

# LEGAL SYSTEMS REGULATING HEALTH PERSONNEL

## A Comparative Analysis

RUTH ROEMER

All over the world the history of medical licensure reflects the attempt of society to protect itself against ignorant and unethical practitioners.<sup>1</sup> At different times and in different countries, regulation of the practice of medicine was undertaken by the state. At other times and places, regulation was under the control of the universities. Mixtures of these two systems of control evolved in most countries, with varying degrees of responsibility placed on government and on educational institutions. And in all systems the medical profession played a significant role.

In the United States, licensure requirements for physicians developed when the provision of medical care was largely an entrepreneurial matter. With each individual free to sell his wares to an innocent public licensing was adopted, even in the colonial period, to safeguard the public against quackery, commercialism and ignorance.<sup>2</sup> Varying means of controlling the qualifications of physicians led in 1873 to the establishment in Texas of a state board of medical examiners, and other states then followed suit.<sup>3</sup> The pattern of enforcing minimum standards for licensure through independent governmental agencies composed mainly of private practitioners representing the state medical associations persists to the present day, although many other complementary mechanisms for controlling the quality of medical practice have emerged. Today health

services are highly organized and hospital regulations, procedures of voluntary professional associations and requirements of federal and state legislation set standards for medical practice. All medical schools in the United States have become approved by the Council on Medical Education and Hospitals of the American Medical Association. Nevertheless, the system of licensure devised when medical care was provided largely by solo practitioners, trained in schools of varying, and often dubious, quality and working with few institutional or governmental controls, continues virtually unchanged to the present day.<sup>4</sup>

This comparative study of the licensure laws governing health personnel in seven countries was undertaken to provide perspective on licensure laws for the health professions and occupations in the United States by examining different systems of regulating health personnel. All countries are attempting to expand and improve their health services and, in the process, are finding requirements for manpower critical. Legal definitions of scope of practice, by circumscribing the functions that may be performed, may restrict productivity of personnel, which could be expanded safely. Legal requirements for minimum qualifications of personnel set a floor for overall quality of personnel. In an era of manpower shortages and expanding demand for the medical care that scientific progress makes possible, examination of differing ways of achieving safe and competent health personnel may prove helpful.

Requirements for qualifications of health workers are related, of course, to the resources of each country, to the level of its educational institutions and to its system of providing health services. The function and effect of licensure laws cannot be understood apart from the ambience in which they operate. The concern here, however, is not with levels of requirements—number of years of schooling or content of curriculum or examination—for these are related to the resources and needs of each country; but rather with the *system* by which qualifications for health workers are determined.

In recognition of the relationship of licensure laws to the administration of health services, this analysis of different systems of regulating health personnel is undertaken in two parts: 1. an examination

of the provisions of the statutes and regulations governing selected health professions and occupations; and 2. an operational investigation of how these provisions work in actual practice and how they relate to patterns of delivery of medical care.

This paper is devoted to the first part of this undertaking. It presents a review of the laws regulating physicians, nursing personnel (nurses, midwives and auxiliary nurses) and selected allied and auxiliary health workers. Laws regulating dentists and dental auxiliary personnel are excluded because, although important, licensure of dentists in most countries resembles that of physicians. The volume of statutory material made it advisable, as much for the reader as for the author, to confine this analysis to the team of health workers providing basic medical care. The second part of this undertaking, the operational investigation, will focus on the relationship of the control of health manpower to the overall pattern of providing health services.

The laws governing physicians and related personnel are examined in seven countries: Colombia, the Federal Republic of Germany, France, Japan, Poland, Sweden and the United Kingdom. These countries provide a broad geographic distribution. More importantly, they illustrate different methods of organizing the provision of health services, ranging from countries with highly organized governmental systems to those in which the predominant pattern is medical care provided by private practitioners, with all countries having some mixture of these two patterns.

The emphasis here is on the varying roles of government, educational institutions and professional and occupational associations. Medicine as the oldest of the licensed health professions is examined in considerable detail. In all seven countries the fundamental control of the quality of physicians is the educational system, and in all countries some form of governmental approval, accreditation or control of medical schools assures the basic competence of medical practitioners. Minor differences in systems of licensing are numerous; but the main variation appears to be between those countries, on the one hand, in which completion of the required education in itself entitles one to apply for licensure or registration without

further examination, and those countries, on the other hand, in which a supplementary governmental examination is required to qualify for licensure. For the newer, ancillary professions and occupations, the roles of government, educational institutions and professional or occupational associations differ.

The statutes and regulations are analyzed by professional or occupational group. As background for each, a brief summary of the system of licensing this profession or occupation in the United States is presented so that the reader may make his own comparisons.

## PHYSICIANS

In the United States, the licensing agency for physicians in each state is the state board of medical examiners, occasionally known by other names, which, in the majority of states, is appointed by the governor from a list of practicing physicians recommended by the state medical association.<sup>5</sup> It operates, with considerable autonomy, to determine the qualifications of applicants for licensure in accordance with statutory requirements. Candidates must meet certain requirements of character, citizenship and education, including graduation from an accredited medical school and generally an internship. Although the licensing agency has authority to accredit medical schools, in practice or by statute reliance is placed on a voluntary professional agency, the Council on Medical Education and Hospitals of the American Medical Association.

A licensing examination is required, separate from and in addition to the examinations required for completion of medical education. All states provide a state examination for applicants for licensure, and a majority of states recognize as an alternative the results of examination by the nongovernmental National Board of Medical Examiners,<sup>6</sup> or without examination grant a license by reciprocity or endorsement. Recognition of licenses of other states generally requires not only equivalence of qualifications, but also, in most states, reciprocal recognition of the licenses of the state in which licensure is being sought by the state of original licensure. Specialist

certification in the United States is a matter for voluntary professional associations, not for the licensing board.

Once licensed, a physician is not required to undertake any further education or to produce any evidence of continuing competence. No legal requirement exists for continuing education or relicensing to prevent educational obsolescence.<sup>7</sup> Only if the physician is guilty of criminal or grossly unethical and unprofessional conduct can his license be suspended or revoked, and then only after observing proper procedures.<sup>8</sup>

The scope of functions of physicians is all-inclusive. Specific definitions of functions of nonphysician personnel in licensure laws governing such personnel tend to inhibit transfer of segments of health service to them, as their qualifications warrant, for fear of a charge of illegal practice of medicine.

Other countries address themselves to assuring ethical and competent physicians by varying means. To survey the routes they take toward this common objective, it may be helpful to compare statutory provisions governing 1. determination of educational qualifications; 2. licensing agencies and their authority; 3. certification or licensure of specialists; 4. geographic mobility and standardization of qualifications; and 5. delegation of functions.

### *Determination of Educational Qualifications for Medical Licensure*

The medical licensure laws of all seven countries contain statutory requirements concerning medical education and qualifications for licensure. Although specific educational requirements differ widely, only two basic systems exist for determining educational qualifications. In one system, a separate governmental licensure examination is required in addition to completion of medical education. In the other system, graduation from medical school yields licensure on mere application therefor, and no separate licensure examination is required.

*System in which separate governmental licensure examination is required.* In Japan, a license to practice medicine is issued to those

with certain personal qualifications who have completed the medical course in a college or university approved by the Minister of Education, served an internship and passed the National Medical Practitioners' Examination, supervised by the Medical Practitioners' Examination Council under the Minister of Health and Welfare.<sup>9</sup>

The system of medical licensure in Japan thus resembles that in the United States, except that the examination is a national examination prepared and supervised by an agency of the national government.<sup>10</sup> In the United States, the 50 states have individual state examinations, and 41 states and the District of Columbia recognize the examination of the National Board of Medical Examiners for initial licensure in lieu of the state examination.<sup>11</sup>

This independent and supplementary check on the educational qualifications of physicians exists, significantly, in two countries in which government, historically, has exercised little control over the universities. Although in both Japan and the United States, medical schools must be approved (in Japan by the national government and in the United States by the state licensing agency or the Council on Medical Education and Hospitals of the American Medical Association), the additional licensure examination beyond graduation from an approved medical school serves to compensate for the autonomy of the universities.<sup>12</sup>

*System in which graduation permits licensure without further examination.* In all the other six countries studied, satisfactory completion of medical education is sufficient proof of competence without a separate examination.

In the United Kingdom (England, Wales, Scotland and northern Ireland),<sup>13</sup> full registration as a medical practitioner—the substantial equivalent of licensure—requires a “primary qualification” granted by a university or one of the licensing bodies authorized to issue a qualifying diploma (e.g., the Royal College of Physicians, the Royal College of Surgeons, the Society of Apothecaries or Apothecaries' Hall, Dublin); passing of a qualifying examination given by a university or one or more of the licensing bodies; and a certificate of satisfactory one-year service in an approved hospital post.<sup>14</sup> The General Medical Council grants provisional registration to persons

who submit a qualifying diploma and evidence of appointment to an approved preregistration hospital post.<sup>15</sup> Full registration is then obtained after completion of the required resident hospital service, with prescribed minimum periods in medicine and surgery, although time spent in midwifery may be substituted for time required in medicine or surgery, as the examining body determines.<sup>16</sup>

In the United Kingdom, responsibility for medical education rests with the universities or with hospital medical schools now attached to universities,<sup>17</sup> although the General Medical Council, as will be shown below, issues recommendations concerning the medical curriculum.<sup>18</sup> Responsibility for examination of candidates rests with the universities and with the professional colleges or the Conjoint Board of the Royal College of Physicians and the Royal College of Surgeons. Although medical education is provided by the university and the medical student is normally expected to take a university degree, a person may take a Conjoint Board diploma and become legally qualified to practice medicine before he receives his university degree.<sup>19</sup>

All the other countries surveyed also rely for certification of professional competence on examinations conducted by the medical schools. To practice medicine in France, one must have French citizenship and a French medical diploma and must register with the Association of Physicians (*Ordre des Médecins*). Since all medical schools in France are governmental, completion of the curriculum and the examinations of the university is deemed sufficient evidence of competence.<sup>20</sup> The requirement of registration with the Association of Physicians provides surveillance of ethical qualifications, and registration with the prefectural authorities is a monitoring device to maintain a check on the location of physicians.

