

## = Osteopathic medicine in the United States =

Osteopathic Medicine is a branch of the medical profession in the United States . Osteopathic physicians ( D.O.s ) are equivalent to both Doctors of Medicine ( M.D.s ) and Bachelor of Medicine , Bachelor of Surgery ( MBBS ) doctors in the United Kingdom and are considered fully licensed physicians ( medical doctors ) to practice medicine and surgery in all 50 states and are recognized in sixty five other countries , including all Canadian provinces .

Frontier physician Andrew Taylor Still founded the profession as a rejection of the prevailing system of medical thought of the 19th century . Still 's techniques relied on manipulation of joints and bones , to diagnose and treat illness , and he called his practices ? osteopathy ? . By the middle of the 20th century , the profession had moved closer to mainstream medicine , adopting modern public health and biomedical principles . American " osteopaths " became " osteopathic medical doctors " , ultimately achieving full practice rights as allopathic medical doctors in all 50 states , including serving in the U.S. armed forces as physicians .

In the 21st century , the training of osteopathic medical physicians in the United States is equivalent to the training of Doctors of Medicine ( M.D.s ) . Osteopathic medical physicians attend four years of medical school followed by an internship and a minimum two years of residency . They use all conventional methods of diagnosis and treatment . Though still trained in osteopathic manipulative treatment ( OMT ) , the modern derivative of Still 's techniques , they work in all specialties of medicine . OMT is a skill they use often in family practice , sports medicine , emergency medicine , but OMT is not commonly used in specialties such as dermatology , surgery , or other fields that do not lend themselves to correcting the body with their hands .

In modern medicine , any distinction between the M.D. and the D.O. professions has eroded steadily ; diminishing numbers of D.O. graduates enter primary care fields , fewer use OMT , and increasing numbers of osteopathic graduates choose to train in non @-@ osteopathic residency programs . An osteopathic physician ( DO ) is a fully licensed , patient @-@ centered medical doctor . DO has full medical practice rights throughout the United States and in 44 countries abroad .

Discussions about the future of modern medicine frequently debate the utility of maintaining separate , distinct pathways for educating physicians in the United States .

## = = Nomenclature = =

Physicians and surgeons who graduate from osteopathic medical schools are known as physicians or osteopathic medical doctors . Upon graduation , they are conferred a professional doctorate , the Doctor of Osteopathic Medicine ( D.O. ) .

Osteopathic curricula in other countries differ from those in the United States . European @-@ trained practitioners of osteopathic manipulative techniques are referred to as " osteopaths " : their scope of practice excludes most medical therapies and relies more on osteopathic manipulative medicine and alternative medical modalities . While it was once common for D.O. graduates in the United States to refer to themselves as ' osteopaths , ' this term is now considered archaic and those holding the Doctor of Osteopathic Medicine degree are commonly referred to as ' osteopathic medical physicians ' .

## = = Demographics = =

Currently , there are 30 accredited osteopathic medical schools offering education in 42 locations across the United States and 141 accredited U.S. M.D. medical schools .

In 1960 , there were 13 @, @ 708 physicians who were graduates of the 5 osteopathic medical schools .

In 2002 , there were 49 @, @ 210 physicians from 19 osteopathic medical schools .

Between 1980 and 2005 , the number of osteopathic graduates per year increased over 250 percent from about 1 @, @ 000 to 2 @, @ 800 . This number is expected to approach 5 @, @ 000 by 2015 .

In 2015 , there were 31 colleges of osteopathic medicine in 45 locations . One in four medical students in the United States is enrolled in an osteopathic medical school .

As of 2015 , there are more than 96 @, @ 000 osteopathic medical physicians in the United States .

By 2020 , the number of osteopathic medical physicians will be over 100 @, @ 000 , say expert predictions , according to the American Medical Association .

