ITALIAN-AMERICANS
and the
MEDICAL PROFESSION
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I. Introduction

This study reports on the role of Italian-Americans in medical education from the viewpoint of medical sociology.[1] Focusing on the areas of recruitment and professional socialization, the effect upon Italian-Americans of ethnic stratification within the American medical system becomes clear. In this article, we will examine the organization of medicine and the process of admissions into medical schools to better understand how medical institutions-as microcosms of the larger sociopolitical structure of society-affect the recruitment of Italian-Americans into the most prestigious profession in contemporary America. General questions to be addressed include: How does one become a physician? When and why is the decision made to become a doctor? Is there a pre-medical prototype? What is the process of socialization throughout the medical career? What factors affect levels of self-esteem? To what extent are Italian-Americans represented in medical schools today?

Initially, we must explore some generalities with regard to medical school education to establish a framework for analyzing the role and distribution of Italian-Americans in medicine. The enrollment of Italian-American students and their values will be juxtaposed to the nature and organization of medicine.

II. Methodology

The methodologies utilized included participant observation, interviews, data anaylsis of medical school directories. A

questionnaire was developed and filled out by pre-medical and medical students, and is being used as a pilot study for a future profile of the Italian-American medical student.

AAMC Directory of American Medical Education (Association of American Medical Colleges, 1981-1982), catalogues of medical schools in New York State (1972-1982), and commencement programs (1981) of medical schools in the United States were used to tabulate the percent distribution of Italian-Americans as graduates of medical schools, as administrators and department chairmen of medical schools and as total enrolled. Despite the probability of error in selecting Italian surnames[2] as the basis for inclusion in the study, no such ethnic identification could have been obtained in any other more definitive manner.

In addition, a questionnaire administered to medical students in New York and abroad in Quadalajara, Mexico obtained information on family background, academic preparedness, academic experience, self-esteem, and professional orientation. Several questions were taken from AAMC and other medical-education surveys published in the Journal of Medical Education (Becker, 1961; Laserman, 1978; Gough, 1977, Milstein, 1976; Page and Herron, 1969). The use of similar questions enabled comparisions with national data.

A brief discussion of the problems of gathering information, and in obtaining a statistically valid data base is necessary to appreciate the significance of this study. Every medical

school applicant, upon taking the MCAT, is requested to fill out a brief questionnaire sponsored by the AAMC. Similarly, every medical-school student is requested to complete a questionnaire sponsored by the AAMC. However, the AAMC-a nationally prestigious organization, which determines the admissions and other policies for all American medical schools-does not request information about a respondents' ethnicity, and therefore it is impossible to retrieve information from AAMC questionnaires specific to Italian-Americans. The gathering of information was difficult for other reasons: (1) Italian-Americans are not formally designated a minority; (2) general skepticism of the role of social science in medicine; (3) the "human subjects" issue (which was used ideologically by medical school deans as a reason not to cooperate with the study, as they feared affirmative-action implications[3]); and (4) the neoconservative mood of the 1980s, which discourages individuals from thinking in terms of equal opportunity and the necessity for such a study. These factors inhibited many attempts to acquire a more representative sample. Furthermore, the data reflect the unique political structure of individual medical schools, given their histories, traditions, and public or private funding basis.

In general, any invalidity which may result reflects unavailability of data, made more difficult by the lack of cooperation among medical school administrators and deans. Every medical school in the country (totalling 126) were sent letters requesting their commencement programs for the year

ending 1981, and one follow-up letter was included to the first round of non-respondents. The sample ultimately included 91 medical schools, or 72.2% of the total. Additional effort was made to contact medical students in the New York area for an interview, and a request to fill out a twenty-five point questionnaire. Although one New York medical school (out of eleven) agreed to cooperate with the study, this phase of the study has been left for a future data to complete.

III. The Socialization and Professionalization of the Physician

Although post-war America is marked by changing and ambiguous labels for the "professional," law and medicine are unequivocally considered professions. In order to "professionalize", practitioners of occupations define an area of special expertise, create occupational organizations, establish codes of ethics, and enforce standards of dress and decorum (Caplow, 1954; Hughes, 1958; Wilensky, 1964). Of all the categories described, Goode (1961) and Freidson (1970) are quite specific about delineating criteria. They emphasize the professions control of its own work, standards, and membership. Freidson believes that the most significant criteria are those that enhance professional autonomy. Medical history and modern clinical practice certainly embody such autonomy. The very organizations of work (private enterprise, solo practice, even the recently evolving group practice) are autonomous and entrepreneurial in nature. Regional standards, diagnostic

procedures, peer review, code of ethics, fees, and occupational mobility are all controlled by the profession itself. It is not surprising, therefore, that entrance into the profession is controlled by the formal and informal recruitment mechanisms of the profession. These will be discussed in detail later, especially as they affect student admissions, location of practice, and patient referrals.

The physician in America possesses high status, wealth, and a position of power relative to his work and community. This stratifying dimension of medicine, as well as its idealization as "the" profession in America, must be kept in mind. Physicians comprise 7.3 percent of all health-care workers, R.N.s comprise 17.1 percent, and nonclerical workers, 46.2 percent. Navarro (1976), although radical in his aproach, attempts to show in what respects the health-care system is part of, and directly reflects, the present corporate structure of American society. He outlines the degrees of ownership, control, and influence by the upper class within the drug industry and private insurance companies, where big flows of capital are evident. Although health is the second largest industry, Navarro concludes that it remains centralized, monopolistic, and noncompetitive. Given Italian-Americans' predominantly blue-collar status, it can be surmised that the majority of Italian-Americans in the health workforce are at the nursing and paratechnical levels.

Physicians tend to be recruited disproportionately from the

higher socioeconomic levels. In one study, it was reported that in 1960 over half of medical school graduates came from professional or managerial families (Becker et al., 1972), and that a large proportion had fathers or other relatives who were physicians. At Cornell Medical College in the 1940s, half of the students had relatives who were physicans (Dubo, 1978). The 1970s saw significant changes, with increased minority and female enrollment (ibid.). However, recent researchers continue to report that medical school applicants represent higher-income families and professional and managerial fathers, and that they are recruited from major universities across the United States (Sullivan, 1982; Zuckerman, 1978; Laserman, 1978; Gough and Hall, 1977; Gordon, 1979; Hackman et al., 1979).

In comparison with deicisions to enter other professions, the decision to become a physician occurs early, usually before the age of eithteen. Even today, a large percentage of medical students have parents or relatives who are physicians. Obviously, such students are socialized relatively early into the values, attitudes, interests, skills, and knowledge of the profession. Gough and Hall (1977) reported that students from medical families attend more prestigious undergraduate colleges and are younger than students from nonmedical families, although the scholastic and MCAT scores of the two groups are similar. Dissimilarities were noted as between the groups regarding their general knowledge about the demands of the profession, their awareness of the importance of

"net-working", and specialty choices. Since undergraduate college has been shown to be a significant factor in gaining admission to medical school, students from medical families are at an advantage. With the costs of medical education skyrocketing well past $10,000 per year, family income has become another significant factor in the decision to enter a career in medicine.