In the Federal Republic of Germany, medical licensure requires the following qualifications: German citizenship, possession of civil rights, suitable character and health, completion of an approved course of medical studies, passing of a qualifying examination and completion of a two-year internship in an approved hospital, medical institute or health department.<sup>21</sup> The qualifying examination may be passed before any medical examination board of a univer-

sity or academy of medicine in which the candidate has pursued his studies.<sup>22</sup> He is examined in 12 branches of medicine as to his ability to apply his knowledge of basic science to clinical work and other matters. The Minister of the Interior is empowered to prescribe the coverage of the qualifying examination and the minimum time for the course of studies.

The Royal Medical Board of Sweden registers physicians who have completed a prescribed course of medical studies and who have passed the Swedish licentiate examination.<sup>23</sup> This examination is the final one in the Swedish course of medical studies, after the candidate has completed both his theoretical training and his practical training in a hospital. Passing the examination gives the formal right to practice medicine, but the usual procedure is to undertake several years of hospital training for specialist's qualifications.<sup>24</sup>

In Colombia, licensure as a physician requires a degree from a recognized medical college, completion of a one-year internship and, in addition, either one year's service in public health, in a rural demonstration area or in a nonuniversity hospital, or other graduate medical education.<sup>25</sup>

The basic qualification for practice in Poland is graduation from one of the medical academies (formerly medical faculties of the universities) under the Ministry of Health.<sup>26</sup> Once the numerous examinations, including oral examinations, in the medical curriculum have been completed, no further examination is required. If, more than five years after completion of his medical studies, the physician gives notice of intention to practice, further studies may be required.<sup>27</sup>

In the summer of 1967, Poland was preparing to amend its laws governing licensure of health personnel. Following the war, lack of experience with the new national health service made changes in the licensure laws inadvisable. Now it is thought that the time is appropriate, and a governmental commission has undertaken discussions of proposed changes with the professions and the medical academies. The new law will incorporate the following:<sup>28</sup>

1. Physicians must be well prepared and of high ethical quality.



2. Physicians must have freedom in their professional decisions.
3. To practice medicine, physicians must have a certificate of completion of medical studies and a governmental diploma (all medical academies in Poland are governmental and give governmental diplomas); must not have been convicted of a crime; and must be persons in whom the public can have complete confidence.
4. Physicians must give public service following graduation and then may practice anywhere in Poland.

All countries surveyed require completion of an approved course of medical studies, whether in a governmental university or in an independent university meeting standards approved by government. An essential difference is the system of examinations. On the one hand, Japan requires the applicant to pass a separate governmental examination, the National Medical Practitioners' Examination, in addition to the medical school examinations, as a prerequisite to licensure. On the other hand, all the other countries surveyed rely on examinations conducted by the medical schools.

It is understandable that no supplementary examination is required in countries in which the medical schools are either governmental institutions or under close governmental control and supervision. In the United Kingdom, governmental supervision of medical education is indirect, but nonetheless real.<sup>29</sup> The absence of a supplementary licensure examination, therefore, can be explained not only by the long traditions of educational excellence, but also by the ultimate supervision of university performance by the Privy Council. Moreover, the same surveillance applies to other bodies granting medical qualifications.

For the United States, it may well be timely to consider whether or not the quality of modern medical education requires continued use of state licensing examinations. National Board examinations are currently in wide use in medical schools in the United States. In 1966, 75 per cent of the sophomore and senior classes in 66 of the nation's 85 medical schools took National Board examinations.<sup>30</sup>

Perhaps the quality of physicians would be safeguarded more by a requirement that all medical students pass National Board examinations as a condition of graduation from medical school than by the current state board licensing examinations.

### *Licensing Agencies and Their Authority*

The medical licensing agency in the countries surveyed may be 1. the national Ministry of Health, as in Japan, Sweden and Colombia; 2. an independent national body, governmental or quasi-governmental, which registers physicians, as in the United Kingdom and France; or 3. state or provincial authorities, as in the Federal Republic of Germany and Poland. The powers of the agency vary, some having decisive control over medical education and qualifications of practitioners, others performing merely the ministerial task of keeping a register of practitioners, and still others combining these two roles.

*National ministry of health as licensing agency for physicians.* Medical licenses in Japan are issued by the national Minister of Health and Welfare. The mechanism of licensure is registration of the physician on the Medical Practitioners' List maintained by the Ministry of Health and Welfare.<sup>31</sup> The medical practitioner is required to report annually his name, address and other matters required by ordinance to the Minister of Health and Welfare through the governor of the prefecture in which he resides.

Also under the jurisdiction of the Minister of Health and Welfare, as mentioned, is the Medical Practitioners' Examination Council, which prepares the licensing examination and decides questions of policy concerning preliminary and final examinations of the National Medical Practitioners' Examination and the required internship. Persons who have completed the medical course in a college or university approved by the Minister of Education, or who have passed the preliminary examination of the National Practitioners' Examination and who have completed a one-year internship, may take the National Medical Practitioners' Examination.

The Minister of Health and Welfare also has authority to sus-

pend, cancel and revoke licenses in accordance with statutory provisions.<sup>32</sup> Under the jurisdiction of the Minister is the Medical Ethics Council, which investigates and gives opinions on disciplinary cases and questions of medical ethics.<sup>33</sup> In all disciplinary proceedings, a hearing is required before a public official designated by the Minister, the prefectural governor or a member of the Medical Ethics Council.<sup>34</sup>

In Sweden, the Royal Medical Board, the national public health agency, is the licensing agency for all health personnel. In addition to supervising the public health services of Sweden, its state psychiatric hospitals, laboratories and forensic medicine stations, the Royal Medical Board is charged with licensing and maintaining a register of all licensed medical practitioners and other health personnel.<sup>35</sup> Registration by the Royal Medical Board occurs after the candidate has passed the Swedish licentiate examination, the final examination of the medical school.

The Board is authorized to curb unauthorized practice prohibited by the regulations and, where necessary, to institute legal proceedings. Under the Board are various committees, such as the legal medicine committee, the legal psychiatry committee, the social psychiatry committee and the disciplinary committee. The disciplinary committee handles withdrawal of authorization to practice a profession, with full procedural safeguards for the practitioner, including the right of appeal, specified in the regulations.<sup>36</sup>

In Colombia, a single agency attached to the Ministry of Health supervises the application of legislation regulating all health personnel.<sup>37</sup> The National Council of Professional Practice is composed of the Minister of Health as chairman, the Secretary-General of the Ministry of Health, a representative of the Minister of National Education and two representatives of each of the professions concerned (medicine, dentistry, pharmacy, clinical laboratory technology and nursing) who attend meetings of the Council when matters of interest to them are discussed. Established in 1953, to replace the separate boards that formerly regulated the health professions, the Council grants permits to practice, takes an annual

census of the medical and auxiliary medical professions, gives advisory opinions on exercise of the professions and frames rules of procedure concerning licensure.<sup>38</sup>

Although all these three countries vest in their national health ministries authority to regulate medical licensure, the powers of the licensing agency vary. The Japanese Ministry of Health and Welfare handles examination of candidates, whereas in Sweden and Colombia the medical schools determine educational qualifications. In all three countries, the Ministry of Health also licenses non-physician personnel, which, at the very least, creates the opportunity to resolve problems of scope of function.

*Independent national body as licensing agency for physicians.* In the United Kingdom, the General Medical Council, an independent governmental corporation, subject only to minimal direction from the Privy Council, is the licensing agency for physicians. It is composed of 47 members, who hold office for five-year terms (eight nominated by the Crown, 28 appointed members chosen by the universities and Royal Colleges, and 11 elected by the medical profession).<sup>39</sup> Some of the members are required to be registered practitioners, but explicit provision is also made for the appointment of nonphysicians to the General Medical Council.<sup>40</sup>

The functions of the Council are:

1. To maintain and keep current a medical register containing the names of all registered practitioners and their degrees and diplomas.<sup>41</sup> The practitioner is not required to renew his registration, but every five years the General Medical Council writes to each registered practitioner to keep the list current. If no reply is received, efforts are made to trace the practitioner before his name is erased. Practitioners cooperate because they are loath to suffer the inconvenience of resubmitting their qualifying diplomas and other papers, as well as paying the fee for restoring a name that has been erased.<sup>42</sup>

2. To issue recommendations concerning the sufficiency of the medical curriculum.<sup>43</sup> The Council has no power to specify a medical curriculum or to interfere with medical instruction, but it is empowered to appoint visitors to medical schools to report to it on

the sufficiency of medical instruction. The institution providing instruction is furnished with a copy of the report and may make observations on or objections to it. The Council has no power to enforce any recommendations concerning curriculum or examinations, but the Privy Council, on receipt of the report and observations or objections, may order that the qualification of the institution cease to be recognized as a registrable qualification until educational improvements have been made.<sup>44</sup>

As a practical matter, the Council revises its recommendations on medical curriculum every ten years after visitations by inspectors. In 1957, for example, the Council recommended that memorizing and learning of factual data be de-emphasized; references to "periods of study" and to the sequence in which subjects should be taught were eliminated.<sup>45</sup> In most respects, medical education is shaped and controlled by the universities and the Royal Colleges, but the General Medical Council serves as an overseer of the character of medical education by its power to present information leading to a recommendation by the Privy Council that a qualification cease to be recognized until improvements are made. In the past, different standards among universities were common, but today medical education in the United Kingdom is of a uniform standard and the university bachelor's degree and the Conjoint Diploma of the Royal Colleges are substantially equivalent.<sup>46</sup>

3. To take disciplinary action and to erase a physician's name from the register for conviction of a crime or for infamous conduct in any professional respect.<sup>47</sup> This function is based on a few lines in the original Medical Act, 1858, which authorized the Council to erase the name of any practitioner convicted of a criminal offense or judged after due inquiry to have been guilty of infamous conduct in any professional respect. Pyke-Lees said of the original act:<sup>48</sup>

This provision attracted little notice, and all concerned in 1858 would have been greatly surprised to know that on the exiguous basis of those six lines of print (not amplified until 1950) the General Medical Council would be primarily known among the laity in the next century as a body concerned with professional ethics and discipline.