Osteopathic physicians are not evenly distributed in the United States . States with the highest concentration of osteopathic medical physicians are Oklahoma , Iowa , and Michigan where osteopathic medical physicians comprise 17 @-@ 20 % of the total physician workforce . The state with the greatest number of osteopathic medical physicians is Pennsylvania , with 7 @, @ 260 DOs in active practice in 2011 . The states with the lowest concentrations of DOs are Louisiana , Massachusetts and Vermont where only 1 ? 3 % of physicians have an osteopathic medical degree . Public awareness of osteopathic medicine likewise varies widely in different regions . People living in the midwest states are the most likely to be familiar with osteopathic medicine . In the Northeastern United States , osteopathic medical physicians provide more than one third of general and family medicine patient visits .

Between 2010 and 2015 twelve states experienced greater than 50 % growth in the number of DOs ? Virginia , South Carolina , Utah , Tennessee , North Dakota , Kentucky , South Dakota , Wyoming , Oregon , North Carolina , Minnesota , Washington .

= = Osteopathic principles = =

Osteopathic medical students take the Osteopathic Oath , similar to the Hippocratic oath , to maintain and uphold the " core principles " of osteopathic medical philosophy . Revised in 1953 , and again in 2002 , the core principles are :

The body is a unit ; a person is a unit of body , mind , and spirit .

The body is capable of self @-@ regulation , self @-@ healing , and health maintenance .

Structure and function are reciprocally interrelated .

Rational treatment is based on an understanding of these principles : body unity , self @-@ regulation , and the interrelationship of structure and function .

Contemporary osteopathic physicians practice evidence @-@ based medicine , indistinguishable from their MD colleagues .

= = = Significance = = =

There are different opinions on the significance of these principles . Some note that the osteopathic medical philosophy is akin to the tenets of holistic medicine , suggestive of a kind of social movement within the field of medicine , one that promotes a more patient @-@ centered , holistic approach to medicine , and emphasizes the role of the primary care physician within the health care system . Others point out that there is nothing in the principles that would distinguish D.O. from M.D. training in any fundamental way . One study , published in The Journal of the American Osteopathic Association found a majority of M.D. medical school administrators and faculty saw nothing objectionable in the core principles listed above , and some endorse them generally as broad medical principles .

= = History = =

= = = 19th century , a new movement within medicine = = =

Frontier physician Andrew Taylor Still , M.D. , DO , founded the American School of Osteopathy ( now the A.T. Still University @-@ Kirksville ( Mo . ) College of Osteopathic Medicine ) in Kirksville , MO , in 1892 as a radical protest against the turn @-@ of @-@ the @-@ century medical system .

A. T. Still believed that the conventional medical system lacked credible efficacy , was morally corrupt , and treated effects rather than causes of disease . He founded osteopathic medicine in rural Missouri at a time when medications , surgery , and other traditional therapeutic regimens often caused more harm than good . Some of the medicines commonly given to patients during this time were arsenic , castor oil , whiskey , and opium . In addition , unsanitary surgical practices often resulted in more deaths than cures .

Dr. Still intended his new system of medicine to be a reformation of the existing 19th @-@ century medical practices . He imagined that someday " rational medical therapy " would consist of manipulation of the musculoskeletal system , surgery , and very sparingly used drugs . He invented the name " osteopathy " by blending two Greek roots osteon- for bone and -pathos for suffering in order to communicate his theory that disease and physiologic dysfunction were etiologically grounded in a disordered musculoskeletal system . Thus , by diagnosing and treating the musculoskeletal system , he believed that physicians could treat a variety of diseases and spare patients the negative side @-@ effects of drugs .

The new profession faced stiff opposition from the medical establishment at the time . The relationship of the osteopathic and medical professions was often " bitterly contentious " and involved " strong efforts " by medical organizations to discredit osteopathic medicine . Throughout the first half of the twentieth century , the policy of the American Medical Association labeled osteopathic medicine as a cult and osteopaths were seen as " cultist . " The AMA code of ethics declared it unethical for a medical physician to voluntarily associate with an osteopath .