Medical School Admissions

The highest medical student enrollment to date, which was recorded for 1966-77, amounted to 57,765 students in 116 medical schools. The freshmen class totaled 15,613 (Dube, 1980). Since there are many more applicants than spaces in American medical schools, many candidates, including Italian-Americans, have chosen to go abroad to medical schools, especially in Italy, Mexico, Belgium, the Philippines, and more recently, Grenada. In fact, it is estimated that there are 3,300 physicians in the United States who have graduated from medical schools in Italy alone since World War II. Prior to the 1960s, almost all such graduates were of Italian descent. Between 1960 and 1970, however, Americans in general found Italy a good alternative career pattern to the American school system, and it is estimated that only about half of the Americans graduating from Italian medical schools during this decade were of Italian descent. This avenue, however, has been almost completely eliminated since 1980, due to the declining credibility of Italian universities.

In a 1979 study of medical school applicants, Gordon found a high correlation between parental income and GPA and MCAT scores.[4] The average applicant to medical school had an MCAT score of over 610 and a GPA score of over 3.10. Applicants from upper-middle class homes increased to 50 percent of the total applicant pool; those from lower-income homes increased by 2 percent between the period 1974 to 1979. Applicants from upper-lower and lower-middle class homes decreased. The majority of applicants had professional and managerial parents. Women averaged from one-third to one-half of the first year class (pp. 677-702).

The next year, the following trend was reported: With an increase in first-year places and a smaller pool of applicants, the chances of being accepted increased from 39 percent in 1977-78 to 45 percent in

> 1978-79...This decline (in total number of applicants) is related to a decrease in repeat applicants...in males...and in members of majority ethnic groups...Applicants from underrepresented minority groups rose slightly (Datagram, 1980:74).

Compared with other graduate programs, medical schools have the lowest dropout rate (Milstein et al., 1976:626). There is no doubt that keen competition and a sophisticated recruitment process have enabled schools to select only the top candidates from a pool of highly qualified candidates. Medical school applicants must respond to countless questionnaires

seeking clues to their basic personality, professional orientation, and academic backgrounds, prepared by the heads of psychiatric departments within the medical schools. The intense and vigorous training-intellectuals, physical, and psychological-of the medical school experience has also encouraged this trend to test students' reactions. Because of the high capital investment required to graduate a single physician, medical school admissions policies are continuously analyzed and reviewed. Nonetheless, recruitment procedures have produced their critics.

From this brief review, it can be concluded that the medical educational system has established an institutional recruitment network, a network that includes both formal and informal mechanisms. In fact, the highly formalized structure of the system is reflected in the status ranking of medical schools themselves (to be discussed later in this article). Consequently, a highly predictable career pattern has evolved from the pre-medical student, expressing itself in whether or not the applicant is accepted (and to what school) and ultimately in the type of specialty, the location of the practice, and the search for a university-affiliated position.[5]

IV. Distribution of Italian-Americans in Medical Schools

We now turn to the data collected for the present study of Italian Americans as graduates, and as basic science and clinical faculties in medical schools.

The percent distribution of Italian-American medical students graduating in 1981, by state and region throughout the U. S., reveals a national norm of 5.6%, with the following regional distribution (see also Appendix A):

Northeastern	- 10.11%
Middle Atlantic	- 7.13%
Great Lakes	- 5.06%
Southwest & South Central	- 4.10%
Western	- 3.85%
Southeastern	- 2.50%
Northwest & Great Plains	- 2.23%

Figure I lists the percent distribution of Italian Americans as medical school graduates in 1981 by state. As one can see, there is a higher concentration of Italian-Americans in states which are urban, industrial, and with generally a higher ethnic composition. When available, the total percent of the Italian Ameican population is also listed (see also Appendix B-H for a complete breakdown by state).

V. Italian-American Medical Students in New York State

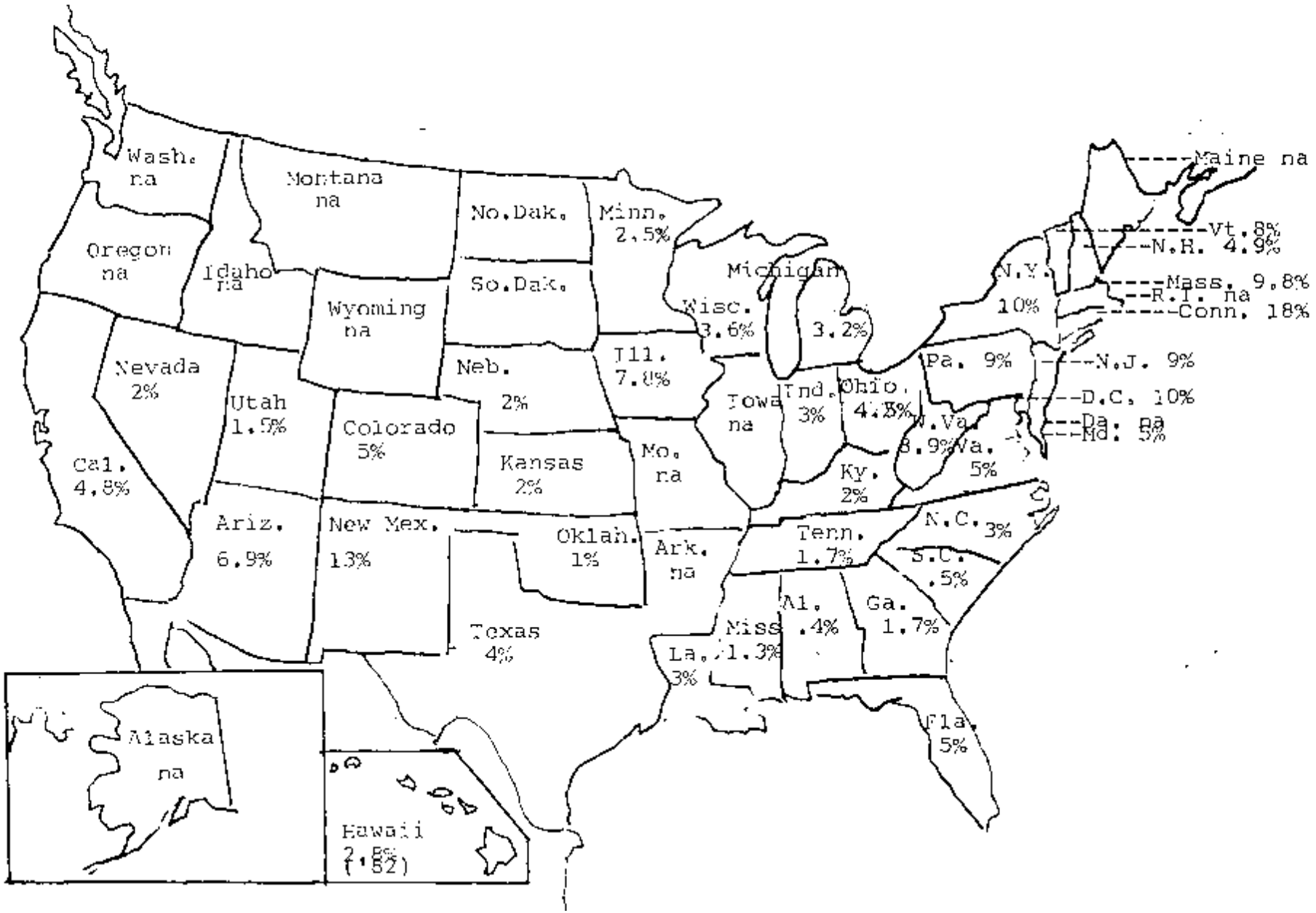
Census reports of the New York tri-state area have always confirmed the fact that this region has the highest percentage of Italian-Americans within the U. S. representing from 20-30%. It is for this reason that the writer undertook the task of analyzing the percent distribution of Italian-Americans in New York State. It is also interesting to note that New York has the highest number of medical school students enrolled