Disciplinary functions are carried out by the Disciplinary Committee of the Council (consisting of the president and 18 other members of the Council) and the Penal Cases Committee, which considers penal cases before they go to the Disciplinary Committee.<sup>49</sup> Although conviction of a crime is sufficient evidence, without a showing of unprofessional conduct, to erase a practitioner's name from the register, the Act does not require erasure after conviction.<sup>50</sup> It is common for the Council to postpone action in cases of both conviction and unprofessional conduct to permit the practitioner to rehabilitate himself.<sup>51</sup> If proof of good conduct during the postponement is lacking, then the name is erased.

The ground of "infamous conduct in any professional respect" is both broad and vague. In 1894, one court defined the term as an act, done in pursuit of the profession, that is regarded as disgraceful or dishonorable by his professional brethren of good repute and competency.<sup>52</sup> The Disciplinary Committee now issues a "Warning Notice," which alerts the profession to the kind of offense that may lead to erasure; for example, an untrue certification or report, covering for and associating with unqualified persons, advertising and canvassing, violation of the Dangerous Drugs Acts, and association with uncertified women practicing as midwives.<sup>53</sup>

The small number of erasures on disciplinary grounds (290 in the years from 1900 to 1959) and the gravity of the charges (adultery or improper conduct with a patient, abortion and offenses with drink or drugs)<sup>54</sup> indicate that this penalty is imposed only for egregious conduct. Since 1948, another disciplinary system designed to control incompetence or negligence has been provided under the National Health Service Act.<sup>55</sup> Under this system, complaints may be made by a patient against a general practitioner, charging that his continued inclusion in the program would be prejudicial to the efficiency of the Service. The National Health Service Tribunal (consisting of three members—a lawyer appointed by the Lord Chancellor, a person appointed by the Minister of Health and a professional practitioner chosen for each case from a panel of practitioners)<sup>56</sup> is established to review these cases, and extensive safeguards are provided for the practitioner. Complaints involving the

competency of hospital specialists are handled by disciplinary actions within the hospital service.

In disciplinary cases before the General Medical Council, full procedural safeguards are provided for practitioners—notice of charges, opportunity to be represented by counsel, right to call witnesses and right of appeal to the Privy Council.<sup>57</sup> The General Medical Council acts only on a complaint. It does not initiate disciplinary proceedings in the absence of a complaint by an individual, an individual acting in a public capacity or information from the law courts. Some criticism has been leveled at the General Medical Council for acting only in a judicial capacity rather than providing surveillance of the quality of practice.<sup>58</sup> It has been suggested that the General Medical Council might better protect the public and compensate for the reluctance of physicians to lodge a complaint against a colleague if it initiated action itself.

Finally, another function of the General Medical Council is:

4. To publish new editions of the British Pharmacopoeia containing descriptions, standards and notes on medicines and other materials used in the practice of medicine, surgery and midwifery.<sup>59</sup>

In France, the National Council of the Association of Physicians (Conseil National de l'Ordre des Médecins) has a role in the licensing of physicians. All physicians are required to register with the departmental Council in the department of their professional residence (France has 95 *départements*) as well as with the prefectural authorities.<sup>60</sup> An association to which all physicians in France must belong, the National Council is given legal authority to supervise maintenance of principles of morality and professional conduct and to enforce rules promulgated under the Code of Ethics.<sup>61</sup>

The Council is organized into departmental and regional councils. Departmental councils are composed of a variable number of members, according to the number of registered physicians, who elect the members of the departmental Council. The members of the regional Councils are elected by the departmental Councils.<sup>62</sup> The regional Councils handle disciplinary matters, and an appeal lies from their action to the National Council and then to the Council of State (*Conseil d'Etat*).<sup>63</sup>

All medical schools in France, as mentioned, are governmental. To the university is assigned responsibility for guaranteeing the technical and professional competence of the practitioner. To the Association of Physicians, a voluntary body endowed with governmental powers by statute, is assigned surveillance of the ethical and moral quality of the profession.<sup>64</sup>

*State or provincial authorities as the licensing agency for physicians.* In the Federal Republic of Germany, medical licenses are issued by the provincial authorities for each province (*Land*).<sup>65</sup> Although the authority for the actual issuance of the license is decentralized, the Federal Minister of the Interior, with the agreement of the Federal Council, promulgates regulations governing qualifications of candidates so that, in effect, the conditions for licensure are prescribed for the nation as a whole.<sup>66</sup> Since the Minister of the Interior also prescribes the coverage of the qualifying examinations in the medical schools, effective control of medical licensure is centralized in the national government despite the nominal authority of the provincial governments.

In Poland, medical licenses are issued by the Executive Committee of the People's Council of the province in which the applicant intends to practice after submission of evidence that he fulfills the requirements.<sup>67</sup> Although current law provides for issuance of medical licenses by units of local government, local control of licensure is a formality in view of the provision of medical education by national medical academies, which give national examinations.<sup>68</sup> Polish law will probably be revised to entitle a physician, once licensed, to practice anywhere in Poland.<sup>69</sup>

The character, placement and powers of the licensing agency for physicians are important only insofar as they contribute to high standards for qualification and equitable distribution of personnel. Examination of the statutes alone cannot reveal their effects in practice. Any conclusions on these effects must await objective, operational studies of actual health manpower conditions in countries with contrasting systems of licensure.

If worldwide trends in legislative policy are any indication of the merits of various approaches, it would seem that centralized au-



thority has the advantage. This is the direction in which most countries are moving. Even in the United States, where medical licensure has long been vested in the state governments, increasing reliance on the National Board of Medical Examiners and the recent development by the Federation of State Medical Boards of a federal licensing examination reflect this trend.<sup>70</sup>

### *Specialization*

Vast expansion in medical knowledge and increasing organization of health services have contributed to the growth of specialization in medicine in all countries. As more and more physicians undertake postgraduate training in a medical specialty, systems of specialty certification or official recognition of specialist qualifications become as important as basic licensure to enable the public to distinguish the highly qualified specialist from the general physician.

Two main systems of specialty certification exist. One is the pattern in the United States and the United Kingdom, whereby the medical profession, through its professional associations of specialists, determines specialty qualifications.<sup>71</sup> In both these countries any physician may legally practice any branch of medicine. In the United Kingdom, the only statutory requirement for a higher qualification relates to public health, and currently the General Medical Council makes recommendations concerning the curriculum for the public health qualification required of all medical officers of health.<sup>72</sup> Other specialist qualifications may be registered with the General Medical Council as extra qualifications on payment of an additional fee, but that registration is not a requirement.

Specialist qualifications in the United Kingdom are awarded by the Royal College of Physicians of London, the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, the Royal College of Obstetrics and Gynecology, and others, after lengthy hospital apprenticeship programs, course work and rigorous qualifying examinations.<sup>73</sup> Although the Medical Act of 1956 does not prohibit specialist practice by those without such qualifications, under the National Health Service only members or fellows of the Royal

Colleges are appointed to registrars' or consultants' (specialists') posts in hospitals. These appointments are made by consultants who constitute an advisory commission to the regional hospital boards. In specialties other than medicine, surgery and obstetrics and gynecology, physicians without specialist qualifications may be appointed as consultants. For example, although the Royal Colleges have a diploma in anesthesiology, the shortage of qualified anesthetists makes it possible for a physician to obtain a consultant appointment in this specialty without the specialist's qualification.<sup>74</sup>

The lack of legal prohibition on specialist practice by those without the higher qualification and the lack of a requirement for registration of specialist qualifications (except in public health) do not impede the maintenance of high standards of excellence in specialist practice. Such standards are assured, first, by the rigorous specialist training and the stiff competition for consultants' posts. Secondly, the organization of health services contributes to high standards for specialists. All consultants practice in hospitals and are therefore in frequent contact with colleagues in an organized framework. All consultants are salaried practitioners in hospitals and are better able than general practitioners to leave their practice to investigate new developments in medicine and to undertake continuing education. In addition, since patients reach the specialist in the United Kingdom by referral from a general practitioner, if word gets around in the profession that a specialist "is losing his grip" referrals from general practitioners quickly drop off.<sup>75</sup> Nevertheless, consideration is being given in the United Kingdom to the imposition of more stringent controls on the quality of specialist practice.<sup>76</sup>

All the other countries surveyed prevent unqualified persons from holding themselves out as specialists by providing for or requiring official recognition or certification of specialists.<sup>77</sup> In Colombia, the statute is permissive and authorizes licensed physicians to apply to the Ministry of Health for recognition of specialists' diplomas.<sup>78</sup> In provinces (*Länder*) of the Federal Republic of Germany, the provincial medical associations (*Landesärztekammer*) are responsible for the recognition of medical specialists.<sup>79</sup>

In France, any physician may practice any branch of medicine

without legal restriction; he is limited only by the dictates of his professional conscience.<sup>80</sup> Nevertheless, the law provides for two grades of specialist: specialized physicians (*médecins spécialistes*), who have fulfilled the requirements of the specialty set by the Minister of National Education and who engage exclusively in practice of their specialty; and qualified physicians (*médecins compétents*), who may engage in general practice as well as in practice of their specialty.<sup>81</sup> Only physicians who have fulfilled either of these specialist qualifications may hold themselves out to the public as specialists. The departmental Council of the Association of Physicians registers these specialist qualifications and draws up a list of authorized specialists.<sup>82</sup> Concurrent specialties in more than one field are permitted. If recognition as a specialist is refused, a right of appeal lies to the National Council of the Association of Physicians.<sup>83</sup>

Specialist certificates are granted for one or more of 28 specialties in Sweden after fulfillment of requirements for training and service specified in the legislation.<sup>84</sup> No physician may announce to the public that he is a specialist unless the Royal Medical Board, through its Committee on Specialization, has granted a certificate to this effect.

