

Occ Ther 4[illegible] requirement of the American Occupational Therapy Association for Certificate and Registration

ELECTIVES to make a total of 12[illegible] units

Enrollment in occupational therapy courses is limited to students selected by the Department of Occupational Therapy [illegible] who possess the qualifications necessary for successful practice as a registered occupational therapist.

A.M. DEGREE AND CERTIFICATE IN OCCUPATIONAL THERAPY

Applicants must enter with a bachelor's degree from an accredited college.

PREREQUISITE COURSES

*Human Anatomy with laboratory

*Human Physiology with laboratory

Introductory or General Psychology

Introductory or General Sociology

Abnormal Psychology

Human Growth and Development

REQUIRED COURSES

See the bulletin of the Graduate School for detailed requirements.

B.S. — PHYSICAL THERAPY

A total of 13[illegible] units is required. Physical therapy courses are open only to students with senior standing who have been selected by the department. Supplementary application to the department is required and must be completed by January 2.

*GENERAL EDUCATION REQUIREMENTS AS LISTED FOR THE A.B. DEGREE***

Group A, General requirements ([illegible] courses) [illegible] English composition

Group B, Humanities [illegible]

*Obtain Departmental approval [illegible] registering for these courses.

**See General Education Requirements.

USC –

Original document is of poor quality

Health Education Workshop (Ed CI 581)

582 Performance Analysis Laboratory: Team Sports (2)

583 Performance Analysis Laboratory: Modern Dance (2)

584 Performance Analysis Laboratory: Ethnic Dance (2)

586 Theories and Principles of Physical Conditioning (2)

587L Seminar: Advanced Exercise Physiology

588L Physiology of Exercise and Aging

589 Seminar: Exercise for the Aged

591 Research Seminar

592 Seminar: Adapted Physical Education (2)

593 Elementary Physical Education for the Atypical Child (2)

595 Seminar: Analysis of Human Motor Performance

PHYSICAL THERAPY

Professor Helen J. Hislop, Ph.D. *(Interim Chairman)*

Associate Professors Margaret Bryce, M.A.; Lenore Krewell, M.A.

Clinical Associate Professors Jacqueline Montgomery, M.A.; Lorraine Ogg, M.A.; Frances Patton, B.S.

Assistant Professors Phyllis Browne, Ph.D.; Janet Duttarer, M.A.; Ardith Meyer, M.A.; Helen C. Ziler, M.A.

Clinical Assistant Professors Hazel Adkins, M.A.; Daniel L. Antonelli, M.S.; Claire Beckman, M.S.; Cecilie [illegible], M.A.; Mary Katie Gillis, B.S.; Austin Grigsby, M.P.A.; Dorothy [illegible], B.S.; Brenda [illegible], M.A.; Linda Matsuno, B.S.; Sharon Nicholas, M.A.; [illegible], B.S.; Beverly J. Paquet, B.S.; Patricia L. Pechtl, M.A.; George C. Walters, Jr., M.A.

Instructors Marybeth Brown, M.A.; Cynthia Moore, B.A.; George Wolfe, M.S.

Clinical Instructors Joyce Campbell, M.S.; Vivian Hall, M.S.; [illegible], B.S.; Scot Irwin, B.S.; Thomas [illegible], B.S.; Beverly Toyama, B.S.

Lecturers Charles L. Lowman, M.D., Sc.D., F.A.C.S.

Emeritus Professor Margaret S. Rood, M.A.

401 Normal Human Structure and Kinesiology (5)
Normal human anatomy and kinesiology with emphasis on upper and lower extremities, trunk, head and neck; cadaver dissection.

402 Human Physiological Support Systems in Exercise (3)
A survey of normal human physiological responses to exercise and environmental changes. Qualified students may substitute [illegible] 587a.

403 Human [illegible] Sequences (3)
Survey of human sensori-motor, perceptual and psychosocial development from prenatal life through changes accompanying the aging process.

410 Introduction to Health Care Systems and the Patient (3)
Examination of community resources, the multidisciplinary approach to patient management, patient-therapist relationships, legal and ethical consideration in the delivery of health care.

420, 422, 424, 426 Practicum in Patient Care (1-1-1-1)
Clinical instruction and laboratory practice in patient settings. [illegible]

431 Pathokinesiology
Disturbances [illegible] with [illegible]

432 Pathology of the Musculoskeletal System (3)
Current knowledge of basic mechanisms of disease and injury affecting muscle, bone, joints and connective tissues.

433 Selected Applications of Environmental Physiology to Patient Care (2)
Physiological responses to temperature, electromagnetic and mechanical energies. Lecture and laboratory.

434 Principles and Practice of Therapeutic Exercise in Musculoskeletal Disorders
Pathokinesiological principles in patient evaluation: muscle testing, goniometry, physical examination, gait, and functional analysis, patient management, including program planning, special approaches to exercise, orthotics, prosthetics.

435 Principles of Clinical Investigation (2)
Elementary statistics, overview of research methodology, experience in critique of research papers.

475 Psychosocial Effects of Physical Disability (2)
Exploration of problems related to the behavioral, emotional and social aspects of disease and disability. Special consideration of interpersonal [illegible] between patient and therapist.

495ab Clinical Affiliation (1, 7)
[illegible] patient management [illegible]

502ab Dissection Anatomy for Therapists (2-2)

503 Neuroscience

504 Clinical Neurology for Therapists (3)

508 Human Physiologic Support Systems in Disability

509 Clinical [illegible] Physiology and Theory of Practice

511 Neurophysiology in the Treatment of Neuromuscular Dysfunction (2 or

522 Neurophysiological Response Mechanisms in Therapy (2 or 4)

525 Principles of Management of Physical Therapy Services (3)

528 Practicum in Patient Care (1)

530ab Objective Measurement of Physical Performance (3-3)

533 Electrotherapy (2)

534 Principles and Practice of Therapeutic Exercise in Neurological Disorders

540 Principles of Clinical Education

553 Gait Analysis, Observational (

559 Readings in Physical Therapy (1-4, max 8)

560 Physiology of Nerve and Muscle (2)

561 Independent Study in Electrophysiologic Measurement

563 Biomechanics (2)

565 Neurophysiology of Motion

570 Practicum in Teaching and Instructional Media (1-5)

575ab Seminar in Physical Therapy

576ab Seminar

587ab Physiological Correlates of [illegible] Exercise (3-3)

595abcd Practicum in Advanced [illegible] Physical Therapy (3-3-3-3)

1997-98

Physical Therapy

Cal St. Univ Long Beach.

Department Chair: Dr. Frank J. Bok

Professors: Bok, D.D. Williams.

Associate Professors: Morris, Nielsen.

Academic Advising Coordinators: Dr. Frank J. Bok, Dr. David D. Williams (EOP and Minority)

The physical therapy curriculum is designed to enable students to become an integral part of the medical rehabilitation team as practicing physical therapists in a variety of clinical facilities. Appropriate science, professional, medical and clinical experiences are provided. Successful completion of the degree requirements leads to a bachelor of science degree. Successful completion of the program qualifies one to write the State of California examination to practice as a physical therapist. The program is approved by the American Medical Association in collaboration with the American Physical Therapy Association.

Professional (Baccalaureate) Program Requirements

Because admission to the program is limited [illegible] admission is on a competitive basis. Admission to [illegible] guarantee admission to the program. The following [illegible] tance requirements.

Application for Admittance to Professional Program

After being admitted to the University, students must file an appropriate supplemental application (obtained from the Physical Therapy Department) with the department. The application must be filed as follows: for currently enrolled undergraduates, during the semester they anticipate having earned 45-60 University credits, they are eligible for enrollment in the orientation course (P.T. 210); and for transfer students, at the time of registration if they have earned 45-60 University credits, they are eligible for the orientation course. For applications to be considered complete and valid applicants must meet the following stipulations:

1. Include all information requested on the application
2. Include transcripts of all academic work attempted at high school and college
3. Be physically well in order to carry out typical case loads expected of working therapists

4. Be emotionally well in order to cope with the typical case loads of working therapists.
5. Be less than 35 years of age
6. Demonstrate satisfactory potential for success in the program as disclosed by previous academic success in all college work attempted.
7. Demonstrate satisfactory potential for success in the program as disclosed by previous academic success in sciences and other program related credits earned. The following sciences and their semester unit values are the CSULB science prerequisites to the professional program: (Note that grades of C or better are required and that all courses except psychology must have laboratory experiences.)

Course	Units
Anatomy (human), Biology 202	3–4
Biology (general, not biological or life science), Biology 200	3
Chemistry (inorganic), Chemistry 200*	4
Chemistry (organic), Chemistry 200*	4
Chemistry (biochemistry), Chemistry 300	4
Physics (survey), Physics 104	4
Physiology (human), Biology 207	3–4
Psychology (general), Psychology 100	3
Psychology (abnormal), Psychology 370	3
Psychology (disability), Physical Therapy 374	3

8. Demonstrate satisfactory success in the field by documented previous work experience in physical therapy or some other health related area.
9. Have no prior felony conviction in the State of California or other jurisdiction.

Requirements for Admittance to Clinical Practice

1. Complete or have in progress all other requirements for the baccalaureate degree [illegible] application for admittance to clinical practice.
2. Submit [illegible] each [illegible] course attempted.
3. Successfully complete a competency [illegible] examination.

Bachelor of Science Degree in Physical Therapy (95 units) (code 3-1225)

Lower Division: Physical Therapy 210

Upper Division: Biology 337, Chemistry 360, Physical Therapy 300, 320, 351, 352, 371, 374, 375, 430, 431, 440, 470, 472, 474, 485A,B, Psychology 370

Lower Division

210. Orientation to Physical Therapy (2) F, S Black, Carlstrom, Hammer, Morris, Nielsen

Orientation to the [illegible]

Upper Division

300. Human Anatomy for Therapists (4) F, S Williams
Prerequisite: Admittance to professional program [illegible] Regional [illegible] anatomy for therapists including [illegible] human specimens. [illegible]

3?5. Applied Kinesiology for Therapists (4) F, S Bok, Morris
Prerequisites: Physical Therapy [illegible] Principles of kinesiology [illegible] therapeutic techniques and [illegible] laboratory, 3 hours.)

351. Physical Therapy Procedures I (3) F, S Bryant, Long, Wetzler
Prerequisites: Physical Therapy [illegible] concurrently and consent of instructor. Principles and techniques of [illegible] massage and hydrotherapeutic [illegible] procedures. (Lecture [illegible] hours.)

352. Physical Therapy Procedures II (3) F, S Bryant, Long, Wetzler
Prerequisites: Physical Therapy [illegible] consent of instructor. Principles and techniques [illegible] electrotherapy procedures [illegible] (Lecture 2 hours, laboratory [illegible])

371. Clinical Lectures I (2) F, S Faculty
[illegible]

374. Psychology of Disability (3) F, S Rabin
Prerequisite: Psychology 150 [illegible] Consideration of reaction [illegible] physical [illegible] and the psychological [illegible] factors [illegible] in promotion and impeding adjustment. [illegible]

380. Clinical Applications (1-4) F, S Bok, Morris, Nielsen, Faculty
Prerequisites: Physical Therapy 320 and consent of instructor. Supervised experience in various clinical rehabilitation facilities during which the student acquires, through observation and participation, clinical insight and experience in the procedures and practices in [illegible] work.)

430. Physical Therapy Procedures III (1) F, S Morris, Nielsen
Prerequisites: Physical Therapy 320 and consent of instructor. Principles and techniques [illegible] design and assistive devices as applied to the prevention and correction of physical disability, including methods of evaluation. (Lecture [illegible] hours, laboratory [illegible] hours.)

431. Physical Therapy Procedures IV (2) F, S Morris, Nielsen
Prerequisites: Physical Therapy 430 and consent of instructor. Advanced therapeutic principles and procedures, including appropriate evaluative techniques. (Lecture 1 hour, laboratory 3 hours.)

440. Organization, Administration and Supervision (2) F, S Hammer
Prerequisites: Senior standing in physical therapy and consent of instructor. Organization, administration and supervision of physical therapy departments in various clinical settings.

445. Modern Trends in Physical Therapy (3) F, S Bok, Faculty
Prerequisite: Consent of instructor. Designed to bring to the active and inactive therapist updated information on trends, procedures, and practices.

460. Neuroanatomy and Neurophysiology for Therapists (3) F, S Williams
Prerequisite: [illegible] and consent of instructor. Correlation of neuroanatomy [illegible] treated by [illegible] (Lecture [illegible] hours, laboratory 3 hours.)

472. Clinical Lectures II (2) F, S Faculty
Prerequisites: [illegible] pathology, clinical [illegible] physical therapy in the course [illegible] with specific reference [illegible] management of [illegible] to arthritis, amputation [illegible] and congenital [illegible]

473. Clinical Lectures III (2) F, S Faculty
Prerequisites: [illegible] 472 [illegible] Pathology, clinical [illegible] of the physical therapist in the course [illegible] management of [illegible] psychiatric [illegible]

485A,B. Clinical Practice (3,3) F, S Nielsen, Faculty
Prerequisites: [illegible]

490. Special Studies (1-3) F, S Bok, Williams
Prerequisite: [illegible] area of physical therapy [illegible] May be repeated [illegible]

Essentials and Guidelines of an Accredited Educational Program for the Physical Therapist

Essentials Adopted 1979 by the
AMERICAN MEDICAL ASSOCIATION
NATIONAL ASSOCIATION OF PHYSICAL THERAPISTS
UNITED STATES PHYSICAL THERAPY ASSOCIATION

Guidelines approved 1979

Program Review Committee
JOINT REVIEW COMMITTEE FOR PHYSICAL THERAPY EDUCATION

Essentials, which present the minimum requirements for an educational program in regular typeface. The extent to which a program complies with the *Essentials* determines its accreditation status; the *Essentials* therefore include all requirements for which an accredited program is held accountable.

Guidelines, explanatory documents which clarify the *Essentials*, are printed in italic typeface. Guidelines provide examples, etc., to assist in interpreting the *Essentials*.

PREAMBLE

OBJECTIVE

These *Essentials* are to be used for the development and self-evaluation of physical therapy educational programs for the first professional degree in physical therapy, i.e., baccalaureate, post-baccalaureate certificate and master's degree. The educational institution offering an educational program in physical therapy assumes responsibility for ensuring that the established *Essentials* contained herein will be met and maintained. On-site surveys are made by the appropriate recognized bodies, and lists of accredited programs are published for public information.

Appropriate utilization of this document in the planning and implementation of a physical therapy educational program should:

1. assure the competency of the entry level therapist who successfully completes the program
2. provide a guide for quality education consistent with the professional standards of physical therapy and the standards of the institution of higher learning
3. assist in the development of a new educational program to meet accreditation standards

DESCRIPTION OF THE PROFESSION

Physical therapy requires practical knowledge of human growth and development, human anatomy and physiology, neuroanatomy, neurophysiology, biomechanics of motion, manifestations of disease and trauma, normal and abnormal psychological responses to injury and disability, and ethnic, cultural and socioeconomic influences on the individual.

Therapeutic procedures include exercise for increasing strength, endurance, coordination, and the range of motion, stimuli to facilitate motor activity and functional integration in activities of daily living and the use of assistive devices; and the application of physical agents to relieve pain or alter physiological status.

The physical therapist practices as part of a large and varied team of health specialists, as well as members of the lay community.

The physical therapist must be prepared to practice safely and effectively, and to assume varied patterns of responsibility for development and revision of the individual patient's therapeutic program. The physician has responsibility for these decisions, and has the prerogative of delegating various degrees of authority to the physical therapist to whom the physician refers patients.

The physician's directions to the therapist may be specific and detailed; or they may take the form of standing orders for all patients in a particular category or location. In still other situations, the physician may develop the treatment plan in conference with the therapist or authorize the therapist to select, perform and report upon procedures which the therapist believes are most useful. In responding to the physician's referral, the therapist must also comply with the legal and ethical requirements of state physical therapy practice acts and with the recognized ethical standards of the profession.

Because physical therapy is a rapidly evolving field it is most useful to classify competencies to be developed by the students into three broad categories.

1. Those in common usage in physical therapy services throughout the country in which the student shall develop a level of skill adequate to allow safe and effective performance;
2. Those utilized primarily in specialty areas of physical therapy services in which the student shall develop knowledge of concepts and principles adequate to allow advancement to useful levels of skill with experience; and;
3. Those rarely used in current physical therapy services but which students should know exist. They should

to patient services; however, little skill in performance shall be expected of the average recent graduate.

Inclusion of a particular aspect of practice in the list of objectives does not mean that the new graduate is expected to carry sole responsibility for that phase of care. It does include that the new physical therapist frequently participates in this activity and therefore, he is to be prepared to carry out related responsibilities effectively.

REQUIREMENTS FOR ACCREDITATION

I. SPONSORSHIP

Educational programs shall be located in any of the following settings:

A. A college or university accredited by its regional association of colleges and secondary schools which is authorized to grant the baccalaureate or higher degree and is affiliated with accredited hospital(s) and community health care programs, facilities and agencies.

B. A medical school or academic health center accredited by the appropriate bodies, which has liberal arts college affiliation and affiliation with accredited hospital(s) and community health care programs, facilities and agencies.

C. A graduate school meeting the institution's criteria and affiliated with accredited hospital(s) and community health care programs, facilities and agencies.

The sponsoring institution must provide, directly or through affiliation with a neighboring institution, facilities for initial directed clinical education, as well as necessary teaching resources and instructional expertise in the areas of basic and applied natural, behavioral, and medical sciences.

In physical therapy programs involving the facilities of more than one institution, the sponsoring institution shall be the one which assumes primary responsibility for curriculum planning and selection of course content, for coordination of classroom teaching and supervised clinical education, for establishing criteria for faculty appointments, for selecting students for admission to the program, for providing general financial support of the program on a current and continuing basis, and for granting a degree or certificate as evidence of completion of the program. The sponsoring institution seeks and is granted accreditation of the physical therapy educational program. The sponsoring institution also enters into affiliation agreements with other institutions for the purpose of providing needed supplementary instructional services for the students enrolled in the program.

The physical therapy educational program may be organized and implemented within one of several administrative patterns. It may be a department in a college or school such as allied health, medicine, or arts and sciences; it may be a cooperative program sponsored by two or more schools of one university; it may be a cooperative program sponsored by two separate educational institutions.

Administrative arrangements should provide the director and faculty of the educational program for the physical therapist with effective channels of communication, with the dean or chief administrative officer of the college or school in which the physical therapy program is located as well as effective channels of communication with one or more designated physicians regarding medical matters associated with the curriculum.

II. CURRICULUM

A. Student Supervision

The student shall be under the direct supervision of the physical therapy faculty in the (educational) program.

B. Learning Experiences

The statements of goals for student competencies in these *Essentials* identify both the [illegible] areas of content on which learning experiences must focus.