FIGURE I

PERCENT DISTRIBUTION OF

ITALIAN-AMERICAN MEDICAL SCHOOL GRADUATES

BY STATE - 1981



nation-wide.

According to Figure II, percentages are shown by a bar graph listing the eleven medical schools in New York. The state-supported schools of Downstate, Albany, SUNY-Buffalo, and Upstate/Syracuse reveal higher percentages of Italian Americans ranging from 8 to 13.3% representation. In contrast, the more prestigous and more costly private schools (such as Cornell) revealed only 2.8% Italian Americans as graduates. Einstein, which is affiliated with The City University of New York,graduated 5.5% Italian Americans in 1981.

In comparing male and female representation in the schools outlined in Figure II, some interesting conclusions can be drawn. While there is a greater ratio of male to female, females appear to have a greater presence (in comparison to their male counterparts) in the more prestigous New York schools. On the other hand, this writer surmises that they fare much lower than other ethnic women, but there is no doubt that they are more hightly represented at places like Columbia, Cornell and New York University than Italian American males (see also Appendix I for a more thorough statistical breakdown of this data).

Table I summarizes the percent of Italian American medical students attending the eleven New York State medical schools for the years 1981 to 1985. As one can see, their representation is far below their norm in the general population of the

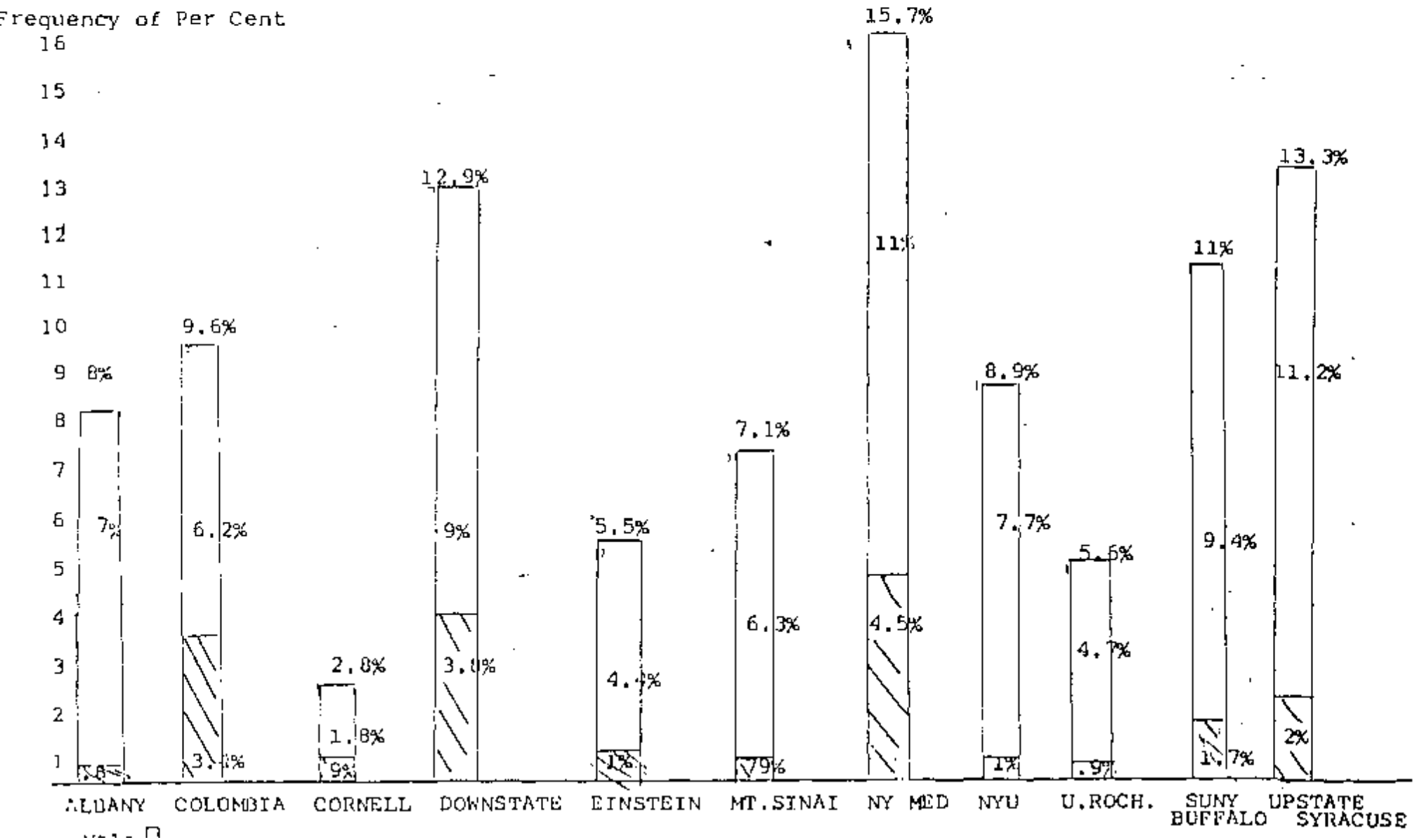
FIGURE II

PERCENT DISTRIBUTION

ITALIAN AMERICAN MEDICAL SCHOOL GRADUATES

NEW YORK STATE

CLASS OF 1981



areas in which these schools are located. 1983 was an exceptional year for enrollment figures for Einstein and Mt. Sinai (see Appendix I, J. K and L for a detailed breakdown of the figures for each medical school).