In Poland, the statutes provide a detailed syllabus for two years' training in 32 medical specialties<sup>85</sup> and specify the requirements for recognition as a specialist: proof of irreproachable conduct, demonstration of required theoretical and practical knowledge, completion of certain periods of training and examination.<sup>86</sup> The Warsaw Academy of Medicine (the Sanitation and Hygiene Department for public health and the Postgraduate Training Department for other specialties) supervises specialist training.<sup>87</sup> If facilities for specialist training are not available in the area where the physician is located, he may take correspondence courses organized by the Academy of Medicine. Supervision of the quality of specialist training is provided by consultants in each specialty in the 22 provinces.<sup>88</sup>

Although current Polish law provides stringent controls for the qualifications of specialists, consideration is being given to raising the standards further by delineating the qualifications required for specific kinds of treatment. The Polish abortion law, as in some other

countries, requires that all terminations of pregnancy be done by qualified specialists or by physicians with specialized experience.<sup>89</sup> Similarly, the Ministry of Health may be given authority, in contrast to the United States, to limit the physicians who may certify a patient as mentally ill to those with certain kinds of training or experience.<sup>90</sup>

### *Geographic Mobility and Standardization of Qualifications*

Recognition of foreign medical education and foreign medical licenses assumes significant proportions in a world of increasing mobility of people, limited capacities of medical schools, shortages of physicians in most countries and maldistribution of physicians in all countries. The question of recognition of foreign medical education and licensure is usually couched in terms of equivalence of requirements, but it actually involves the requirement of nationality, national immigration policy and economic interests.

The subject is complex. Fortunately, J. De Moerloose of the World Health Organization has recently published an up-to-date analysis of legislation governing equivalence of medical qualifications.<sup>91</sup> All the seven countries discussed here, except Japan,<sup>92</sup> are included in this comprehensive review. The reader is referred to this survey for discussion of reciprocal licensing arrangements among members of the British Commonwealth; of the recognition of foreign licenses in France and the Federal Republic of Germany only in exceptional cases; of the more flexible provisions in Colombia and Sweden, and of the law in Poland granting recognition to Polish citizens with equivalent foreign qualifications and to foreigners in accordance with conditions laid down by the Minister of Health.

Policy concerning geographic mobility and standardization of qualifications is influenced both by the legislation of individual countries and by international efforts to extend the right of medical practice across national boundaries. Within countries, legislative provisions, such as in Colombia and Poland,<sup>93</sup> requiring one or two years of public service in a health department or in a rural area as part of postgraduate education, tend to correct the concentration of

physicians in clinical medicine and in urban centers. The same objective may be accomplished by offering incentives to physicians to practice in rural areas rather than by requirements of the licensure laws.<sup>94</sup>

Several international agreements have been executed that may result ultimately in standardization of medical qualifications. The Treaty of Rome, executed in 1957, provides for free movement of persons, services and capital among the six Common Market countries of Europe. In 1970, physicians in the six countries will have the right to practice in any of the countries irrespective of nationality.<sup>95</sup> Achievement of this common market of physicians involves mutual recognition of diplomas and certificates, equivalence of medical education being recognized as a *de facto* matter. Future problems are legion, including recognition of specialty qualifications and perhaps a union of the medical faculties in the countries.<sup>96</sup>

On August 10, 1966, an agreement for a Scandinavian common market of physicians became effective.<sup>97</sup> Signed by Denmark, Finland, Norway and Sweden, with the right reserved to Iceland of joining the agreement after negotiations, it grants to persons who have passed the licentiate examination in their country of origin, have completed the required hospital training and are physicians of good standing in the country of original licensure the right to practice medicine in the other Scandinavian countries signatory to the agreement. This agreement is a logical evolution of flexible reciprocity provisions that have obtained for some time among the Scandinavian countries.<sup>98</sup>

Precedent for these modern agreements is found in the Mexico City Convention on the Practice of the Learned Professions, executed by a number of Latin American countries from 1902 to 1910.<sup>99</sup> This early treaty, however, limited privileges conferred to those reciprocally granted, and reserved to each country the right to require such examination of candidates as might be determined by each government.<sup>100</sup>

If the multitude of problems concerning requirements of citizenship<sup>101</sup> and equivalence of education can be resolved across national boundaries, removal of barriers to interstate recognition of medical

licenses within a single country would seem to be relatively easy. In the United States, increased use of National Board examinations is a reliable means to assure equivalence of qualifications. It would seem to be only a matter of time until the logic of allowing qualified physicians greater mobility and the imperatives of medical manpower needs cause an easing of restrictions or endorsements of out-of-state licenses.

### *Delegation of Functions*

Effective use of physician manpower depends, in many instances, on delegation to allied and auxiliary health workers of functions that are within the competence of these workers and that they are legally authorized to perform. Although review of statutes regulating allied and auxiliary health workers will be concerned with the scope of their authority, because of the importance of this question to the productivity of the physician, a few preliminary comments are offered as reflections of this problem in the medical licensure laws.

In countries in which the national Ministry of Health licenses physicians—as in Colombia, Japan and Sweden—and in countries in which qualifications for licensure are determined by the national government—as in the Federal Republic of Germany and Poland—administration of the standards for licensure and medical practice is generally conducted by committees or administrative units that are related to administration of other aspects of national health policy. This close tie between the medical licensing agency and the central health agency of the nation presents the opportunity to examine problems of delegation of functions in relation to new technical and scientific developments and to methods of organizing health services. Where the Ministry of Health also administers the licensure laws for nonphysician health personnel, the problem of delegation can be examined in light of total health manpower resources.

The statutes of all seven countries define, in varying detail, the practice permitted by allied and auxiliary personnel. Within this general statutory framework, however, decisions on authority to perform specific functions may be handled differently. For example,

in France a professional committee develops a list of medical acts that qualified medical auxiliaries are authorized to perform either on prescription (both quantitative and qualitative) of the physician or under the direct surveillance of the physician.<sup>102</sup> This list is specific and detailed and is revised periodically.

In the United Kingdom, the precise scope of functions of auxiliary workers is defined by the physician who supervises them, in accordance with the governing statutes.<sup>103</sup> For example, health departments are increasingly permitting nurses to give not only oral vaccines, but also injections for diphtheria, pertussis and tetanus, provided a physician is available in the clinic, albeit in another room of the clinic building.

In Poland, the problem of delegation of functions arose most sharply with respect to feldshers—auxiliary medical workers authorized to perform diagnosis and treatment in certain circumstances, but required to refer certain kinds of cases to a physician.<sup>104</sup> Since feldshers worked primarily in rural areas where physicians were not readily available, many instances occurred in which they exceeded their authority and capability.<sup>105</sup> Moreover, the training of increased numbers of physicians in Poland has made the independent functions of feldshers unnecessary. It was therefore decided to abolish this category of worker by closing the schools for feldshers, although the legislation authorizing the functions of feldshers and specifying their training still remains on the statute books. Those already trained are employed in sanitary inspection and in hospitals, where constant medical supervision has eliminated the problem of the scope of their functions.

#### NURSES, MIDWIVES AND AUXILIARY NURSES

In the majority of American states, licensure of professional nurses is mandatory; that is, licensure is required for the practice of professional nursing and for use of the title.<sup>106</sup> The state licensure statutes define the practice of nursing and numerous exemptions from licensure requirements. Approval of nursing schools is a function of state licensing boards, but only a few state statutes specify standards

for approval. In two states by statute and in other states by practice, reliance is placed on accreditation by either of two national voluntary accrediting agencies. The use of a single standardized examination for licensure by all states has impelled uniform national standards for education and has greatly facilitated interstate recognition of licenses.

Nurse-midwives are licensed only in New Mexico, the eastern counties of Kentucky and in New York City. A registered professional nurse with additional specialized academic and clinical training in midwifery, the nurse-midwife is authorized to work as an independent practitioner in a medical setting—a hospital, public health program, maternity nursing service or family planning clinic. Her functions are specified in the three licensure laws, and she must have graduated from a training program recognized and approved by the American College of Nurse-Midwifery, a national voluntary accrediting agency.

Practical or vocational nurses are licensed in all the American states, but licensure is mandatory in only nine states. In the majority of states, licensure is permissive and is required only to use the title, “Licensed Practical Nurse” or “Licensed Vocational Nurse.” Functions of licensed practical nurses are defined in the licensure laws, but in implementation of the laws (for example, in delineating nursing tasks in hospitals or in physicians’ offices) these functions must be differentiated not only from functions of physicians, but also from those of professional nurses. As in the case of professional nurses, licensure examinations are standardized nationally so that the most important function of state licensing agencies is approval of educational programs conducted under a variety of auspices. Although one-fifth of such programs maintain an affiliation with a hospital, only seven states by statute require this relationship as a condition of approval. In most states, the same agency licenses both professional and practical nurses, thus providing coordinated administration for all licensed nursing personnel.

All countries face the problem of developing a rational system of using nursing personnel, with functions tailored to levels of education and ability.<sup>107</sup> In the effort to devise such systems, the licensure



laws can be an instrument to aid in the development of highly trained nursing leadership, delegation of functions to less expensively trained personnel and opportunity to advance to more responsible work.

