ג'וינט ישראל
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THE GRAYING OF ISRAEL - IMPLICATIONS FOR HEALTH AND THE NEED FOR SERVICES

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THE GRAYING OF ISRAEL—IMPLICATIONS FOR HEALTH AND THE NEED FOR SERVICES

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ABSTRACT. This article provides a brief overview of the demographic transformation of Israel and its consequences as a background to the articles appearing in this issue. Measurements of the morbidity of the elderly and their use of health services are discussed together with the ways those differ from estimates of health status and activities of daily living. The use of epidemiological surveys in planning future services is described and the need to develop innovative models of integrated care based on the neighborhood and community is discussed.

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Key words: gerontology; health services

The fact that the population of Israel has aged rapidly was slow to be perceived. Even in 1985, neither the fact nor the implications of this demographic revolution have been fully realized, and the needed changes in the organization of human services have yet to be worked out.

The phenomenon of aging is not peculiar to Israel; all countries of the world are growing older, some faster, some slower (1, 2). In countries of Scandinavia and Northern Europe, where aging of the population has been gradual and continuous over the past 50 years or more, the society could recognize the process and adjust to it. At the other end of the spectrum, in many developing countries, recognition of the existence of a growing body of elderly is more recent, made apparent by changes in the traditional structure of tribal societies, and there is little chance of their needs being met.

The causes are many and have their roots in the lowering of fertility and the conquest of infectious diseases, together with reduced mortality throughout the life span (2). A high proportion of elderly has long been a characteristic of Jewish communities, and already in the last century, the proportion of infants in the Jewish populations of Europe was lower than that of their non-Jewish neighbors, while the proportion of the elderly was higher (3). In 1975, 14.2% of world Jewry was aged ≥ 65, and the predicted rate for the year 2000 is 16.4% (4), a figure expected to be reached by most developed nations only in 2025 (1). By the end of the century, the percentage of Jews aged ≥ 75 will rise to 7.3%, a proportion higher than that of some Scandinavian countries.

In Israel, the natural process of population aging has been compounded by the effects of the Holocaust and by the selective immigration of older groups at different times. Seven percent of those arriving in the years following 1948 were already 65 years old and 20% were aged 50 to 64 (5). The proportion of elderly differed markedly in the various groups of earlier immigrants (6), while those coming from North Africa in the early 1950s, from Poland in the early 1960s and from Russia, the U.S. and others in recent years have contained a high proportion

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of middle-aged and elderly people. The percentage of elderly in the total Israeli population has thus risen much more rapidly than would be expected from the aging of a normally distributed population—from 3.9% in 1950 to 8.4% in 1982 (5). Within the Jewish population, the change was from 3.7% aged ≥ 65 in 1950 to 9.7% in 1980 and will reach over 10% by 1990.

As Kop and Factor (7) remind us, not only has the population become older but the elderly themselves are living longer, therefore we can anticipate a considerable increase in both the proportion and the numbers of the "old-old," i.e., those aged ≥ 75. The most rapidly growing sector of the Israeli population is that aged ≥ 80. The demographic profile of the elderly is also affected by sex differentials in survival and in household composition, compounded by the poverty and illiteracy of some of the immigrant groups; all these markedly affect the utilization of long-term care services. As the population grows older, there will be more frail elderly in ever increasing need of more services that the nation can ill afford. The present and future dilemma is analyzed by Factor and Habib (8), and they, together with Ginsberg (9), make the unanswerable case for expansion of services by institutions and in the community.

The problems of providing for the needs of the elderly are by no means unique to Israel, and the recommendations of the Mann Commission (10) have marked parallels with those of some other countries (1), such as the deliberations of a recent British working group (11). Both of these committees stress the need for a multisectorial approach that goes beyond hospital and community health services and institutional care, to include pensions, special housing, social benefits and collaboration between the public, voluntary and private sectors. In other words, the focus is on the needs of the client rather than on the limited services that one or another sector is prepared to give. As for health services, "Health care is a vital, but often minor, part of the support of the older person" (2).

Measures of morbidity

Ninety-five percent of the elderly population of the world continues to live in the community, and there is scant objective data on their health status (2). Information on morbidity is derived mainly from interpretations of statistics on health service utilization and from self-reporting in different surveys. Although recalled morbidity can provide important information, as illustrated by the survey conducted by Barell and Kaplan (12), those interviewed can only report, at best, what they understand their physician to have told them (2). There are, so far, very few systematic medical examinations, by standard methods on representative population samples, that would provide a baseline in Israel or elsewhere.