Data was available on the distribution of Italian-Americans at Downstate Medical School in Brooklyn for a twelve-year period from 1970-1981, and revealed that they represented an average of 9.5% over this time. (see also Appendix M).

VI. The Reputation of Medical Schools

In Cole and Lipton's study (1977), medical schools were given a rank order based on their reputations as judged by "full-time medical school faculty members within all clinical and basic sciences in 87 American medical schools" (p. 663) during the 1971-72 academic year. The criteria for selection were the perceived quality and visibility of the medical school, which in turn depended on the status of faculty members and the performance of medical schools as scientific and research organizations-especially in their ability to attract federal funding for research. "Schools with the greatest resources in support of research, with faculty producing the most research, and with faculty recognized and honored for their research performance, would be rated most highly" (p. 672). In the following statement, Cole and Lipton reveal the importance of medical school reputation in the career patterns of graduates:

> While reputation should not be equated with quality, it also should not be dismissed as

TABLE I
PERCENT DISTRIBUTION OF
ITALIAN AMERICAN MEDICAL STUDENTS
ATTENDING NEW YORK STATE MEDICAL SCHOOLS

1981-1985

	1985	1984	1983	1982	1981
ALBANY	-	9.3%	14.72%	7.03%	8.0%
COLUMBIA	-	8.6	5.7	9.7	9.6
CORNEL	-	5.71	6.9	10.0	2.8
DOWNSTATE	-				12.92
EINSTEIN	-	3.8	11.9	9.92	5.55
MT. SINAI	-		10.42	8.16	7.14
NEW YORK U.	8.64	4.9	9.3	13.3	8.8
NEW YORK MED					15.74
U. ROCHESTER		14.4	11.7	13.7	5.66
SUNY-BUFFALO				13.5	11.1
UPSTATE/SYRACUSE					13.3

an insignificant part of the social reality of the medical community...Reputation makes a difference because it has multiple consequences for students, for faculty members, and for medical schools. Students are concerned with the reputation of medical schools when they elect to apply to some rather than others. They are aware that the reputation of their alma mater has an impact on their subsequent career mobility; they perceive the medical school as a first, but critical stepping stone in the medical career opening or closing future opportunities.

Further, the reputation of their school influences students' self-esteem and affects perceptions of their ability within their significant reference groups. Faculty members are interested in reputations of schools when they consider appointments and promotions, not only because these reputations affect their own visibility and perceived ability in the larger medical community, but more basically because they hinder or enhance opportunities to obtain resources and facilities necessary for research. Correlatively, medical schools are concerned with their reputation because it affects their success in recruiting able faculty and outstanding students, and in obtaining resources

to carry out basic and clinical research. In short, general reputation has much to do with the actual quality of a medical school (p.772-63).

This study indicated generally high scores of perceived quality for schools in the Northeast and the West (p.676), with significantly lower rankings for New Jersey (92/94), New York Medical College (85/94), and Loyola (90/94) (p.671). The rank of a medical school was not based solely on functional performance as a research institution, but reflected other dynamics of contemporary higher education. For example, southern schools ranked lower, the reputation of the university with which the medical school was affiliated affected the latter's rank, and privately endowed schools with a longer history of providing medical education were perceived as higher quality institutions (p.676).

Table II (p.15A) lists the medical schools in the Northeast, according to rank order, and the percent distribution of Italian Americans represented at these schools for 1981. In comparing the schools' reputation with the distribution of Italian Americans, it becomes clear that the higher prestige school, the fewer Italian Americans are in attendance! The norm of Italian Americans represented in the top seven ranked schools is 8.5%; in contrast, the normative distribution among the less prestige schools is 13.9%. Several explanations appear relevant:

Economic - The more prestige schools are, undoubtedly, more costly and leave the children of immigrants at a disadvantage. Recent studies reveal that given the present state of the economy, families are opting to send their

children to the cheaper state university systems, rather than to the prestigious and enormously expensive private schools. In addition, Italian Americans are not classified as "minorities" and do not, therefore, qualify for financial assistance in many areas.

Geographic - The state-supported schools are located in central city areas, in which large Italian American populations reside, and their representation in such schools is evident by the data presented above.

Educational Network - Italian Americans have traditionally begun their education at parochial schools, and continue at the small catholic colleges. Unfortunately, this places them at a competitive disadvantage when they compete for post-graduate programs against students who have attended more elite preparatory schools, and private colleges.

VII. Pre-Medical Education and Minority Enrollment

Several reasons for the lack of preparation of Italian-Americans for the field of medicine were alluded to above. In addition, mathematical and scientific knowledge, which demand greater abstract cognitive development, leave the bilingual and the "contadino" child at a disadvantage. High grades and MCAT scores, pre-medical science curricula, professional parents, and elite undergraduate schools tend to insure entrance into medical schools--none of which Italian-Americans typically bring to the admissions process.

TABLE II

MEDICAL SCHOOLS IN THE NORTHEAST

BY RANK ORDER*

and

PERCENT DISTRIBUTION OF ITALIAN AMERICANS IN 1981

	% Distribution
1. YaleUniversity	na
2. Columbia University	9.6%
3. Cornell University	2.8%
4. Albert Einstein College of Medicine	5.5%
5. University of Rochester	11.0%
6. New York University	8.8%
7. State U. of New York/Upstate	13.3%
8. University of Buffalo	8.0%
9. Albany Medical College	11.0%
10. State U. of New York/Downstate	12.9%
11. University of Connecticut	18.0%
12. New York Medical College	15.7%
13. Loyola College	18.0%
14. College of Medicine& Dentistry/NJ	9.4%

*Source; Cole & Lipton (1977:669-71).

In studies on minority enrollment in medical schools, it was found consistently that minorities possess (1) less than average preparation in math and science; (2) less than average reinforcement of scientific subject matters; (3) less than average preparation in study skills--and doubts about becoming a doctor. Although these studies did not include Italian-Americans, the findings are quite relevant given their concentration in urban areas and their predominantly blue-collar backgrounds. Elsewhere, I have presented data on minority and foreign student enrollment during the period of highest enrollment, 1972-77 (Martorella, 1979). Unfortunately, sice Italian-Americans have not been classified as "minorities," they cannot benefit from special recruitment procedures.