### *Professional Nurses*

In all countries studied, the licensing function is closely tied to supervision of nursing education and training. Whether licensure is placed in the hands of an independent agency of government (as in the General Nursing Council for England and Wales) or in the Ministry of Health (as in Japan and Sweden), the licensing agency has authority to oversee education and to recognize the school's examination or to give its own examination.

In the United Kingdom, the General Nursing Council is the body responsible for keeping the nursing register in several parts for different kinds of nurses; for examining candidates for admission to the register; for prescribing qualifications for teachers of nursing; and for recommending withdrawal of approval of nursing education institutions.<sup>108</sup> Thus, licensure of nurses in the United Kingdom differs in one fundamental respect from licensure of physicians; no one is admitted to the Nurses' Register without having passed a uniform examination prescribed by the General Nursing Council.

In Japan, the Minister of Health and Welfare, and in Sweden the Royal Medical Board licenses nurses, and governmental control of nursing education is provided. In Japan, this control is exercised through the Council on Authorization of Schools, Training Schools and Examination of the national Ministry of Health and Welfare. A national examination, separate from the school examinations, is required for licensure.<sup>109</sup> In Sweden, the 28 state schools for nursing and the six private schools are supervised by the National Board of Education under the Ministry of Education.<sup>110</sup> No separate examination for licensure is required. Nursing schools are required to send the list of nursing students who have passed qualifying examinations in the school to the Royal Medical Board.<sup>111</sup>

With minor variations, this close tie between the licensing agency and the educational system is apparent everywhere. In France, the

Minister of Social Affairs (formerly, the Minister of Public Health and Population) determines the educational requirements, the validity of certificates and the use of titles.<sup>112</sup> In the Federal Republic of Germany, licensure is granted only after completion of a course of studies in an officially recognized school and passing of a state examination.<sup>113</sup> In Colombia, the six state schools that award a baccalaureate degree in nursing are supervised by the Association of Colombian Universities through a standing committee on nursing composed of nursing educators, the director of nursing of the Ministry of Health and a representative of the Colombian Nurses' Association.<sup>114</sup> Refresher programs of two and a half months' duration are organized jointly by the schools of nursing, the Ministry of Health and a coordinator who has been appointed by the World Health Organization.

### *Midwives*

Midwifery, like nursing, shows the same pattern of close supervision of education by the licensing agency or a closely related agency. Where midwifery schools are not governmental schools, as in the United Kingdom and Japan, a separate qualifying examination is required. Where the schools are governmentally controlled, as in Sweden, France, the Federal Republic of Germany and Poland, examination within the educational program constitutes the qualifying examination for licensure.

Continual upgrading of educational requirements for midwives is tending toward a fusion of the professions of nursing and midwifery.<sup>115</sup> In Japan and Sweden, midwifery is a specialty of nursing. A prerequisite for undertaking the 17-month midwifery program in Sweden is basic nurse's training in an approved school of nursing for at least two years.<sup>116</sup> In Japan, a prerequisite for taking the national midwife examination is nurse's training or licensure, in addition to completion of the six-month midwifery curriculum.<sup>117</sup>

All statutes are meticulous in specifying the duties and functions of midwives and their responsibility to summon a physician in abnormal or difficult cases.<sup>118</sup> The Federal Republic of Germany requires midwives to attend refresher courses when so requested,<sup>119</sup>

and Sweden requires the midwife to follow developments and advances in the field and to attend a two-week refresher course every ten years if selected for it by the Royal Medical Board.<sup>120</sup> The United Kingdom, in its Rules of 1955, specifies courses of instruction the midwife must attend.<sup>121</sup>

### *Auxiliary Nurses*

Auxiliary nurses are of many kinds, with varying educational preparation and functions.<sup>122</sup> The functions and training of this category of worker vary, of course, with the personnel and economic resources of each country. Enrolled nurses (formerly called "assistant nurses") in the United Kingdom are required to have two years' training;<sup>123</sup> assistant nurses in Japan similarly.<sup>124</sup> In Colombia, a nurse's aide has 12 months of theory and practice in a hospital, and a nursing auxiliary receives three to four months' in-service training in a hospital.<sup>125</sup> In France the three kinds of nursing auxiliary are required to have ten months' training.<sup>126</sup> In Sweden, practical nurses are trained in special courses and on the job.<sup>127</sup> In Poland, auxiliary nurses were formerly trained in hospitals; now they are prepared in schools approved by the Ministry of Health.<sup>128</sup>

In view of this diversity of educational requirements, it is understandable that licensure requirements also vary. In some countries, as in the United Kingdom and Japan, registration as an enrolled nurse or an assistant nurse, respectively, is similar to that for a professional nurse, except for lesser educational requirements.<sup>129</sup> In other countries, the procedures differ: in France, a certificate of proficiency is issued by the departmental health authorities, which is valid for all France;<sup>130</sup> in Poland, regulation of auxiliary nurses is under an instruction of the Minister of Health and Welfare, not under a statute.<sup>131</sup>

Provisions in Japan and Poland specifically recognize the qualifications of an auxiliary nurse for those who wish to undertake further training as a professional nurse.<sup>132</sup>

The shortage of professional nurses in all countries makes the quality of auxiliary nursing personnel a matter of primary importance. In Sweden, for example, in 1962, approximately 9,000 pro-

fessional nurses were employed in general hospitals, compared with approximately 25,000 auxiliary nursing personnel.<sup>133</sup> A ratio of nearly three auxiliary nurses for every professional nurse—and the ratio is more striking in other countries with a poorer supply of professional nurses—demands strenuous efforts to upgrade auxiliary nursing personnel. The continuing efforts of governments, vocational educational institutions, hospitals and the nursing profession to improve the training of auxiliary nursing personnel can be furthered by carefully devised and realistic standards in the licensure laws.<sup>134</sup>

#### OTHER ALLIED AND AUXILIARY HEALTH PERSONNEL

In the United States, regulation of allied and auxiliary health personnel varies considerably for different occupations and also varies among the states for the same occupation.<sup>135</sup> Despite these variations, a trend is discernible in the direction of statutory, rather than voluntary or nongovernmental, regulation of the qualifications of increasing categories of ancillary personnel and in the direction of more stringent requirements for licensure. Since the skills of allied and auxiliary personnel are limited to specific segments of health service, definitions of scope of permissible practice and authority to perform acts delegated by the physician or other professionals constitute a central issue in regulation of the activity of ancillary personnel. The shortage of highly trained professional personnel and rapid technological developments in medical science accentuate the problem of scope of functions. Statutory provisions designed to protect the patient against acts beyond the skill of auxiliary personnel are found, in some instances, to block expansion of functions warranted by additional training or development of new kinds of workers whose functions are not authorized by licensure laws.<sup>136</sup>

Close comparison of the regulation of specific categories of allied and auxiliary personnel in the countries studied is difficult, and perhaps not too helpful, because of different systems of providing health services, variations in nomenclature and functions of the many kinds of workers and differences in educational resources in the countries.<sup>137</sup> Common to all countries, however, is the need to make the

most effective use of these essential health workers and to provide maximum protection of the public. It may be helpful, therefore, to list some of the devices employed to achieve this double objective, with illustrative examples.

### *Definition of Functions*

In all seven countries, the functions of allied and auxiliary health workers are specified by statute or by regulation, often in great detail. For example, in France, as mentioned, functions that may be performed under the physician's prescription are distinguished from functions that must be performed under his direct supervision,<sup>138</sup> and the list of medical acts that qualified auxiliaries may perform is revised periodically.<sup>139</sup>

### *Statutory Standards for Education and Approval of Schools*

Governmental guarantees of the quality of education for allied and auxiliary personnel are achieved in various ways. The Federal Republic of Germany specifies by statute the standards such schools must meet—direction by a physician, quality of faculty and hospital affiliation.<sup>140</sup> In the absence of federal law, the provinces (*Länder*) are empowered to regulate training and practice.<sup>141</sup> In Japan, the number of years of training or experience required is set forth.<sup>142</sup> In Colombia, optometrists and physical therapists must be prepared by a recognized faculty or in an officially recognized school, not by private training.<sup>143</sup> In Poland, the syllabus for health technicians is prepared by the Ministry of Health and Welfare.<sup>144</sup> In the United Kingdom, a separate board for each of the health professions and occupations approves courses and institutions.<sup>145</sup>

### *Governmental Examination*

In some countries, as in France and Poland, no separate examination, apart from the examinations of the schools, is required for auxiliary personnel. As in medicine, a state certificate, awarded on completion of the training, suffices.<sup>146</sup> In the Federal Republic of Germany,<sup>147</sup> Japan,<sup>148</sup> and the United Kingdom,<sup>149</sup> passing a national examination is generally required. Japan also requires a

licensing examination for physicians, but in the Federal Republic of Germany and the United Kingdom the examination for auxiliary personnel represents a requirement beyond the requirements for medical licensure.

*Administration by Ministry of Health or Other National Agency*

In Sweden, Japan and Colombia, the national Ministry of Health (in Colombia the National Council of Professional Practice under the Ministry of Health) licenses allied and auxiliary personnel just as it licenses physicians. In this way, regulation of practice as it relates to more than one profession is facilitated. The same result is reached in the United Kingdom through the council, established under the Professions Supplementary to Medicine Act, 1960, to coordinate and supervise the activities of the registration boards for the various occupations.

Not all countries administer licensure of allied and auxiliary personnel at the national level. In the Federal Republic of Germany, regulation of medicotechnical assistants, for example, is fragmented among various authorities, some having jurisdiction of the examination and in-service training, others of equivalence and others of reinstatement after withdrawal of a license.<sup>150</sup> In Japan, the prefectural authorities generally administer licensure of allied and auxiliary personnel for each prefect, whereas physicians and other highly trained professionals are licensed by the national Ministry of Health and Welfare.<sup>151</sup> In Poland, the health technician must be registered with the local authorities, and each time he moves he must be re-registered. This local registration will probably be replaced shortly by a national certificate valid for the entire country.<sup>152</sup>

**KEY ISSUES FOR COMPARISON**

Review of legislation governing licensure of health personnel raises fundamental issues concerning the roles and relative importance of government, educational institutions and professional associations in controlling the quality of health personnel. In all the seven countries studied, the national health agency plays a more im-

portant role in licensure than in the United States, where, constitutionally, licensure is a matter for state government. In all countries, also, great reliance is placed on the educational system, particularly for physicians. Such reliance is understandable where the universities are governmental institutions. Even in the United Kingdom, where universities are relatively independent though subject to governmental surveillance, great reliance is placed on them along with professional associations.