One notable advocate for the fledgling movement was Mark Twain . Manipulative treatments had purportedly alleviated the symptoms of his daughter Jean 's epilepsy as well as Twain 's own chronic bronchitis . In 1909 , he spoke before the New York State Assembly at a hearing regarding the practice of osteopathy in the state . " I don 't know as I cared much about these osteopaths until I heard you were going to drive them out of the state , but since I heard that I haven 't been able to sleep . " Philosophically opposed to the American Medical Association 's stance that its own type of medical practice was the only legitimate one , he spoke in favor of licensing for osteopaths . Physicians from the New York County Medical Society responded with a vigorous attack on Twain , who retorted with " [ t ] he physicians think they are moved by regard for the best interests of the public . Isn 't there a little touch of self @-@ interest back of it all ? " " ... The objection is , people are curing people without a license and you are afraid it will bust up business . "

= = = 1916 ? 1966 , federal recognition = = =

Recognition by the U.S. federal government was a key goal of the osteopathic medical profession in its effort to establish equivalency with its M.D. counterparts . Between 1916 and 1966 , the profession engaged in a " long and tortuous struggle " for the right to serve as physicians and surgeons in the U.S. Military Medical Corps . On May 3 , 1966 Secretary of Defense Robert McNamara authorized the acceptance of osteopathic physicians into all the medical military services on the same basis as MDs . The first osteopathic physician to take the oath of office to serve as a military physician was Harry J. Walter . The acceptance of osteopathic physicians was further solidified in 1996 when Ronald Blanck , DO was appointed to serve as Surgeon General of the Army , the only osteopathic physician to hold the post .

= = = 1962 , California = = =

In the 1960s in California , the American Medical Association ( AMA ) spent nearly \$ 8 million to end the practice of osteopathic medicine in the state . In 1962 , Proposition 22 , a statewide ballot initiative in California , eliminated the practice of osteopathic medicine in the state . The California Medical Association ( CMA ) issued M.D. degrees to all DOs in the state of California for a nominal fee . " By attending a short seminar and paying \$ 65 , a doctor of osteopathy ( D.O. ) could obtain an M.D. degree ; 86 percent of the DOs in the state ( out of a total of about 2000 ) chose to do so . " Immediately following , the AMA re @-@ accredited the formerly the osteopathic University of

California at Irvine College of Osteopathic Medicine as the University of California , Irvine School of Medicine , an M.D. medical school . It also placed a ban on issuing physician licenses to DOs moving to California from other states . However , the decision proved to be controversial . In 1974 , after protests and lobbying by influential and prominent DOs , the California Supreme Court ruled in Osteopathic Physicians and Surgeons of California v. California Medical Association , that licensing of DOs in that state must be resumed . Four years later , in 1978 , the College of Osteopathic Medicine of the Pacific opened in Pomona , and in 1997 Touro University California opened in Vallejo . As of 2012 , there were 6 @, @ 368 D.O.s practicing in California .

= = = 1969 , AMA House of Delegates approval = = =

In 1969 , the American Medical Association ( AMA ) approved a measure allowing qualified osteopathic physicians as full and active members of the Association . The measure also allowed osteopathic physicians to participate in AMA @-@ approved intern and residency programs . However , the American Osteopathic Association rejected this measure , claiming it was an attempt to eliminate the distinctiveness of osteopathic medicine . In 1970 , AMA President Dwight L. Wilbur , M.D. sponsored a measure in the AMA 's House of Delegates permitting the AMA Board of Trustees ' plan for the merger of D.O. and M.D. professions . Today , a majority of osteopathic physicians are trained alongside MDs , in residency programs governed by the ACGME , an independent board of the AMA .

= = = 1993 , first African @-@ American woman to serve as dean of a U.S. medical school = = =

In 1993 , Barbara Ross @-@ Lee , DO was appointed to the position of dean of the Ohio University College of Osteopathic Medicine ; she was the first African @-@ American woman to serve as the dean of a U.S. medical school . Ross @-@ Lee now is the dean of the NYIT College of Osteopathic Medicine at Arkansas State University in Jonesboro , Arkansas .

= = = Non @-@ discrimination policies = = =

Recent years have seen a professional rapprochement between the two groups . DOs have been admitted to full active membership in the American Medical Association since 1969 . The AMA has invited a representative of the American Osteopathic Association to sit as a voting member in the AMA legislative body , the house of delegates .