Affirmative action has had its effect upon entrance into medical schools (Odeggard, 1977). Both HEW and the Association of American Medical Colleges have accumulated statistics on minority student enrollment. Hispanics and Blacks have represented up to 19 percent of first-year students, and women averages 38 ro 43 percent in the period 1974-79 (Datagram, 1980: 75). The director of research at the Student Studies Division of the Association of American Medical Colleges, Dr. Davis Johnson, reports that medical colleges have listed the follwoing ethnic groups as underrepresented minorities in medicine: Black, American Indian, Alaskan, Asian-Pacific Islander, Hispanic-

Mexican American, Hispanic-Puerto Rican, Hispanic-Commonwealth, and Hispanic-Other. A residual category "Other Minorities," incorporated South Americans and Asians. Dr. Johnson notes that Italian-Americans "haven't even been studied. I think that Italian-Americans in our reports were probably in the Caucasian group. Our literature on minority students did not have anything at all on... (Italian-Americans).[6]

Other aspects of pre-medical training require analysis. Unfortunately, there are apparently no data on patterns relating pre-medical college to medical school admission. However, deans of admissions do rank colleges (e.g. the Astin Score is average MCAT score of undergraduate school compared to norm). In addition, small catholic colleges are not competitive with elite private colleges and universities in many ways. Like other ethnic Catholic groups Italian-American parents are provincial in seeking the right and proper education for their children; especially their daughters. Often, they have opted for the small Catholic college without regard to the students ability to compete on the university level. And the importance of undergraduate education should not be underestimated: a 1975 study endicates that the undergraduate college attended is the most important factor in predicting future success in medical school (Evans et al.). In fact, at one of the top-ranked medical schools in the United States, Cornell Medical College, 1981 graduates had come almost

exclusively from the nation's top-ranked undergraduate universities (e.g., Harvard, Stanford, Columbia, Cornell, Yale, Rice, Brown, Dartmouth, and the University of Pennsylvania). Out of 107 graduates from 49 different undergraduate schools, only 4 graduates had attended the City University of New York, and not a single graduate had attended an undergraduate Catholic college or university.

VIII. Post-Graduate Medical Careers of Italian-American: As Heads of Basic Science And Clinical Department

In addition to the formal organization of medical school admissions just discussed, there is a prevalent informal network that takes the form of awarding hospital internships and residencies, sponsorships or research, and appointments to medical-school faculties, as well as patient referrals. Being part of the right colleagial network, or having access to it, has a snowball effect and virtually insures professional success (Freidson, 1975). In 1961, in a study of the distribution of "ethnics" among Chicago hospitals (Solomon, 1961), it was found that medical services were predominantly distributed by "elite Protestant," "Catholic," and "Jewish" hospitals. However, Solomon found that few Jewish doctors, and no doctors from other identifiable ethnic groups were affiliated with Prot-stant hospitals. Jewish hospitals, similarly, had high percentages of Jewish doctors. In contrast,

Catholic hospitals, although they had the highest percentage of any hospitals of presumably Catholic doctors, presented the following ethnic breakdown: Protestant doctors, 60.2 percent; Jewish doctors, 14.8 percent; Polish, Italian, and Czechoslovakian doctors, 25 percent. In addition, doctors affiliated with Catholic hospitals located their practices in less prestigious areas of the city . Soloman concluded by stating:

> There appears to be marked differences in what is involved in gaining access to hospital patients, and in the nature of colleague relationships and the resulting standards of medical practice. Elite Protestant hospitals are closed to all but members of their regular staffs. Graduating from the "right" medical school, training in the "right" type of hospital, and obtaining the sponsorship of senior colleagues in the hospital staff--all are involved in becoming a staff member... (p.463).

A review of the AAMC Directory for 1981, listing the names of the heads of basic science and clinical departments in medical schools across the country, is summarized in Table III of the 115 schools reviewed, 4% had some representation, and included predominantly schools in the Northeast in 1981. With the exception of Nevada, and New Hampshire which reveal high percentages (8.6% and 14.2% respectively), Italian-Americans are low in number. Interestingly, at the schools in which they are represented, they are usually in twenty-member departments, which is considered quite small in comparison to the other major university systems, (see also Appendix N to T).

TABLE III

ITALIAN AMERICANS AS HEADS OF
BASIC SCIENCE AND CLINICAL DEPARTMENTS

NATIONAL REGIONAL TOTALS FOR 1981

Region	#Med. Colleges	#Italian-Americans	# Others	Total #	%Italian-Americans	%Others
Northeastern	21	61	1028	1089	5.60	94.40
Middle Atlantic	25	66	1441	1507	4.38	95.62
Southeastern	13	25	705	730	3.42	96.58
Great Lakes	18	36	935	971	3.71	96.29
Southwest&SouthCentral	18	42	920	962	4.37	95.63
Northwest&GreatPlains	8	11	401	412	2.67	97.33
Western	12	18	583	601	3.00	97.00
NATIONAL TOTAL	115	259	6013	6272	4.13	95.87

Italian American Medical Student Profile

The sociologist, Bourgeois, found that "pre-meds" are highly competitive, major in undergraduate biology and chemistry, and view the huminities as least important (1975:122). Although persuasive arguments have been presented to incorporate the social sciences more meaningfully into explanations of disease and illness (Niemi, 1980; Begren and Rieker, 1980) the germ theory remains the persistent, and somewhat ideological, basis of western medicine. Put more broadly, western medicine emphasizes biological and chemical explanations of illness rather than physical, social, or psychological explanations. In contrast, ancient Greek and Roman societies stressed the importance of the physical environment and also included spiritual and philosophical interpretations of health, which the humanities later accepted as the basis for their theories.

Italian-Americans excel in the areas of teaching, music, language, culture and the arts. These areas of interest to Italians, so inextricably part of Italian culture and history, are not part of the secular and scientific socialization of doctors-to-be. Empirical data support the argument. Comparisons of pre-medical and medical students with their cohorts reveal some difference with regard to self-descriptions, attitudes, occupational values, and academic preparedness.

As part of a preliminary study, thirty-seven Italian American medical students were surveyed representing students from U. of Rochester, Cornell, Alany, NYU, Columbia, and Guadalajara. Data reflecting socio-economic and academic backgrounds was compared to other medical students. It was found that parents are generally high school graduates (with some college and professional degrees) and with incomes from $20-30,000. They had majored in biology and chemistry. Their greatest fears were reported to be: adjusting to the course load, handling the work; and having proper study skills. Their motivations for entering medicine was stated as "help other in difficulty," "be successful in business," and "to become community leaders". Unlike their non-ethnic conterparts, they do not place priority in becoming a leader in medical research or advancing in scientific medicine. They see themselves as average in originality, ability, and intelligence. They generally see their families as their major support systems, rather than other physicians who may provide the guidance and knowledge of the professional network.