Utilization of services

Elderly Jews are the highest users of primary care services in Israel, and over 97%, according to different surveys, carry health insurance (13). A systematic inquiry in 1981 showed 45% to have visited their doctor at least once, 12% twice and 7% three times or more, within the previous fortnight. The average number of visits per year (based on the patient's recall for the last quarter) was 22 per person aged ≥ 65 compared with 11 for the general population (14). Population surveys in Kiryat Ono (15) and in Baka, Jerusalem (16), confirmed this high utilization of up to 50 or more visits per year for part of the population, while there was marked underutilization for some groups. Thus, a third of the Kiryat Ono elderly saw their doctors only twice a year or less, while 10% of the men in Baka and 5.4% of the women reported visiting once a year or less. At age 80 the proportion of very infrequent users rose to 20% due to decreased mobility. The discrepancy between these findings and those reported by Ron et al. (17) may be due to selection factors, in the reporting physicians and in the characteristics of their elderly patients. There may also be a question as to the validity of reported data; there have been no systematic comparisons of recorded numbers of visits with those reported for the same populations. Moreover, the use of private physicians by those elderly who can afford it is considerable (15).

The oldest groups also reported more X-rays (25% of Jews ≥ 65 during the past quarter) and more laboratory tests (74% of those ≥ 75 during the past quarter) than did other groups (14); similar findings have been reported previously (16). Again, the reasons for the differences between findings cited here and those reported by Ron et al. require elucidation.

The elderly are also high users of acute hospital beds, and admissions to short-stay hospitals increase rapidly with age, as is documented by Halevi (18). Thirty percent of the Jewish men ≥ 65 and 23.3% of the Jewish women were admitted to hospital at least once during 1976, the latest year for which detailed national data are available. As Halevi shows (his Table 5), the admission rates differed markedly between Jews of different origins; for Arab men the rate was 29.8% for those ≥ 65 but it was only 13% for Arab women of the same age-group.

In 1976, a third of the women and slightly more of the men ≥ 65 were discharged with a diagnosis of diseases of the circulatory system; about a tenth had diseases of the CNS and special sense organs, while an additional 9 to 10% had malignant neoplasms.

Hospital data, however, give only a limited picture of morbidity and are affected by severity of disease, ability of treatment to alleviate the condition and the effects of social and economic factors on admission. Admission rates in Israel for fractured hip, for stroke or for most cancer sites probably give a fair estimate of the frequency of the condition. On the other hand, osteoarthropathies leading to limitation of movement are among the most frequent conditions reported by the elderly and found in clinical surveys, although they have a low hospitalization rate. Similarly, reported rates for hernias and hypertrophy of the prostate markedly underestimate the true prevalence, while patients with mental disease or "senility" are often not admitted to short-stay hospitals.

Health status

Studies of self-reported health status give a very different picture from that derived from utilization statistics. In Baka, Jerusalem, in 1978 (16), nearly two-thirds of the elderly men and over three-quarters of the elderly women reported the presence of one or more chronic diseases of at least 2 months' duration. A quarter of the respondents reported two or more conditions and 16%, three or more. The most frequent conditions were arthritis (15.6%), cardiovascular disease (14.4%), hypertension (14.0%), gastrointestinal conditions (11.3%) and diabetes (8.4%), and the prevalence increased markedly with age (16). This reporting was affected by the accuracy and completeness of the diagnosis and whether or not the respondent had been informed by his physician. The frequencies reported in the Kiryat Ono study (14), for instance, are higher, although the question of comparability arises due to differences in the questionnaires.

Table 1. *Self-reported physical disabilities by age, Baka neighborhood of Jerusalem, 1979 (%)*

	Age			
Disability	65–69	70–74	75–79	≥ 80
Seeing	43.4	54.4	55.9	69.2
Hearing	22.4	34.2	30.9	50.0
Chewing	39.8	39.5	44.1	48.1
Walking	29.6	28.9	32.4	61.5
Talking	10.4	9.3	6.0	21.6
No. interviewed	196	114	68	52

[a] Source: ref. 16 and unpublished data.