= = = = 2006 , American Medical Student Association = = = =

In 2006 , during the presidency of an osteopathic medical student , the American Medical Student Association ( AMSA ) adopted a policy regarding the membership rights of osteopathic medical students in their main policy document , the " Preamble , Purposes and Principles . "

AMSA RECOGNIZES the equality of osteopathic and allopathic medical degrees within the organization and the healthcare community as a whole . As such , DO students shall be entitled to the same opportunities and membership rights as allopathic students .

= = = = 2007 , AMA = = = =

In recent years , the largest M.D. organization in the U.S. , the American Medical Association , adopted a fee non @-@ discrimination policy discouraging differential pricing based on attendance of an M.D. or D.O. medical school .

In 2006 , calls for an investigation into the existence of differential fees charged for visiting D.O. and M.D. medical students at American medical schools were brought to the American Medical Association . After an internal investigation into the fee structure for visiting D.O. and M.D. medical students at M.D. medical schools , it was found that one institution of the 102 surveyed charged

different fees for D.O. and M.D. students . The house of delegates of the American Medical Association adopted resolution 809 , I @-@ 05 in 2007 .

Our AMA , in collaboration with the American Osteopathic Association , discourages discrimination against medical students by institutions and programs based on osteopathic or allopathic training .

= = = State licensing of practice rights = = =

In the United States , laws regulating physician licenses are governed by the states . Between 1901 and 1989 , osteopathic physicians lobbied state legislatures to pass laws giving those with a D.O. degree the same legal privilege to practice medicine as those with an M.D. degree . In many states , the debate was long and protracted . Both the AOA and the AMA were heavily involved in influencing the legislative process . The first state to pass such a law was California in 1901 , the last was Nebraska in 1989 .

= = Current status = =

= = = Education and training = = =

According to Harrison 's Principles of Internal Medicine , " the training , practice , credentialing , licensure , and reimbursement of osteopathic physicians is virtually indistinguishable from those of allopathic ( MD ) physicians , with 4 years of osteopathic medical school followed by specialty and subspecialty training and [ board ] certification . "

D.O.-granting U.S. medical schools have curricula identical for the most part to those of M.D.-granting schools . Generally , the first two years are classroom @-@ based , while the third and fourth years consist of clinical rotations through the major specialties of medicine . Some schools of Osteopathic Medicine have been criticized by the osteopathic community for relying too heavily on clinical rotations with private practitioners , who may not be able to provide sufficient instruction to the rotating student . Other D.O.-granting and M.D.-granting schools place their students in hospital @-@ based clinical rotations where the attending physicians are faculty of the school , and who have a clear duty to teach medical students while treating patients .

= = = = Graduate medical education = = = =

Upon graduation , most osteopathic medical physicians pursue residency training programs . Depending on state licensing laws , osteopathic medical physicians may also complete a one @-@ year rotating internship at a hospital approved by the American Osteopathic Association ( AOA ) .

Osteopathic physicians may apply to residency programs accredited by either the AOA or the Accreditation Council for Graduate Medical Education ( ACGME ) . Currently , osteopathic physicians participate in more ACGME programs than in programs approved by the American Osteopathic Association ( AOA ) . By June 30 , 2020 , all AOA residencies will also be required to have ACGME accreditation , and the AOA will cease accreditation activities .

= = Osteopathic manipulative treatment ( OMT ) = =

Within the osteopathic medical curriculum , manipulative treatment is taught as an adjunctive measure to other biomedical interventions for a number of disorders and diseases . However , a 2001 survey of osteopathic physicians found that more than 50 % of the respondents used OMT on less than 5 % of their patients . The survey follows many indicators that osteopathic physicians have become more like M.D. physicians in every respect ? few perform OMT , and most prescribe medications or suggest surgery as the first line of treatment . The American Osteopathic Association has made an effort in recent years to support scientific inquiry into the effectiveness of osteopathic manipulation as well as to encourage osteopathic physicians to consistently offer manipulative

treatments to their patients . However , the number of osteopathic physicians who report consistently prescribing and performing manipulative treatment has been falling steadily . Medical historian and sociologist Norman Gevitz cites poor educational quarters and few full @-@ time OMT instructors as major factors for the decreasing interest of medical students in OMT . He describes problems with " the quality , breadth , nature , and orientation of OMM instruction , " and he claims that the teaching of osteopathic medicine has not changed sufficiently over the years to meet the intellectual and practical needs of students .

