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ACCIDENT PREVENTION AMONG THE ELDERLY: MOVING FROM HFA HEALTH POLICY TO SOCIAL STRATEGY

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Julie Cwikel
Tamara Barnea

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ACCIDENT PREVENTION AMONG THE ELDERLY:
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INTERNATIONAL VIEW

Accident Prevention
Among the Elderly:
Moving from HFA Health Policy
to Social Strategy

Julie Cwikel, PhD

Ben-Gurion University of the Negev, Beersheba, Israel

Tamara Barnea, MA

Brookdale Institute of Gerontology
and Adult Human Development, Jerusalem

ABSTRACT. In 1980 the World Health Organization (WHO) published a set of health targets to guide the health policy of its member states as part of its "Health For All by the Year 2000" (HFA-2000) initiatives. However, the translation of health targets into health and social program guidelines is a complex process. This paper illustrates this process through an analysis related to accident prevention among the elderly as conducted by Israeli researchers. Several types

93

of comparative data were used in the analysis. First, the health policy guidelines published by WHO, the United States, and Israel were compared along specific parameters. Then, mortality statistics on accidents among those aged 65 and over were compared for Israel, the United States, Sweden, and Ireland in order to examine the different components of mortality and suggest different priorities for accident prevention. Specific health policy recommendations made to prevent accidents among Israeli elderly are noted; they are compared to those adopted by Israel's Ministry of Health. Finally, exemplary community accident prevention programs from several countries that can serve as models for translating general targets into specific social programs are described.

HFA TARGETS: ACCIDENTS AMONG THE ELDERLY

Health for all by the year 2000 — this idealistic goal was declared by the World Health Organization (WHO) in 1980. Thirty-eight health targets were elaborated as the means to reach this end. Despite the endorsement of the targets by WHO member states, their translation into obtainable, operative objectives remains a challenge for each country. WHO has offered several sources of data and background material that can guide policy and programs (WHO, 1986a, 1986b, 1988a, 1988b). Using the available data, each country can decide which objectives should be given priority, which population groups to target, and how to build programs that can achieve selected goals.

One of the major obstacles in achieving a reduction in accidents is the application of existing knowledge (WHO, 1988a). Toward the diffusion of current information among policymakers and researchers, in 1989 WHO co-sponsored the first international conference on the topic of accident prevention.[1] In this paper, we illustrate how researchers in Israel analyzed several data sources to formulate a set of program recommendations for meeting targets in accident reduction. Furthermore, we describe the accident prevention programs implemented in several countries, including Israel, that may serve as model programs.

WHO Target 11 declares: "By the year 2000, deaths from accidents should be reduced by at least 25%, through an intensified effort to reduce traffic, home and occupational accidents" (WHO, 1986a, p. 48). Children and the elderly constitute the populations

most at risk (WHO, 1988a). We focus on a specific age group, those over 65, for whom accidents are a major source of morbidity and mortality.

Accident prevention requires moving from the global to the national and community level, from macro goals to the micro level of program planning and implementation. In this paper, we initially compare the WHO goals for accident reduction on specific parameters with the targets formulated by Israel and the United States. Second, in order to assess the impact of accidents on the health of those over age 65, background and mortality statistics are compared for several countries. These analyses provide a broad picture of the health of various countries and an indication of the extent of mortality from several types of accidents (motor vehicle accidents, falls, other accidents) in order to define priorities in program planning. Specific goals are recommended for Israel and compared with the most recent formulation of health targets published by the Ministry of Health (1989). Then, these analyses are used to discuss the problems inherent in the formulation of realistic goals for health policy. Finally, to illustrate how different countries have attempted to implement preventive interventions, several accident prevention programs are described.

The choice of the elderly and accidents as the subject for this analysis was not arbitrary. This is one of the areas where significant reductions in morbidity and mortality that have an appreciable impact on the health of older persons can be achieved.

- Despite the connotations of chance or luck in the word "accident,"[2] they are not random events but can be predictably associated with certain demographic, medical, and social characteristics (Campbell, Reinken, Allan & Martinez, 1981; Haddon, 1970; WHO working group, 1984). Identification of high-risk groups or situations can be the basis for the development of effective preventive interventions.
- In most European or Western countries, those over age 65 constitute the fastest growing sector of the population, with the proportion of "very old" (those over 75) and "oldest old" (those over 85) growing at a particularly fast rate (Cnaan, Olsson & Wetle, 1990; Davies, 1990; Macarov, 1989).

• Accidents often result in injuries that may precipitate an irreversible decline in function, leading either to permanent dependency or death (WHO Working Group, 1984). Furthermore, accidents are one of the leading causes of mortality in the elderly, ranking third after cardiovascular diseases and cancer (Davies, 1984).

WORLD HEALTH ORGANIZATION GOALS

The World Health Organization based its health targets on a concept of health that expands on the traditional biomedical model to encompass other professional approaches. This WHO definition states that health is a state of physical, mental, and social well-being, and not only an absence of disease and disability (WHO, 1986a).