The specific question that emerges from comparison of the roles of these three forces in different countries relates to the necessity for a separate, independent examination of the candidate's qualifications for licensure apart from stringent examinations within the educational system. Is the separate licensing examination for physicians, as it exists in Japan and the United States, a safeguard for the public, or is it a recheck of educational accomplishments already recognized by completion of a medical curriculum of high quality? Where the medical schools are of uniformly high quality or under governmental control, the necessity for a licensing examination seems to be diminished. Where schools are of low or uneven quality, however, as for many kinds of nonphysician personnel, then the public must be protected by a second line of defense. Thus, one can see an equilibrium of authority among government, educational institutions and professional associations to assure adequate safeguards of competence. If a separate examination is deemed a protection of the quality of medical manpower, a national examination of the caliber of the examination of the National Board of Medical Examiners, including Part III, in the United States is preferable to varying state examinations.

The differing roles of government and professional associations are also important in certification of specialists. Increasingly, specialization is being regulated by statutory requirements in much the same way as basic licensure. The notable exceptions are the United States and the United Kingdom, where professional bodies examine and certify specialists. Current debate in the United Kingdom may foreshadow a change in the procedure governing specialists' qualifications there. Do the advantages lie in regulating all echelons of

physicians by legislation, or is a system of certification by voluntary professional associations with traditions of excellence satisfactory?

The progress that has been made in removing the barriers of national boundaries to licensure gives a new focus to the question of reciprocity among the American states. If removal of this barrier can be achieved among different countries without jeopardizing standards, then a new look must be taken at the operation of reciprocity and endorsement policies within a single country having a high level of medical education.

In determining scope of functions of nonphysician personnel, the interrelationships among government, educational institutions and professional and occupational groups seem particularly important. These interrelationships are not fully illuminated by a reading of the statutes. Investigation of actual practices is necessary.

Licensure laws have traditionally been viewed as a means of establishing and enforcing minimum standards of competence. The worldwide demand for more and better health services cannot be met without health manpower of the best quality each country is capable of producing. The laws regulating health personnel may well be a resource to encourage that production, to promote improved geographic distribution of personnel and to relate manpower resources to the needs of people for health services in each country.

## REFERENCES

<sup>1</sup> See Sigerist, H. E., *The History of Medical Licensure*, in Roemer, M. I. (Editor), *HENRY E. SIGERIST ON THE SOCIOLOGY OF MEDICINE*, New York, MD Publications, Inc., 1960, p. 308.

<sup>2</sup> Shryock, R. H., *MEDICAL LICENSING IN AMERICA, 1650-1965*, Baltimore, The Johns Hopkins Press, 1967, pp. 15-18.

<sup>3</sup> Sigerist, *op. cit.*, p. 317; Shryock, *op. cit.*, pp. 47-49.

<sup>4</sup> For an analysis of licensure laws governing physicians and other health personnel in the 50 states and the District of Columbia, see Forgotson, E. H., Roemer, R. and Newman, R. W., *LEGAL REGULATION OF HEALTH PERSONNEL IN THE UNITED STATES*, Study Prepared for the National Advisory Commission on Health Manpower, Washington, United States Government Printing Office, 1968. (The chapter on licensure of physicians is also contained in *Washington University Law Quarterly*, 249-331, Summer, 1967.)



<sup>5</sup> *Ibid.*, only seven states provide for public members of the board of medical examiners. In six states these public members are state officials. California is the only state requiring appointment of a public member who is not a state official. See Chapter 1, Appendix 1.

<sup>6</sup> The National Board of Medical Examiners is a private, independent agency, established in 1915, to measure medical competence through preparation and administration of qualifying examinations, to consult with state examining boards and with medical schools, and to develop methods of testing and evaluating medical knowledge. For the role of the National Board as a qualifying agency and its cooperation with state boards of medical examiners, which are the legal licensing authorities, see Parks, J., Objectives and Achievements of National Board Examinations, *Journal of the American Medical Association*, 198, 760-762, November 14, 1966.

<sup>7</sup> Forgetson, Roemer and Newman, *op. cit.*, Chapter 1; and *Report of the National Advisory Commission on Health Manpower*, Washington, United States Government Printing Office, 1967, pp. 40-42.

<sup>8</sup> Forgetson, Roemer and Newman, *op. cit.*, Chapter 1; Statutory grounds for license removal in the United States, although phrased in varying language from state to state, can be summarized within three general and somewhat overlapping categories: 1. personal disqualifications (illness or disability, drug addiction, alcoholism, gross immorality, etc.); 2. illegal acts (conviction of a felony or a misdemeanor involving moral turpitude; violation of narcotics laws, licensure laws or public health laws and regulations; performing or procuring or aiding the performance of an abortion; aiding or abetting an unlicensed person to practice medicine, fraud in obtaining a license, etc.); 3. unprofessional conduct (improper advertising, fee-splitting, representing an incurable condition as curable, conduct likely to deceive, defraud or injure the public, betrayal of a professional secret, habitually negligent conduct, wilful neglect of a patient, gross malpractice, etc.).

For examples of provisions governing license removal in other countries, similarly limited to egregious acts, see Sweden, Law Number 214 of March 20, 1964, *International Digest of Health Legislation*, 17, 155, 1966 (convictions; illegal practice of medicine; charlatanism; involvement in offense designated by law); Japan, Law Number 201 of July 30, 1948 (violation of requirements for licensure, including certain physical disabilities and drug addiction, condemnation to a penalty heavier than a fine, commission of a crime concerning medical affairs or behavior detrimental to the dignity of the medical profession); and United Kingdom, *infra* text at note 52.

<sup>9</sup> Japan, Medical Practitioners' Law, Law No. 201 of July 30, 1948, and amendments.

<sup>10</sup> The author learned on a visit to Japan in July, 1968, that the question of medical licensure examinations is a very live issue. The interns at the University of Tokyo had been on strike for six months in protest against, among other things, the separate governmental licensure examination over and above the university examinations. The contention of the interns is that this supplementary examination, imposed 20 years ago during the postwar American occupation of Japan, is a burdensome formality in view of the stringent university examinations. Members of the medical faculty admitted to the author that when more than 90 per cent of candidates pass the governmental examination (nearly that proportion now does), it will probably be eliminated.

<sup>11</sup> Forgetson, Roemer and Newman, *op. cit.*; The nine states that do not recognize National Board certification for initial licensure are Arkansas, Dela-

ware, Florida, Georgia, Indiana, Louisiana, Michigan, North Carolina and Texas. Four states (Delaware, Indiana, North Carolina and Texas), however, accept National Board certification if the diplomate has been licensed by another state, and Georgia accepts certificates of the National Board issued prior to October, 1953.

<sup>12</sup> Cf. Canada, where licensure is granted by a provincial agency, but all the provinces recognize the examination of the Medical Council of Canada, passing of which allows registration in the Canadian Medical Register. *Equivalence of Medical Qualifications and the Practice of Medicine, A Survey of Existing Legislation*, Geneva, World Health Organization, 1967, pp. 12-13 (originally published in *International Digest of Health Legislation*, 18, 459-503, 1967).

<sup>13</sup> The United Kingdom is the only country in this study in which licensure of physicians is not mandatory. Registration, or licensure, is not required to practice medicine, but the severe disabilities that an unregistered practitioner suffers effectively inhibit the activities of unlicensed practitioners. An unregistered practitioner may not use the courts to recover any charge for medical or surgical attendance; may not hold an appointment in the military or naval services, in any mental or other hospital unless it is wholly supported by voluntary contributions, in any prison or in any society providing mutual relief in sickness, infirmity or old age; may not issue a valid medical certificate required by law (e.g., birth or death certificate); and is not exempt, as is a fully registered practitioner, from jury duty or liability to other offices. The greatest disability is that unregistered practitioners are not employed as physicians in the National Health Service, but their services are recognized in certain cases because of the right of the patient to seek treatment from anyone he chooses. Furthermore, the unregistered practitioner is not permitted to practice obstetrics or to treat venereal disease and has no authority under the Dangerous Drugs Act or Poison Rules. United Kingdom, Medical Act, 1956, 4 and 5 Elizabeth 2, Chapter 76, sections 27(1), 28, 29, 30(1). See Hadfield, S. J., *LAW AND ETHICS FOR DOCTORS*, 17-20, London, Eyre & Spottiswoode, 1958, pp. 17-20.

<sup>14</sup> United Kingdom, Medical Act, 1956, 4 and 5 Elizabeth 2, Chapter 76, sections 7, 11, 15.

<sup>15</sup> *Ibid.*, section 17.

<sup>16</sup> *Ibid.*, section 15(4), (5).

<sup>17</sup> For authority for this summary, see Stevens, R., Additional notes: The General Medical Council, in *MEDICAL PRACTICE IN MODERN ENGLAND: THE IMPACT OF SPECIALIZATION AND STATE MEDICINE*, New Haven, Yale University Press, 1966, pp. 369-375.

<sup>18</sup> See text at notes 41 and 42.

<sup>19</sup> Stevens, *op. cit.*; the vast majority of physicians qualify by taking a university degree or by taking the degree and the Conjoint Board diploma, but a small minority qualifies with the Conjoint Diploma alone.