In their assigned readings , students learn what certain prominent DOs have to say about various somatic dysfunctions . There is often a theory or model presented that provides conjectures and putative explanations about why somatic dysfunction exists and what its significance is . Instructors spend the bulk of their time demonstrating osteopathic manipulative ( OM ) techniques without providing evidence that the techniques are significant and efficacious . Even worse , faculty members rarely provide instrument @-@ based objective evidence that somatic dysfunction is present in the first place .

At the same time , recent studies show an increasingly positive attitude of patients and physicians ( M.D. and D.O. ) towards the use of manual therapy as a valid , safe and effective treatment modality . One survey , published in the Journal of Continuing Medical Education , found that a majority of physicians ( 81 % ) and patients ( 76 % ) felt that manual manipulation ( MM ) was safe , and over half ( 56 % of physicians and 59 % of patients ) felt that manipulation should be available in the primary care setting . Although less than half ( 40 % ) of the physicians reported any educational exposure to MM and less than one @-@ quarter ( 20 % ) have administered MM in their practice , most ( 71 % ) respondents endorsed desiring more instruction in MM. Another small study examined the interest and ability of M.D. residents in learning osteopathic principles and skills , including OMT . It showed that after a 1 @-@ month elective rotation , the M.D. residents responded favorably to the experience .

= = = Professional attitudes = = =

In 1998 , a New York Times article described the increasing numbers , public awareness , and mainstreaming of osteopathic medical physicians , illustrating an increasingly cooperative climate between the D.O. and M.D. professions .

In 2005 , during his tenure as president of the American Association of Medical Colleges , Jordan Cohen described a climate of cooperation between D.O. and M.D. practitioners :

" We now find ourselves living at a time when osteopathic and allopathic graduates are both sought after by many of the same residency programs ; are in most instances both licensed by the same licensing boards ; are both privileged by many of the same hospitals ; and are found in appreciable numbers on the faculties of each other 's medical schools " .

Elsewhere , he has remarked that osteopathic manipulative medicine ( OMT ) " can be an aid to the physician in fostering a relationship with the patient . "

= = = International practice rights = = =

Each country has different requirements and procedures for licensing or registering osteopathic physicians and osteopaths . The only osteopathic practitioners that the U.S. Department of Education recognizes as physicians are graduates of osteopathic medical colleges in the United States . Therefore , osteopaths who have trained outside the United States are not eligible for medical licensure in the United States . On the other hand , U.S.-trained DOs are currently able to practice in 45 countries with full medical rights and in several others with restricted rights .

The Bureau on International Osteopathic Medical Education and Affairs ( BIOMEA ) is an independent board of the American Osteopathic Association . The BIOMEA monitors the licensing and registration practices of physicians in countries outside of the United States and advances the recognition of American @-@ trained DOs . Towards this end , the BIOMEA works with international health organizations like the World Health Organization ( WHO ) , the Pan American Health

Organization ( PAHO ) as well as other groups .

The procedure by which countries consider granting physician licensure to foreigners varies widely . For U.S. trained physicians , the ability to qualify for " unlimited practice rights " also varies according to one 's degree , M.D. or D.O. Many countries recognize U.S.-trained MDs as applicants for licensure , granting successful applicants " unlimited " practice rights . The American Osteopathic Association has lobbied the governments of other countries to recognize U.S.-trained DOs similarly to their M.D. counterparts , with some success .

In over 65 countries , U.S.-trained DOs have unlimited practice rights . In 2005 , after one year of deliberations , the General Medical Council announced that U.S.-trained DOs will be accepted for full medical practice rights in the United Kingdom . According to Josh Kerr of the AOA , " some countries don ' t understand the differences in training between an osteopathic physician and an osteopath . " The American Medical Student Association strongly advocates for U.S.-trained D.O. international practice rights " equal to that " of M.D. qualified physicians .

