

# Medical Society Relative Value Scales and the Medical Market

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ECONOMISTS and other interested observers of the medical marketplace frequently speculate on the impact of voluntary health insurance and other mass purchasing of physicians' services on medical prices. Medical prices, such as are reflected in the Consumer Price Index, are made up of a host of individual determinations made by individual physicians as to the amounts to be charged individual patients. In the past, in this market, typical cost-price determinations hardly entered into establishing the charge because of the many imponderables involved. The nature of the demand for medical care sets it apart from ordinary goods and services.

The longstanding custom of varying physicians' fees by vague yardsticks of ability to pay further removes the pricing of physicians' services from the area of direct cost-price relationships or the operation of the market. In the United States, however, a different kind of market structure is emerging in this field, a structure which lies somewhere between a system of administered prices and a system in which supply and demand affect but do not set prices. In the medical marketplace hospital charges are identical for all paying patients, regardless of income. Insurance payments, too, with few exceptions, are the same for all patients regardless of their financial situation.

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Early fee schedules were developed by purchasers of services in such programs as the Veterans Administration Home Town Medical Program and for workmen's compensation purposes. Their impact was not great because the volume of services was relatively small and either diffused or confined to a few physicians (in the case of workmen's compensation).

In the early stages of voluntary health insurance plans, surgical-fee schedules covering most procedures were developed by the plans. These schedules bore little resemblance to the charges the physician might actually make. One characteristic of these early schedules was readily apparent; procedures that had a high incidence usually carried a fee in the schedule considerably below the best estimate of going charges; rarely performed procedures carried the top fee and gave the schedule its identification, such as a \$150, \$200, or \$300 fee schedule. Even these fees bore little resemblance to actual charges.

The few studies that were conducted relating insurance benefits to actual charges produced evidence that, overall, surgical benefits were meeting only between 60 to 65 percent of the amounts billed by surgeons. Raising all the items in the schedule by an identical proportion, such as the 50 percent increase that would change a \$200 fee schedule to a \$300 one, did not increase the proportion of the surgical bill met by insurance to a corresponding degree. Obviously, the change in purchasing power created by the new schedule influenced physicians' fees.

A second influence operated simultaneously in this particular market. It was probably as influential in the changes that have since oc-

curred as was the failure of fee schedules to come close to the levels of actual charges. This second phenomenon was the adoption by many Blue Shield plans of the "service-benefit concept." Physicians participating in a Blue Shield plan agreed to accept the plan's fee-schedule benefits as payment in full for services to patients whose family income was below a certain ceiling established by the plan.

This requirement brought to the physicians' attention the arbitrary variations among fees for various procedures inherent in most, if not all, fee schedules. An additional element of physician dissatisfaction was also present in the Blue Shield service-benefit concept. Specialists must accept exactly the same compensation as nonspecialists providing the same services, whereas to direct-pay patients their fees usually are supposed to reflect their more intense training. At this point, insured patients and physicians were already sharing considerable disillusionment over the terms of most insurance contracts.

Meanwhile, incomes among insured persons were rising, and proportionately fewer families qualified for the Blue Shield service benefits. Experiments were undertaken which provided for the addition of a higher level fee schedule, at a correspondingly higher premium, for groups whose average income exceeded the previously established ceiling. With the higher schedules available, some union groups negotiated with local medical societies for an insurance plan with a fee schedule that would be guaranteed as payment in full for all the persons enrolled, regardless of income. The San Joaquin Medical Foundation is the best-known example of this approach.

### Relative Value Scales

Recognition of these problems led to a study by the California Medical Association's Committee on Professional Fees (1). Initiated in 1952, the study was not completed until 1956 when the CMA's first "Relative Value Study" was published.

Members of the association assisted by reporting to the committee their usual fees for an extensive list of medical and surgical procedures and services. For each item, the low-

est and highest 10 percent of the fees reported were discarded. From the remainder, medians and modes in dollars were developed. The dollar amounts were then multiplied by a constant decimal factor to obtain the relationships of one procedure to another in a form other than dollars. The resulting figures became the units or scales that could then be used to answer a question such as: "If an appendectomy is worth 'x' dollars, how much added to 'x' would constitute a reasonable fee for a hysterectomy?"