C. Student Competencies

The curriculum shall be designed so that upon completion of the physical therapy educational program, students will possess competencies in the following categories:

1. Individual Patient Services
   a. Evaluation of the problem—ability to participate in the initial planning and revision of patient treatment programs through supplementation of the referring physician's evaluation by recognition of areas in which structure and function are abnormal and performing appropriate tests and measurements. The physical therapist shall have the competence to [illegible] that will assist [illegible] planning a treatment program [illegible] the goals and results.
   b. Treatment planning—ability to participate with [illegible] in determining objectives and in planning a plan [illegible] these objectives.
   c. The student must have knowledge of:
      1. The types of therapy that are available and their uses
      2. The indications and contraindications
      3. The goals of treatment including [illegible] goals and subsequent modification of therapy as indicated by the patient's condition and progress
      4. A discharge plan
   d. The student shall be able to apply specific techniques according to the following principles:
      1. Preparing the treatment area
      2. Instructing the patient
      3. Positioning and draping of the patient
      4. Examining the affected part [illegible] before, during
      5. Treating the appropriate part
      6. Applying treatment techniques effectively and safely
      7. Striving to obtain the desired results
   e. Performance—ability to implement appropriate programs of patient treatment through the use of intelligent utilization of exercise, physical agents, assistive and supportive devices, and other treatment procedures and equipment designed to:
      1. Maintain and restore strength, endurance, coordination, relaxation, and range of motion
      2. Promote healing
      3. Relieve pain
      4. Improve functional independence
   f. Cognizance—ability to be cognizant of the physiological and psychological effects of illness, disability and the processes necessary to [illegible] treatment through the evaluation, planning and performance of services. In cooperation with the referring physician, the student therapist shall select and implement promising approaches to

prevent or minimize psychological stresses for the patient and his family.

2. Communication—the student shall achieve competence in intelligent and effective verbal and non-verbal communication with patients and their families, supervisors, physicians, associates and the public.
3. Administration—the student shall demonstrate ability to participate in major aspects of planning for overall operation of physical therapy services in a facility or a community.
4. Professional growth: self-evaluation and continuing education—the student shall recognize responsibility to expand and improve his own professional knowledge and skills and foster continuing improvement of the physical therapy profession and health care.

D. Course Work

1. Each course shall have written objectives. Learning experiences shall be designed to meet the objectives. Students shall know what the objectives and experiences are.
2. Rationale for determination of academic credit must be the same for all courses. The type of degree [illegible] the type of a degree [illegible] which was completed.
3. The instructor must develop the content of each course in terms of the overall curricular pattern.
4. An appropriate system of prerequisites shall be established. Courses shall be offered in logical sequence related to the level of difficulty and the student's professional development.

E. Clinical Work

1. Each phase of clinical experience shall have written objectives. Learning experiences shall be designed to meet these objectives. Students shall know what the objectives and experiences are.
2. Students shall have planned experiences which will provide for increasing time, depth of responsibility, and complexity of student involvement with patients throughout the curriculum.

Development and Planning

The process of curriculum development will vary considerably in exact format among schools of different sizes and administrative structures. The institution should provide the faculty with adequate time for planning, development, reevaluation and revision of the curriculum. The endeavors should result in an up-to-date basic description of all learning experiences, including courses, clinical experiences and independent work.

The following elements are desirable [illegible] of curriculum development for all programs. These guidelines describe major aspects of the process needed if the curriculum is to be related to educational goals of the program, [illegible] to change, and effectively integrated.

- *Faculty should be allowed time to work on individual course planning as a regular part of their responsibilities.*
- *There should be regularly scheduled meetings of the full faculty and of sub-groups which have closely related curriculum responsibilities, to facilitate exchange of information and collaboration on course planning, and to develop strong bases for integration and sequencing of curriculum components.*
- *An up-to-date file of basic descriptive material on all courses should be [illegible]*
- *[illegible] the fa-*

ulty to assess overall strengths and weaknesses of the program.

- *The curriculum should be subject to annual review by faculty groups outside the immediate professional program to ensure that its structure and level are compatible with those of other programs in the institution, and as one means of avoiding professional parochialism. The exact nature of the review may vary widely among institutions, and it need not be a formal process involving controlling approval. Some established method should, however, exist for soliciting ideas from other specialists within the parent institution and the [illegible].*
- *Some regular mechanism should be in use to allow student participation in curriculum evaluation and development.*
- *Regular provision should be made for joint planning meetings in which both classroom and clinical faculty participate. Clinical faculty should be kept fully informed about all changes in curriculum, but should also have an opportunity to participate in planning these changes, although they act ordinarily in an advisory capacity.*
- *Regular provision should also be made for joint planning meetings of representatives of the physical therapy faculty and medical specialists who utilize the services of physical therapists for their patients. These meetings should be used to [illegible] expectations of both groups and to share views on the relevance of selected curriculum content.*
- *Despite the desirability of active advisory participation of faculty from other disciplines, students and clinicians, the full-time program faculty should have the major voice in determining curriculum structure. The mechanisms for securing administrative or overall faculty approval should be clearly described and known to faculty. Extended delays in securing administrative review and veto of faculty-proposed changes by a single administrative officer on other than financial grounds should be avoided.*

The following are examples of skills which the physical therapist should possess to communicate effectively:

- *Recognizing the effect of her his own verbal or non-verbal communications*
- *Being receptive to message of others, whether expressed verbally or non-verbally*
- *Asking relevant and understandable questions*
- *Giving accurate and appropriate information concisely and clearly*
- *Giving patients and their families clear and concise directions using lay or medical terms for body parts and disorders as indicated*

Other kinds of performance skills include:

- *Estimating current costs of providing services, establishing charges, and identification of methods for minimizing costs*
- *Implementing a practical system for ongoing assessment of the quality of care provided by the service*
- *Implementing policies to ensure safe and ethical practice in keeping with medico-legal principles*
- *Estimating needs for manpower at various levels and delegation of responsibility and scheduling of activities for available personnel*
- *Estimating needs for recruitment, selection, orientation, retention, and promotion of new personnel for the service*
- *Estimating facility and equipment needs, and establishing planning priorities for their acquisition as a basis for budget planning*
- *Hypothesizing about probable consequences for physical therapy services as a result of changing patterns in delivery of health care*
- *[illegible] expert assistance in planning physical therapy services*
- *Relating the [illegible] physical therapy to those of other elements in the health care system of the community*

The curriculum should encourage:
- *Acquiring awareness of major developments in theory and practice*
- *Being flexible in adapting to new and changing concepts and practice*
- *Identifying unsolved problems which exist in physical therapy*
- *Identifying her/his own areas of special interest and opportunities for involvement in these areas*
- *Identifying additional knowledge and skills needed to improve her/his function in areas of special interest*
- *Recognizing and becoming involved in the resources for continuing education*
- *Recognizing areas in need of research and understanding some of the major research methods in use to evaluate published or presented work*
- *Participating in community health planning*
- *Understanding and practicing professional ethics*
- *Recognizing major social issues and health trends which influence the field of physical therapy*

III. RESOURCES

A. Personnel Resources

The instructional staff shall be qualified, through academic preparation and experience, to teach the subjects assigned. A planned program for their continuing education should be provided.

1. Program Director
   a. Qualifications
      1. The director shall be a physical therapist with special competence in educational administration and curriculum.
      2. The director shall have had adequate clinical, administrative, and classroom experience.
      3. Except in unusual cases when special professional experiences can be considered the equivalent, the director shall hold the master's or doctoral degree in an appropriate field.

   The director is expected to be licensed as a physical therapist by the state board of examiners for the state in which the program is located. Evidence of competence in educational administration and curriculum planning will ordinarily consist of graduate study in these areas and of recent experience on the academic faculty of an established physical therapy educational program.

   The director's competence in educational administration and curriculum planning should include knowledge of trends in higher education and their implications for physical therapy education, as well as familiarity with current legislation in health and education having potential impact on physical therapy practice.

   The director should have at least five years of experience in the various aspects of physical therapy practice, three years of which should be clinical.

   a. Responsibilities
      1. The director brings together the many and varied talents in a department for the total effort and the optimum use for that of individual abilities.
      2. The director [illegible] within the department on an [illegible] departmental, university, and community [illegible]
      3. The director provides leadership in [illegible] the development of the staff, in budgeting, in establishing priorities, and in delegating departmental responsibilities.
      4. The director takes an active part with the rest of the faculty in seeking facilities and resources for research and special teaching projects.
      5. The director has chief responsibility for the [illegible] development, maintenance, and updating of the curriculum.

2. Classroom Faculty

   All persons with major teaching responsibilities shall hold academic appointments in the institution in which the program is located.

   a. Qualifications
      1. Except in unusual cases when special professional experiences can be considered the equivalent, all classroom faculty shall hold the master's or doctoral degree.
      2. Physical therapist faculty members shall have had sufficient clinical experience to enable them to relate classroom theory to [illegible] and share examples of clinical practice in a practical and [illegible] manner.
      3. Instructors responsible for basic courses in the natural, biological, and social sciences shall ordinarily hold an advanced degree in that discipline, be active in it, and hold an appointment in the appropriate academic department. They may or may not be qualified as professional physical therapists.
      4. Faculty members shall have special competence in those areas of the curriculum for which they are responsible.

   Faculty members shall not be expected to teach in all parts of the program or to frequently vary the curriculum areas for which they are responsible. Collectively, physical therapy faculty members shall have complementary strengths and special expertise in varying areas.

   b. Responsibilities
      1. The majority of classroom faculty shall devote full time to the educational program, although a limited number of part-time faculty and guest lecturers may be used to enrich program offerings.
      2. All classroom faculty shall have and must use regular opportunities for renewal and extension of their own knowledge and skills.

3. Clinical Faculty
   a. One person in each facility who is familiar with basic therapy and method of planning educational activity shall be designated as responsible for the student affiliation program in that institution. This person shall have continuing, regularly scheduled contact with the classroom faculty and program administration throughout the year.
   b. Professional staff shall be available in each affiliating center to assist with student education and supervision. Staff members to whom students are assigned shall have been formally oriented to the course and goals of the total curriculum and to the special purpose of the clinical phase of that curriculum.
   c. Professional staff who are assigned to work with the students shall

supervision of all students by a professional physical therapist despite temporary absences of individual staff or of the supervisor of clinical education.

2. Have had a minimum of one year of full-time clinical experience.
3. Ensure that the student has opportunities for meaningful interaction with physicians who utilize the services of physical therapy for their patients.

All clinical faculty shall participate in continuing education programs for renewal and extension of their knowledge and skills. This may be accomplished by use of opportunities such as those outlined for classroom faculty.

4. Medical and Basic Science Faculty

There shall be substantial evidence of institutional commitment to support the educational program by providing adequate mechanisms to ensure ongoing provision of appropriate instruction on subject matter usually covered by faculty based in other departments such as clinical medicine, anatomy, physiology, psychology and social sciences. In executing this commitment, the sponsoring institution shall:

a. Designate a qualified physician to participate with the program director and faculty in developing and coordinating appropriate instructional services concerning medical and surgical topics relevant to physical therapy; and
b. Provide administrative support to ensure adequate commitment of basic science departments to meet the reasonable and legitimate needs of the program.

B. Financial Resources

1. The institution which accepts responsibility for the education of physical therapists shall be prepared from the onset to provide a major portion of the total budget required. As the program grows, institutional support for the program should increase to reflect rising costs and an increase in total tuition payments by the enrolled students.
2. The director of the professional curriculum shall be actively involved in both immediate and long-range planning and budget management.
3. The program shall not substitute students for paid personnel to conduct the work of the clinical facility.

C. Facilities Resources

1. There shall be adequate classroom and laboratory space as well as adequate administrative offices.
2. There shall be space and resources for independent study available to students.
3. There shall be space for faculty and student meetings.
4. There shall be secretarial services and space adequate to meet the needs of both program administration and faculty.
5. There shall be one or more primary areas with adequate learning opportunities for clinical education.
6. Appropriate modern equipment and supplies for directed experience shall be available in sufficient quantities for student participation.
7. Faculty of the program shall participate in, or conduct, and document an annual review of the adequacy of the facilities currently available in relation to the types of learning experiences offered and the numbers of students enrolled and make written recommendations to appropriate administrative officers regarding projected needs of the program.

The faculty should have full opportunity to participate in the activities of the total faculty of the institution as well as those of their own program.

A sufficient number of full-time faculty should hold appointments to the program to ensure that:

- *The student-faculty ratio allows for continuing individual counseling of students by professional program faculty throughout their period of study.*
- *The student-faculty ratio for laboratory activities should not exceed 10 to 1 (as the upper limit).*
- *The faculty teaching loads approximate those recommended by the American Association for University Professors: 12 semester hours credit per semester.*
- *There is an adequate reserve of faculty to provide continuity of coverage when an individual faculty member is temporarily absent.*
- *The variety of faculty background allows expression of different ideas and points of view in faculty planning conferences, and exposure of students to a variety of approaches in the instructional program.*

Two years of experience should in most cases be regarded as minimum for faculty who are teaching basic physical therapy theory and procedures. In addition, if contact with patients is not possible as a regular part of faculty assignments an opportunity should be provided for some of the faculty to spend blocks of time in a clinical setting at periodic intervals.

This involvement should be in some form of scientific research whether it is clinical, laboratory, or literary. Formal scientific research is only one of the appropriate forms of contributory activity, but its importance is such that at least some of the faculty should be regularly involved in such investigations. The time and other resources necessary for this component of faculty responsibility should be considered a basic element in program planning and budgeting.

Classroom faculty should be regularly involved in some type of scholarly activity designed to contribute to assessment, synthesis, or expansion of professional knowledge.

These opportunities are generally referred to as continuing education. Continuing education is a fundamental aspect in the maintenance of a qualified faculty. Continuing education endeavors should include:

- *Study of current methods and new developments in the general field of physical therapy in addition to study of special areas of interest to the faculty member.*
- *Study in areas of general applicability to physical therapy including: clinical areas, methods of teaching, development of administrative skills, and the changing role of physical therapy in relationship to the health sciences and the community.*

Some methods used to obtain continuing education (varied among the many available) are:

- *Reading published literature in scientific journals*
- *Attending workshops, scientific meetings, seminars, lectures, and experiences of equivalent educational merit*
- *Watching televised educational programs and listening to educational tape recordings*

The supervisor of clinical education should:

- *Have formal approval from the administrator of the facility to participate in the teaching program*
- *Be formally recognized as a member of the university program faculty in whatever way is most appropriate in terms of that institution's policies*
- *Be available in the facility on a full-time basis throughout the period of all student affiliations*
- *Have varied clinical experience (three years will ordinarily be a minimum), preferably in more than one facility*
- *Be familiar with basic theory and method of planning educational activities*

Financial

Because the per student cost of quality education at the professional level is necessarily high, it will usually be impossible for the parent institution to meet the full cost of operation from tuition payments alone. Additional support from gifts, endowments, and grants must be sought as needed through a process which includes realistic long-range planning. In particular, when grant support is an important element of an overall funding of the program, there should be careful advanced planning to identify sources of alternative funding to cover budget needs when and if grant support is reduced or terminated.

The director as well as all members of the professional program faculty should have an opportunity to participate in the establishment of the priorities on which budget planning and allocation of resources are based. They should be advised of the institutional policies and procedures which form the framework for fiscal planning.

As a basis for budget planning, the present and anticipated costs of program operation should be calculated for the total program and on a per-student basis. Projections should include such items as the number of students that will be enrolled, the number of instructors needed, and the number of sections in each of the required subjects to be covered. Other considerations are provisions for faculty participation in continuing education activities, books to be purchased by the library, plant maintenance and upkeep and all the other needs of the program for the fiscal period. Provisions should be made for contingencies and emergencies and for vacations, sabbatical leaves and other faculty benefits.

Because the budget consists of a series of estimates, many of which are prepared months in advance of the fiscal period to which they are related, periodic revision should be made in order that the budget may always represent a realistic plan for expenditures.

Facilities

It is the responsibility of the sponsoring institution to ensure that students assigned to an affiliating clinical facility are engaged in planned activities designed to complement the academic phase of the program; that each student is adequately supervised; and that students are not exploited.

These facilities are expected to be conveniently located, well-lighted, ventilated, and maintained at comfortable temperatures in relation to the activities being conducted.

Administrative offices for the program director and supportive personnel should be adequate in size, design, and location to enable the administrative functions of these persons to be conducted effectively and efficiently.

Each full-time faculty member should be provided with adequate office space which is well-lighted, ventilated, maintained at a comfortable temperature, and large enough to advise students and keep files.

At least one basic laboratory for instruction in physical therapy skills and treatment techniques should be assigned permanently to the physical therapy program. If clinical facilities are readily accessible and available at convenient times, they may be used for part of the laboratory instruction in physical therapy procedures, but additional laboratory space is usually needed for demonstration and practice of techniques.

Additional classroom space required for lectures, demonstrations, and laboratory activities may be shared with the other university programs, so long as it is available at suitably scheduled times to meet the needs of the program.

In addition to the resources available to the educational program for the physical therapist, there should be an adequate learning center. Each school should have access to library, teaching materials, and audiovisual aids center. The important factor is that students be provided with adequate access to journals and textbooks they need to prepare for classroom participation and to complete assignments requiring library research on a topic.

The number of secretarial and clerical personnel assigned to provide supportive services for the program will vary in relation to the operational requirements of the program. However it is expected that the routine administrative work of the program is sufficient to justify at least one full-time secretary. Additional supportive personnel may be needed to type course materials for individual faculty members and to prepare correspondence related to admissions or clinical education.

A primary area for clinical education is defined as a well-established physical therapy service which is utilized for the initial directed clinical education of students and which is geographically convenient to permit early integration of clinical and didactic learning.

IV. STUDENTS

A. Selection

The academic standards for the students shall reflect the requirements and the purposes of both the educational institution and the program of physical therapy. There shall be a published statement of criteria for the recruitment, selection, retention and evaluation of students.

B. Health

The sponsoring institution shall provide health services for its students. This shall include provisions for adequate coverage during periods when students are off campus at clinical affiliations.

C. Number

The number of students enrolled in each class must be commensurate with the most effective learning and teaching practices and shall also be consistent with acceptable student-teacher ratios.

D. Counseling

Testing and counseling services shall be available to the student prior to enrollment and shall continue throughout the entire educational program.

RECORDS

A. Student

Records of classroom, laboratory, and clinical experience of each student shall be maintained in accordance with the requirements of the institution.

B. Curriculum

1. A copy of the current curriculum shall be kept available.
2. Copies of all materials utilized to implement the curriculum shall be available for review by representatives of the accrediting agencies.

Information should be provided by the educational institution, including assistance to students who seek part-time employment opportunities, scholarships, and loans. Assistance should also be provided to graduates of the program of physical therapy who are seeking appropriate employment.

V. OPERATIONAL POLICIES

A. Announcements and advertising must reflect accurately the program offered.

B. Student matriculation practices and student and faculty recruitment shall be non-discriminatory with respect to race, color, creed, sex, age, handicap(s), or national origin.

C. Academic credit and costs to the student shall be accurately stated and published.

D. Policies and processes for student withdrawal, and refunds of tuition and fees, shall be published and made known to all applicants.

E. The institution shall comply with *Fair Practices in Education* as established by the Committee on Allied Health Education and Accreditation (CAHEA).

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VI. CONTINUING PROGRAM EVALUATION

program's effectiveness must be documented. The results of these reviews must be considered and reflected in policies developed and in the program's self-study.

B. One element of program evaluation shall be the employment record of graduates of the program.

VII. MAINTAINING ACCREDITATION

A. The Annual Report form provided by the Committee on Allied Health Education and Accreditation shall be completed, signed by an appropriate official, and returned by the established deadline.

B. If the program director, medical director, or education coordinator of an accredited program is changed, prompt notification shall be sent to the Department of Allied Health Evaluation of the AMA. A curriculum vitae of the new program official, giving details of training, education, and experience in the field, shall be provided.

C. The Committee on Allied Health Education and Accreditation may withdraw accreditation whenever the educational program is not maintained in substantial compliance with the *Essentials* outlined herein; or there are no students in the program for two consecutive years.

D. Accreditation shall be withdrawn only after notice has been given to the chief executive officer of the institution that such action is contemplated, with the reasons therefore, and with sufficient time to permit a considered response. Established procedures for appeal and review shall be available.