NOTES

1

There are two main areas of investigation available to the medical sociologist, each of which contains numerous avenues of research on the role of the Italian-American in medicine. Medical sociology is the study of relationships among health, illness, and society. Therefore, epidemiological studies relate ethnicity and illness; however, they have typically dealt with racial minorities and Hispanic-Americans. Zborowski's People in Pain is an exception, since he compares ethnic responses to pain on the part of WASPS, Jews, and Italians. The Italians in his research were more fearful, anxiety-ridden, present-conscious, and highly emotional with regard to their illness. There is much work to be done, however, relating the Italian-American experience (immigration, poverty, blue-collar job hazards, poor housing, urban-ghetto life, Cooley's anemia, etc.) to the evidence of illness. (See also Wyatt et al., "A Survey of Ethnic and Sociocultural Issues in Medical School Education." Journal of Medical Education, 43 (1978) 627-32.)

The second area of investigation available to the medical sociologist is the education, training, and recruitment of the health professional, focusing on socialization, and professionalization of medicine.

2

Names were confirmed by a language specialist. When a

doubt occurred, it was included as an Italian surname, thereby raising the percent distribution of Italian-Americans in the listings.

3
The University of California Medical School at Davis lost a famous reverse-discrimination case to Allan M. Bakke in 1978, and this case has encouraged other medical schools to lower their enrollments of minorities. (See Chronicle of Higher Education, 1982:3.)

4
Weingartner, in "Selecting for Medical School" (1980), is critical of the cut-and-dried selection criteria of GPA and MCAT scores, and the overemphasis on basic science in the pre-medical major. He argues for more informal procedures, an abolishment of the pre-med major, and the inclusion of arts and social sciences in medical-school curricula.

5
Zuckerman clearly reveals the relationship between the type of internship and residency selected and the career patterns that result for many years thereafter (1978:458).

6
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APPENDIX A

PERCENT DISTRIBUTION

OF ITALIAN AMERICANS AS

1981 MEDICAL SCHOOL GRADUATES

NATIONAL REGIONAL TOTAL

Region	Total Med. Colleges	# Male	# Female	Total #	% Male	% Female	% Total	# In Class
Northeastern	13	138	39	177	7.88	2.23	10.11	4,751
Middle Atlantic	20	145	43	188	5.50	1.63	7.13	2,635
Southeastern	11	31	7	38	2.04	0.46	2.50	1,521
Great Lakes	20	121	42	163	3.76	1.30	5.06	3,219
Southwest & South Central	10	33	15	48	2.82	1.28	4.10	1,170
Northwest & Great Plains	3	4	1	5	1.79	0.45	2.23	224
Western	10	28	14	42	2.57	1.28	3.85	1,090
NATIONAL TOTAL	87	500	161	661	4.31	1.39	5.69	11,610

APPENDIX B

PERCENT DISTRIBUTION

OF ITALIAN AMERICANS AS
1981 MEDICAL SCHOOL GRADUATES
NORTHEASTERN REGION

# Med. Colleges	State	# Male	# Female	Total #	% Male	% Female	% Total	# In Class
1	Conn.	12	3	15	14.63	3.66	18.29	82
N/A	Maine	-	-	-	-	-	-	-
2	Mass.	21	5	26	7.95	1.89	9.85	264
1	New Hamp.	3	0	3	4.92	0	4.92	61
8	New York	95	31	126	7.54	2.46	10.00	1,260
N/A	Rhode Isl.	-	-	-	-	-	-	-

APPENDIX C

PERCENT DISTRIBUTION

ITALIAN AMERICAN

1981 MEDICAL SCHOOL GRADUATES

MIDDLE ATLANTIC REGION

Total Male + Female

# Med. Colleges	State	# Male	# Female	Total #	% Male	% Female	% Total	# In Class
N/A	Delaware	-	-	-	-	-	-	-
2	D. of Col.	28	5	33	8.76	1.57	10.34	319
3	Maryland	16	6	22	4.06	1.52	5.58	394
2	New Jersey	15	6	21	6.52	2.61	9.13	230
2	N. Carolina	7	1	8	3.11	0.44	3.56	225
5	Penn.	58	18	76	7.15	2.22	9.37	811
2	S. Carolina	1	0	1	0.53	0	0.53	188
3	Virginia	14	6	20	3.59	1.54	5.13	390
1	W. Virginia	6	1	7	7.69	1.28	8.97	78
MID ATLANTIC TOT 20		145	43	188	5.50	1.63	7.13	2,635

APPENDIX D

PERCENT DISTRIBUTION

OF ITALIAN AMERICANS AS

1981 MEDICAL SCHOOL GRADUATES

SOUTHEASTERN REGION

Total Male + Female

# Med. Colleges	State	# Male	# Female	Total #	% Male	% Female	% Total	# In Class
2	Alabama	0	1	1	0	0.44	0.44	229
3	Florida	17	4	21	4.36	1.03	5.38	390
2	Georgia	4	1	5	1.43	0.36	1.79	280
1	Kentucky	2	1	3	1.45	0.72	2.17	138
1	Mississippi	2	0	2	1.38	0	1.38	145

APPENDIX E

PERCENT DISTRIBUTION
OF ITALIAN AMERICANS AS
1981 MEDICAL SCHOOL GRADUATES

GREAT LAKES REGION

	# Med. Colleges	State	# Male	# Female	Total #	% Male	% Female	% Total	# In Class
	7	Illinois	55	27	82	5.24	2.57	7.81	1,050
	2	Indiana	14	2	16	2.79	0.40	3.19	501
	3	Michigan	14	4	18	2.49	0.71	3.20	562
	6	Ohio	30	5	35	3.86	0.64	4.50	777
	2	Wisconsin	8	4	12	2.43	1.22	3.65	329
GREAT LAKES REGION TOTALS	20		121	42	163	3.76	1.30	5:06	3,219

APPENDIX F

PERCENT DISTRIBUTION
OF ITALIAN AMERICANS AS
1981 MEDICAL SCHOOL GRADUATES

SOUTH WEST & SOUTH CENTRAL REGION

# Med. Colleges	State	# Male	# Female	Total #	% Male	% Female	% Total	# In Class
N/A	Arkansas	-	-	-	-	-	-	-
1	Colorado	6	1	7	4.62	0.77	5.38	130
1	Kansas	1	1	2	1.03	1.03	2.06	97
1	Louisiana	2	3	5	1.33	2.00	3.33	150
1	Missouri	0	0	0	0	0	0	Grads. Not Listed
1	New Mexico	8	2	10	10.67	2.67	13.33	75
1	Oklahoma	1	1	2	0.59	0.59	1.18	169