With the scales available, the individual physician could select as his index a procedure performed frequently, for which he had a more or less standard charge, and then price his other procedures in multiples of this index. For example, a routine followup office visit is usually given a unit value of 1. If the physician's usual charge for such a visit is \$5, 1 unit in the scale equals \$5. A physical examination then equals \$20 if it carries 4 units.

Insurers recognized the utility of the scales in developing fee schedules more nearly designed to satisfy the demands of their customers, so interest in relative value scales spread.

Since 1956, 13 State medical societies, the Medical Society of the District of Columbia, and 3 local or county societies have issued similar studies. The majority made independent studies. The remainder modified the California scales.

The nomenclature and coding adopted by the medical societies generally follow the system developed by the "Blue Cross-Blue Shield Actuarial and Statistical Manual." The scales are divided into four separate sections: (a) medical services, (b) surgery, (c) radiology, and (d) pathology.

### Analysis of Scales

We wondered just how disparate these several studies were or whether they might in fact indicate a greater degree of uniformity in the fee structures for physicians' services than would be expected in different parts of the country.

We obtained 17 relative value scales of 14 State and 3 county and district medical societies, as well as the national scales prepared by the American College of Radiology and the Coun-

cil of American Pathologists. The scales include hundreds of items; for example, the Illinois scale contains 1,200 items. Four of the scales duplicate the California scale almost verbatim. Three or four of the other scales studied bore a resemblance in unit values to the 1960 California scale, acknowledged as a guide by a number of studies. A procedure with a unit value of 5 in one scale might, however, have a value of 15 in another. Nomenclature for some items differed slightly or markedly. As a consequence, it was necessary to limit our study to items with identical nomenclature and to eliminate practically all rare and unusual procedures. Particularly for the latter, some studies called for "individual consideration" rather than designating a value.

In our analysis, relationships exist only within each of the four separate sections; no comparisons should be made among the sections. We selected one procedure as a baseline for each of the four sections, and assigned it a value of 1. The value of all other procedures in each section

was then divided by the value given in the particular scale for this base procedure. This method retained the relationships between procedures, but reduced them all to a common baseline within each section. In our analysis, "office visit, followup" was assigned a value of 1 in the medical section. In the surgical section, "incision and drainage of furuncle" was established as the index; in the radiology section, "single posteroanterior teleroentgenogram of the chest" was chosen as the index; and in the pathology or laboratory section, "complete blood count."

The medicine section in table 1 shows seven items. The range within any one schedule is generally from one to seven units, but Hawaii and Onondaga County, N.Y., show a wider structure and more disparity item by item than holds for the remaining 14 schedules. The sum of the seven items appears to produce a slightly higher scale for Onondaga County than for Hawaii. The table also shows a greater range among the scales in the value attached to "ini-

**Table 1. Unit values of seven medical procedures selected from the relative value studies of sponsoring State or other medical societies, standardized to permit comparisons**

State and county	Office visit, followup, routine	Intra-dermal skin tests, per 10	Office visit, initial, routine, new patient or new illness, history and examination	Home visit, initial, routine, new patient or new illness, history and examination	Allergy tests, passive transfer, per 10	Office visit, initial, complete diagnostic history and physical examination	Consultation, complete diagnostic history and examination
Range.....	1. 0-1. 0	1. 0-2. 5	1. 2-2. 5	1. 9-3. 0	2. 5-6. 2	4. 0-7. 0	6. 2-8. 8
Mean.....	1. 0	1. 6	1. 9	2. 3	3. 3	5. 5	7. 3
Median.....	1. 0	1. 5	2. 0	2. 4	3. 0	5. 0	7. 0
California, Florida, Kansas, Minnesota, Vermont.....	1. 0	1. 5	2. 0	2. 5	3. 0	5. 0	<sup>1</sup> 7. 0
District of Columbia.....	1. 0	2. 0	2. 0	2. 0	-----	5. 0	7. 0
Hawaii.....	1. 0	1. 9	1. 2	1. 9	3. 8	6. 2	8. 8
Illinois.....	1. 0	1. 2	1. 2	1. 9	6. 2	6. 2	6. 2
Iowa.....	1. 0	1. 5	2. 0	2. 6	3. 0	7. 0	7. 0
Montana.....	1. 0	1. 5	2. 0	-----	3. 0	-----	-----
Nebraska.....	1. 0	1. 2	2. 0	2. 4	3. 0	5. 0	7. 0
Pennsylvania.....	1. 0	1. 5	2. 0	3. 0	3. 0	6. 0	7. 0
South Dakota.....	1. 0	1. 5	2. 0	2. 0	3. 0	5. 0	7. 0
Utah.....	1. 0	1. 0	2. 0	2. 5	3. 0	5. 0	7. 0
Hampden (Mass.) District Medical Society.....	1. 0	2. 0	2. 0	2. 0	3. 0	4. 0	7. 0
Onondaga County, N.Y.....	1. 0	2. 5	2. 5	2. 5	2. 5	6. 3	8. 8