ADMINISTRATION OF ACCREDITATION

1. Application for accreditation of a program should be made to:
   Department of Allied Health Evaluation
   American Medical Association
   535 N Dearborn St
   Chicago, IL 60610
2. The evaluation and accreditation of a program can be initiated only at the written request of the chief executive officer of the sponsoring institution or an officially designated representative.
3. A sponsoring institution may withdraw its request for initial accreditation at any time (even after the site visit) prior to final action.
4. The program being evaluated is given the opportunity to review the factual report of the visiting survey team and to comment on its accuracy before final action is taken.
5. CAHEA and cooperating review committees will periodically [illegible] and programs for continuation of accreditation.
6. The chief executive officer of the sponsoring institution may request that a return on site evaluation be made in the event of significant deficiencies in the performance of an earlier evaluation team.
7. Adverse accreditation decisions may be appealed by writing to CAHEA. Due process will be followed.

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[illegible] OR CATEGORY / AWARD LEVEL / State / [illegible] / School Program Title / Occupational Title	Specialization	ACADEMIC DESCRIPTION: Accred. [illegible]	Academic [illegible]	Award Conferred	Length (mos.)	Year [illegible]	PROGRAM SIZE: Total enrollment 10 15 [illegible] Full-time	Part-time	Class [illegible]	[illegible]	[illegible]	APPLICATION INFORMATION: Prerequisites	[illegible]	[illegible]	Entrance requirements	FINANCIAL INFORMATION: Aid: VA	Scholarships	Loans	[illegible]	[illegible]	Employment assist	Cost: Resident	[illegible]
REHAB-PHYSICAL -Con.																							
ILLINOIS																							
Central YMCA Cmty College / Physical Therapy Assistant / Physical Therapy Assistant		YES	F	A CERT	22	1971	32	5	15		Private	Diploma/GED	3		Institution Exam / Personal Interview / Biographical Info / Other	Y	Y	Y	Y	N	BG/AG	4,000	[illegible]
TEXAS																							
[illegible] College / Physical Therapy Assistant / Physical Therapy Assistant [illegible]		YES	CP	AS [illegible] CERT	24	[illegible]	112	110	114	6	Public	Diploma/GED	1	N	A C T / Personal Interview / G.P.A. 2.00 / Biographical Info	Y	Y	Y	Y	N	BG/AG	616	[illegible]
Tex Med Br Galveston U / Physical Therapy Assistant / Physical Therapy Assistant [illegible]		YES	CP	AAS, [illegible] CERT	24	1970	[illegible]0	[illegible]0	[illegible]	6	Public	Diploma/GED	1	N		Y	Y	Y	Y	N	BG/AG		
BACHELOR'S DEGREE																							
ALABAMA																							
Alabama in Birmingham U / Physical Therapist / Physical Therapist		YES	F	BS	21	1964	46	0	23	112	Public	2 Yrs College / [illegible] Sci / Chemical Sci / [illegible] Behav Sci	1	Y	A C T	N	Y	Y	N	N	BG/AG	2,400	3[illegible]
South Alabama U of / Physical Therapist / Physical Therapist		NEW		BSPT	36	1975	49	0	20		Public	Diploma/GED	1	N	A C T	Y	Y	Y	N	N	BG/AG	3,600	[illegible]
ARKANSAS																							
Univ of Central Arkansas / Physical Therapist / Physical Therapist		YES	F	BS	15	1970	17	0	18	64	Public	3 Yrs College / Liberal Arts / [illegible] Sci / [illegible]/Behav Sci	1	N	Personal Interview / G.P.A. 2.50	Y	[illegible]	Y	N	Y	BG/AG	1,165	1,[illegible]
CALIFORNIA																							
Cal State U Fresno / Physical Therapist / Physical Therapist		YES	F	BS	24	1971	50	0	30	[illegible]	Public	[illegible] College / [illegible] Sci / [illegible]/Behav Sci	1	N	Institution Exam / Personal Interview / G.P.A. 2.00 / Biographical Info	Y	Y	Y	Y	N	BG/AG	1,0[illegible]	[illegible]
Cal State U Los Angeles / [illegible] Education for Exceptional Students / [illegible] Therapist/Adapted [illegible] / [illegible]				BA			[illegible]0	[illegible]0			Public												
Loma Linda University / Physical Therapist / Physical Therapist		YES	F	BS	22		[illegible]8	0	50	100	Private	2 Yrs College / [illegible] Sci / Chemical Sci / [illegible]/Behav Sci	1	Y	Portfolio / Other	Y	Y	Y	N	N	BG/AG	6,170	6,1[illegible]
CONNECTICUT																							
[illegible] Main Campus U of / Physical Therapist / Physical Therapist		YES	F	BS	36		300	0	60	900	Public	Diploma/GED	1	N	S.A.T.-CEEB	N	Y	Y	Y	Y	BG/AG	1,735	2,[illegible]
[illegible] College / Physical Therapist / Physical Therapist		YES	CP	BS	48	1969	263	0	3[illegible]	250	Private	Diploma/GED	1	N	S.A.T.-CEEB / Achievement T.-CEEB / A.C.T. / Personal Interview	Y	Y	Y	Y	N	BG/AG	9,500	9,5[illegible]
DELAWARE																							
Delaware University of																							

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Admission Procedure

Logan College of Chiropractic selects students on the basis of character, [illegible] interest, intellectual ability, motivation, and superior scholastic [illegible]. There is no discrimination because of race, color, creed, sex, [illegible], or financial status. Applications are reviewed and independently [illegible] by members of the Committee on Admissions. Final decisions are [illegible] by the Faculty committee as a whole. All applicants are interviewed [illegible] to their acceptance.

The College strives to recruit, enroll, and educate an increased number of [illegible] from racial-minority and educationally deprived groups, and to [illegible] the number of black doctors of chiropractic in the United States.

Application and full information on admission may be obtained by writing [illegible] College of Admissions at Logan College.

For enrollment, the following must be submitted:

1) Completed application for admission.
2) Small photo.
3) Letter of recommendation.
4) Official transcripts of all previous education credits sent directly from schools attended. College entrance tests taken should be exhibited on these transcripts or results sent in conjunction with them.
5) Admissions fee of $25.00.

Logan College reserves the right to accept those students it feels will benefit by the course of training, who will be a credit to the College and an asset to the profession. The admission procedure is based not only on the applicant's academic record, but also upon careful scrutiny of the "total personality" of the student.

The College calendar in the front of the catalog gives the dates of admission. The curriculum is arranged for the student to enroll either in September or January.

Admission Requirements

It is the policy of Logan College that completion of two years (60 semester hours) of education at an accredited college be required for enrollment.

Pre-Chiropractic Education

The Logan Professional Education Program is based on the firm belief that chiropractic students should be liberally educated in addition to being competently trained in the basic sciences and chiropractic skills.

Logan College is committed to the idea that the best education is one which in addition to producing a highly skilled doctor of chiropractic, produces an individual able to reason, to think, to explore the great heritage of ideas and the vast body of knowledge accumulated in literature, the humanities, and the sciences, and who is able to wrestle with the issues and values of contemporary society.

The recommended two-year liberal arts curriculum includes:

ENGLISH	6 semester hours
SCIENCE	20-40 semester hours
Biology	in any of the following
Chemistry	
Physics	
Mathematics	
Microbiology	
Bio-Chemistry	
SOCIAL STUDIES	10-20 semester hours
History	
Economics	
Political Science	
Sociology	
Psychology	
HUMANITIES	6-8 semester hours
Literature	
Philosophy	
Religion	
Art	
Music	

Students may matriculate at Logan College of Chiropractic after successfully completing two-years of any pre-professional course of studies. It is not mandatory for students to follow this structured course of study. However,

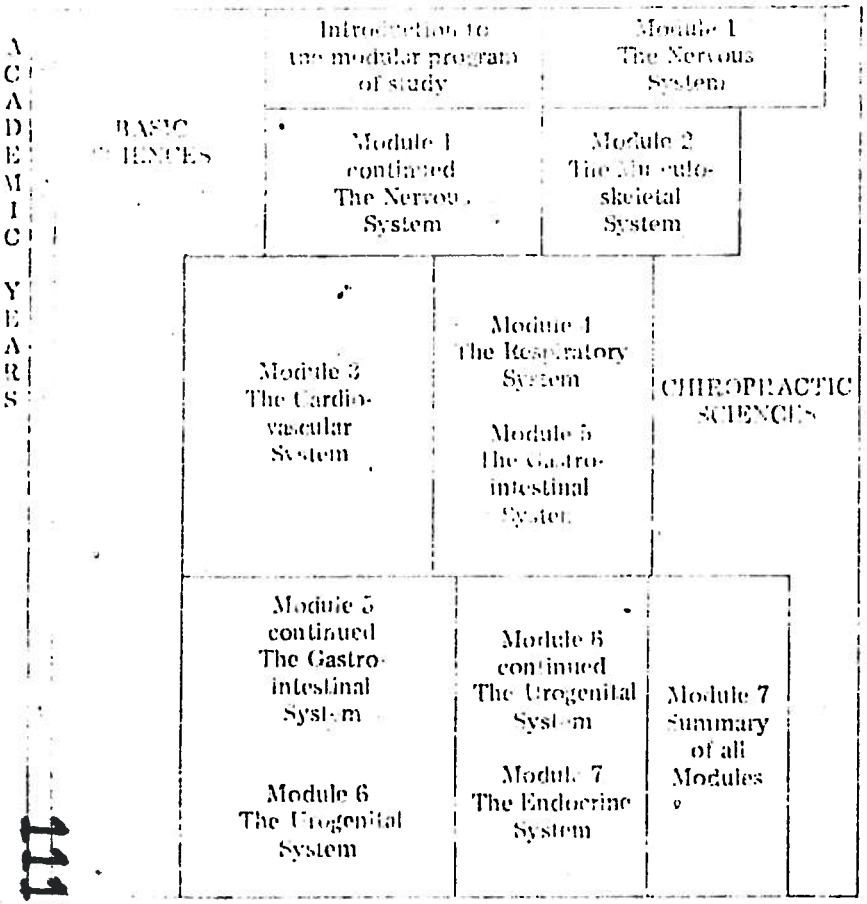
is [illegible] to follow this program if the Bachelor of Science (B.S.) degree is to be awarded with the Doctor of Chiropractic (D.C.) degree.

The first two years at a liberal arts college are devoted to laying the basis of a scientific base. Students need to know what science is in its general sense prior to studying the application of the methods of science to chiropractic practice. In addition to being a scientist, it is exceedingly important for the chiropractic student to become a humanist. A very generous portion of the liberal arts curriculum is left open for electives and students may pursue the humanities of their choice.

Upon satisfactory completion of his liberal arts studies, the student may matriculate at Logan College of Chiropractic to complete his professional education.

Chiropractic practice is a translation of basic science into chiropractic care. The best means of achieving precision in care. Everything that doctors of chiropractic do in clinical practice comes out of some decision of behavioral or biophysical, or both. The curriculum is the means by which this process is conceptualized.

The first year at Logan College of Chiropractic students begin a modular program of study.



Each module contains all studies of a particular system of the body. For instance, module #1, the nervous system, includes the embryological development, the histological components, the anatomical structures, the physiological functioning, and the possible pathological conditions with associated physical diagnosis, clinical diagnosis and suggested treatment procedures. In the modular system, students develop a total understanding of each bodily system. In addition to the modules, students study the basic sciences (chemistry, microbiology, etc.) and chiropractic principles and practices (x-ray analysis, adjusting technique, etc.). All modules are team taught.

Logan College of Chiropractic

Four years of instruction in the basic sciences and chiropractic principles and practice.

Student graduates with the Bachelor of Science (B.S.) and Doctor of Chiropractic (D.C.) degree.

Pre-Professional
two year liberal arts

Two sciences, social sciences and electives in the liberal arts at a college selected by the student.

The student who follows the Logan Education Program can graduate with the Bachelor of Science (B.S.) degree in addition to the Doctor of Chiropractic (D.C.) degree. This makes it possible for him to continue his education in a post graduate course of studies, which is particularly helpful to the student who is interested in a career in chiropractic education or research.

Advanced Standing

Application for advanced standing credits from other institutions must be supported by an official transcript and a catalog of the institution containing a course outline. If the applicant meets the general admission requirements at Logan, the Registrar will refer the files to the Academic Dean for a decision on advanced standing.

In all cases where an immediate decision for advanced standing application cannot be made, applicants are required to attend all classes in such subjects until the instructor concerned has rendered his decision to the Dean.

In some cases of question a proficiency examination may be necessary to acquire advanced standing credit.

[illegible] of Curriculum

[illegible] Year

[illegible] Semester

	Hours
[illegible] 102	160
Inst[illegible] Chemistry 106	120
Orga[illegible] Chemistry 107	40
On[illegible] 150	80

Introduction to Basic Science Module

Histophysiology 1MA	40
Pathology 1MB	20
Embryology 1MC	20
Total	480

Second Semester

Chiropractic Principles 158	80
Anatomy 152	160
Biochemistry 156	160

Module I (Nervous System)

Embryology M1-A	20
Histology M1-B	10
Neurology M1-C	50
Total	480

Second Year

First Semester

	Hours
Bacteriology 205	160
Palpation & Analysis 204	80
Physical Diagnosis 200	80

Module I (Nervous System)

Physiology M1-D	60
Pathology M1-E	20
Clinical Diagnosis M1-F	70
Neurological Reflexes M1-G	10
Total	480

Second Semester

X-Ray Interpretation & Diagnosis 252	80
Basic Technique 251	40
Principles of Chiropractic 258	80
Diversified Technique 250	40

Module II (Musculoskeletal system)

Embryology M2-A	20
Histology M2-B	20
Physiology M2-B	40
Pathology M2-C	80
Clinical Diagnosis M2-D	50
Orthopedics M2-E	30
Total	480

Third Year

First Semester

	Hours
Diversified Technique 300	40
Basic Technique 310	40
X-Ray Interpretation 307	80
Histology 304	40
Hematology 302	40

Module III (Cardiovascular System)

Embryology M3-A	10
Histology-Anatomy M3-B	30
Physiology M3-C	80
Pathology M3-D	40
Physical Diagnosis M3-E	20
Clinical Diagnosis M3-F	60
Total	480

Second Semester

X-Ray Interpretation 354	40
Nutrition & Dietetics 353	40
Diversified Technique 351, 352	80
Adjusting Drill 350	80

Module IV (Respiratory System)

Embryology M4-A	10
Histoanatomy M4-B	20
Physiology M4-C	40
Pathology M4-D	40
Physical Diagnosis M4-E	20
Clinical Diagnosis M4-F	40

Module V (Gastrointestinal System)

Embryology M5-A	20
Histoanatomy M5-B	20
Physiology M5-C	20
Biochemistry M5-D	10
Total	480

Fourth Year

First Semester

	Hours
Obstetrics 401	40
Anesthesiology 405	40
Medicine 403	40
Orthopedic Treatment 101	40
Operative Dental 400	10
Dental Technique 411	40
Module V (Cont.)	
Pathology M5-E	40
Physical Diagnosis M5-F	5
Clinical Diagnosis M5-G	60
Module VI (Urogenital System)	
Embryology M6-A	10
Histology M6-B	10
Physiology M6-C	10
Physical Diagnosis M6-D	5
Pathology M6-E	10
Total	480

Second Semester

Pediatrics 451	60
Advanced Drill 450	60
Dental Technique 453	40
Topographical Anatomy 452	10
Office Management 451	40
Module VI (Cont.)	
Pathology M6-F	60
Diagnosis M6-G	30
Clinical Diagnosis M6-H	40
Module VII (Endocrine System)	
Embryology M7-A	20
Histology M7-B	20
Anatomy M7-C	10
Biochemistry M7-D	10
Physiology M7-E	20
Pathology M7-F	30
Total	480

Third Semester

Psychology 501	80
X-Ray 508	80
Jurisprudence 502	30
Insurance 503	10
Dermatology 507	10
Module Conclusion MC	80
Toxicology 505	20
Bacteriology 506	20
Hygiene & Sanitation 504	30
	40
Electives	
Total	480

Summary of Courses

	Hours
Anatomy	
Orthopedy	80
Histology	170
Embryology	160
Neurology	60
Gross Anatomy	120
	890
Physiology	
Physiology	320
	320
Pathology	
Pathology	360
Bacteriology	180
Toxicology	20
	560
Public Health	
Hygiene & Sanitation	80
	80
Chemistry	
Inorganic	120
Organic	40
Clinical Laboratory Diagnosis	80
Biochemistry	180
	420
Clinical Subjects	
Orthopedics	30
Physical Diagnosis	130
Clinical Diagnosis	370
Pediatrics	60
Dermatology	40
Psychology	80
Nutrition & Dietetics	80
Obstetrics	40
Gynecology	40
X-ray Technique	80
	950

Chiropractic Subjects

...dpation & Analysis	80
...ciples of Chiropractic	80
...chanics - Basic Technique	150
...ssifies, Chiropractic Technique	210
...hniques, Adjusting Drill	180
...Interpretation & Diagnosis	200
...Management	30
...ntroductory Clinic	50
...urance	10
	1060

...ine

...nical Practice	800
	120
...ical Science	2050
...ectives	90
...and Total	5120

...ourse Descriptions

...ourse Descriptions - First Year, First Semester

...thopedy 181
...rs: 80
...ecture course presenting detailed information on the anatomy of the ...ne and pelvis, and functions of the parts involved. The spinal cord and ...nal areas are fully discussed; characteristics of individual segments are ...scribed as are the articulations, joints and spinal ligaments.
...ts: Gray's Anatomy — Goss
Chiropractic Orthopedy — Pharaoh
...ferences: Atlas of Anatomy — Grant
Nervous System — Ciba

...s Anatomy 102
...rs: 200
Lecture course study of osteology which provides information on the ...es, joints and articulations of the human body. Detailed descriptions are ...n with full information on function and relationship.
Detailed study is made of the musculature, blood and lymph vessels and ...ve fibers of the lower extremities.
Laboratory groups dissect a human cadaver of those regions being studied. ...dents learn gross characteristics of body structures. Lectures are closely ...ted to laboratory work. Relationships of the various structures under ...dy are stressed and association of the nervous system throughout these ...as is emphasized.
...ts: Gray's Anatomy — Goss
The Dissector's Handbook — Grant

Inorganic Chemistry 106
Hours: 120
Study of the basic principles, theories and applications of chemistry in ...tory and theory which cover the general properties and composition of matter; measurement and calculation; structure of the atom; atom structure and the chemical change; classification of the elements; chemical relationships of mass and energy; states of matter. A survey of the elements and their more important compounds is presented, including sodium, chlorine, magnesium, aluminum, silicon, phosphorus, sulfur, electrolytes, their solutions and equilibria involving them.
Texts: Inorganic Chemistry — Morrison and Boyd, Publisher, Allyn and Bacon.
Outline of General Chemistry by Selmon

Organic Chemistry 107
Hours: 90
Introduction to introductory organic chemistry and a study of the more common and typical organic compounds in the aliphatic, aromatic and heterocyclic series; including saturated hydrocarbons; unsaturated hydrocarbons; halogen derivatives of aliphatic alcohols, ethers, aldehydes and ketones; aliphatic monocarboxylic acids; esters, fats and oils, soaps, amides, ureas; amines.

Introduction to the Modules
Introduction to Histophysiology IMA
Hours: 30
Lecture course covering histological components and physiological functioning of the typical cell.

Introduction to Pathology, IMB
Hours: 20
Lecture course covering pathological changes and dysfunction of the typical cell.