<sup>20</sup> France, Code de la Santé Publique, Art. L. 356 (1), (2) (1952); Ordre national des Médecins, *Guide Pratique d'Exercice Professionnel*, hereinafter called "*Guide Pratique*," 85, 6th edition, Paris, Masson et Cie, 1966.

<sup>21</sup> Federal Republic of Germany, Law of October 2, 1961, *International Digest of Health Legislation*, 13, 295, 1962.

<sup>22</sup> ———, Regulations of September 15, 1953, *International Digest of Health Legislation*, 6, 155, 1955.

<sup>23</sup> Sweden, Law No. 408 of June 30, 1960, *International Digest of Health Legislation*, 12, 847, 1961.

<sup>24</sup> Waldenstrom, J., The Social and Economic Situation of the Medical Profession in Sweden, *New England Journal of Medicine*, 221, 515-518, 1939.

<sup>25</sup> Colombia, Law No. 52 of December 31, 1964, *International Digest of Health Legislation*, 18, 302, 1967, amending Law No. 14 of April 28, 1962, *International Digest of Health Legislation*, 14, 7, 1963.

<sup>26</sup> Poland, Law No. 458 of October 28, 1950, *International Digest of Health Legislation*, 4, 576, 1952-3.

<sup>27</sup> *Ibid.*, section 4(3).

<sup>28</sup> Information provided by Lidia Krotkiewska, Director of Juridical and Administrative Affairs, Ministry of Health and Social Welfare of Poland and chairman of the commission studying licensure of health personnel.

<sup>29</sup> See text at footnote 42 *et seq.*

<sup>30</sup> *National Education Examiner*, 14, 3, November, 1966; and Forgotson, Roemer and Newman, *op. cit.*, Chapter I.

<sup>31</sup> Japan, Medical Practitioners' Law, Articles 2, 5, 6, 1955.

<sup>32</sup> *Ibid.*, Article 7, 1955.

<sup>33</sup> *Ibid.*, Article 25, 1955.

<sup>34</sup> *Ibid.*, Article 7(5), 1955; the law requires a statement of the charges, notice of hearing, opportunity for the licensee to testify and produce witnesses, transcript of the testimony and a written report of the hearing officer's findings and recommendations transmitted to the Minister of Health and Welfare for decision. Article 7(5)(6)(7). The statute does not affirmatively provide for a right of appeal from the decision of the Minister, but the requirement that a transcript be made and preserved would seem to indicate a right of appeal.

<sup>35</sup> Sweden, Law No. 408 of June 30, 1960, *International Digest of Health Legislation*, 12, 847, 1961; see Crown Regulations Number 778 of December 3, 1965, *International Digest of Health Legislation*, 18, 174, 1967; and Number 40 of January 23, 1959, *International Digest of Health Legislation*, 11, 488, 1960.

<sup>36</sup> ———, Crown Regulations Number 40 of January 23, 1959, section 39, *International Digest of Health Legislation*, 11, 488, 1960.

<sup>37</sup> Colombia, Decree Number 0946 of April 6, 1953, *International Digest of Health Legislation*, 5, 593, 1954.

<sup>38</sup> ———, Decree Number 0124 of January 20, 1954, supplementing Decree Number 0279 of February 17, 1953, *International Digest of Health Legislation*, 6, 144, 1955.

<sup>39</sup> United Kingdom, *op. cit.*, sections 1-4.

<sup>40</sup> *Ibid.*, sections 2(1) and 3(6). George Bernard Shaw is credited with the suggestion "that a member of the public should maintain a critical vigilance over the Council, especially in matters of discipline and should represent the consumer-interest." Pyke-Lees, W., CENTENARY OF THE GENERAL MEDICAL COUNCIL 1858-1958: THE HISTORY AND PRESENT WORK OF THE COUNCIL, London, Spottiswoode, Ballantyne, 1959, p. 17; cf. Forgotson, Roemer and Newman, *op. cit.*

- <sup>41</sup> United Kingdom, *op. cit.*, section 7.
- <sup>42</sup> Pyke-Lees, *op. cit.*, pp. 21–22.
- <sup>43</sup> United Kingdom, *op. cit.*, section 9.
- <sup>44</sup> *Ibid.*, section 13; see General Medical Council, *Memorandum on Constitution, Functions, and Procedure*, London, Constable & Co. Ltd., January, 1950.
- <sup>45</sup> Pyke-Lees, *op. cit.*, p. 20.
- <sup>46</sup> Information provided by Dr. John D. Kershaw, Medical Officer of Health, Colchester, England.
- <sup>47</sup> United Kingdom, *op. cit.*, section 33.
- <sup>48</sup> *Ibid.*, section 4.
- <sup>49</sup> Hadfield, *op. cit.*, pp. 24–25.
- <sup>50</sup> United Kingdom, *op. cit.*, section 33, which reads “. . . the Committee may if they they think fit direct his name to be erased from the register.”
- <sup>51</sup> Pyke-Lees, *op. cit.*, p. 26.
- <sup>52</sup> Allinson v. General Medical Council, Q.B. 1894, 750 at 760–761.
- <sup>53</sup> Hadfield, *op. cit.*, p. 32.
- <sup>54</sup> Pyke-Lees, *op. cit.*, p. 27.
- <sup>55</sup> Curran, W. J., Legal Regulation and Quality Control of Medical Practice under the National Health Service, *New England Journal of Medicine*, 274, 547, March 10, 1966.
- <sup>56</sup> *The United Kingdom National Health Service*, Working Document Prepared by the Social Security Branch, International Labour Office, 37, 1967 (mimeographed). This document, citing the *Annual Report of the Ministry of Health* for the year 1965, Command 3039, 108 note, states that in 1965, the Tribunal removed one practitioner from the National Health Service list, reinstated one practitioner and allowed the case against another practitioner to be withdrawn.
- <sup>57</sup> United Kingdom, *op. cit.*, sections 36 and 37; also, *General Medical Council Disciplinary Committee (Procedure) Rules Order of Council*, 1958.
- <sup>58</sup> Hadfield, *op. cit.*, p. 37.
- <sup>59</sup> United Kingdom, *op. cit.*, section 47.
- <sup>60</sup> France, Code de la Santé Publique, Art. L. 412.
- <sup>61</sup> *Ibid.*, p. 382.
- <sup>62</sup> *Ibid.*, Arts. L. 384, 385, 399.
- <sup>63</sup> *Ibid.*, Arts. L. 395, 411.
- <sup>64</sup> Ordre National des Médecins, *op. cit.*, p. 12.
- <sup>65</sup> Federal Republic of Germany, Regulations of September 15, 1953, *loc. cit.*
- <sup>66</sup> ———, Law of October 2, 1961, *loc. cit.*

<sup>67</sup> Poland, Law Number 458 of October 28, 1950, *International Digest of Health Legislation*, 4, 576, 1952-53.

<sup>68</sup> ———, Ordinance Number 367 of September 21, 1951, *International Digest of Health Legislation*, 4, 582, 1952-53, specifying the statutory requirements of the curriculum of the medical academies in detail.

<sup>69</sup> Krotkiewska, *loc. cit.*

<sup>70</sup> Dawn of a Single U.S. Licensing Test?, *Medical World News*, 21, March 8, 1969; New Board Examinations Set for June Aim at Universal Endorsement, *The House Physician Reporter*, 1, March, 1968.

<sup>71</sup> The Medical Practitioners' Law of Japan contains no reference to specialist qualifications. Presumably, specialist certification in Japan also is a function of the professional associations.

<sup>72</sup> Pyke-Lees, *op. cit.*, p. 21; A New Look at the D.P.H., *The Lancet*, 345-346, February 17, 1968.

<sup>73</sup> Stevens, *op. cit.*, p. 369.

<sup>74</sup> Information from Dr. John D. Kershaw, *loc. cit.*

<sup>75</sup> *Ibid.*

<sup>76</sup> Postgraduate Medical Education, *British Medical Journal*, 613, December 9, 1967; Postgraduate Surgical Education, *British Medical Journal*, 231-232, January 28, 1967; Training the Specialist, *The Lancet*, 990-991, May 6, 1967.

<sup>77</sup> For a comprehensive world review of the laws governing medical specialists as of 1957, see Specialization, A Survey of Existing Legislation, *International Digest of Health Legislation*, 8, 561, 1957.

<sup>78</sup> Colombia, Decree Number 605 of March 21, 1963, *International Digest of Health Legislation*, 15, 73, 1964.

<sup>79</sup> Information provided by Dr. J. De Moerloose, Chief, Health Legislation, World Health Organization, Geneva.

<sup>80</sup> Ordre National des Médecins, *op. cit.*, p. 118.

<sup>81</sup> *Ibid.*, pp. 118-119.

<sup>82</sup> *Ibid.*, pp. 123-124.

<sup>83</sup> *Ibid.*, p. 124.

<sup>84</sup> Sweden, Crown Order Number 664 of December 6, 1963, *International Digest of Health Legislation*, 17, 153, 1966.

<sup>85</sup> Poland, Order of January 7, 1965, *International Digest of Health Legislation*, 15, 803, 1964.

<sup>86</sup> ———, Order of December 29, 1962, *International Digest of Health Legislation*, 14, 457, 1963.

<sup>87</sup> ———, Order Number 263 of May 29, 1958, *International Digest of Health Legislation*, 11, 322, 1960.

<sup>88</sup> Krotkiewska, *loc. cit.*

<sup>89</sup> Roemer, R., *Abortion Law: The Approaches of Different Nations*, *American Journal of Public Health*, 57, 1906-1922, November, 1967.

<sup>90</sup> Krotkiewska, *loc. cit.*

<sup>91</sup> *Equivalence of Medical Qualifications and the Practice of Medicine: A Survey of Existing Legislation*, Geneva, World Health Organization, 1967 (originally published in *International Digest of Health Legislation*, 18, 459-503, 1967).