<sup>1</sup> No value listed for Florida.

NOTE: Leaders (---) indicate not comparable or "individual consideration."

**Table 2. Unit values of 24 surgical procedures selected from the relative value studies of**

State and county	Incision and drainage of furuncle	Burns: dressings under anesthesia, large or with major debridement, per hour	Mastotomy with exploration or drainage of abscess, deep	Cystoscopy, with ureteral catheterization	Tonsillectomy, with or without adenoidectomy, under age 18	Dilation and curettage of uterus, independent procedure, under anesthesia, diagnostic or therapeutic
Range.....	1.0-1.0	2.5-6.0	3.3-5.0	5.0-7.5	6.0-7.5	3.3-8.7
Mean.....	1.0	5.0	5.1	5.5	7.2	6.7
Median.....	1.0	5.0	4.7	5.0	7.5	7.5
California, Florida, Kansas, Minnesota, Vermont.....	1.0	5.0	5.0	7.5	7.5	7.5
District of Columbia.....	1.0	5.0	5.0	-----	7.5	7.5
Hawaii.....	1.0	5.0	5.0	5.5	7.5	7.5
Illinois.....	1.0	5.0	5.0	5.0	7.5	7.5
Iowa.....	1.0	5.0	4.0	5.0	-----	5.0
Montana <sup>1</sup> .....	1.0	5.0	5.0	-----	-----	8.7
Nebraska.....	1.0	5.0	5.0	-----	6.5	6.0
Pennsylvania.....	1.0	2.5	5.0	-----	7.5	7.5
South Dakota.....	1.0	4.0	5.0	-----	6.0	5.0
Utah.....	1.0	2.5	5.0	-----	7.5	7.5
Hampden (Mass.) District Medical Society.....	1.0	-----	3.3	5.0	-----	3.3
Onondaga County, N.Y.....	1.0	5.0	5.0	5.0	-----	7.5
Cuyahoga County, Ohio.....	1.0	-----	4.5	-----	7.5	-----

State and county	Iridotomy	Ligation and division and complete stripping of long or short saphenous veins, unilateral	Inguinal hernia, unilateral repair	Appendectomy	Obstetrical delivery, including antepartum and postpartum care	Suture of torn, ruptured, or severed collateral ligament, one knee
Range.....	10.0-16.7	11.0-17.5	10.0-17.5	10.0-20.0	12.5-20.0	15.0-27.5
Mean.....	11.3	14.2	15.6	15.7	16.4	22.6
Median.....	10.0	15.0	15.0	15.0	15.0	25.0
California, Florida, Kansas, Minnesota, Vermont.....	10.0	15.0	17.5	20.0	17.5	27.5
District of Columbia.....	10.0	11.0	17.5	15.0	20.0	20.0
Hawaii.....	10.0	15.0	17.5	20.0	19.4	27.5
Illinois.....	10.0	15.0	15.0	15.0	15.0	-----
Iowa.....	10.0	15.0	15.0	15.0	12.5	15.0
Montana <sup>1</sup> .....	10.0	17.5	17.5	17.5	15.0	25.0
Nebraska.....	10.0	12.5	15.0	15.0	15.0	25.0
Pennsylvania.....	10.0	12.5	15.0	15.0	17.5	20.0
South Dakota.....	10.0	15.0	15.0	15.0	15.0	20.0
Utah.....	10.0	12.5	17.5	15.0	15.0	25.0
Hampden (Mass.) District Medical Society.....	16.7	-----	10.0	10.0	-----	18.3
Onondaga County, N.Y.....	15.0	15.0	15.0	15.0	19.0	25.0
Cuyahoga County, Ohio.....	15.0	-----	15.0	16.5	-----	-----