Introduction to Embryology IMC
Hours: 20
Review of the anatomy and physiology of the reproductive organs, and the formation of gametes with their travel. The course examines the process of fertilization and growth of the zygote through the three germinal stages.
Texts: Medical Physiology — Guyton
Textbook of Histology — Bloom and Fawcett
Human Embryology — Patten
A Textbook of Pathology — William Boyd

Course D...ptions - First Year, Second Semester

Gross Anatomy
Hours: 160
A continuation of Gross Anatomy 102 including the upper extremities, the thorax, abdomen, pelvis, brain and spinal cord.

SPA 720—Introduction to Graduate Study	3
SPA 721—Craniofacial Disorders	3
SPA 751—Dysphasia	3
SPA 752—Stuttering	3
SPA 753—Communication Disorders in the Cerebral Palsied	3
SPA 754—Seminar in Physical [illegible]	2
SPA 757—Experimental Phonetics	3
SPA 759—Seminar in Clinical Procedures	2
SPA 762—Disorders of Voice	3
SPA 765—Advanced Audiology	3
SPA 767—Advanced Practicum	2
SPA 768—Seminar in Audiology	3
SPA 769—Seminar in Audiological [illegible]	2
SPA 794—Workshops and Institutes	1-3
SPA 790—Independent Study	1-3
SPA 797—Thesis	1-6

All students must have their programs approved by the departmental graduate adviser.

For additional information on the graduate program in speech pathology and audiology, consult the Program Director, Room 10[illegible], Mackay Science.

Graduate Programs in Biochemistry

Advanced degrees are offered at the Master of Science and the Doctor of Philosophy levels and may be pursued under the direction of the graduate faculties in the College of Agriculture, College of Arts and Science, or School of Medicine. Since requirements are determined by the Graduate School and not by the individual colleges, they are identical and are shown under Graduate Offerings from the College of Agriculture.

Four-year Medical School Program

General Information

The School of Medicine, University of Nevada-Reno, was established in 1969 to provide the first two years of medical education and was authorized to convert to an M.D. degree-granting school in 1977 by separate acts of the Nevada State Legislature.

The goal of the school is to provide academic programs for undergraduates and postgraduates in the health professions, with an emphasis on the development of primary care physicians who will provide comprehensive health care to meet the needs of the individual, the family, and the community. The school is dedicated to selecting and training individuals who will provide [illegible] care competently [illegible] campus [illegible] laboratories, and clinical [illegible] a combination of on-campus buildings and community health facilities. Through affiliation agreements with hospitals [illegible] throughout Nevada, students have access to clinical facilities totaling 2,000 beds.

Curriculum

The first two years of the curriculum [illegible] emphasis on [illegible] and behavioral sciences basic to medicine. [illegible] disciplines are often integrated with each other and with clinical material toward a clear and meaningful understanding of the major organ systems of the body. The curriculum [illegible] behavioral objectives [illegible] graduates [illegible] grated courses in clinical and behavioral sciences follow the core curriculum. Preceptorships with physicians throughout Nevada offer students additional clinical experience.

The third and fourth years of the curriculum include clerkships and [illegible] in Family and Community Medicine, Internal Medicine, Obstetrics and Gynecology, Pediatrics, Psychiatry and Behavioral Sciences, and Surgery. The curriculum is oriented toward the education of primary care physicians. Clinical training occurs in a number and variety of community-based hospitals. Thus, the third and fourth year's education is divided among Reno, Las Vegas and [illegible] Nevada. Postgraduate training at [illegible] consists of residency programs in Family and Community Medicine, Internal Medicine and Pediatrics.

Requirements for Entrance

Since the medical school utilizes the centralized application service of the Association of American Medical Colleges (AAMC), students must submit their applications through the American Medical College Application Service (AMCAS). AMCAS applications may be obtained from the AAMC, 1776 Massachusetts Avenue, Northwest, Washington, D.C. 20036. On completion, the application must be returned directly to AMCAS. Deadline is November 1.

The new MCAT is required. This exam is offered only twice a year, once in the spring [illegible] Applications may be [illegible] by [illegible] Testing [illegible]

1116

Medical School Admissions. A minimum of three years of college work (90) semester credits is normally required. Under exceptional circumstances, 60 semester credits may be accepted. However, the Student Selection Committee strongly recommends completion of a baccalaureate degree.

Requirements for application include

	Semester Credits
Chemistry (including organic)	16
Biology	16
Physics	8
Behavioral Sciences*	9

In addition, a facility in English composition and expression is required. Generally, students are expected to satisfy the English composition requirements of their undergraduate institution. Students are encouraged to utilize courses in human growth and development, abnormal psychology, or medically oriented sociology in fulfillment of the behavioral science requirement. The following supplementary courses are recommended as useful to the study or practice of medicine but are not required for admission: calculus, biochemistry, genetics, and embryology.

Selection Factors

Candidates are evaluated on the basis of academic performance, performance on the new MCAT (which should be taken in spring prior to making application), the nature and depth of scholarly and extracurricular activities during college years, academic letters of evaluation, and the personal interview if requested by the Student Selection Committee. A high priority is given to residents of Nevada. Generally the remaining successful applicants have been residents of states participating in the WICHE program, particularly residents of states without medical schools. Applicants from states other than those involved in the WICHE program are discouraged from applying to the University of Nevada.

First Year

	Credits
B Ch 401 Human Biochemistry	9
Anat 401 Human Anatomy	9
Pchy 401 Human Behavior I	3
Phsy 401 Medical Physiology I	[illegible]
Phsy 402 Medical Physiology II	5
Anat 402 Human Neuroanatomy	4
Micr 401 Medical Microbiology	[illegible]
Med S 460 Introduction to Clinical Medicine	3
Med S 470 Introduction to Clinical Medicine	2
	53

*Three credits of the behavioral science requirement must be upper division.

[illegible]

	Credits
Phar 401 Medical Pharmacology I	7
Path 401 General Human Pathology	4
Path 402 Systemic Human Pathology	6
Phar 402 Medical Pharmacology II	4
Path 403 Laboratory Medicine	4
Pchy 402 Human Behavior II	4
Med S 473 Physical Diagnosis	2
Med S 476 Community Health	2
[illegible] being developed)	
	33

Third Year

	Credits
Med 451 Clerkship	12
Surg 451 Clerkship	12
Ob Gyn 451 Clerkship	6
Pedi 451 Clerkship	6
Pchy 451 Clerkship	6
Fam 451 Clerkship	6
	48

Students are required to pass the Part I exam [illegible] Board of Medical Examiners [illegible] enter the fourth year of study.

Fourth Year

Building on the three previous years, the curriculum of the fourth year covers 32 required weeks and is made up of selective-elective clinical experiences, as arranged between the individual student, adviser, clinical adviser, and appropriate chairmen of the various clinical departments of the school. Included in the 32 weeks are four weeks of a required rural preceptorship which offer opportunities of most of the clinical areas in a rural setting, and 24 weeks of strictly clinical electives. The advisory system insures that students are guided to take account of both career choices and to secure additional experiences in areas needing any remediation.

Students must pass the Part II exam administered by the National Board of Medical Examiners in order to graduate with an M.D. degree.

Departments and Faculty

The School of Medicine has 12 teaching departments whose interaction permits the curriculum to be structured for the maximum interdisciplinary approach to health care education.

Anatomy

Faculty: Kendall, Licata, Schneider (Ch.), Stratton, Tibbitts, Wakefield

References

1. Vecchio TJ. Predictive value of a single diagnostic test in unselected populations. N Engl J Med. 1966; 274:1171-3.
2. McNeil BJ, Keeler E, Adelstein SJ. Primer on certain elements of medical decision making. N Engl J Med. 1975; 293:211-5.
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SOUNDING BOARD

THE FUTURE OF CHIROPRACTIC

What is to be done about chiropractors? Efforts by organized medicine to eliminate them have been unsuccessful. The label "quack" has not stuck. Despite the most strenuous opposition, they have attained licensure in every state in the United States and in Canada and many foreign countries. Over 23,000 chiropractors treat some 8 million Americans for a wide variety of conditions. Reimbursement for their services has been authorized by Medicare, Medicaid, Workmen's Compensation plans, and by many Blue Shield plans and other private insurance carriers. Chiropractors received more than $30 million of Medicare funds in 1978. Over 2000 new chiropractors will be graduated this year, more than 70 per cent of them from colleges federally recognized as accredited. Chiropractors appear to be winning their struggle to survive.

Awareness of these facts is finally appearing in medical circles.[1,2] Perhaps the most important stimulus, however, has come from the antitrust suit filed in 1976 by five Illinois chiropractors against the American Medical Association (AMA), the American Osteopathic Association, 10 other medical organizations, and four individuals,[3] followed by antitrust suits in several other states. The medical code of ethics has already been modified to remove restrictions on professional association with chiropractors, but the broader question of the role that chiropractors will play in the American health-care system must still be faced by makers of health policy, legislators, and the leaders of organized medicine.

An informative discussion of the worth of chiropractic therapy is contained in a recent report, "Chiropractic in New Zealand," by an official Commission of Inquiry.[4] I agree that it is "probably the most comprehensive and detailed independent examination of chiropractic ever undertaken in any country." Its principal conclusions are that

modern chiropractic is far from being an [illegible] safe, [illegible] effective [illegible] limited number of cases where [illegible] symptoms, chiropractic treatment is [illegible] unpredictable and [illegible] the patient. [illegible]

rent medical care of that [illegible] practitioners. There must be [illegible] ment to full professional cooperation between chiropractors and medical practitioners. Chiropractors should, in the public interest, be accepted as partners in the general health care system. Patients should continue to have the right to consult chiropractors direct.

An impartial evaluation of chiropractic in the United States should, and probably would, come to essentially the same conclusions as the New Zealand Commission. In any case, the makers of American health policy need to consider carefully the roles that chiropractors might play in the future.

One alternative seems clearly to be closed — the route that osteopathy has followed. The notion that chiropractic's evolution has, a generation later, been modeled after that of osteopathy is not historically accurate,[5] nor is such a route likely in the future. Despite their claimed [illegible] manipulation, chiropractors rely [illegible] practice. Osteopaths prescribe drugs nearly as much as medical doctors. Although chiropractors enjoy far greater prestige and comprehensiveness of medical practice, and [illegible] claim to provide complete primary care, their hostility toward drug therapy strongly inhibits the desire to become allopathic practitioners. This impediment is, of course, reinforced by the vigorous opposition of organized medicine to any claims by chiropractors to practice comprehensive medicine.

A second possible alternative — for chiropractors to function under medical prescription as physical therapists do — is equally unlikely, although it is what President Carter first proposed to Congress, but later dropped, in his 1979 National Health Insurance plan. It would not work because chiropractors already have too autonomous a professional status to be willing to subordinate themselves to medical doctors. In addition, medical doctors are not trained to know when chiropractic would be beneficial or contraindicated, and they have regarded chiropractors as unfit for professional association for so long that they would generally be unwilling to send patients to chiropractors.

A variant on this "solution" would be for physical therapists to become skilled spinal manipulators and offer patients all that chiropractors do — but under medical prescription. [illegible] Cyriax, M.D., himself a skilled manipulator, urges physicians and physical therapists to master the manipulative therapy that he calls "only [illegible]" and he offers [illegible] workshops for those who wish to learn.[6] Similarly, physical therapist Stanley Paris tells us that he initiated postgraduate instruction in "orthopaedic physical therapy"; he organized the Institute of Orthopaedic Physical Therapy on Staten Island, N.Y., and helped to establish a Section on Orthopaedics in the American Physical Therapy Association. However, physical therapists [illegible] this route. [illegible] would [illegible] to abandon the [illegible] and contraindications [illegible] manipulative therapy than they do now, but

therapists would in effect have to become chiropractors, although their current baccalaureate-level training does not qualify them to diagnose general pathology or to prescribe for it. Hence, it is not likely that the problem of chiropractic can be eliminated by a concerted effort to replace chiropractors with upgraded physical therapists.

A third option is to maintain the status quo. Chiropractors would remain a "marginal" profession independent of organized medicine, their therapy continuing to be stigmatized as of dubious value, and their ability to make differential diagnoses suspect. Perhaps chiropractors could gradually elevate themselves to a profession "parallel" to medicine (a status somewhat like that of osteopaths in the recent past) through continuing to upgrade the quality of their schools and their diagnostic competence. But if this were to happen, the "separate but equal" dilemma would probably appear, just as it has with race relations. Separated groups are seldom truly equal; invidious comparisons are inevitably made. The reverse also occurs: Groups of equal status tend not to remain separate. Just as racial groups of equal standing integrate more easily, so too do professional groups that are close to equal status — thus, the recent rapprochement between medicine and osteopathy. Since chiropractic, for reasons stated earlier, is not likely to follow the path of osteopathy by broadening its scope of practice and upgrading itself to the level of medicine, the attempt to maintain the status quo in professional relations between chiropractic and medicine would be more likely to keep chiropractic "marginal" rather than "parallel." Still, this is a viable option.

The final alternative, and the most promising one for many reasons, is the gradual evolution of chiropractic to a "limited" or "limited medical" profession. The most familiar examples are dentistry, podiatry, and optometry; psychology, speech therapy, and audiology occupy similar roles. These professions limit their scope of practice to a specific part of the body or its functioning, and the range of therapies they employ is also limited. Unlike chiropractic, they do not challenge orthodox medical theories of disease and therapy. Hence, they can coexist with organized medicine. However, the road can be rocky, as demonstrated by the long history of disputes between ophthalmologists and optometrists and between psychiatrists and psychologists.[8]

It is far more difficult for a marginal profession like chiropractic, which has historically subscribed to a special theory explaining the source of all illnesses, to achieve the satisfactory relation with medicine that limited medical professions have. The different provisions in state laws of chiropractors' scope of practice have relatively little effect on how chiropractors actually practice or on major trends in chiropractic practice. One critical question will be to what extent chiropractors will abandon some of their traditional principles, a process that has indeed already begun. Policy makers should not be misled by pronouncements of the chiropractic "superstraights," a very small group of doctrinaire practitioners who disavow the vast majority of chiropractors and who are in turn disavowed by them.

With most states now requiring that candidates for licensure be graduated from accredited colleges, there is increasing uniformity in chiropractors' education as well as a guaranteed minimum of competence in the basic medical sciences. Furthermore, the colleges now use standard medical textbooks and university-trained instructors, most of whom are not chiropractors, for the basic sciences. Although the colleges are still weak, recent graduates are less doctrinaire, more aware of the limitations of chiropractic theory and therapy, and better able than their predecessors to identify conditions beyond their competence to treat. Therefore, they may function satisfactorily as "portals of entry" into the health-care system without being the providers of total primary care that medical doctors are (and that some chiropractors still claim to be). As a result, chiropractors have the potential for evolving into "limited" or "limited medical" practitioners even though many of them would deny it and many medical doctors would resist it.

There are several forces pushing chiropractors toward becoming limited practitioners. Chiropractic is in fact a limited therapy, not as limited as most physicians have assumed, but certainly not as broad as chiropractors originally claimed, and as chiropractors become better educated in the basic medical sciences, they better understand the limited role of spinal manipulation. They devote most of their time to treatment of musculoskeletal conditions and closely related conditions such as sciatica that manipulative therapy has been shown to help. These conditions are the ones that chiropractors are most associated with in the public view, the ones for which third-party payers are most willing to reimburse chiropractors, and the ones for which medical doctors would be most likely to refer patients to chiropractors.

If chiropractors were to become limited practitioners, there would be advantages for the organized medicine, the health-care system, and the public health. Chiropractic would be "contained" to a limited role, and organized medicine could cease its active opposition to chiropractors. Medical doctors would be more likely to refer patients to chiropractors, and vice versa. There would develop a greater consensus among chiropractors as to what chiropractic is, and the public would have a clearer understanding of what chiropractors do, which should lead to an improved public opinion of this form of treatment and its practitioners. Insurance companies would more readily reimburse chiropractors for services performed. Chiropractors would attain a more secure place in the health-care system, and the health of the American public would be enhanced.

It may seem utopian to expect chiropractors to concede to such a limited role, and just as utopian to expect organized medicine even to consider it. But that is what the New Zealand Commission of Inquiry seems to be recommending for its country. In Ontario, where chiropractors are routinely reimbursed under a socialized system, hostility between medical doctors and chiropractors is minimal. There is no fundamental reason why the same situation could not prevail in the United States. The AMA has already lost its struggles to keep chiropractors unlicensed, to prevent payments to them under Medicare, Medicaid, and most other third-party payers, and to prevent the accreditation of chiropractic colleges. Organized medicine faces further assaults on its prerogatives and practices from the courts and in legislative chambers. The leaders of organized medicine and other members of health policy need to become better informed concerning the current status of chiropractic education and practice, and should seriously consider whether the limited-practice model could be the basis of accommodation between the two groups that have been so hostile to each other for so long.

University of Connecticut
Storrs, CT 06268

WALTER I. WARDWELL, PH.D.

REFERENCES

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2. Relman AS. Chiropractic recognized but unproved. N Engl J Med. 1979; 301:659-60.
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MASSACHUSETTS MEDICAL SOCIETY

DEATHS

ANDREW — Edward Donald Andrew, M.D., of East [illegible], died on August 1. He was in his [illegible] year.

Dr. Andrew received his degree from the [illegible] College of Physicians and Surgeons in 1941. He was associate medical examiner for Hampshire County.

He is survived by his wife, four daughters, and three [illegible].

BAKER — Harry Abraham Baker, M.D., of Holyoke, died October 27. He was in his 73rd year.

Dr. Baker received his degree from Tufts College Medical School in 1932. He was a member of the American College of Physicians and the American Medical Association.

BARNES — William Howarth Barnes, III, M.D., of Taunton, died on December 3. He was in his 60th year.

Dr. Barnes received his degree from Tufts College Medical School in 1945. He was a member of the American Medical Association.

He is survived by his wife, three daughters, and two [illegible].

BARONE — Salvatore Antonio Barone, M.D., of Lawrence, died on August 14. He was in his 74th year.

Dr. Barone received his degree from Middlesex University School of Medicine in 1940. He was a member of the American Medical Association.

He is survived by his wife, a daughter and [illegible], and several nieces and nephews.

BEAUCHAMP — Eugene Wilfrid Beauchamp, M.D., of Chicopee, died on October 20. He was in his 81st year.

Dr. Beauchamp received his degree from Jefferson Medical College in 1923. He was formerly president of the staff and surgery at Mercy Hospital and president of the staff at the Soldiers Home. He was a member of the American College of Surgeons, the American Medical Association, and a fellow of the Massachusetts Medical Society.

He is survived by his wife, a daughter and four [illegible], and two sisters, and 17 grandchildren.

BEECHAM — William Perkes Beecham, Sr., M.D., of Wakefield, died on February 24, 1979. He was in his 77th year.

Dr. Beecham received his degree from Harvard Medical School in 1926. He was formerly surgeon-in-chief at Massachusetts Eye and Ear Infirmary and assistant clinical professor of surgery at Harvard Medical School. He was a member of the American Ophthalmological Society, the American Association for Ophthalmology, the American Academy of Ophthalmology and Otolaryngology, the American Society for Internal Medicine, and the American Medical Association.

He is survived by his wife, two daughters, and a [illegible].

BELLEMEUR — Gedeon Aram Bellemeur, M.D., of Gardner, died on November 12. He was in his 81st year.

Dr. Bellemeur received his degree from University of Maryland Medical School in 1929. He was formerly chairman of the Board of Health in Gardner. He was a member of the American Medical Association and a 50-year member of the Massachusetts Medical Society.

He is survived by a daughter, a son, and three [illegible].

LOGIE — Arthur James Logie, M.D., of Tewksbury, formerly of Westfield, died on July 29. He was in his [illegible] year.