However, morbidity is not a reliable measure of the ability of an individual to cope in his daily life, and different individuals react quite differently to the same disease (2, 19). In addition, certain disorders, such as those affecting mobility, hearing and vision are of particular importance to the elderly (2, 16), while dental problems are among the most prevalent and the most neglected (20).

Physical disabilities are reported by a high proportion of the elderly in every published survey, although there were quite substantial differences in frequency between different countries of Europe (21). The differences between surveys in Israel (15, 16, 22–25) are less marked, although there is some variation depending on how the questions were phrased.

The results of the Baka survey may serve as a fairly representative illustration (Table 1). A quarter of those ≥ 60 had difficulty in hearing, and nearly half, difficulty in seeing. Nearly 40% reported difficulty in chewing even though many of them had false teeth, and 29% had difficulty in walking; the frequency of these disabilities increased markedly with age. When a detailed study of oral health was subsequently carried out on this population, the full extent of neglected pathology was revealed (20).

Activities of daily living (ADL)

A better measure of independence and the need for health and social support services is ADL

Table 2. *Limitations in dressing, toilettting and feeding in Kiryat Ono survey*[a] (%)

	Age					
	Total	65–69	70–74	75–79	80–84	≥ 85
Men						
Completely dependent	4.7	2.2	2.2	3.1	15.7	17.6
Partially dependent	5.7	1.8	5.7	12.5	9.8	8.8
Independent	88.6	95.2	91.1	83.3	74.5	70.6
Women						
Completely dependent	3.2	1.6	3.3	3.4	4.6	11.1
Partially dependent	9.9	2.7	10.6	13.6	17.0	38.9
Independent	85.8	94.6	85.1	83.0	78.5	50.0

[a] Based on interviews with 587 men and 689 women (15).
Data were unavailable in 0.9% of the men and 1.2% of the women.

(25). These cover the six basic functions of bathing, dressing, toiletting, feeding, getting from place to place and control of sphincters, and a score can be given to each individual depending on whether he or she can carry out each function independently.

In the Kiryat Ono study (15), 77% were completely independent in all of the first four functions, 7.7% were completely dependent on another to carry them out, and 14.1% needed some help. Half of those completely dependent were so because of their inability to bathe or shower alone. If bathing was excluded, then 3.8% were dependent and 8.0% partially so. The increase in dependency with age and the effect of sex is shown in Table 2. But even at age ≥ 85, only 17.6% of the men and 11.1% of the women were completely dependent on someone else. Of the men, 1.4% were bedbound as were 1.2% of the women, while 4.9% and 8.7%, respectively, were completely housebound (15).

The need for personal services

The elderly require the same health services as does the general population, with additions because of their special needs. Elderly persons with the same level of impairment vary markedly in their degree of autonomy (19) in daily living, and individual assessment is necessary to measure the need for health and social services. Summaries of the results of such assessments made by standardized methods on representative samples of the elderly population (26) are necessary for the planning of services. A recent Israeli study (27) has been instructive in this area. Based on the surveys of Bnei Brak (28) and Beer Sheva (unpublished), Morgenstein has shown that 7.7 to 14.0% of those ≥ 65 are in need of personal services of some kind, and that this need is experienced by a quarter or more of those aged ≥ 80. Ten percent of the elderly (23% of those ≥ 85) need home visits by a nurse; only 3.1% receive them, although the proportion of the very old so served is greater. Other needs, met to a greater or lesser extent, are physiotherapy, chiropody, laundry services and "meals on wheels."

There is no estimate in these surveys of the unmet needs for medical services, and this would require a special study. The range of personal services required (and we have omitted mention of income, housing, social and community support) illustrates the limitations of the health services alone in helping maintain the autonomy of the elderly. The provision of much needed systems of integrated, comprehensive services should be facilitated by forthcoming legislation (10).