sponsoring State or other medical societies, standardized to permit comparisons

State and county	Classic cesarean section	Total hysterectomy (corpus and cervix) with or without tubes, and/or ovaries, one or both	Radical mastectomy, including breast, pectoral muscles, and axillary lymph nodes	Transurethral resection of prostate, including control of postoperative bleeding, complete	Tympanoplasty (type I), myringoplasty uncomplicated	Keratoplasty: corneal transplant, lamellar
Range-----	20.0-30.0	20.0-32.0	23.3-40.5	25.0-40.0	25.0-40.0	25.0-50.0
Mean-----	24.3	27.7	30.7	31.7	32.5	38.4
Median-----	25.0	30.0	30.0	30.0	32.5	40.0
California, Florida, Kansas, Minnesota, Vermont-----	25.0	30.0	35.0	40.0	35.0	50.0
District of Columbia-----	25.0	30.0	30.0	30.0	-----	35.0
Hawaii-----	27.8	30.0	35.0	40.0	35.0	50.0
Illinois-----	25.0	30.0	30.0	35.0	30.0	35.0
Iowa-----	20.0	25.0	25.0	30.0	25.0	40.0
Montana <sup>1</sup> -----	30.0	32.0	40.5	35.0	30.0	40.0
Nebraska-----	17.5	25.0	30.0	30.0	-----	35.0
Pennsylvania-----	25.0	25.0	25.0	35.0	40.0	40.0
South Dakota-----	22.5	27.5	30.0	25.0	-----	40.0
Utah-----	25.0	25.0	35.0	25.0	-----	35.0
Hampden (Mass.) District Medical Society-----	-----	20.0	23.3	26.7	-----	33.3
Onondaga County, N.Y.-----	25.0	30.0	30.0	25.0	-----	25.0
Cuyahoga County, Ohio-----	-----	30.0	30.0	35.0	-----	40.5

State and county	Complete proctectomy, combined abdomino-perineal, one or two stages	Spinal fusion with excision of intervertebral disc, one surgeon	Valvulotomy or commissurotomy, mitral	Laryngectomy, with neck dissection	Cardiotomy with exploration or removal of foreign body from cardiac chamber	Suboccipital craniectomy for brain tumor	Highest value item listed in scale (any procedure)
Range-----	30.0-50.0	26.7-60.0	50.0-60.0	45.0-75.0	50.0-75.0	60.0-75.0	50.0-100.0
Mean-----	45.0	45.1	53.3	56.7	66.2	67.5	-----
Median-----	45.0	42.5	50.0	50.0	70.0	67.5	-----
California, Florida, Kansas, Minnesota, Vermont-----	50.0	60.0	60.0	70.0	75.0	75.0	75.0
District of Columbia-----	50.0	40.0	-----	-----	-----	-----	50.0
Hawaii-----	50.0	60.0	60.0	70.0	75.0	75.0	75.0
Illinois-----	45.0	45.0	50.0	75.0	-----	-----	100.0
Iowa-----	40.0	40.0	50.0	50.0	50.0	60.0	60.0
Montana <sup>1</sup> -----	50.0	50.0	-----	-----	-----	-----	50.0
Nebraska-----	40.0	50.0	-----	-----	-----	-----	50.0
Pennsylvania-----	50.0	40.0	-----	50.0	-----	-----	50.0
South Dakota-----	40.0	40.0	-----	-----	-----	-----	50.0
Utah-----	50.0	40.0	50.0	50.0	65.0	-----	75.0
Hampden (Mass.) District Medical Society-----	30.0	26.7	-----	50.0	-----	-----	56.7
Onondaga County, N.Y.-----	45.0	50.0	50.0	50.0	-----	60.0	75.0
Cuyahoga County, Ohio-----	45.0	-----	-----	45.0	-----	-----	50.0

<sup>1</sup> Montana base used average of office surgical procedure (1), and hospital surgical procedure (3)  $\left(\frac{1+3}{2}=2\right)$ .

NOTE: Leaders (--) indicate not comparable or "individual consideration."

tial office visit including diagnostic history, and physical examination" than for the other six items.

In the surgical section, 24 procedures are listed (table 2). The list includes most of the commonly performed surgical procedures, and, for illustration, a few infrequently performed procedures. The highest value assigned any procedure is shown to indicate the upper range.