Dr. Logie received his degree from Temple University School of Medicine in 1917. He served with the Army Medical Corps during World War I. He formerly was chief of staff at Noble Hospital in Westfield. He was a member of the American Medical Association and a fellow of the Massachusetts Medical Society.

He is survived by his wife, a daughter and a [illegible], and five grandchildren.

EXHIBIT D

DEFINITION: INTERPRET

The American College Dictionary

1. To set forth the meaning of; explain or elucidate
2. To explain, construe or understand in a particular way
3. To give an explanation

Websters

1. To esplain the meaning of
2. To expound
3. To explain or unfold the intent, meaning or reasons of
4. To make intelligible, decipher, unravel, elucidate

Dorland's Medical Dictionary

Not listed in the medical dictionary

EXHIBIT E

DEFINITION: DIAGNOSIS

Websters

1. Distinguish, decern between
2. Scientific discrinination of any kind
3. In medicine - the discrimination of diseases by their distinctive marks or symptoms
4. The examination of a person to discover what ailment affects him

Dorland's Medical Dictionary

1. The act of distinguishing one disease from another
2. The determination of the nature or cause of disease

Library Note:

During the examination of this set of minutes, Exhibit F was found to be missing. It also appears to have been missing at the time this set of minutes was hand numbered, as the numbering does not have a gap where these pages should be. The pages are also missing from the microfiche.

Research Library
April 2011

INSPECTION OF FACILITIES page 5

Any member or agent of the Board may enter an office, clinic or hospital where Physical Therapy (as described by this chapter) is practiced to determine if the Physical Therapists and Physical Therapy Assistants are licensed and complying with the requirements of this chapter. (NRS 640.170 & 640.300)

EXHIBIT H

DEFINITIONS: Dorland's Medical Dictionary

MOBILIZATION - The process of making a fixed or ankylosed part moveable

MANIPULATION - Skilful or dextrous treatment by hand. In Physical Therapy, the forceful passive movement of a joint beyond its active limit of motion

EXHIBIT I

Manual Therapy Courses

Institute of Graduate Health Sciences

1981 Calendar

E-1 Basic Mobilization and Detailed Evaluation of Extremity Dysfunction, 36 hours, $250 (no prerequisites)

New York City	Jan 10-11, 24-25	Donatelli/Patla
Omaha	Feb. 7-8, 21-22	Donatelli/Patla
Cincinnati	March 7-8, 21-22	Patla
Atlanta	March 30-April 3	Donatelli/Paris/Patla
Honolulu	May 4-8	Patla
Boston	May 30-31, June 13-14	Donatelli
Los Angeles	Aug. 28-29 & Sept. 11-12 or 18-19	Paris/Donatelli/Patla
Atlanta	Nov. 16-20	Donatelli/Paris/Patla
San Francisco	Jan. 23-24, 30-31	Donatelli/Patla
Spokane	Feb. 20-21, 27-28	Donatelli/Patla
New Orleans	March 20-21, 27-28	Donatelli
Detroit	April 11-12, 25-26	Donatelli
Miami	May 15-16, 22-23	Patla
Denver	June 19-20, 26-27	Patla
New York City	Oct. 9-10 & Oct. 23-24 or 30-31	Paris/Donatelli/Patla

E-2 Intermediate Mobilization and Case Studies of Extremity Dysfunction, 36 hours, $250 (prerequisite: E-1)

Atlanta	April 20-24	Donatelli/Paris
Los Angeles	Dec. 4-5, 18-19	Donatelli
New York City	Aug. 7-8, 21-22	Donatelli
Atlanta	Dec. 14-18	Donatelli/Paris

S-1 Introduction to Evaluation and Mobilization of the Spine, 72 hours, $400 (no prerequisites)

Cincinnati	Jan 10-18	Grodin
San Francisco	Feb 7-15	O'Donnell
Miami	March 7-15	Kraus
Kansas City	April 4-12	Kraus
Boston	April 25-May 3	Grodin
Detroit	May 23-31	Nyberg
Los Angeles	June 20-28	O'Donnell
Minneapolis	July 11-19	Grodin
Houston	Aug. 8-16	To be Announced
Chicago	Sept. 5-13	O'Donnell
Seattle	Oct. 3-11	To be Announced
Atlanta	Oct. 19-23, 26-30	Paris et al
Buffalo	Nov. 14-22	To be Announced
Nashville	Jan 24-Feb 1	Kraus
San Diego	Feb 21-Mar 1	O'Donnell
Dallas	March 21-29	O'Donnell
Atlanta	April 6-10, 13-17	Paris et al
Philadelphia	May 9-17	Grodin
New York City	June 6-14	Nyberg
Portland	July 11-19	O'Donnell
Honolulu	July 25-Aug. 2	O'Donnell
Washington, D.C.	Aug. 22-30	To be Announced
Boston	Sept. 19-27	To be Announced
New York City	Oct. 17-25	To be Announced
Milwaukee	Nov. 7-15	To be Announced
Denver	Dec. 5-13	O'Donnell

S-2 Intermediate/Advanced Evaluation and Mobilization of Pelvic, Lumbar and Thoracic Spines, 36 hours, $250 (prerequisite: S-1)

Atlanta	May 4-8	Paris/Nyberg
Cincinnati	Sept. 25-26, Oct. 9-10	Paris/Nyberg
Boston	Nov. 6-7, 20-21	Paris/Nyberg
Denver	Sept. 4-5, 18-19	Paris/Nyberg
Atlanta	Nov. 2-6	Paris/Nyberg
Los Angeles	Nov. 13-14, Dec 4-5	Paris/Nyberg

S-3 Intermediate/Advanced Evaluation and Mobilization of the Cranio-Facial Region, Cervical and Upper Thoracic Spines, 36 hours, $250 (prerequisite: S-1)

Atlanta	April 27-May 1	Paris/Kraus
Atlanta	Nov. 9-13	Paris/Kraus
San Francisco	Dec. 4-5, 18-19	Paris/Kraus
Portland	Aug. 14-15, 28-29	Paris/Kraus
New York City	Nov. 20-21, Dec. 11-12	Paris/Kraus

Physical Therapy in Dentistry, 24 hours, $175 (prerequisites: S-1 & S-3)

San Francisco	Sept 4-6	Kraus
New York City	Oct 9-11	Kraus

Manual Therapy Certification, (prerequisites: S-1, S-2, S-3, and E-1)

Atlanta	Dec 7-12	Paris et al

Please send me information on
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DEPARTMENT OF THE ARMY
ACADEMY OF HEALTH SCIENCES, UNITED STATES ARMY
FORT SAM HOUSTON, TEXAS 78234

HSA-IMS

1 April 1981

Ms. Pat Conn
80 Arrowhead Dr.
Carson City, Nevada 89701

Dear Pat:

Enclosed is information concerning the hours taught in our program on Mobilization. As you can see from Annex F, Section IV, taken from our Program of Instruction (POI), we teach:

Mobilization Introduction	2 hours
Mobilization: Hip & Knee	4 hours
Mobilization: Ankle & Foot	2 hours
Mobilization: Shoulder	2 hours
Mobilization: Elbow, Wrist & Hand	4 hours
Mobilization: The Spine	8 hours

NOTE: C = Conference
D = Demonstration
PE = Practical Exercise
L = Lecture

We are in the process of revising our POI and don't have a final copy yet, so that's the reason there are marks on it.

Also, I have enclosed two lesson plans for you and a handout on the spine. The LP's for the upper member and spine were not available. I hope this information will be helpful to you. Please do not hesitate to contact me for any additional information.

Sincerely,

Mary E. Lucas

MARY E. LUCAS, LTC(P), AMSC
Director, US Army-Baylor Program
in Physical Therapy

3 Incl
as

1126

ACADEMY OF HEALTH SCIENCES, US ARMY
MEDICINE AND SURGERY DIVISION
PHYSICAL THERAPY BRANCH
FORT SAM HOUSTON, TEXAS 78234

Therpeutic Application of Exercise: Introduction to Joint Mobilization (2 hours)

COURSES PRESENTED TO: 6H-65B, U.S. Army-Baylor University Program in Physical Therapy students

PLACE: Physical Therapy Classroom

REFERENCES: Cookson, J.C., Orthopedic Manual Therapy: I. The Extremities Physical Therapy, 59: 136-146, Feb 79.
Maitland, G.D., Peripheral Manipulation, 2 ed. Boston, Butterworth Inc., 1977, pp. 3-28.
Paris, S.V. Course Notes: Introduction to Joint Mobilization, Institute of Postgrade Physical Therapy Atlanta, 1978.

STUDY ASSIGNMENT: After class read Cookson, pp. 136-146.

STUDENT UNIFORM AND EQUIPMENT: Duty uniform

TOOLS, EQUIPMENT, AND MATERIALS: M 32-370-557-1

INSTRUCTIONAL AIDS: Overhead projector

TROOP REQUIREMENTS: None

TRANSPORTATION REQUIREMENTS: None

METHOD OF INSTRUCTION: Lecture

I. INTRODUCTION

A. Opening Statement: Specific joint mobilization techniques are just beginning to be introduced into physical therapy curricula in this country, yet they have been an effective part of the management of musculoskeletal disorders for many years. I find it odd that the physical therapy profession which has prided itself for "hands on treatment" has been slow to adapt mobilization techniques. Never the less, mobilization or manual therapy is becoming an integral part of our practice and both the patient and the profession are benefitting.

B. OBJECTIVES

1. Define terms associated with joint mobilization.

2. Describe the methods and grades of mobilization movements.

3. State the concave-convex rule and apply it to selected examples of joint dysfunction.

4. Describe the close-packed position and loose-packed position of a joint.

5. State the rationale for joint mobilization.

6. State the indications and contraindications for joint mobilization.

C. Class Procedure and Lesson Tie-in: This is a 2 hour block preceding the practical application of joint mobilization techniques.

II. EXPLANATION

QUESTION: Where does mobilization fit into physical therapy?

ANSWER: Joint Mobilization is a part of passive exercise.

A. History of Mobilization

1. Hippocrates wrote about and practiced joint manipulation in 400 B.C.

   a. For spinal injuries Hippocrates suggested tying patient upside down to a ladder and then shaking the ladder.

   b. Hippocrates also wrote on reduction of dislocated extremities.

2. Friar Moulton, an Augustin monk, published "The Complete Bone-Setter" in 1656.

3. Medical Orthopaedic Surgeons of the late 1700's and early 1800's, such as John Hunter advocated strict rest for joint trauma. This left joint manipulation in the hands of lay bonesetters.

4. Osteopathy was founded in 1892 by Dr. Andrew Taylor Still, an orthopaedic surgeon. His three sons had died of meningitis and medical practice of that time could not help them. Still set out to find the answer to the "cause of all disease". In 1874 by "divine revelation" Still was given the answer, the Law of the Artery. He stated that "all disease processes were a direct result of interference with blood flow through the arteries depriving the part of vital nutrition. By restoring normal blood flow the body's natural substances would take care of the disease processes".

   a. In 1896, Still founded the American School of Osteopathy.

   b. In 1920, Congress granted equal rights to Osteopaths and M.D.'s.

   c. Osteopathy is concerned with the body as a unit and is concerned with maintaining and restoring structural integrity.

5. Chiropractic was founded by D.D. Palmer, a grocer and former patient of Still's. No prior education was needed. His twelve year old son was one of the first graduates. Theory is as follows:

a. A vertebra becomes subluxed.

b. The subluxation impinges on the NAVL passing through the intervertebral foramen.

c. Innervation and nutrition to organs of that segment become predisposed to functional or organic disease.

d. Adjustment removes the impingement.

6. Forerunners of the present trend toward joint mobilization:

a. Dr. James Mennel

b. Dr. James Cyriax

c. Dr. John Mennell - coined term joint dysfunction

d. Freddy Kaltenborn

e. Stanley Paris

B. Mobilization Terminology

1. Physiologic Movement: Movements of the joint in a direction in which the patient can voluntarily move (ie. shoulder flexion).

2. Accessory Movements: A normally occuring joint movement that cannot be reproduced by the patient and must be performed by the therapist (ie. lateral distraction of the humeral head).

3. Joint Play Movements: Same as accessory movements.

4. Joint Mobilization: Passive movements performed by the therapist to restore normal joint motion and relieve pain. Two types of joint mobilization:

a. Articulations: Graded rhythmic oscillations in which the joint is passively taken through its available or pathological range.

b. Manipulation: A high velocity, low amplitude trust applied at the end of the available range directed at restoring the full range of functional movement available.

C. Arthrokinematic Concepts

1. Classification of Joints

a. Ovoid: a convex surface fitting into a concave surface (ie. glenohumeral, proximal radial ulnar, metacarpophalangeal, hip).

b. Sellar: Each joint surface is both concave and convex (ie. first carpometacarpal, sternoclaricular, humeroulnar).

2. Joint Motions

   a. Roll

   b. Slide

   c. Spin

   d. Compression

   e. Distraction

3. Concave--Convex Rule: When a concave surface moves on a convex surface roll and slide occur in the same direction; when a convex surface moves on a convace surface roll and slide occur in the opposite direction.

QUESTION: What would happen to a joint if only roll occured?

ANSWER: If only roll occured the joint would tilt and potentially dislocate.

4. Close-packed position is the unique position of a joint where:

   a. The joint surfaces are completely congruous.

   b. The joint capsule and ligaments are maximally taut.

   c. The two bones connot be separated by traction.

5. Loose-packed positon is any position of a joint that is not close-packed. Most motion occurs in the maximally loose-packed position.

D. Rationale for Joint Mobilization

1. Muscles cannot move joints which are not free to move.

2. Muscles cannot be rehabilitated if the joints which they move are not free to move.

3. Altered joint structures lead to decreased nutrition and lubrication and increased wear and stress on articular surfaces.

E. Indications for Joint Mobilization: Restriction of accessory joint motion causing pain or restriction of motion during normal physiological movement, in other words joint dysfunction.

F. Contraindications:

1. Absolute: Bacterial infection, neoplasm, recent fractures.

2. Relative:

a. Joint effusion or inflamation

b. Rheumatoid arthritis

c. Osteoporosis

d. Internal derangement

e. Pregnancy, flue etc..

6. Questions from Students.

IV. SUMMARY

A. Review of Main Points:

1. History of Mobilization

2. Mobilization Terminology

3. Arthrokinematic Concepts

4. Rationale for Joint Mobilization

5. Indication for Joint Mobilization

6. Contraindications for Joint Mobilization

B. Closing Statement: Joint mobilization is an exercise tool that can be of significant benefit to patient rehabilitation. It requires understanding of the pathomechanics of joint dysfunction and the technique to restore normal joint mechanics.

Subject and LP Number	Class	Hrs, Method(Medium) Peace	Hrs, Method(Medium) Mob	Lesson Objective	References
Evaluation of Joint Motion: Hip and Knee 32-370-125	U	2 D 2 PE_1	2 D 2 PE_1	Demonstrate goniometric measurement of hip and knee and record results.	
Muscle Evaluation: The Hip and Knee 32-370-126	U	2 D 4 PE_2	2 D 4 PE_2	Perform a muscle test of the muscles of the hip and knee, to include identification of individual muscles, palpation, test positions, support, grading, and recording.	GR 32-370-12 pp 59-77; Daniels, et pp 34-75; Kendall & Kendall, pp 147-194; VT 89, 91.
Mobilization: Introduction 32-370-127	U	2 C	2 C	Define terms associated with joint mobilization. Describe the close-packed position and loose-packed position. State the concave-convex rule and apply it to selected examples of joint dysfunction. Describe the methods and grades of mobilization movements. State the rationale for joint mobilization.	Cookson & Ke pp 136-146; Maitland(1) pp 3-28; Paris Mennell(1)(2 Mennell 20
Mobilization: Hip and Knee 32-370-128	U	2 C 2 PE_2	2 C 2 PE_2	Describe the accessory motions of hip and knee joints. State the close-packed position and capsul pattern of restriction for the major joints of the lower member. Demonstrate and state the purpose of selected mobilization techniques of the lower member.	Maitland(2)ch Mennell(1)ch
Therapeutic Exercise: Hip & Knee 32-370-129	U	1 C 1 D 3 PE_2	1 C 1 D 3 PE_2	Discuss and demonstrate selected exercises for the hip and knee.	Basmajian (2 467-72; Call (3); Crensha Vol I; DePal II, 1326-150 Insall, et a Nicholas(1); Paulsoud; Slocum; Wate Williams & Stutzman; Richardson

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C
PE

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Subject and LP Number	Class	Hrs, Method(Medium) Peace	Mob	Lesson Objective	References
Evaluation of Joint Motion: Ankle and Foot 32-370-140	U	1 D 1 PE_1	1 D 1 PE_1	Demonstrate goniometric measurement of ankle and foot and record results.	
Muscle Evaluation: The Ankle & Foot 32-370-141	U	2 D 2 PE_2	2 D 2 PE_2	Perform a muscle test of the muscles of the ankle and foot, to include identification of individual muscles, palpation, test positions, support, grading, and recording.	GR 32-370-124, pp. 59-7 Daniels, et a pp. 34-75; Kendall & Kendall (2) pp 147-194; VT 89, 91.
Gait Evaluation 32-370-142	U	2 C 2 D (TV)(F) 3 PE_2	2 C 2 D (TV)(F) 3 PE_2	Briefly discuss rationale for gait evaluation. Describe appropriate steps involved in gait analysis. Describe and demonstrate characteristic gaits caused by specific muscle weakness, pain or dysfunction in weight bearing member, and injury or disease of CNS. Perform an evaluation of a patient with a pathological gait.	Basmajian (1) pp. 259-272; Boenig; Brampton; Long (2), (3), (4 Normal & Path Gait Syllabus Perry (2), pp 144-168; Smid and Wadsworth Steindler, pp 631-691; Wadsworth, et VT 125.
Therapeutic Exercise: The Ankle and Foot 32-370-143	U	1 D 2 PE_2	1 D 2 PE_2	Discuss and demonstrate selected exercises for the ankle and foot.	Cailliet (4), Ch 1-9; De Palma, Vol II pp. 1544-1714 Kapandji, Vol II, ch 3.
✓ Mobilization: Ankle and Foot 32-370-144	U	1 C 1 PE_2	1 C 1 PE_2	Describe the accessory motions of the ankle and foot. State the close packed position and the capsular pattern of restriction for the major joints of the lower membrane. Demonstrate and state the purpose of selected mobilization techniques of the lower member.	Maitland (2), ch 8; Mennell (1) ch 4-8.

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Subject and LP Number	Class	Hrs, Method(Medium) Peace	Mob	Lesson Objective	References
				the shoulder. Describe the physical therapy management of specific shoulder lesions. Discuss and demonstrate selected exercises of the shoulder.	Mennell (1), ch 8
Mobilization: The Shoulder 32-370-152	U	1 C 1 PE_2	1 C 1 PE_2	Describe the accessory motions of shoulder joints. State the close-packed position and the capsular pattern of restriction for the major joints of the upper member. Demonstrate and state the purpose of selected mobilization techniques of the lower member..	Maitland (2) ch 8 Mennell (1), ch of 9-13
Evaluation: The Shoulder 32-370-153	U	1 L 1 D 1 PE_1	1 L 1 D 1 PE_1	List and describe the 6 types of end feel when evaluating passive ROM. Compare and contrast the information from active and passive ROM. Perform an evaluation of the shoulder to include history inspection of the part, bony and soft tissue palpation, selective tissue tension, neurological examination, and appropriate special tests.	Hoppenfeld, (1) pp 1-34.
Planning Treatment Programs: Shoulder 32-370-154	U	1 C 2 PE_2	1 C 2 PE_2	Evaluate patients and plan treatment programs for selected shoulder conditions. Discuss objectives and goals, and instruct patient and/or family. Defend your plan.	Hoppenfeld, (1) pp 1-34.
Therapeutic Use of Electricity 32-370-155	U	3 C 2 D 3 PE_1	3 C 2 D 3 PE_1	Stimulate normal muscle by unipolar and bipolar technique using the available generators. Discuss the physical and/or physiological effects of electrical currents on denervated muscle. Discuss the indications and technique of application for the therapeutic stimulation of innervated and denervated muscle. Select and set up appropriate equipment for the stimultaneous application of electrical stimulation and ultrasound. Define medical galvanism and ion transfer; discuss their indications, precautions, and therapeutic affects.	APTA-OVR Institute Papers pp 26-74; Bour & Shaffer; Licht (1), ch 4&8; Licht (3 ch. 13-14; Scott ch 8-16; Watkins, ch 12 & 14.