APPENDIX G

PERCENT DISTRIBUTION
OF ITALIAN AMERICANS AS
1981 MEDICAL SCHOOL GRADUATES
NORTH WEST - GREAT PLAINS REGION

# Med. Colleges	State	# Male	# Female	Total #	% Male	% Female	% Total	# In Class
N/A	Idaho	-	-	-	-	-	-	-
N/A	Iowa	-	-	-	-	-	-	-
1	Minnesota	1	0	1	2.56	0	2.56	39
N/A	Montana	-	-	-	-	-	-	-
2	Nebraska	3	1	4	1.62	0.54	2.16	185
N/A	N. Dakota	-	-	-	-	-	-	-
N/A	Washington	-	-	-	-	-	-	-
N/A	Wyoming	-	-	-	-	-	-	-
REGION TOTALS 3		4	1	5	1.79	0.45	2.23	224

APPENDIX H

PERCENT DISTRIBUTION
of ITALIAN AMERICANS as
1981 MEDICAL SCHOOL GRADUATES

WESTERN REGION

# Med. Colleges	State	# Male	# Female	Total #	% Male	% Female	% Total	# In Class
1	Arizona	8	1	9	6.15	0.77	6.92	130
5	California	15	10	25	2.90	1.93	4.84	517
1	Nevada	0	1	1	0	2.08	2.08	48
2	Utah	4	1	5	1.23	0.31	1.54	324
1	Hawaii ('82)	1	1	2	1.41	1.41	2.82	71

APPENDIX I

% DISTRIBUTION OF ITALIAN AMERICANS AS MEDICAL SCHOOL GRADUATES IN NEW YORK STATE

CLASS OF 1981

COLLEGE	# MALE	# FEMALE	TOTAL #	% MALE*	% FEMALE*	% TOTAL	ALL STUDENTS #/% MALE	ALL STUDENTS #/% FEMALE	ALL STUDENTS TOTAL
lbany Medical A	9	1	10	9.18 7.2	3.84 .8	8.0	98/79.03	26/20.97	124
olumbia Co	9	5	14	9.09 6.21	10.87 3.45	9.65	99/68.28	46/31.72	145
rnell Co	2	1	3	2.74 1.87	2.94 .93	2.8	73/68.22	34/31.77	107
nstate Dc	19	8	27	11.95 9.09	16.0 3.83	12.92	159/76.08	50/23.93	209
nstein Ei	8	2	10	6.0 4.44	4.25 1.11	5.55	133/73.89	47/26.11	180
unt Sinai Mo	8	1	9	8.42 6.35	3.23 .79	7.14	95/75.4	31/24.6	126
Medical NY	22	9	31	16.06 11.17	15.0 4.57	15.74	137/69.54	60/30.46	197
University NY	14	2	16	11.67 7.78	3.7 1.11	8.89	120/66.67	54/33.0	174
of Rochester U.	5	1	6	6.33 4.72	3.7 .94	5.66	79/74.53	27/25.47	106
NY: Buffalo SU	11	2	13	12.94 9.4	6.25 1.71	11.11	85/72.65	32/27.35	117
tate Up	16	3	19	14.16 11.27	10.34 2.11	13.38	113/79.58	29/20.0	142
TOTALS	123	35	158	10.33 7.56	8.03 2.15	9.71	1,191/ 73.2	436/ 26.8	1,627

* Top figure is the % of I-A male/female students out of the total male/female population.
Bottom figure is the % of I-A male/female students out of the total population of the college.

APPENDIX J

% DISTRIBUTION OF ITALIAN AMERICANS AS MEDICAL STUDENTS IN NEW YORK STATE

1982

COLLEGE	# MALE	# FEMALE	TOTAL #	% MALE*	% FEMALE*	% TOTAL	ALL STUDENTS #/% MALE	ALL STUDENTS #/% FEMALE	ALL STUDENTS TOTAL
Albany Medical	4	5	9	3.96 3.12	18.52 3.9	7.03	101/78.9	27/21.1	128
Columbia	12	4	16	9.68 7.32	10.0 2.44	9.75	124/75.61	40/24.39	164
Cornell	10	1	11	12.82 9.09	3.12 .9	10.0	78/70.9	32/29.1	110
Downstate	N/A	-	-	-	-	-	-	-	-
Einstein	10	3	13	11.49 7.63	6.82 2.29	9.92	87/66.41	44/33.59	131
Mount Sinai	4	4	8	6.35 4.08	11.43 4.08	8.16	63/64.29	35/35.71	98
NY Medical	N/A	-	-	-	-	-	-	-	-
NY University	19	5	24	14.39 10.56	10.42 2.78	13.33	132/73.33	48/26.67	180
U. of Rochester	10	4	14	13.89 9.8	13.33 3.92	13.72	72/70.59	30/29.41	102
SUNY-Buffalo	16	3	19	16.16 11.43	7.32 2.14	13.57	99/70.71	41/29.29	140
Upstate	N/A	-	-	-	-	-	-	-	-
TOTALS	85	29	114	11.24 8.07	9.76 2.75	10.83	756/71.8	297/28.2	1,053

APPENDIX K

% DISTRIBUTION OF ITALIAN AMERICANS
AS MEDICAL STUDENTS
IN NEW YORK STATE

1983

COLLEGE	# MALE	# FEMALE	TOTAL #	% MALE*	% FEMALE*	% TOTAL	ALL STUDENTS #/% MALE	ALL STUDENTS #/% FEMALE	ALL STUDENTS TOTAL
Albany	17	3	20	18.08 13.10	8.57 2.32	14.72	94/72.86	35/27.14	129
Columbia	5	4	9	3.97 3.16	12.5 2.53	5.7	126/79.75	32/20.25	158
Cornell	5	3	8	5.43 4.31	2.5 2.59	6.9	92/79.31	24/20.69	116
Downstate	N/A	-	-	-	-	-	-	-	-
Einstein	4	6	10	3.9 2.17	9.09 3.26	11.90	118/64.13	66/35.87	184
Mount Sinai	8	2	10	12.9 8.33	5.88 2.08	10.42	62/64.58	34/35.42	96
NY Medical	N/A	-	-	-	-	-	-	-	-
NY University	8	8	16	6.25 4.65	18.18 4.65	9.3	128/74.42	44/25.58	172
U. of Rochester	10	1	11	15.38 10.64	3.45 1.06	11.7	65/69.15	29/30.85	94
SUNY-Buffalo	N/A	-	-	-	-	-	-	-	-
Upstate	N/A	-	-	-	-	-	-	-	-
TOTALS	57	27	84	8.32 6.0	10.23 2.85	8.85	685/72.18	264/27.82	949