Wider differences are evident in the surgical section than in the medical section; the more involved the procedure, the greater the range of the relative values among the schedules (table 2). There does not seem to be a set pattern for a scale to have either high or low values. For example, the Cuyahoga County Medical Association of Ohio gives a value of 4.5 for a "mastotomy with exploration or drainage of abscess"; the mean for all the scales for this item is 5.1. For six other items, however, Cuyahoga County shows a higher unit value than the mean for the respective item.

To point up the differences which exist in these scales, if a hypothetical conversion factor of \$10 were assigned, the value, for example, of "cardiotomy with exploration or removal of foreign body from cardiac chamber" or open-heart surgery would be priced at \$750 in the California scale and \$500 in the Iowa schedule.

For radiology and pathology the individual State and county scales in tables 3 and 4 can be measured against the national scales of the two societies. In many instances, the national scales are assigned higher values than holds true in the State scales. Possibly, the physicians who provided their usual charges for these items to the various State and local relative value study committees were not in all instances radiology and pathology specialists, while the memberships in the two national societies would be limited to specialists.

### Significance

Obviously, though this instrument for bringing greater standardization to the field of physicians' charges is far from being universally accepted by medical societies and individual physicians, the fact that 19 such scales, including the two national ones, are in existence has had a far wider impact than is evident from the geographic areas where they were developed.

The scales can be useful in assessing "usual and customary fees" when an insurance contract is written in these terms, as is true of many major medical programs. They may be used as guidelines for payments under public programs that reimburse private physicians' services, such as under medical assistance to the aged. They provide a basis for modifying surgical schedules, developing insurance programs for services outside the hospital, and the like. And where they are provided to the individual physician as a guide for his charges under some insurance contracts, they must surely cause some modifications of his customary charges to the rest of his clientele. Governmental third-party programs find relative value scales a ready vehicle for establishing their payment levels, as has been demonstrated under the Medicare Program for Dependents of the Armed Forces.

Most of the scales include disclaimers in their preface. For example: "This study is not a fee schedule nor is it to be construed as such. This report in no way sets or directs the fees or schedule of fees charged by physicians and surgeons of the State of -----." This stems from legal advisers' caution that the societies will not be accused of fixing prices. The following statement appears on the same page as the disclaimer in one schedule: "The study will be useful as a negotiating instrument when actual fee schedules are required when dealing with governmental agencies. . . . This study may be of considerable assistance for a new practitioner in establishing his own charges . . . but still should be considered only a guide."

That apparatus and operating costs do enter into the assignment of the values in some instances is evident from the preface to the second edition of the "Relative Value Study of the College of American Pathologists" which says, "Some procedures have been downgraded in point value due to new advances in instrumentation and technology and others raised for similar reasons." The prefatory material in most scales recognizes the need to review the values at frequent intervals to keep pace with changes in medicine.

As physicians' services come more and more under the umbrella of insurance, the rising insistence by consumers that insurance truly insure and in so doing equalize the ability of

**Table 3. Unit values of 12 radiology procedures selected from the relative value studies of sponsoring State or other medical societies, standardized to permit comparisons**

State and county	Chest, single posteroanterior, teleroentgenogram or other	Examination at bedside or in operating room, additional charge (unless otherwise specified)	Abdomen, single A-P	Leg, including one joint	Nasal bones	Paranasal sinuses
National scale -----	1.0	0.5	1.0	1.3	1.3	2.0
Range -----	1.0-1.0	.2-1.0	1.0-1.5	1.0-1.3	1.0-1.5	1.5-2.5
Mean -----	1.0	.5	1.0	1.1	1.3	1.9
Median -----	1.0	.5	1.0	1.0	1.4	2.0
California, Florida, Kansas, Minnesota, Vermont -----	1.0	.5	1.0	1.0	1.5	2.0
District of Columbia -----	1.0	.5	1.0	1.0	1.3	1.5
Hawaii -----	1.0	.5	1.0	1.0	1.5	2.0
Illinois -----	1.0	.5	1.0	1.3	1.3	2.0
Iowa -----	1.0	-----	1.0	1.0	1.0	1.5
Montana -----	1.0	1.0	1.5	1.2	1.5	2.0
Nebraska -----	1.0	.3	1.0	1.0	1.0	2.0
Pennsylvania -----	1.0	.5	1.0	1.0	1.4	2.5
South Dakota -----	1.0	.2	1.0	1.0	1.0	2.0
Utah -----	1.0	.5	1.0	1.0	1.5	1.5
Onondaga County, N.Y. -----	1.0	.5	1.0	1.2	1.5	2.0