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Subject and LP Number	Class	Hrs, Method(Medium) Peace	Mob	Lesson Objective	References
Mobiljzation: The Elbow, Wrist & Hand 32-370-161	U	1 C 2 PE$_2$ 1 L	1 C 1 PE$_2$ 1 L	Describe the accessory motions of the elbow, wrist and hand joints. State the close-packed position and the capsular pattern of restriction for the major joints of the upper member. Demonstrate and state the purpose of selected mobilization techniques of the lower member.	Maitland(2) ch 7; Mennell(6) ch 9-13.
Evaluation: The Elbow, Wrist & Hand 32-370-162	U	2 PE$_1$	2 PE$_1$	Perform an evaluation of the elbow, wrist and hand, to include inspection of the parts, bony and soft tissue palpation, neurological examination, and appropriate special tests.	American Society for Surgery of Hand; Boyes, pp 108-128; Calliet, (6) Cyriax (1), pp. 255-307; Hoppenfeld (1) ch 2,3; Wynn Parry, ch 5-8.
Planning Treatment Programs: Elbow, Wrist, and Hand 32-370-163	U	1 C 2 PE$_2$	1 C 2 PE$_2$	Evaluate patients and plan treatment programs for selected elbow, wrist, and hand conditions. Discuss objectives and goals, and instruct patient and/or family. Defend your plan.	Hoppenfeld, (1) pp. 35-104.
Orthotics: Upper & Lower Members 32-370-164	U	3 C 2 D 2 PE$_1$	3 C 2 D 2 PE$_1$	State the basic principles of bracing and splinting. Identify or describe commonly prescribed splints and braces, proper fit of each splint and brace, and conditions for which each splint or brace might be prescribed. Describe the purpose and use of dynamic handsplints. Given a patient in a long or short brace; check the fit, analyze gait and make appropriate adjustments or suggestions. Describe or demonstrate the method of measuring for a wheel chair using a wheelchair prescription form. Describe the three basic weelchair frames. State the basic components of a wheelchair, and given a specific patient, describe appropriate modifications.	Perry & Hisl In toto; Rus pp. 199-212; American Aca of Ortho Sur In toto.

Subject and LP Number	Class	Hrs, Method(Medium) Peace	Mob	Lesson Objective	References
Facilitation Techniques: Introduction 32-370-175	U	2 C	2 C	Define facilitation as related to therapeutic exercise. ∫Explain how the various sensory modalities are used to facilitate movement. ∫List the three most common indications for the use of facilitation techniques. ∫State the common CNS manifistations which should be considered when using facilitation techniques. ∫Contrast and compare the general characteristics of the PNF, Bobath, Brunnstrom and Rood approaches.	Basmajian (2), chap 14; ∫Brunnstrom (2); Knott & Voss; Payton, Hirt, Neuman.
Facilitation Techniques PNF Approach 32-370-176	U	2 C 6 D 14 PE_1	2 C 6 D 14 PE_1	Discuss the philosophical bases of PNF. ∫Define and discuss the basic principles of PNF to include mass patterns, maximal resistance, reinforcement, normal timing, manual contacts, commands and communications, stretch, traction and approximation. ∫Define, discuss and demonstrate the following techniques: Slow reversals, rhythmic initiation, repeat contraction, timing for emphasis, contract-relax, hold-relax and rhythmic stabilization. ∫Describe and/or demonstrate extremity and trend patterns, functional mat activities and resisted gait training, utilizing the basic principles and techniques above. ∫Given a patient diagnosis, evaluation results, and goals, choose the most appropriate patterns, and techniques to achieve the stated goals.	Knott & Voss; Voss
✓Mobilization the Spine 32-370-177	U	2 C 2 D 4 PE_2 GS	2 C 2 D 4 PE_2 GS	Review back evaluation techniques and findings. ∫State the joint play and/or component motions of the spine and sacroiliac joints. Given a normal subject, demonstrate passive movement tests and perform basic mobilization of the spine and sacroiliac joints.	Maitland (1); Mennell (2)(3) Mennell (2); Paris (2).

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ACADEMY OF HEALTH SCIENCES
MEDICINE AND SURGERY DIVISION
PHYSICAL THERAPY BRANCH

M 32-370 560-3
059

AN OVERVIEW OF ORTHOPEDIC MANUAL THERAPY FOR THE SPINE

OBJECTIVES: At the end of this unit you should be able to:

1. design and perform an appropriate subjective and objective evaluation of the spine, relating findings to possible pathology and treatment techniques.
2. perform one accessory and one physiologic mobility test/ treatment technique for the cervical and lumbar spine.
3. perform longitudinal traction (manual) as a general treatment technique in the cervical and lumbar spine.
4. understand your limitations in this area, and intelligently explore in detail the vastness of orthopedic manual therapy for the spine.

UNIT DESIGN:

WEDNESDAY, JUNE 13, 1979, four afternoon class periods

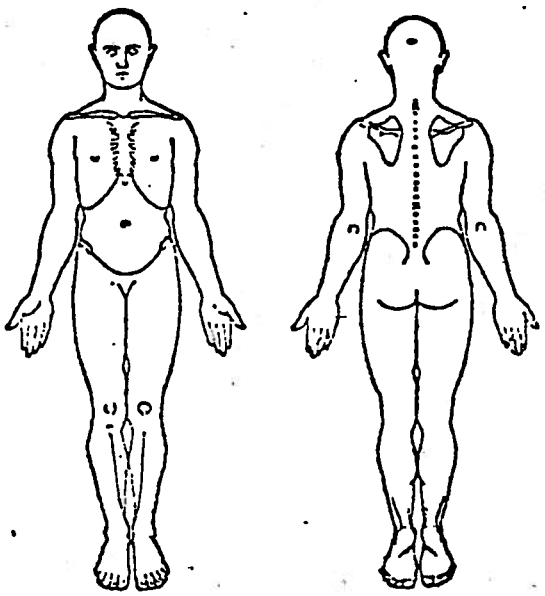
- Review of subjective evaluation for the spine
- Review of objective evaluation for the spine
- Relating evaluation to pathology to treatment

FRIDAY, JUNE 15, 1979, four afternoon class periods

- Treatment of the lumbar spine:
  Mobility testing
  Traction
  General mobilization
  Exercise
- Treatment of the cervical spine:
  Mobility testing
  General mobilization
  Traction
- Contraindications to manual techniques for spinal pain

** For the Friday session ladies will need a swimsuit top or a halte top that allows adequate visualization of the spine.

THE SPINE - SUBJECTIVE EVALUATION



A body chart such as the one at the left can allow a rapid recording of a lot of data, such as:

1.
2.
3.

It is essential to order your subjective evaluation, and always perform it in_____ _____, so as not to forget any questions. What follows is the order that works the best for me:

AREA: Record the body chart information, detailing as much as you can.

HISTORY:

First episode:

- What caused the pain to begin?
- Where did it start?
- Where did it spread?
- How long did it last?
- How was it treated?
- Any associated symptoms? (neurological, viscer
- How did changes in postu and activity affect it?

SUBSEQUENT EPISODES:

- How many?
- Similar to the first? How?
- Increasing in se

This attack:

- How did it come on? (sudden, gradual; incident, no incident)
- When did it start?
- Is it worsening, sta getting better?
- Any associated sympt

BEHAVIOR OF PAIN:

- What aggravates the pain?
- How is it in the AM? thru the day? in the PM?
- How does a cough feel?
- What eases the pain?
- What is the effect of re of activity?

During the behavior section, it helps to find an _____ sign

For _____ functional activity find out:

1.
2.
3.

- This allows you to determine the irritability of the pain as a clue to how _____ the objective evaluation will be

SPECIAL QUESTIONS: (discovering contraindications)

For all spinal patients ask:

1. Any unexplained weight loss? (CA, metabolic disturbances)
2. General health good?
3. X-rays OK?
4. What medications is the patient on now, and during the week. BEWARE of _____!!!! They demineralize bones. This also gives you an idea of the _____.

Then:

Cervical	Lumbar
5. Any dizziness? (vert.art. compromise)	5. How is bowel and bladder function? (compression of S4 nerve root)
6. Gait OK? (spinal cord compression)	6. Pain, paresthesia, anestthesie in the saddle area? (S4 root)

THE SPINE - OBJECTIVE EVALUATION

INSPECTION: observe

ADL: gait? willingness to move?

AIDS: crutches? collar? corset? heel lift?

POSTURE: view from behind and to the side: kyphosis? lordosis? scoliosis? flattened areas? areas of increased curve? Level and symmetry of:

iliac crests	
PSIS	fibular heads
gluteal folds	lateral malleoli
greater trochanter	

SHAPE: body type- obese? bony deformities?

SKIN: color (circulation)? scars?

MOVEMENT TESTS:

Active physiological : look for which joints _____ and which _____

Compare one side with _____. Also observe any rhythmic slippage, local blocking, and spasm.

Test: FLEXION - be careful!! (do last)
EXTENSION
LATERAL FLEXIONS
ROTATIONS

Passive accessory

On both of the above, note: ROM,
end feels: spasm? _____? bony block? bouncy?
stability; hypermobile? _____?

PALPATION:(for condition)
Skin: temperature? moisture? hyperasthesia? _____?

Muscles: atrophy? _____? tone?

Subcutaneous tissue: edema?

Ligaments : thickened? lax? tender?

(for position)
Vertebrae and bony landmarks. _____ or may not be significant.

NEUROLOGICAL: This is best done _____.
At the least perform it:
1.
2.

Monosegmentally innervated muscles:

CERVICAL		LUMBAR	
C 2-4	Trapezius	L 2-3	Psoas
C 5	Deltoid	L 3	Queads
C 5-6	Biceps	L 4	Ant. Tibialis/ Ext. hallu
C 6	Wrist extensors	L 5	Ext. hallucis/ peronei
C 7	Triceps/ wrist flexors	S 1	Peronei/ gastroc/ hamstri
C 8	Thumb extensors	S 2	Hamstrings
T1	Interossei		

Reflexes

C 5-6	Biceps jerk	L 3	Knee jerk
C 7	Triceps jerk	L 5-S 1	Ankle jerk

For both: Babinski sign: for corticospinal tract

Coordination: gait

Nerve stretches:

T 1	shoulder/elbow flexion	L5-S2	SLR
		L3	PKB

Considering _____ produced spinal pain, one can have two general types of overload, torsional and _____.

TORSIONAL:

- May affect either the disk or the facet joints.

DISK: as it dehydrates with age, you can get:

1. Loosening and migration of annular fragments

Hx:
- sudden onset, with or without trauma
- _____ pain: side to side
- any age
- uni or bilateral pain

Signs:
- may be _____ in one position
- one or several motions with decreased range, others less limited or painful, or completely OK
- usually no _____ pain.

Treatment: Consider: mobilization, self _____, corset for unstable condition

2. Annular distortion due to bulgy nucleus pulposus

Hx:
- Onset _____
- Usually related to a heavy lifting activity or other "we on" incident.
- pain develops later in the day, or the next _____ after incident.
- pain uni or bilateral
- not in elderly

Signs:
- can be associated with a postural deformity such as_____.
- ROM variable: sometimes several motions blocked and pain OR (rarely) no articular motion hurts.
- May be some _____ pain referral

Treatment: If there is a postural deformity: specially designed mobilizations.
- If no postural deformity: high poundage static lumbar traction.
- Flexion exercises are best avoided.

3. Herniation of nucleus pulposus and subsequent nerve root compression

Hx: Usually _____ history of "attacks" of increasing severity.
- Gradual onset pain, segmentally spreading from_____
- Unilateral
- Not in elderly

3. Disk herniation, con't

Signs: Paresthesia, weakness
- spinal motions may be full range, OR several limited more than the others.
- signs of S4 _____: SEND BACK TO MD!!!!

Treatment: If muscles are weak, condition can't be reversed.
- Static Traction, high poundage to _____.

FACET:

4. Pinched intrarticular meniscus, loose body

Hx: _____ onset
- Local pain, unilateral(primarily)
- Non-migratory pain.

Signs: _____ locked joint
- some motions limited, some not.

Treatment: Mobilization, _____ exercises, intermittent traction.

AXIAL OVERLOAD

1. Facet Arthritis (weight bearing facets)

Hx: Gradual onset, may or may not be related to trauma
- Pain pattern _____.
- Pain increases in "weight on" positions.

Signs: Patient usually obese - beer belly, _____.
- Generalized pain to all motions.
- No neurological signs

Treatment: _____ exercises.

2. Compression fracture

Hx: Sudden onset, usually with a history of heavy lifting or falling
- _____ person, female
- osteoporotic

Signs: "Weight on" or "weight off" positions comfortable. Patien is in agony getting up from lying down.
- All motions may hurt and _____
- _____ pain unless gross fracture
- X-ray evidence of fracture

Treatment: immediate: no manual treatment avails: all will aggra

recovered: GENTLE PA's (mobilization) may help to decrease generalized ache.

3. Spondylolysthesis

Hx: Gradual onset of _____ back and leg aching.
- Prolonged standing increases the ache.

Signs: _____ signs if slippage is severe.
- "Shelf" in lumbosacral area
- May or may not be pain to movement: depends on irritability that day

Treatment: send back to MD. NO MOBILIZATION, ESPECIALLY IN A

The available ROM when testing passively can be categorized as so:

0 No movement
1 Markedly decreased movement
2 Slightly decreased movement
3 Normal movement
4 Slight increase in movement
5 Marked increase in movement
6 Complete instability

"Mobility tests" can also be used as specific mobilizations. Maitland's grading system for treatment movements is so:

Grieve summarized the following rules for orthopedic manual treatment of the spine:

MOBILISATION/MANIPULATION/TRACTION TREATMENT

SUMMARY OF RULES OF PROCEDURE

1. Bear in mind contra-indications, and the conditions requiring extra care and gentleness. DO NO HARM!
2. Examine thoroughly, and carefully assess patient's signs and symptoms for indications of initial technique and likely progress.
3. Always try to localise the problem(s) and work in a specific way, i.e. localise the treatment, too.
4. Begin feeling your way forward by exploratory mobilisation, or traction, and keep the treatment under control by frequent re-assessment and precise recording.
5. Each step should be reasoned, and governed by the response to the previous steps in treatment.
6. Use vigorous procedures only if necessary; for the most part only when adequately applied mobilisation is not achieving the degree of improvement reasonably expected.
7. If a procedure is being effective, do not substitute another until it ceases to produce adequate improvement. Discard or modify techniques which are unproductive.
8. Remember to warn patients about treatment soreness and temporary after-effects; this relieves their unnecessary anxiety between treatments.
9. Do not over-treat; when signs and symptoms are cleared, STOP.
10. NEVER push through spasm when it is protecting the joint you are treating, and treat joint irritability with respect.

CONTRAINDICATIONS TO ACTIVE TREATMENT OF SPINAL PAIN

PRESENCE OF:	WHY:
1. Advancing autoimmune disease, such as rheumatoid arthritis	1. _____ become slack. Steroids cause osteoporosis.
2. Active or past bacterial infection affecting soft tissues or bone.	2. Will weaken bone, predisposing to _____.
3. Neoplasm	3. Undiscovered _____.
4. Signs of advanced arteriosclerosis, such as a calcified aorta, vertebral artery.	4. Vigorous treatment may cause arterial _____, or occlusion.
5. Dangerous neural compression, such as indications of S4 root compression.	5. S4 crucial for _____ and bladder control.
6. Osteoporosis, or other gross bony deformity.	6. Predisposes to fracture or _____.
7. Pregnancy, last trimester, or history of miscarriage.	7. Vigorous movement may cause miscarriage.
8. Severe neuosis	8. Unpredictable reaction to definitive, pain relieving treatment

READING LIST

Calliet, R.: Low Back Pain Syndrome, ed 2. Philadelphia, F.A. Davis Company, 1968. (Good rationale for Williams exercises)

Calliet, R.: Neck and Arm Pain. publisher same as above. 1964

Cookson, JC: Orthopedic manual therapy : an overview, Part II - the spine. Phys Ther 59: Mar 1979

Cyriax, J. Textbook of Orthopedic Medicine, Volume One: Diagnosis of Soft tissue lesions, ed 6. Baltimore, The Williams and Wilkins Company, 1975 (Good rationale for disk pathology).

Cyriax, J.: Textbook of Orthopedic Medicine, Volume II:. Treatment by manipulation, massage and injection, ed 8. Wms and Wilkins 1971. (General mobilizations, traction "how to's")

Grieve, G.: Mobilisation of the Spine: Notes on examination, assessment, clinical method . Publisher? 1975. (Quoted treatment rules from this booklet)

Maitland, GD: Vertebral Manipulation, ed 4. London, Butterworth and Co. (Publishers) LTD 1977 (all pictures from this book- excellent for evaluation and treatment!)

Maitland, GD: The Vertebral Column: Examination and recording guide, ed. 6. Adelaide, Virgo Press, 1977.

Mennell, JJ McM: Back Pain: Diagnosis and treatment using manipulativ techniques. Boston, Little, Brown and Co. 1960

Paris, SV: Course notes: The Spine - Etiology and treatment of dysfunction including joint manipulation, January 1975 issue. Handed out at Mr. Paris's course (Evaluation and treatment techniques, facet theory and substantiating articles within)

FOR FURTHER COURSE WORK:

These first two are offered quite regularly and are an example of how divergent the rationale and treatment approaches can be,- with essentially the same evaluation!

SV Paris: evaluation, mobilization, mobility testing, specific techniques

SV Paris, President
Institute of Graduate Health Sciences
20 Linden Ave. NE
Atlanta, GA 30308

J Cyriax, MD: evaluation, disk pathology, general Grade V mobilization

Postgraduate Course in orthopedic Medicine
Dept. of Orthopedics
University of Rochester School of Medicine
Rochester, NY

A variety of short courses are always announced in the journal (P
Categorized by type:
Australian method: Peter Edgelow, Jim and Jennifer Lynn, Linda Van Housen

Norwegian: Ola Grimsby

These folks also offer quality courses: John Mennell, MD, Sandy Burkart, PhD, Rick Bowling, Richard Ehrhart.

ACADEMY OF HEALTH SCIENCES, US ARMY
MEDICINE AND SURGERY DIVISION
PHYSICAL THERAPY BRANCH

LP 32-370-558
040

THERAPEUTIC APPLICATION OF EXERCISE: LOWER MEMBER MOBILIZATION 1L,2D,4PE

COURSE PRESENTED TO: 6H-65B US Army-Baylor University Program in Physical Therapy.

PLACE: Physical Therapy Lab

REFERENCES:

Maitland, G.D., Peripheral Manipulation, 2 ed., London-Boston: Butterworths 1979, chapter 8.
Mennell, John McM., Joint Pain, Boston: Little Brown & Co., 1964, chapters 9-13.