APPENDIX L

% DISTRIBUTION OF ITALIAN AMERICANS AS MEDICAL STUDENTS IN NEW YORK STATE 1984

COLLEGE	# MALE	# FEMALE	TOTAL #	% MALE*	% FEMALE*	% TOTAL	ALL STUDENTS #/% MALE	ALL STUDENTS #/% FEMALE	ALL STUDENTS TOTAL
Albany	10	2	12	11.11 7.75	5.13 1.55	9.3	90/69.77	39/30.23	129
Columbia	11	2	13	10.09 7.33	4.06 1.33	8.6	101/67.33	49/32.66	150
Cornell	6	0	6	9.1 5.71	0	5.71	66/62.86	39/37.14	105
Downstate	N/A	-	-	-	-	-	-	-	-
Einstein	3	4	7	2.4 1.63	6.78 2.17	3.80	125/67.93	59/32.07	184
Mount Sinai	N/A	-	-	-	-	-	-	-	-
NY Medical	N/A	-	-	-	-	-	-	-	-
NY University	6	2	0	5.8 3.7	3.39 1.23	4.94	103/63.58	59/36.42	162
U. of Rochester	12	1	13	15.19 13.33	9.09 1.11	14.44	79/87.78	11/12.22	90
SUNY-Buffalo	N/A	-	-	-	-	-	-	-	-
Upstate	N/A	-	-	-	-	-	-	-	-
TOTALS	48	11	59	8.5 5.9	4.3 1.34	7.24	564/68.78	256/31.22	820

APPENDIX M

ITALIAN AMERICAN STUDENTS AT DOWNSTATE MEDICAL SCHOOL

YEAR	# MALE	# FEMALE	TOTAL #	% MALE*	% FEMALE*	% TOTAL	ALL STUDENTS */% MALE	ALL STUDENTS #/% FEMALE	ALL STUDENTS TOTAL
1970	18	3	21	11.11 9.57	11.54 1.6	11.17	162/86.17	26/13.83	188
1971	12	1	13	6.78 5.91	3.85 .5	6.4	177/87.19	26/12.81	203
1972	17	3	20	9.77 5.07	13.04 1.52	10.15	174/88.32	23/11.68	197
1973	12	4	16	7.0 6.42	25.0 2.14	8.56	171/91.44	16/8.56	187
1974	N/A	-	-	-	-	-	-	-	-
1975	N/A	-	-	-	-	-	-	-	-
1976	N/A	-	-	-	-	-	-	-	-
1977	17	6	23	10.12 7.98	13.33 2.82	10.8	168/78.87	45/21.13	213
1978	N/A	-	-	-	-	-	-	-	-
1979	10	4	14	6.29 4.72	7.55 1.89	6.6	159/75.0	53/25.0	212
1980	13	7	20	7.92 6.13	14.58 3.3	9.43	164/77.36	48/22.67	212
1981	19	8	27	11.95 9.09	16.0 3.83	12.92	159/76.08	50/23.93	209

APPENDIX N

NORTHEASTERN REGION

# Med. Colleges	State	# Italian-Americans	# Others	Total #	% Italian-Americans	% Others
2	Conn.	10	131	141	7.07	92.93
N/A	Maine	-	-	-	-	-
4	Mass.	7	207	214	3.42	96.58
1	New Hamp.	2	21	23	8.69	91.31
12	New York	37	578	615	5.74	94.27
1	Rhode Isl.	3	46	49	6.12	93.83
1	Vermont	2	45	47	4.25	95.75
ORTHEAST TOTALS 21		61	1028	1089	5.60	94.40

APPENDIX O

MIDDLE ATLANTIC REGION

# Med. Colleges	State	# Italian-Americans	# Others	Total #	% Italian-Americans	% Others
N/A	Delaware	-	-	-	-	-
3	D. of Col.	11	162	173	5.71	94.29
3	Maryland	3	151	154	1.08	96.91
2	New Jersey	10	133	143	5.61	94.39
4	N. Carolina	10	275	285	3.36	96.54
7	Penn.	23	441	464	5.17	94.83
1	S. Carolina	0	53	53	0.00	100.00
3	Virginia	3	141	144	2.08	97.92
2	W. Virginia	6	85	91	6.59	93.41
MID ATLANTIC TOT						

APPENDIX P

SOUTHEASTERN REGION

	# Med. Colleges	State	# Italian-Americans	# Others	Total #	% Italian-Americans	% Others
	2	Alabama	3	91	94	3.22	96.78
	3	Florida	9	157	166	5.61	94.39
	2	Georgia	4	99	103	3.83	96.17
	2	Kentucky	4	123	127	3.15	96.85
	1	Mississippi	1	42	43	2.32	97.68
	3	Tennessee	4	193	197	1.90	98.10
UTHEASTERN TOT.	13		25	705	730	3.42	96.58

APPENDIX Q

GREAT LAKES REGION

	# Med. Colleges	State	# Italian-Americans	# Others	Total #	% Italian-Americans	% Others
	7	Illinois	18	412	430	4.15	95.85
	1	Indiana	0	83	83	0.00	100.00
	3	Michigan	3	133	136	2.40	97.60
	5	Ohio	11	191	202	7.25	92.75
	2	Wisconsin	4	116	120	3.22	96.73
GREAT LAKES REGION TOTALS	18		36	935	971	3.71	96.29

APPENDIX R

WESTERN REGION

# Med. Colleges	State	# Italian-Americans	# Others	Total #	% Italian-Americans	% Others
1	Arizona	2	49	51	3.92	96.08
8	California	12	421	433	2.38	97.62
1	Nevada	3	18	21	14.28	85.72
1	Utah	1	74	75	1.33	98.67
1	Hawaii	0	21	21	0.00	100.00
WESTERN TOTALS 12		18	583	601	3.00	97.00

APPENDIX S

SOUTH WEST & SOUTH CENTRAL REGION

# Med. Colleges	State	# Italian-Americans	# Others	Total #	% Italian-Americans	% Others
1	Arkansas	0	60	60	0.00	100.00
1	Colorado	4	44	48	6.66	93.33
1	Kansas	1	31	32	3.12	96.88
3	Louisiana	13	140	153	8.58	91.42
4	Missouri	13	233	246	5.36	94.64
1	New Mexico	4	59	63	6.34	93.66
1	Oklahoma	0	38	38	0.00	100.00
6	Texas	7	315	322	2.17	97.83
REGION TOTALS 18						

APPENDIX T

NORTH WEST & GREAT PLAINS REGION

	# Med. Colleges	State	# Italian-Americans	# Others	Total #	% Italian-Americans	% Others
	N/A	Idaho	-	-	-	-	-
	1	Iowa	2	67	69	2.89	97.11
	3	Minnesota	5	134	139	4.55	95.45
	N/A	Montana	-	-	-	-	-
	2	Nebraska	2	113	115	1.79	98.21
	1	N. Dakota	1	43	44	2.27	97.73
	1	Washington	1	44	45	2.20	97.80
	N/A	Wyoming	-	-	-	-	-
REGION TOTALS	8		11	401	412	2.67	97.33