State and county	Facial bones, with or without stereo projections	Pelviccephalometry	Colon, by barium enema	Upper gastrointestinal tract	Radioactive isotopes, diagnostic, liver function (as with radioiodinated rose bengal)	Radiotherapy, therapeutic, breast malignancy; postradical mastectomy, not to exceed per treatment basis
National scale -----	2.0	2.5	3.0	3.5	3.0	-----
Range -----	1.5-2.5	2.0-3.0	2.0-3.0	2.5-3.5	2.0-3.0	20.0-25.0
Mean -----	2.0	2.4	2.5	2.9	2.8	21.9
Median -----	2.0	2.5	2.5	3.0	3.0	21.2
California, Florida, Kansas, Minnesota, Vermont -----	2.0	2.5	2.5	3.0	3.0	20.0
District of Columbia -----	1.5	2.5	2.5	3.0	2.5	-----
Hawaii -----	2.0	2.0	3.0	3.0	2.0	25.0
Illinois -----	2.0	2.5	3.0	2.5	3.0	22.5
Iowa -----	2.0	2.5	2.5	2.5	3.0	-----
Montana -----	2.0	3.0	2.5	3.0	-----	-----
Nebraska -----	2.5	2.0	2.0	2.5	-----	-----
Pennsylvania -----	2.0	2.5	2.5	3.5	-----	-----
South Dakota -----	1.5	2.0	2.0	2.5	-----	-----
Utah -----	2.0	2.5	2.5	3.0	3.0	20.0
Onondaga County, N.Y. -----	2.0	2.0	2.0	3.5	3.0	-----

NOTE: Leaders (--) indicate not comparable or "individual consideration."

**Table 4. Unit values of 16 laboratory procedures selected from the relative value studies of sponsoring State or other medical societies, standardized to permit comparisons**

State and county	Blood count, complete	Spinal fluid, routine microscopic (cell count)	Bleeding time	Urine, quantitative sugar	Reticulo-cyte count	Platelet count	Coagulation time (Lea and White)	Blood sugar
National scale.....	1.0	-----	0.5	1.0	0.6	0.6	-----	1.0
Range.....	1.0-1.0	.2-.7	.2-.5	.2-1.0	.4-.8	.4-.8	.3-1.0	.5-1.0
Mean.....	1.0	.4	.4	.6	.6	.6	.6	.9
Median.....	1.0	.3	.4	.4	.6	.6	.6	.9
California, Florida, Minnesota, Vermont.....	1.0	.4	.4	.3	.6	.6	1.6	1.0
District of Columbia.....	1.0	-----	.3	.5	.8	.8	-----	.8
Hawaii.....	1.0	.4	.4	.3	.6	.6	.6	1.0
Illinois.....	1.0	.6	.3	1.0	.6	.6	1.0	.8
Iowa.....	1.0	.3	.4	1.0	.6	.6	.7	1.0
Kansas.....	1.0	-----	.4	1.0	.7	.7	1.0	1.0
Montana.....	1.0	.3	.4	.4	.6	.6	.6	1.0
Nebraska.....	1.0	.3	.3	.3	.5	.5	.5	.7
Pennsylvania.....	1.0	.3	.4	.3	.6	.6	.6	.8
South Dakota.....	1.0	.2	.2	.2	.4	.4	.6	1.0
Utah.....	1.0	.2	.3	.8	.5	.5	.5	.8
Hampden (Mass.) District Medical Society.....	1.0	.7	.5	.2	.5	.5	.5	.5
Onondaga County, N.Y.....	1.0	.3	.3	.9	.5	.5	.3	.9