STUDY ASSIGNMENT: Prior to class review the anatomy and kinesiology of the hip, knee, and ankle.

STUDENT UNIFORM AND EQUIPMENT: Lab uniform.

TOOLS, EQUIPMENT AND MATERIALS:

M 32-370-558-1, M 32-370-558-2 - Issue before hours 1 and 2

M 32-370-558-3 - Issue before hours 3 and 4

M 32-370-558-4 - Issue before hours 5 and 6

PERSONNEL:

INSTRUCTIONAL AIDS: Model of skeleton and chalk board

TROOP REQUIREMENTS: None

TRANSPORTATION REQUIREMENTS: None

METHOD OF INSTRUCTION: Demonstration and Practical Exercise

I. INTRODUCTION (5 min)

A. Opening Statement: With the knowledge of the anatomy and kinesiology of low member that we have learned over the past several months, we can begin examining the joints and soft tissue for possible joint dysfunction related to restricted motion. Mobilization techniques will be used to evaluate and restore normal joint motion.

B. Objectives:

1. Describe the accessory motions of the hip, knee, ankle and foot joints.

2. State the close-packed position and capsular pattern of restriction for the major joints of the lower member.

3. Demonstrate and state the purpose of selected mobilization techniques of the lower member.

C. Class Procedure and Lesson Tie-In: This block of instruction will follow the anatomy, kinesiology, and therapeutic exercise of the regions of the lower member.

II. EXPLANATION (20 Min)

A. Review Terminology

1. Physiological movements - movements which the patient can carry out actively.

2. Accessory movements - movements which cannot be performed by voluntarily.

3. Grades of movement

a. Stretch articulation

b. Progressive oscillation

c. Grade I - passive oscillations at the beginning of the range at a rate of 2 or 3 per second.

d. Grade II - passive oscillations through the mid range.

e. Grade III - passive oscillation from the mid to end of range.

f. Grade IV - passive oscillations at the end of range.

g. Grade V - (Manipulation) - low amplitude, high velocity thrust at the end of range for the purpose of increasing range.

QUESTIONS:

For what general types of joint condition is mobilization directed at?

ANSWER:

Mobilization is directed at 3 types of joint condition

1. Restoring structures within a joint to their normal position, i.e., meniscus tear.

2. Stiff painless joints can be stretched to restore normal range and mechanics.

3. Painful joints which limit active motion may be treated to decrease pain and maintain normal range during an acute episode.

B. Principles of Performing Joint Mobilization

1. Patient must be relaxed. A modality sometimes helps.

2. Therapist must ensure patient comfort by positioning, proper grip, and use of mechanical advantage.

3. Therapist must embrace the part to be moved in order to feel the movement and control the movement.

4. The therapist must be comfortable by using proper body mechanics and leverage.

5. Therapist shall not cause increased pain.

C. Mobilization Technique

1. Assessment

a. At initial evaluation

b. At the beginning of each treatment

c. At the end of each treatment

d. Questions to ask

(1) How have you been? This leaves it open for a patient response.

(2) What do you feel was the effect of yesterday's treatment? Better or worse?

2. Signs of an abnormal synovial joint

a. Constant pain even at rest in the neutral position.

b. Constant pain except in a neutral rest position

c. Painless at rest but painful on movement.

d. Painless at rest and with movement but stiff.

e. Pain and stiffness - majority of patients.

D. Close packed position of hip: Extension and Internal Rotation

E. Capsular pattern of hip: limited in Flex/Abd/Int. Rot.

F. Accessory Motions of the Hip

1. Inferior glide: necessary for hip flexion and hip abduction
2. Anterior glide: necessary for external rotation
3. Posterior glide: necessary for internal rotation
4. Traction: for general capsular stretch
5. Lateral distraction: for general capsular stretch

III. DEMONSTRATION (20 min)

A. Hip Flexion/Adduction Test: To find the limitation the hip should be moved through an arc of flexion in adduction from 90^{o} to 140^{o}. The therapist then applies pressure through the shaft of the femur. Pain without compression indicates capsular problem; pain with compression indicates articular problem.

B. Joint Massage

1. Position of Patient (P): Supine
2. Position of Therpist (T): Standing
3. Method: Therapist places hand on greater trochanter and pushes medially. Other hand is on the knee and performs ER/IR or Flex/ext of the hip.
4. Uses: To decrease pain

C. Inferior Glide or Long Extension or Traction

1. P - Supine with belt across ASIS's for stabilization. Hip in slight abduction and external rotation.
2. T - Grasps the leg at the femoral condyles and the ankle
3. M - Apply traction and inferior glide by leaning backward with the trunk.
4. Uses - General capsular stretch and to increase flexion and hip abduction

D. Lateral Distraction

1. P-- Supine with hip and knee at 90^{o} flexion.
2. T - Position belt around proximal femur and his waist and hands on condyles and ankle

3. M - Lateral distraction is performed locking pelvis backward and moving femur into adduction

4. Uses - general capsular stretch to increase adduction

E. Inferior Glide in Flexion

1. P - Supine with hip and knee flexed to 90°

2. T - Supports lower leg by letting it rest on trapezeal ridge. Proximal femur is grasped

3. M - Inferior glide is imparted with hands while rocking the thigh into flexion

4. Uses - to increase flexion

F. Anterior Glide

1. P - Prone with knee bent to 90°

2. T - Supports knee and lower leg. The mobilizing hand contacts the posterior aspect of the proximal femur with the heel of the hand

3. M - The mobilizing hand imparts an anterior glide to the head of the femur

4. Uses - to increase external rotation and stretch posterior capsul.

G. Anterior Glide

1. P - Supine

2. T - Grasps proximal femur level with trochanter

3. M - Anterior glide is imparted by lifting

4. Uses - For increased ext. rotation.

H. Posterior Glide

1. P - Supine

2. T - Supports distal thigh and places mobilizing hand over proximal femur

3. M - Posterior glide is imparted to femoral head

4. Uses - To increase internal rotation

IV. PRACTICAL EXERCISE (60 min)

A. Students pair off and one acts as therapist and second student acts as subject for performing the demonstrated mobilization techniques.

B. Students Reverse Roles.

C. Instructor Supervises Techniques

Hours 3 and 4

V. DEMONSTRATION (20 min)

A. Femorotibial Joint

1. Long Axis Distraction

a. P - Sitting on the edge of the plinth

b. T - With back to patient, both hands grasp distal tibia proximal to the malleoli

c. M - A long axis distraction is imparted through varying degrees of flexion of the knee

d. Uses - general capular stretch

2. Anterior glide of tibia on femur

a. P - Supine with the knee slightly flexed from the limit of extension.

b. T - Stabilizes distal femur anteriorly and grasps posterior aspect of proximal tibia

c. M - An anterior glide is imparted to the tibia on the femur

d. Uses - to increase knee extension

3. Posterior glide of tibia on femur: Position is the same as for anterior glide except hands are reversed. Uses - to increase knee flexion.

4. Internal Rotation

a. P - Supine, with the knee flexed to 90°

b. T - Grasps proximal tibia with thumbs gaining a purchase on the tibia

c. M - Both hands rotate the tibia medially

d. Uses - To increase knee flexion

5. External Rotation: This is performed exactly like internal rotation except that the tibia is moved externally on the femur. This motion is used to increase knee extension.

6. Valgus Tilt and Varus Tilt: These are performed similar to the collateral ligament integrity test and are used as a general capsular stretch.

B. Patello Femoral Joint

1. Medial - Lateral Glide

a. P-- Supine with the knee slightly flexed (10^0)

b. T - Contacts the lateral or medial patellar border with his thumb pads.

c. M - Medial or lateral glide is imparted to the patella

d. Uses - General mobilization of restricted patellar movement

2. Superior - Inferior Glide: Performed in a similar manner to medial-lateral glide. Superior glide is necessary for knee extension. Interior glide is necessary for full knee flexion.

C. Proximal Tibio Fibular Joint:

1. Anterior - Ppsterior Glide

a. P - Supine with knee flexed to 90^0

b. T - Grasps the head and neck of proximal fibula with the index, long finger and thumb. Care is taken to avoid the common peroneal nerve.

c. M - The proximal fibula is moved aneeriorly and posteriorly

d. Uses - Fibular head must move forward on knee flexion and backward on knee extension

VI. PRACTICAL EXERCISE (70 min)

A. Students perform Mobilization techniques in pairs

B. Instructor Supervises Techniques

Hours 5 and 6

VII. DEMONSTRATION (20 min)

NOTE: Pass out M 32-370-558-3 Mobilization of the Ankle and demonstrates the following techniques:

A. Distal Tibio Fibular Joint: Anterior Posterior Glide
Use - This accessory motion is necessary to allow ppreading of the distal tibio fibular joint which is required for full dorsiflexion.

B. Ankle Joint:

1. Long axis distraction: This accessory motion must occur to allow full plantar flexion

2. Anterior glide of the talus on the tibia: This accessory motion must occur with plantar rlexion at the ankle

3. Posterior glide of the talus on the tibia: This accessory motion must occur during dorsiflexion

C. Subtalar Joint:

1. Long axis distraction is performed for a general capsular stretch

2. Valgus Tilt: This accessary motion is necessary for eversion

3. Vavus Tilt: This accessory move next is necessary for inversion at the subtalar joint

4. Dorsal Rock of Calcaneus on the Talus: This accessory motion occurs at the end of full dorsiflexion

5. Plantar Rock of Calcaneus on the Talus: This accessory motion occurs at the end of full plantar flexion

D. Talonavicular Joint: Dorsal-Plantar glide is performed to increase forefoot motion

E. Naviculocuneiform Joint: Dorsal Planter glide is performed to increase forefoot motion

F. Cuneiform - Metatarsal Joints: Dorsal-Planter glide is performed to increase forefoot motion

G. Cuneiform - Metatarsal/Cuboid-Metatarsal Joints: Rotation is performed to increase pronation and supination of the forefoot.

VIII. PRACTICAL EXERCISE (70 min)

A. Students perform mobilization techniques on each other in pairs.

B. Instructor supervises and answers questions

IX. SUMMARY (5 min)

A. Questions From Students

B. Review of Main Points

1. Terminology

2. Principles of Mobilization

3. Mobilization Techniques

4. Specific Mobilization for the lower member

C. Closing Statement: With the use of joint mobilization we are able to restore joint mobility much quicker than with traditional methods. A thorough knowledge of anatomy and many hours of practice will be essential to gain expertise in this form of treatment.

EXHIBIT J

Jack J. Pursel
ATTORNEY AND COUNSELOR AT LAW

SUITE 1610 VALLEY BANK PLAZA
300 SOUTH FOURTH STREET
LAS VEGAS, NEVADA 89101
TELEPHONE (702) 382-6321

May 6, 1981

The Honorable Robert E. Robinson
Assemblyman
Nevada State Assembly
Carson City, Nevada

Re: S.B. 492
A Bill extending regulation of bank holding companies, mergers, etc.

Dear Bob:

As I mentioned to you in our telephone conversation last Saturday, I am seriously concerned with the passage of S.B. 492 which is presently being considered by your committee.

Will you please give consideration to the enclosed objections, criticisms and comments and to the proposed changes in the language of the bill as drafted.

Thank you for your good work as Assemblyman and for your attention to this important matter.

Sincerely,

JACK J. PURSEL

JJP:bl
Enclosure

SENATE BILL 492

Page 1

Lines 14-17 Leaves ambiguous the situation of a bank holding its own shares as a fidiciary for such as a family trust of a shareholder; or the situation of holding treasury stock as a result of its own shares being surrendered as collateral for a defaulted loan which was made as an arms-length transaction.

RECOMMEND: Amend page 1, line 15 by inserting:

".....one or more banks, other than itself;"

and amend page 1, line 17 by inserting:

".....more banks, other than itself; or"

Page 1,

Lines 18-23 Imputes knowledge to the directors and officers of any bank as to the affairs and circumstances of all of that bank's shareholders, even when the shareholders are acting independently of the bank, each other shareholder, and even each other shareholder's trustee(s). The language of the bill would impute a criminal liability to the officers and directors for an omission of which they could have no knowledge, since a bank can require reports of investments in other banks made by directors and officers but not its own general shareholders.

RECOMMEND: Delete page 1, lines 18 through 20, inclusive;

Also amend page 1, line 23:

".....bank or its (stockholders or members) officers or directors,"

Page 2,

Lines 11 and 12 are so open-ended and general as to invite ambiguity and abuse. Inasmuch as the requirement of lines 8 through 10 so

Thoroughly exhaust the affairs of a bank holding company, lines 11 and 12 are not needed.

RECOMMEND: Delete page 2, lines 11 and 12.

Page 2,

Lines 14 and 15 leave the dates and frequency of subsequent reports too vague and open to abuse by permitting reports to be required daily, weekly, monthly or even at random. This can be corrected by establishing the frequency of reports with specific language.

RECOMMEND: Amend page 2, lines 15:

"...., and annually thereafter (on dates designated by the superintendent)."

Page 2, lines 16 through 25 are so broad, sweeping, discretionary and potentially devastating to every banking corporation as to invite abuse; and to assure allegations of abuse and appeals from every investigation ever undertaken as being in violation of due process and the equal protection clause of the constitution. Inasmuch as this section of NRS would be involved whenever an out of state holding company felt it was being subjected to a different standard than a Nevada resident, the language herein would invite litigation in Federal courts, and be an open invitation to the Federal government to interject itself into the minutest area of state banks and banking regulation, due to the broad sweep of power and discretion granted in lines 16 and 19, and the punitive financial burden imposed by lines 24 and 25. There is a need to make substantial modifications in the language of the bill, by limiting attention to the proper province of the superintendent, establishing a statutory frequency of investigations

and removing the punitive nature of the financial burden.

RECOMMEND: Amend page 2, lines 17, 18 and 19:

".....of and into the affairs of every bank holding company and every banking subsidiary thereof doing business in this state upon the filing of each annual report (as often as the superintendent may deem necessary)."

Further RECOMMEND: Delete page 2, lines 24 and 25.

Page 2, lines 26 through 42 would establish an entirely new principal in Nevada banking law; that of requiring the affirmative action of a strictly appointive official before citizens may protect their own assets and the financial integrity of all Nevadans. It requires but minimal exercise of foresight to anticipate that some future day would see a distressed or nonliquid state bank tendered a merger offer with a stable out-of-state institution. The existing statute would expedite such a merger as properly protecting the financial needs of the state as a whole. Under the existing statute, the superintendent has all the authority necessary to sue to prevent any unlawful or inequitable merger, through NRS 666.046 and NRS 658.195, as well as to bring action to prevent any consolidation or merger which is a clear and convincing threat to the public good. The essential thrust of the proposed language would be to make the superintendent himself the investigator, prosecutor, judge and jury with no burden of proof save his administrative discretion. The proposed language in effect makes all proposed mergers or consolidations guilty of restraint of trade until proven otherwise. And since an administrative act is accorded such presumption of propriety in all judicial proceedings, the burden of proof is now placed entirely upon the industry.

RECOMMEND: Amend page 2, lines 27 and 28 by deleting:

"A state bank may (, with the approval of the superintendent,)"

Further RECOMMEND: Delete page 2, lines 31 through 42, inclusive, renumbering subsections 3, 4, 5 and 6 of NRS 666.035 to retain the numbering of the existing statute.

Further RECOMMEND: Amend page 3, lines 33 and 34 by deleting:

".....(, with the approval of the superintendent,)....."

Further RECOMMEND deleting page 3, lines 37, 38 and 39, retaining the numeration of the subsections of the existing statute for NRS 666.045.

Page 3, lines 29 through 31; At this point, the proposed language merely makes a minor correction of syntax. However, both the existing statute and the proposed language of this bill leave a discomforting anomoly. While the <u>license</u> to operate as a state bank is terminated, the state banking corporation charter remains in limbo, awaiting only a refiling by its holders with the FDIC to spring forth anew as a Phoenix. This would invite a perpetual cycle of mergers and relicensing or extensive litigation to settle the matter.

RECOMMEND: Amend page 3, lines 30 and 31, by inserting:

".....the license to operate as a state bank, <u>and the Nevada state banking corporate charter</u> (shall automatically terminate) automatically terminates."

EXHIBIT K

BRITISH AMERICAN KENNEL

[Wayne Strong and Stanley Margolis]

May 11, 1981

William Elliot
c/o Las Vegas Downs
711 Racetrack Road
Henderson, Nevada 89105

Dear Mr. Elliot:

Enclosed herewith you will find financial statements on British American Kennel at Las Vegas Downs up to the end of April.

To summarize: We have lost $21,340.58 to date and we are top kennel!

Moreover, we have no intention of continuing to lose money whilst the track operators, the state and the city make a profit, effectively, at our expense.

No one can make a profit if there are no greyhounds to race and with the present handle and purse money structure no one can afford to race greyhounds at Las Vegas. It is frankly just a matter of time before every kennel withdraws.

Today, it costs approximately $2000 to breed, rear and school a greyhound to racing age. You can then anticipate an <u>average</u> of 24 months racing life, i.e. to age 3½ or, alternatively, say 150 races. If that dog were leased to British American Kennel (or any other kennel) at Las Vegas on normal 35% lease terms it would, therefore, have to run out $5714 for the owner just to get back his $2000 investment--leaving aside profit or even interest on his money.

With Grade A win purses averaging $75, that greyhound, therefore, <u>has to win over 50% of its races all in Grade A</u> for the owner to get his money back!

I would also point out that an increase in purse money from 3% to 5%, in itself, will not solve the problem. All it will do is reduce our losses--but it will reduce them to a level whereby we can afford to absorb them until the handle increases.

To use the same example as above, if purses were increased to 5% but the handle remained the same, Grade A purses would increase to $125. For a dog owner on 35% lease terms, therefore, he would receive $43.75 for each win and would need 46 wins to

recover his $2000 investment. This is still requiring over a 30% win percentage which is impossible to achieve on an overall basis.

British American's win percentage is currently 24.9% but again I would emphasize we are top kennel and even so we cannot expect to maintain this high a level.

With eight dogs in each race it is obvious that the overall average win percentage must be 12½%. Equally a dog will finish second 12½% of the time and likewise third and fourth. Overall, therefore, a dog will have one win, one second place finish, one third and one fourth from every eight races. This equates to the equivalent of two win purses for every eight races.

To achieve a median break even situation, therefore, a greyhound must earn $5714 from 19 wins, 19 seconds, 19 thirds, and 19 fourth place finishes (i.e. in each case 12½% of an estimated racing life of 150 races). This equates to an average win purse of just over $150. So even with 5% win purses we still need to see the handle increase substantially and let me repeat this is just to recover our investment!

I am sure that the legislators are totally unaware of the above economics and feel sure that if they are educated to the facts they will wholeheartedly support the requested increase.

Unfortunately, and with the utmost of respect to you, dogmen generally do not have a grasp of the facts or figures involved. Consequently they do not have the ability to support their claim that they are losing money. Hopefully this letter and the enclosed accounts will help.

Our accountants are Price Waterhouse & Co. and every single figure on our accounts is accurate and can be verified.

We have now cut our expenses to the bone but even so we need to win approximately $1700 per week to break even and as top kennel we have only achieved that level once since the track opened.

Dogmen in the past and (so far as Las Vegas Downs are concerned) in the present have been looked upon by track operators as a necessary evil. They have to have us because we supply the dogs but they would rather do without us and just sell hotdogs. It would be interesting to see how many hotdogs they'd sell if the buying public didn't have racing to watch whilst they were eating them!

With kind regards.