<sup>92</sup> The Medical Practitioners' Law of Japan is silent on this general problem. The only provisions relating to recognition of foreign licenses concern Japanese nationals licensed before August 15, 1945, by Korea, Formosa, the Republic of China and a few other governments, recognition of their licenses being valid for a limited period of time, which has now expired.

<sup>93</sup> Colombia, Law Number 52, *loc. cit.*; and Krotkiewska, *loc. cit.*

<sup>94</sup> For a discussion of these little-known incentives in the United States, see Roemer, M.I., *Health Needs and Services of the Rural Poor*, in *RURAL POVERTY IN THE UNITED STATES*, report by the President's National Advisory Commission on Rural Poverty, Washington, United States Government Printing Office, 1968, pp. 311-332.

<sup>95</sup> Treaty Establishing the European Economic Community, Articles 57, 59, 60, Rome, March 25, 1957; see *CCH Common Market Reporter*, Paragraph 1421 concerning Article 57 of the treaty. Originally, the effective date of free movement of physicians was to have been January 1, 1968, but the effective date has been postponed until 1970.

<sup>96</sup> Mallet, H., *MÉDECINE ET TRAITÉ DE ROME, LES INCIDENCES DU TRAITÉ SUR LA PROFESSION MÉDICALE DANS LES PAYS DU MARCHÉ COMMUN*, Paris, Masson et Cie, 1963, Chapter 1.

<sup>97</sup> Accord entre le Danemark, la Finlande, la Norvège et la Suède pour un marché commun scandinave du travail pour les médecins, unpublished document in tentative translation.

<sup>98</sup> See, for example, Sweden, Crown Order Number 653 of November 25, 1960, *International Digest of Health Legislation*, 14, 107, 1960, requiring physicians licensed in Denmark, Finland or Norway desiring Swedish licensure to take a course in Swedish health legislation and to satisfy the Swedish requirements for hospital training.

<sup>99</sup> Triepel, H., *Nouveau recueil général de traités et autres actes relatifs aux rapports de droit international*, Tome VI, 191, Leipzig, Librairie Dieterich, 1913.

<sup>100</sup> Articles 1, 3.

<sup>101</sup> For the contention that citizenship is irrelevant to qualification for licensure, see Fisher, M. L. and Nathanson, N. L., *Citizenship Requirements in Professional and Occupational Licensing in Illinois*, *Chicago Bar Record*, 45, 391-398, 1964.

<sup>102</sup> *Ordre National des Médecins*, *op. cit.*, pp. 140-143. See also Kornprobst, L., Jullien, G. and Mathias, A., *LES AUXILIAIRES MÉDICAUX*, Paris, Masson et Cie, 1966.

<sup>103</sup> Kershaw, *loc. cit.*

<sup>104</sup> See, for example, Poland, Order of June 6, 1963, *International Digest of Health Legislation*, 15, 593, 1964; Order Number 73 of February 23, 1953, *International Digest of Health Legislation*, 6, 294, 1955.

<sup>105</sup> Krotkiewska, *loc. cit.*

<sup>106</sup> For discussion of licensure of professional nurses, midwives and practical nurses in the United States, see Forgotson, Roemer and Newman, *op. cit.*, Chapter 2.

<sup>107</sup> World Health Organization Expert Committee on Nursing, *Fifth Report*, Geneva, World Health Organization Technical Report Series No. 347, 1966, p. 11.

<sup>108</sup> United Kingdom, Nurse Act, 1957 and 1961; see also Speller, S. R., *LAW RELATING TO HOSPITALS AND KINDRED INSTITUTIONS*, London, H. K. Lewis & Co., Ltd., 1965, pp. 361-368.

<sup>109</sup> Japan, The Public Health Nurse, Midwife and Nurse Law Number 203 of July 30, 1948, as amended, Articles 17, 21, 23.

<sup>110</sup> Sweden, New Regulations concerning Schools of Nursing from the Swedish Ministry of Education and Ecclesiastical Affairs, December 30, 1965.

<sup>111</sup> ———, Crown Regulations Number 657 of November 22, 1957, *International Digest of Health Legislation*, 9, 595, 1958.

<sup>112</sup> France see Order of July 20, 1959, *International Digest of Health Legislation*, 11, 134, 1960 for required approval by Minister of Public Health and Population (now Minister of Social Affairs) of schools for nurse supervisors, including requirement that such schools be situated in a town with a medical school or in the main town of a health district.

<sup>113</sup> Federal Republic of Germany, Notice of September 20, 1965, promulgating the consolidated version of the Nursing Law, *International Digest of Health Legislation*, 17, 878, 1966.

<sup>114</sup> Information from Miss Yvonne Hentsch, League of Red Cross Societies, Geneva.

<sup>115</sup> See *Legislation on Midwives*, Memorandum prepared by the Secretariat for the World Health Organization Expert Committee on the Midwife in Maternity Care, Geneva, World Health Organization, July, 1965.

<sup>116</sup> Sweden, Crown Regulations Number 472 of June 30, 1953, *International Digest of Health Legislation*, 6, 329, 1955.

<sup>117</sup> Japan, The Public Health Nurse, Midwife and Nurse Law of July 30, 1948, as amended, *op. cit.*, Articles 20, 21.

<sup>118</sup> See, for example, *Federal Republic of Germany*, Order of July 25, 1961, on General Conduct of Midwives (Hamburg), *International Digest of Health Legislation*, 14, 621, 1963; *Ordre National des Médecins*, *op. cit.*, p. 60; United Kingdom, Rules of 1955 concerning practice of midwifery, discussed in *Legislation on Midwives*, *loc. cit.*

<sup>119</sup> Federal Republic of Germany, Order of July 25, 1961, on General Conduct of Midwives (Hamburg), *loc. cit.*

<sup>120</sup> Sweden, Crown Regulations Number 592 of November 11, 1955, section 14, *International Digest of Health Legislation*, 8, 105, 1957.

<sup>121</sup> *Legislation on Midwives, loc. cit.*

<sup>122</sup> *Auxiliary Personnel in Nursing, A Survey of Existing Legislation*, Geneva, World Health Organization, 1966 (originally published in *International Digest of Health Legislation*, 17, 197-232, 1966).

<sup>123</sup> *Ibid.*, p. 34. The enrolled nurse is assisted by a nurse auxiliary or nursing orderly, without formal training, who helps with the handling of patients on the wards. The nursing auxiliary or nursing orderly in the United Kingdom is analogous to the nurse's aide or orderly in the United States.

<sup>124</sup> *Ibid.*, p. 21.

<sup>125</sup> Hentsch, *loc. cit.*

<sup>126</sup> *Auxiliary Personnel in Nursing, op. cit.*, p. 19.

<sup>127</sup> *Nursing in Sweden*, memorandum prepared by the Swedish Nurses' Association, Stockholm, May, 1965.

<sup>128</sup> *Auxiliary Personnel in Nursing, op. cit.*, p. 23.

<sup>129</sup> *Ibid.*, p. 33.

<sup>130</sup> *Ibid.*, p. 20.

<sup>131</sup> *Ibid.*, p. 23.

<sup>132</sup> *Ibid.*, p. 25; Japan, The Public Health Nurse, Midwife and Nurse Law of July 30, 1948, as amended, *op. cit.*, Article 21(3).

<sup>133</sup> *Nursing in Sweden, loc. cit.*

<sup>134</sup> These standards are, of course, related to the resources of each country. Efforts on the part of the Council of Europe to standardize nursing certificates and training to facilitate exchange of nursing personnel among countries have resulted in agreement on the lowest common denominator of training, a standard far below existing standards for many countries and therefore unacceptable to them.

<sup>135</sup> Forgotson, Roemer and Newman, *loc. cit.*

<sup>136</sup> *Ibid.*

<sup>137</sup> For discussion of these and other problems, see Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel, *Third Report*, Geneva, World Health Organization, 1956.

<sup>138</sup> *Ordre National des Médecins, op. cit.*, p. 140.

<sup>139</sup> Kornprobst, Jullien and Mathias, *op. cit.*, p. 101.

<sup>140</sup> Federal Republic of Germany, Law of July 14, 1964, *International Digest of Health Legislation*, 17, 896, 1966.

<sup>141</sup> De Moerloose, *loc. cit.*

<sup>142</sup> Japan, Nutritionist Law of December 29, 1947, Article 2; Medical X-Ray Technicians' Law of 1951, Article 20.

<sup>143</sup> Colombia, Decree No. 0825 of March 23, 1954, *International Digest of Health Legislation*, 7, 35, 1956.



<sup>144</sup> Krotkiewska, *loc. cit.*

<sup>145</sup> United Kingdom, Professions Supplementary to Medicine Act, 1960.

<sup>146</sup> See, for example, Poland, Instruction Number 30/61 of May 8, 1961, regulating the procedure for examination for the diploma in state schools for dental technicians; Instruction Number 29/61 of May 8, 1961, regulating the diploma examination for dispensing assistants to pharmacists; Instruction No. 18/65 of May 14, 1965, regulating examination in the state medical school of electroradiology and analytical technicians (copies provided by the World Health Organization).

<sup>147</sup> Federal Republic of Germany, Law of December 21, 1958, section 9, *International Digest of Health Legislation*, 11, 136, 1960.

<sup>148</sup> Japan, Nutritionist Law of December 29, 1947, *op. cit.*, Article 2; Law for Medical X-Ray Technicians of 1951, *op. cit.*, Article 3.

<sup>149</sup> United Kingdom, National Health Service (Speech Therapists) Regulations, 1964 in Speller, *op. cit.*, p. 602.

<sup>150</sup> Federal Republic of Germany, Law of December 21, 1958, *loc. cit.*

<sup>151</sup> Japan, Nutritionist Law of December 29, 1947, *loc. cit.*; Medical X-Ray Technicians' Law of 1951, *op. cit.*, Article 7.

<sup>152</sup> Krotkiewska, *loc. cit.*

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