State and county	Standard tests for syphilis, each	Flocculation tests, each	Coombs' technique, blood	Gastric contents, tubeless (diagnex blue)	Basophilic aggregates (L-E cells)	Biologic tests for pregnancy	Electrophoresis pattern, protein	Bone marrow, collection and examination of material
National scale.....	-----	0.6	1.2	2.0	1.5	2.0	-----	5.0
Range.....	.5-1.0	.5-.8	.5-1.2	.8-2.0	1.0-2.0	.9-2.0	1.7-3.0	3.3-6.0
Mean.....	.9	.6	.9	1.3	1.4	1.8	2.1	4.5
Median.....	1.0	.6	1.0	1.2	1.4	2.0	2.0	5.0
California, Florida, Minnesota, Vermont.....	1.0	.6	1.0	2.0	1.5	2.0	2.0	5.0
District of Columbia.....	-----	.8	.8	.8	1.2	1.7	2.5	-----
Hawaii.....	1.0	.6	1.0	2.0	1.5	2.0	2.0	5.0
Illinois.....	1.0	.6	1.0	1.0	1.5	2.0	2.0	4.0
Iowa.....	-----	.8	1.0	1.0	1.2	2.0	3.0	5.0
Kansas.....	-----	.6	1.2	1.5	1.5	2.0	2.0	5.0
Montana.....	1.0	.6	1.0	2.0	1.0	2.0	2.0	6.0
Nebraska.....	.9	.5	.9	1.3	1.3	1.7	1.7	3.3
Pennsylvania.....	-----	.5	1.0	1.0	1.0	2.0	2.0	5.0
South Dakota.....	-----	.6	1.0	1.0	1.5	2.0	2.0	4.0
Utah.....	-----	.6	1.0	1.2	1.2	-----	1.7	4.2
Hampden (Mass.) District Medical Society.....	.5	-----	-----	-----	-----	-----	2.5	-----
Onondaga County, N.Y.....	-----	-----	.5	1.3	2.0	.9	2.1	3.3

<sup>1</sup> Florida has a value of 1.0.

NOTE: Leaders (..) indicate not comparable or "individual consideration."



consumers to pay for physicians' services is apparently changing the price structure of the market for physicians' services. It seems safe to predict that the trend toward more equitable and more standardized pricing will snowball. Inherent in the increasing availability and use of relative value scales is the reaction of the suppliers and purchasers to the confusing

pricing system of the medical market in the past.

#### REFERENCE

- (1) Committee on Fees of the Commission on Medical Services: 1960 relative value studies. Ed. 3. California Medical Association, San Francisco, 1960.

## Child Welfare Studies

The Children's Bureau of the U.S. Welfare Administration has announced 10 grants totaling \$404,021, the seventh series awarded through the Child Welfare Research and Demonstration Grants program. The grants provide financial support for three new research projects and seven continuing research and demonstration projects in child welfare.

Of the \$164,560 awarded for new research, the Yale University Child Study Center, New Haven, Conn., received \$72,762 to study the development processes of children from infancy to age 7 in three settings—their own homes, residential group care, and foster families. Focus of the study is on the relation of the characteristics of development to problems in development and behavior and the process and steps in the child's adaptation to the physical, social, and psychological environment.

The Council on Social Work Education in New York City received \$50,000 for a curriculum development project in social work education related to the welfare of children and the services they require. The third grant, \$41,798, was made to Pacific Oaks College, Pasadena, Calif., for an observational study of day care programs.

Four awards for continuation of research projects amounted to \$103,789. The develop-

ment and adjustment of Negro American children is being studied at Fisk University, Nashville, Tenn., with a grant of \$45,644. The Florence Crittenton Association of America, Inc., Chicago, Ill., the National Conference of Catholic Charities, Washington, D.C., and the Salvation Army, Inc., New York, N.Y., received a total of \$22,234 for developing and testing a data-collecting instrument for universal use of agencies serving unmarried mothers. The Child Welfare League of America, Inc., New York City, was awarded \$18,360 to followup a study of Caucasian families who adopted American Indian children and \$17,551 for further exploration of caseworkers' perceptions of adoptive applicants.

Two demonstration projects being conducted in New York City and one in Des Moines, Iowa, were awarded a total of \$135,672. The Association for Homemakers Service, Inc., and Retarded Infants Service, Inc., are studying the value of homemaker service in the family with a retarded child under 5 years. The Associated YM-YWHAs of Greater New York City are working with problems of integrating physically handicapped and normal children in recreation groups, and the Iowa Children's Home Society is continuing demonstrations of a method of working with emotionally disturbed children in foster care.