Yours sincerely,

Stanley Margolis

BRITISH AMERICAN KENNEL

Income & Expenditure Account
For the period January 1981

	PERIOD	YEAR TO DATE
Purse Money	$ 3304.21	
Other Income	-0-	
TOTAL INCOME	$ 3304.21	
Kennel Setup Costs	$ 544.99	
Commissions Payable	1039.76	
Wages and Employee Benefits	2330.40	
Transportation Costs	175.00	
Feed	811.59	
Vet Fees, Medication & Greyhnd Supplies	335.00	
Rent and Telephone	522.74	
Motor Expenses	543.75	
Printing, Postage & Programs	2.50	
Insurance	108.00	
Bank Chgs and Loan Interest	159.99	
License Fees	240.00	
Sundry Expenses	62.08	
Depreciation -- Greyhounds	331.81	
Kennel Equipment	145.18	
TOTAL EXPENSES	$ 7352.79	
Net Income/(Loss) for the period	$ (4048.58)	

BRITISH AMERICAN KENNEL

Balance Sheet as at January 31, 1981

FIXED ASSETS		
Greyhounds, at cost	$ 14000.00	
Less depreciation to date	1327.25	$ 12672.75
Kennel Equipment, at cost	5226.47	
Less depreciation to date	562.77	4663.70
		$ 17336.45
CURRENT ASSETS		
Feed Inventory	$ 410.13	
Deposits and Prepayments	1557.26	
Purse Money Receivable	1389.04	
Cash at Bank and in Hand	477.37	
	$ 3833.80	
CURRENT LIABILITIES		
Loan Account-STALRA Family Partnership	$ 10000.00	
Commissions Payable	284.79	
Sundry Creditors	2265.65	
	$ 12550.44	
NET CURRENT ASSETS		$ (8716.64)
TOTAL ASSETS		$ 8619.81
CAPITAL ACCOUNTS		
Stanley Margolis		
Balance, brought forward	$ 7454.85	
Capital introduced/(withdrawn)	--0--	
Share of profit/(loss) for the period	(2024.29)	
Balance carried forward		$ 5430.56
Wayne Strong		
Balance, brought forward	$ 4674.84	
Capital introduced/(withdrawn)	538.70	
Share of profit/(loss) for the period	(2024.29)	
Balance carried forward		3189.25
		$ 8619.81

BRITISH AMERICAN KENNEL

Income & Expenditure Account
For the period February 1981

	PERIOD	YEAR TO DATE
Purse Money	$ 5523.98	$ 8828.19
Other Income	-0-	-0-
TOTAL INCOME	$ 5523.98	$ 8828.19
Kennel Setup Costs	$ 213.04	$ 758.03
Commissions Payable	1903.42	2943.18
Wages and Employee Benefits	2183.00	4513.40
Transportation Costs	135.00	370.00
Feed	856.01	1667.60
Vet Fees, Medication & Greyhnd Supplies	222.88	556.88
Rent and Telephone	635.14	1157.88
Motor Expenses	528.39	1072.14
Printing, Postage & Programs	90.00	92.50
Insurance	108.00	216.00
Bank Chgs and Loan Interest	161.35	321.34
License Fees	0	240.00
Sundry Expenses	93.97	156.05
Depreciation -- Greyhounds	331.81	663.62
Kennel Equipment	145.18	290.36
TOTAL EXPENSES	$ 7667.19	$ 15019.98
Net Income/(Loss) for the period	$(2143.21)	$ (6191.79)

BRITISH AMERICAN KENNEL

Balance Sheet as at February 28, 1981

FIXED ASSETS		
Greyhounds, at cost	$ 14000.00	
Less depreciation to date	1659.06	$ 12340.94
Kennel Equipment, at cost	$ 5226.47	
Less depreciation to date	707.95	4518.52
		$ 16859.46
CURRENT ASSETS		
Feed Inventory	$ 834.76	
Deposits and Prepayments	1574.05	
Purse Money Receivable	758.31	
Cash at Bank and in Hand	1336.27	
	$ 4503.39	
CURRENT LIABILITIES		
Loan Account-STALRA Family Partnership	$ 10000.00	
Commissions Payable	789.01	
Sundry Creditors	3153.89	
	$ 13942.90	
NET CURRENT ASSETS		$ (9439.51)
TOTAL ASSETS		$ 7419.95
CAPITAL ACCOUNTS		
Stanley Margolis		
Balance, brought forward	$ 5430.56	
Capital introduced/(withdrawn)	-0-	
Share of profit/(loss) for the period	(1071.61)	
Balance carried forward		$ 4358.95
Wayne Strong		
Balance, brought forward	$ 3189.25	
Capital introduced/(withdrawn)	943.35	
Share of profit/(loss) for the period	(1071.60)	
Balance carried forward		3061.00
		$ 7419.95

BRITISH AMERICAN KENNEL

Income & Expenditure Account
For March 1981 and period January 1, 1981 to March 31, 1981

	PERIOD	YEAR TO DATE
Purse Money	$ 4575.67	$ 13403.86
Other Income	-0-	-0-
TOTAL INCOME	$ 4575.67	$ 13403.86
Kennel Setup Costs	$ -0-	$ 758.03
Commissions Payable	1383.46	4326.64
Wages and Employee Benefits	1991.50	6504.90
Transportation Costs	-0-	370.00
Feed	653.59	2320.19
Vet Fees, Medication & Greyhnd Supplies	244.60	802.48
Rent and Telephone	451.47	1609.35
Motor Expenses	272.95	1345.09
Printing, Postage & Programs	133.60	226.10
Insurance	138.21	354.21
Bank Chgs and Loan Interest	184.80	506.14
License Fees	-0-	240.00
Sundry Expenses	50.01	206.06
Depreciation -- Greyhounds	331.81	995.43
Kennel Equipment	145.18	435.54
TOTAL EXPENSES	$ 5981.18	$ 21001.16
Net Income/(Loss) for the period	$ (1405.51)	$ (7597.30)

BRITISH AMERICAN KENNEL

Balance Sheet as at March 31, 1981

FIXED ASSETS		
Greyhounds, at cost	$ 14000.00	
Less depreciation to date	1990.87	$ 12009.13
Kennel Equipment, at cost	$ 5226.47	
Less depreciation to date	853.13	4373.34
		$ 16382.47
CURRENT ASSETS		
Feed Inventory	$ 728.92	
Deposits and Prepayments	2096.03	
Purse Money Receivable	439.64	
Cash at Bank and in Hand	2027.56	
	$ 5292.15	
CURRENT LIABILITIES		
Loan Account-STALRA Family Partnership	$ 10000.00	
Commissions Payable	73.91	
Sundry Creditors	4488.29	
	$ 14522.20	
NET CURRENT ASSETS		(9230.05)
TOTAL ASSETS		$ 7152.42
CAPITAL ACCOUNTS		
Stanley Margolis		
Balance, brought forward 3/1/81	$ 4358.95	
Capital introduced/(withdrawn)	-0-	
Share of profit/(loss) for period	(702.75)	
Balance carried forward		$ 3662.28
Wayne Strong		
Balance, brought forward 3/1/81	$ 3061.00	
Capital introduced/(withdrawn)	1131.90	
Share of profit/(loss) for period	(702.76)	
Balance carried forward		3490.14
		$ 7152.42

BRITISH AMERICAN KENNEL

Balance Sheet as at April 30, 1981

FIXED ASSETS		
Greyhounds, at cost	$ 12000.00	
Less depreciation to date	1954.26	$ 10045.74
Kennel Equipment, at cost	$ 5226.47	
Less depreciation to date	998.31	4228.16
		$ 14273.90
CURRENT ASSETS		
Feed Inventory	$ 624.00	
Deposits and Prepayments	2040.87	
Purse Money Receivable	163.09	
Cash at Bank and in Hand	687.84	
	$ 3515.80	
CURRENT LIABILITIES		
Loan Account-STALRA Family Partnership	$ 10000.00	
Commissions Payable	90.75	
Sundry Creditors	4763.33	
	$ 14854.08	
NET CURRENT ASSETS		$(11338.28)
TOTAL ASSETS		$ 2935.62
CAPITAL ACCOUNTS		
Stanley Margolis		
Balance, brought forward 4/1/81	$ 3662.28	
Capital introduced/(withdrawn)	162.58	
Share of profit/(loss) for period	(2326.49)	
Balance carried forward		$ 1498.37
Wayne Strong		
Balance, brought forward 4/1/81	$ 3490.14	
Capital introduced/(withdrawn)	273.59	
Share of profit/(loss) for period	(2326.48)	
Balance carried forward		1437.25
		$ 2935.62

BRITISH AMERICAN KENNEL

Income & Expenditure Account

For April 1981 & period January 1, 1981 to April 30, 1981

	PERIOD	YEAR TO DATE
Purse Money	$ 2028.76	$ 15432.62
Other Income (Loss on Dog destroyed)	(1684.21)	(1684.21)
TOTAL INCOME	$ 344.55	$ 13748.41
Kennel Setup Costs	$ -0-	$ 758.03
Commissions Payable	587.18	4913.82
Wages and Employee Benefits	1529.28	8034.18
Transportation Costs	80.00	450.00
Feed	740.59	3060.78
Vet Fees, Medication & Ghnd Supplies	83.25	885.73
Rent and Telephone	672.72	2282.07
Motor Expenses	464.95	1810.04
Printing, Postage & Programs	100.00	326.10
Insurance	95.49	449.70
Bank Chgs and Loan Interest	151.81	657.95
License Fees	10.00	250.00
Sundry Expenses	58.89	264.95
Depreciation -- Greyhounds	279.18	1274.61
Kennel Equipment	145.18	580.72
TOTAL EXPENSES	$ 4997.52	$ 25998.68
Net Income/(Loss) for period	$ (4652.97)	$ (12250.27)

BRITISH AMERICAN KENNEL

Income & Expenditure Account
For the period October 10, 1980 to December 31, 1980

	PERIOD	YEAR TO DATE
Purse Money	--	--
Other Income	--	--
TOTAL INCOME	--	--
Kennel Setup Costs	$ 978.85	$ 978.85
Commissions Payable	--	--
Wages and Employee Benefits	1591.95	1591.95
Transportation Costs	1866.60	1866.60
Feed	880.84	880.84
Vet Fees, Medication & Greyhnd Supplies	164.50	164.50
Rent and Telephone	437.75	437.75
Motor Expenses	537.73	537.73
Printing, Postage & Programs	575.27	575.27
Insurance	--	--
Bank Chgs and Loan Interest	53.59	53.59
License Fees	50.00	50.00
Sundry Expenses	540.20	540.20
Depreciation -- Greyhounds	995.44	995.44
Kennel Equipment	417.59	417.59
TOTAL EXPENSES	$ 9090.31	$ 9090.31
Net Income/(Loss) for the period	($9090.31)	($9090.31)

BRITISH AMERICAN KENNEL

Balance Sheet as at December 31, 1980

FIXED ASSETS		
Greyhounds, at cost	$ 14,000.00	
Less depreciation to date	995.44	$ 13,004.56
Kennel Equipment, at cost	$ 5,011.00	
Less depreciation to date	417.59	4,593.41
		$ 17,597.97
CURRENT ASSETS		
Feed Inventory	$ 529.20	
Deposits and Prepayments	834.78	
Purse Money Receivable	--	
Cash at Bank and in Hand	(1,555.36)	
	$ (191.38)	
CURRENT LIABILITIES		
Loan Account-STALRA Family Partnership	$ (4,000.00)	
Commissions Payable	--	
Sundry Creditors	(1,276.90)	
	$ (5,276.90)	
NET CURRENT ASSETS		(5,468.28)
TOTAL ASSETS		$ 12,129.69
CAPITAL ACCOUNTS		
Stanley Margolis		
Balance, brought forward	$ --	
Capital introduced/(withdrawn)	12,000.00	
Share of profit/(loss) for the period	(4,545.15)	$ 7,454.85
Balance carried forward		
Wayne Strong		
Balance, brought forward	$ --	
Capital introduced/(withdrawn)	9,220.00	
Share of profit/(loss) for the period	(4,545.16)	4,674.84
Balance carried forward		
		$ 12,129.69

EXHIBIT L

ROBERT E. ROBINSON
ASSEMBLYMAN
CHAIRMAN-COMMERCE COMMITTEE
417 LACY LANE
LAS VEGAS, NEVADA 89107
PHONE: (702) 878-3202

COMMITTEES
CHAIRMAN
COMMERCE
MEMBER
ELECTIONS
WAYS AND MEANS

Nevada Legislature

SIXTY-FIRST SESSION

May 14, 1981

Joseph O. Sevigny
Superintendent of Banks
Banking Division
406 E. Second Street
Carson City, NV 89710

Dear Joe,

Enclosed is a copy of A.B. 585, which was heard before the Commerce Committee on Wednesday, May 13, 1981.

The reasoning behind this bill was that some of Mrs. Ham's constituents complained that their banks had made offset withdrawals from their checking accounts to cover overdue installment payments. The withdrawals threw their accounts into overdraft, and they were distressed because some of their other checks were then returned and additional charges were made against their accounts for the processing of the overdrawn checks.

The first knowledge that these people had of their accounts being overdrawn was through calls that they received from people regarding payment on bad checks. Mrs. Ham claimed that they had not received a notice that an offset deduction was going to be made.

Lt. Governor Leavitt testified that the same thing had happened to him.

There will be a great many serious problems with A.B. 585, and testimony by bankers convinced Mrs. Ham to withdraw her bill with the condition that all of the banks and savings and loan companies and others handling checking accounts would give notice when an offset, such as described above, was made. The notice would have to give the amount of the charge and the reason for the charge.

Two of the major banks testified that they were already doing this, (giving notice), and we feel that it would be a good idea to make such notice standard practice for all financial institutions.

If the banks and financial institutions do not voluntarily adopt such procedures, you should require it by regulation. Hence this letter. The Legislature intends that you solve this problem through

your regulatory authority.

If you should have any questions concerning this matter, please let me know.

Very sincerely yours,

R. E. Robinson

Robert E. Robinson
Assemblyman

RER:ee

Enclosure

EXHIBIT M

Good Afternoon Gentlemen:

My name is Arthur Senini, President of the Wine & Spirit Wholesalers of Nevada.

Our industry supports A.B. #598 and does hope that you will act favorabley in a "Do Pass" vote.

This proposed legislation was presented to Mr. Roy Nickson, Exec. Secretary of the Nevada Tax Commission, discussed in detail and was approved in concept at that meeting. In view of the fiscal note attached to this bill wherein there is no effect to local Government and no effect on the State or on Industrial Insurance, the Nevada Tax Commission could find no objection to this bill. If anything, it could be beneficial to the Tax Commission. A.B. #598 is an industry sponsored bill wherein we are imposing additional requirements on ourselves in pursuit of a more orderly conduct of business. This bill assures complete service to the entire beverage industry.

Government has strong and legitimate interests in the public benefits offered by this proposed legislation. Enforcement of liquor tax collection and liquor control laws can be strengthened by this proposal wherein all beverage alcohol must pass through three controllable levels prior to sale to the consumer.

A.B. #598 will help protect public revenue. The tax revenues generated by beverage alcohol sales is aided significantly by the "proper audit trail" resulting from this proposal within the frame work of our three-tier system of distribution.

After repeal of Prohibition, many of the license states and control states enacted laws similiar to that which we propose. Their basic purpose is to define a legal and efficient channel of distribution of beverage alcohol for purposes of efficient and effective taxation and protection of the public health and safety through state liquor control administration.

Once again. we ask your support to A.B. #598 and do hope that you will act favorabley in a "do pass" vote.

Thank you.

EXHIBIT N

NEVADA STATE APARTMENT ASSOCIATION

PROUDLY SERVING THE GREAT STATE OF NEVADA

AB 554 does not address the real problem. Tenants, in some cases, are not receiving their deposit refund within the required 21 days. The Apartment Association in both the North and South admit this problem exists and is heavily concentrated in out of state owned apartment complexes. We propose amendments to AB 554 as follows:

1. Delete Section 1 through Section 8 and amend the summary and the description of the act.
2. Include as Section 1, an amendment to NRS 118A.240, subparagraph seven inclusive.

   Should the landlord willfully neglect to return the remaining portion of the Security Deposit as described in Subsection 4 or 5 above to the tenant within 21 days after termination of tenancy, the landlord shall be required to return the entire deposit forthwith, without any deduction whatsoever for defaults in payment of rent, repairs, or costs of cleaning the premises. If a judgment in favor of the tenant is granted and the defendant fails to comply within a reasonable time, the defendant shall be liable for a misdemeanor charge as well as the judgment.

3. Include as Section 2 an amendment to NRS 118A.260, subparagraph 4 inclusive.

   If the principal or corporate owner does not reside within the state of Nevada:

   a. He shall designate a representative within the state to receive service in connection with any legal action brought by tenants or others.

   b. In the absence of such designation then the on-site manager, or other person managing or operating the property, will automatically become the designated representative to accept legal service.

   c. The obligations of the landlord devolve upon the persons authorized to enter into a rental agreement on his behalf.

These amendments address the real problem, lack of compliance with the three week deposit refund provision and lack of availability of local Small Claims courts to tenants to voice their grievances against out of state landlords. There does not appear to be a problem with landlords retaining the Security Deposit and having it available to return to a tenant. We therefore urge your adoption of our amendments to AB 554 since this addresses the primary problem within our state.

NORTHERN OFFICE
570 CALIFORNIA AVENUE
RENO, NV 89509
(702) 322-6622

SOUTHERN OFFICE
1111 LAS VEGAS BLVD., SO. - 210-C
LAS VEGAS, NV 89109
(702) 382-3258

EXHIBIT O

1981 REGULAR SESSION (61st)

ASSEMBLY ACTION	SENATE ACTION	Assembly AMENDMENT BLANK
Adopted ☐	Adopted ☐	AMENDMENTS to Assembly
Lost ☐	Lost ☐	Bill No. 580 ~~Joint Resolution No.~~
Date:	Date:	BDR 58-2044
Initial:	Initial:	Proposed by Committee on Commerce
Concurred in ☐	Concurred in ☐	
Not concurred in ☐	Not concurred in ☐	
Date:	Date:	
Initial:	Initial:	

Amendment No. 900

Amend section 1, page 1, line 11, by deleting "single rate" and inserting:

"rate for interruptible service".

Amend section 1, page 1, line 14, by deleting "customers." and inserting:

"customers in Nevada."

EXHIBIT P

1981 REGULAR SESSION (61st)

ASSEMBLY ACTION	SENATE ACTION	Assembly AMENDMENT BLANK
Adopted ☐	Adopted ☐	AMENDMENTS to Assembly
Lost ☐	Lost ☐	Bill No. 288 ~~Joint Resolution No.~~
Date:	Date:	BDR 54-1131
Initial:	Initial:	Proposed by Committee on Commerce
Concurred in ☐	Concurred in ☐	
Not concurred in ☐	Not concurred in ☐	
Date:	Date:	
Initial:	Initial:	

Amendment No. 595

Amend the bill as a whole by deleting sections 1 through 6 and by inserting a new section designated section 1, to read as follows:

"Section 1. Chapter 624 of NRS is hereby amended by adding thereto a new section which shall read as follows:

1. Each contractor who completes the performance of a contract for which he employs a subcontractor shall, on the day on which the performance is completed, mail to each subcontractor notice that the performance was completed. The notice must be sent by registered or certified United States mail, return receipt requested.

2. The contractor shall retain the returned receipt in his records for at least 2 years after the performance is completed.

3. Willful or repeated failure to comply with the requirements of this section is cause for disciplinary action."

Amend the title of the bill to read as follows:

"AN ACT relating to contractors; requiring notice to subcontractors of completion of contracts; and providing other matters properly relating thereto."