= = = Osteopathic medicine and primary care = = =

Osteopathic physicians have historically entered primary care fields at a higher rate than their M.D. counterparts . Some osteopathic organizations make claims to a greater emphasis on the importance of primary care within osteopathic medicine . However , the proportion of osteopathic students choosing primary care fields , like that of their M.D. peers , is declining . Currently , only one in five osteopathic medical students enters a family medicine residency ( the largest primary care field ) . In 2004 , only 32 % of osteopathic seniors planned careers in any primary care field ; this percentage was down from a peak in 1996 of more than 50 % .

= = Criticism and internal debate = =

= = = OMT = = =

Traditional osteopathic medicine , specifically OMT , has been criticized for many techniques such as cranial and cranio @-@ sacral manipulation . A study performed in the early 2000s questioned the therapeutic utility of osteopathic manipulative treatment modalities . Also , New York University health information website claims that " it is difficult to properly ascertain the effectiveness of a hands @-@ on therapy like OMT . "

= = = Research emphasis = = =

Another area of criticism has been the relative lack of research and lesser emphasis on scientific inquiry at D.O. schools in comparison with M.D. schools .

The inability to institutionalize research , particularly clinical research , at osteopathic institutions has , over the years , weakened the acculturation , socialization , and distinctive beliefs and practices of osteopathic students and graduates .

= = = Identity crisis = = =

There is currently a debate within the osteopathic community over the feasibility of maintaining osteopathic medicine as a distinct entity within U.S. health care . JD Howell , author of The Paradox of Osteopathy , notes claims of a " fundamental yet ineffable difference " between MD and DO qualified physicians are based on practices such as " preventive medicine and seeing patients in a sociological context " that are " widely encountered not only in osteopathic medicine but also in allopathic medicine . " Studies have confirmed the lack of any " philosophic concept or resultant practice behavior " that would distinguish a D.O. from an M.D. Howell summarizes the questions framing the debate over the future of osteopathic distinctiveness thus :

If osteopathy has become the functional equivalent of allopathy [ meaning the MD profession ] , what is the justification for its continued existence ? And if there is value in therapy that is uniquely osteopathic , why should its use be limited to osteopaths ?

= = = = Rapid expansion = = = =

As the number of osteopathic schools has increased , the debate over distinctiveness has often seen the leadership of the American Osteopathic Association at odds with the community of osteopathic physicians .

within the osteopathic community , the growth is drawing attention to the identity crisis faced by [ the profession ] . While osteopathic leaders emphasize osteopaths ' unique identity , many osteopaths would rather not draw attention to their uniqueness .

The rapid expansion has raised concerns about the number of available faculty at osteopathic schools and the role that those faculty play in maintaining the integrity of the academic program of the schools . Norman Gevitz , author of the leading text on the history of osteopathic medicine , recently published ,

DO schools are currently expanding their class sizes much more quickly than are their MD counterparts . Unlike MD colleges , where it is widely known that academic faculty members ? fearing dilution of quality as well as the prospect of an increased teaching workload ? constitute a powerful inhibiting force to expand the class size , osteopathic faculty at private osteopathic schools have traditionally had little or no input on such matters . Instead , these decisions are almost exclusively the responsibility of college administrators and their boards of trustees , who look at such expansion from an entrepreneurial as well as an educational perspective . Osteopathic medical schools can keep the cost of student body expansion relatively low compared with that of MD institutions . Although the standards of the Commission on Osteopathic College Accreditation ensure that there will be enough desks and lab spaces to accommodate all new students , they do not mandate that an osteopathic college must bear the expense of maintaining a high full @-@ time @-@ faculty : student ratio .

The president of the American Association of Colleges of Osteopathic Medicine commented on the current climate of crisis within the profession .

The simultaneous movement away from osteopathic medicine ? s traditionally separate training and practice systems , when coupled with its rapid growth , has created a sense of crisis as to its future . The rapid rate of growth has raised questions as to the availability of clinical and basic science faculty and clinical resources to accommodate the increasing load of students .