## *South Pacific Seminar on Village Hygiene and Health Education*

The South Pacific Commission sponsored a Seminar on Village Hygiene and Health Education at Port-Vila, New Hebrides, from January 14 to February 11, 1965. Twenty-one full-time students and numerous part-time participants met to study the health problems common to the thousands of islands in the 5,000-mile expanse of the South Pacific between New Guinea on the west and Tahiti on the east.

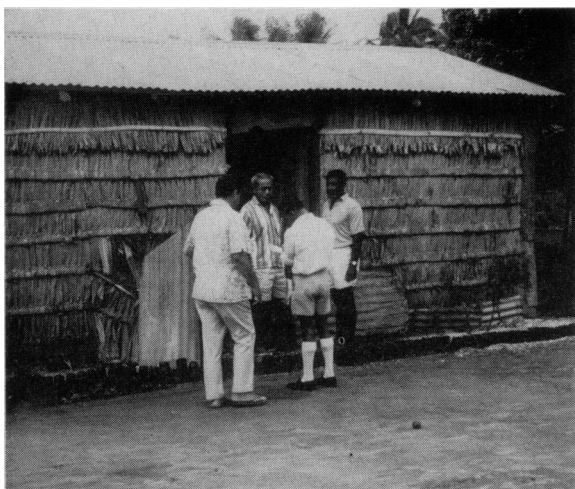
The students came from 2 independent countries, Western Samoa and Tonga, and 12 territories—American Samoa, British Solomon Islands Protectorate, Fiji, French Polynesia, Gilbert and Ellice Islands Colony, Guam, New Caledonia, New Hebrides, Niue, Papua and New Guinea, Wallis and Futuna Islands, and the Trust Territory of the Pacific Islands. The seminar staff consisted of a medical entomologist from the U.S. Public Health Service; a sanitary engineer, a health educator, and an

audiovisual-aid officer provided by the South Pacific Commission; and two sanitary engineers and an advisor on health education from the World Health Organization.

Each student was given training literature on insect and rodent control, developed at the Communicable Disease Center, Public Health Service, and films produced at the Center were shown. Lectures and demonstrations dealt with insects and rodents prevalent in the South Pacific and the diseases associated with them.

Diseases transmitted by mosquitos—malaria, filariasis, and dengue—are among the major health problems. Flies are probably important in the transmission of diarrhea, dysentery, and other enteric infections.

Rats are one of the chief agricultural pests in coconut groves and copra warehouses. They are vectors of many diseases, such as salmonellosis and leptospirosis, of which the importance



**Left: Seminar students conduct house-to-house environmental health survey, Mele Village near Port-Vila. Right: Student collects mosquito larvae from outrigger canoe.**



**Class exercise in constructing bored-hole latrine**

is still unknown because of insufficient laboratory investigations. These rodents are the host of the nematode worm, *Angiostrongylus cantonensis*, which causes eosinophilic meningitis, a recently recognized disease prevalent in several archipelagos. There is also a danger of murine typhus and plague being introduced by infected ship rats or rat fleas.

Because most of these health problems stem from the condition of the local water supply, the methods of excreta and refuse disposal, and the agricultural and social practices, the seminar emphasized environmental sanitation. In the laboratory sessions, the students identified mosquitoes and flies, collected locally. Field surveys and demonstrations included the screening of cisterns and water barrels and the installing of sanitary latrines with water seals to prevent fly and mosquito breeding, the installation of wells with pumps and adequate concrete covers, and the burial of refuse and other fly-breeding material. Some time was devoted to modern insecticides and rodenti-

cides, though it was realized that limited funds and trained personnel make the chemical control of vectors impractical in most villages.—**DR. HARRY D. PRATT**, chief, Training Section, *Aedes aegypti* Eradication Branch, Communicable Disease Center, Public Health Service, Atlanta, Ga.

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### ***FAO Promotes the Luau***

Trying to persuade Polynesian ladies to chuck their aluminum G.I. messkit pots and pans is a difficult task for nutritionists of the United Nations Food and Agriculture Organization. The FAO nutritionists want the Polynesians to return to the time-honored method of cooking and wrapping foodstuffs in big leaves. The messkit pots and pans, however, have become a status symbol. According to Margaret Crowley, one of the nutritionists, these fresh leaves are the original disposable dishes and are not only more sanitary but also preserve essential nutritional elements.