Future trends

The prediction of future needs is, of necessity, based on extrapolation of current age, sex and other disability ratios to the makeup of future populations. The assumption is that the service needs of, say, the population of 85-year-old widows in 1995 will be the same as those of 85-year-old widows today, with an increase for population growth; this assumption is explicit in several papers in this issue (7–9, 18). There is some evidence that this may not be so and that the elderly may be healthier in the future. There is already evidence that overall mortality from coronary heart disease and stroke is decreasing in Israel (29), as is the mortality from some of the cancers, following the trend in several West-

ern countries (2, 30). In the U.S., Fries (31) has proposed the hypothesis of "natural death" according to which future populations could theoretically live a disease-free, fully autonomous life until "natural" death from biological senescence. This idea includes both the concept of a biological limitation of lifespan, averaging around 85 years, and that of compression of morbidity into the very last months or weeks of life. There is thus hope that death could become "disease-free" because of appropriate lifetime health behavior. Others, however, adduce evidence that the life expectancy of the old is continuing to increase, at least in the U.S., but with no indication of a reduction in dependency ratios (27). More than this, achievements of modern medicine, such as antibiotics, cardiac pacemakers and renal dialysis all extend the life span with more person-years spent in poor health and dependency (32). Detailed examination of Fries' hypothesis will require the prospective follow-up of representative samples of different populations with measurement of morbidity, health status and ADL over many years. Meanwhile, there is some support from the only study of this type now being conducted. In Gothenburg, Sweden, Svanborg et al. (33) are following up successive cohorts drawn every 5 years from men and women who reach their 70th birthdays. The 1982–83 cohort shows objective evidence of having more healthy hearts, lungs and kidneys than those first examined in 1971–72. Moreover, no predominant cause of death can be ascribed to 30% of those dying; they die of "old age" (Svanborg A, Department of Geriatrics and Long-Term Care, University of Gothenburg, Sweden, personal communication). Until other countries achieve similar results, however, very many years will have passed, and there is a danger that present and future generations of elderly in need of care may be neglected in expectation of the millenium (34). In Israel, changes in origin, and in the educational and economic status of the future elderly may affect their dependency pattern and their chances of being admitted to a long-term care facility (7).

For the forseeable future, however, it will be necessary to increase the scope and quality of services for the elderly in institutions, and in particular, in the community. This, at a time of diminishing resources, will require greatly increased coordination between public, private and voluntary agencies and an end to the autonomous and competing services, which result in neglect of the elderly at considerable expense. We need more innovative models of integrated care based on the neighborhood and the community, that we may heed the age-old plea of the psalmist: "Cast me not off in the time of old age; Forsake me not when my strength faileth," (Psalm 71:9).

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הזדקנות האוכלוסייה בישראל - השלכות לגבי מצב הבריאות והצורך בשירותים

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<<The>> graying of Israel: implications
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ה מ כ ו ן

הוא מכון ארצי למחקר, לניסוי ולחינוך בגרונטולוגיה והתפתחות אדם וחברה. הוא נוסד ב-1974 ופועל במסגרת הג'וינט האמריקאי (ועד הסיוע המאוחד של יהודי אמריקה), בעזרתן של קרן ברוקדייל בניו-יורק וממשלת ישראל.

בפעולתו מנסה המכון לזהות בעיות חברתיות ולהציב להן פתרונות חילופיים בשירותי הבריאות והשירותים הסוציאליים בכללם. אחד מיעדיו הוא להגביר שיתוף הפעולה של מומחים מהאקדמיות והממשלה, עובדי ציבור ופעילים בקהילה כדי לגשר בין מחקר לבין מימוש מסקנות מחקר הלכה למעשה.

המימצאים והמסקנות המוצגים בדפים הם של המחבר או המחברים וללא כוונה ליצג את אלה של המכון או של פרטים וגופים אחרים הקשורים למכון.

הזדקנות האוכלוסייה בישראל - השלכות לגבי מצב הבריאות והצורך בשירותים

מאת

א. מיכאל דייויס

בית הספר לבריאות הציבור ורפואה קהילתית, האוניברסיטה העברית-הדסה,
ומכון ברוקדייל לגרונטולוגיה והתפתחות אדם וחברה בישראל, ירושלים

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תקציר

מאמר זה סוקר בקצרה את התמורות הדמוגרפיות והשלכותיהן. נדונים בו שיעורי התמותה של הקשישים ומידת השימוש שלהם בשירותי בריאות, וכן השוני בין ממצאים אלה לבין אומדנים לגבי מצב הבריאות והמוגבלות בפעילויות יומיומיות. בנוסף מתואר השימוש בסקרים אפידמיולוגיים לצורך תכנון שירותים בעתיד, ונדון הצורך בפיתוח מודלים חדשניים לטיפול משולב על בסיס שכונתי וקהילתי.