The methods WHO proposed for achieving these goals center on certain themes underlying the formulation of specific health targets. They are:

1. Ensuring equity of access to health care.
2. Encouraging health promotion and prevention of disease.
3. Participation of the consumers of health care services in health promotion in an informed, motivated fashion.
4. Multisectoral cooperation to establish the prerequisites of health, especially in the physical, economic, and social environments.
5. Emphasis on primary health care over hospital-based services.
6. Establishing international cooperation to help to solve certain health problems (e.g., malaria, AIDS) (WHO, 1986b).

Within the framework of these general themes, specific targets were developed in several major areas: achievement of equity and reduction of preventable morbidity and mortality, promotion of healthy lifestyles and environments conducive to health, and the provision of adequate and accessible services to all.

The specific target relating to accident reduction is included within the framework of reduction of preventable morbidity and

mortality. WHO suggested the preventive policies and programs (WHO, 1986b):

1. Elimination or reduction of hazards, especially at home, at work, or on the roads. Design of safer goods and vehicles. On the national level, these changes can be encouraged through legislation and economic incentives.
2. Increase awareness of consumers, health practitioners, and public servants about safety.
3. Establishment of epidemiological surveillance systems.

COMPARISON OF POLICIES
ON ACCIDENT PREVENTION

Health policy is reflected in the formulation of health targets. Countries vary in their available resources, in their priorities, and in the infrastructure available for provision of services and for monitoring population changes in behavior, morbidity, and mortality. However, documenting success in attaining program goals requires not only programmatic specificity but also the availability of data to evaluate changes in health and functional status. We compare the goals of WHO, Israel, and the United States (whose targets are the most detailed).

When moving from overall goals to specific program health targets, it is useful to categorize targets along three parameters (Barnea, 1987).

1. *The level of programmatic specificity.* For example, a general target could be to reduce accidents, while a specific target could be to reduce home accidents that result from poisonings.
2. *The extent to which the target is quantifiable.* A qualitative goal could be to increase the awareness of health care professionals about methods of preventing accidents. An example of a quantitative target is: By the year 2,000, 80% of persons over 65 will be able to name three sources of risks for home accidents (e.g., slippery rugs, poor lighting, unlabelled drug bottles).
3. *Whether the target relates to process or outcome measures.* In

program planning, a distinction is made between those elements that are *inputs* to program change (budget, laws, manpower) and *process goals*, such as increasing knowledge among the public or health care professionals, or improving data collection. Both inputs and process goals can ultimately assist in attaining *outcomes*, such as reduction in morbidity and mortality from accidents.

The WHO targets on accident prevention are, for the most part, not formulated in an age-specific fashion. In those cases where targets were formulated specific to accident prevention among children (e.g., with respect to safety restraints in motor vehicles), we have excluded them. This comparison, as described in Table 1, shows that the targets defined by the World Health Organization are both general and specific, both qualitative and quantitative, but relate to outcomes and not process (WHO, 1986b). However, Israel's targets as described by the Ministry of Health in 1985, are general, qualitative, and process goals (Israeli Ministry of Health, 1989). By contrast, the targets of the United States are quite detailed, specific for different types of accidents, and for the most part are quantitative (DHHS, 1986).

The advantages of targets as formulated by the United States are multiple. Breaking down general targets into programmatic specifics encourages a division of responsibility between different health service sectors, allows progress toward the targets to be periodically evaluated by means of quantifiable indicators, and ultimately establishes the success or failure to meet the target. For example, in 1985 the United States re-evaluated its progress toward a reduction in deaths from falls to 2.0/100,000 by the year 2,000 and determined that the target was probably not attainable (DHHS, 1986). Part of the difficulty stemmed from the increasing proportion of those over 75 in the population. A recommendation was made for greater investment in injury-prevention programs.

In general, morbidity data is used as the basis for program planning. While morbidity data on infectious diseases exist, accidents are reported in the WHO statistics only as a cause of mortality. Therefore, standardized mortality rates—standardized for age and population size (SMR)—form the basis of crossnational comparisons

TABLE 1. Comparison of WHO, Israel and United States Targets Relating to Reduction in Accidents in the General Population

Target Description	General/ Specific	Qualitative/Quantitative	Process/ Outcome
I. WHO (WHO, 1986)			
A. Reduction by 25% of accident deaths	general	quantitative	outcome
1. Reduce mortality from road accidents to > 20/100,000	specific	quantitative	outcome
2. Reduce differences in sex, age, SES groups	general	qualitative	outcome
3. Reduce occupational accidents by 50%	specific	quantitative	outcome
4. Significantly reduce home accident mortality	specific	qualitative	outcome
II. ISRAEL (Ministry of Health, 1985)			
1. Develop prevention guidelines for home poisoning, work, and road accidents	general	qualitative	process
2. Develop data base on accidents	general	qualitative	process
3. Identify risk factors for high risk groups	general	qualitative	process
III. U.S.A. (USDHHS, 1986) (Selected targets)			
A. Health Promotion by 1990			
1. Reduce traffic deaths to > 18/100,000	specific	quantitative	outcome
2. Reduce deaths from falls to 2/100,000	specific	quantitative	outcome

TABLE 1 (continued)

Target Description	General/ Specific	Qualita- tive/Quanti- tative	Process/ Outcome
3. Reduce drowning deaths to 1.5/100,000	specific	quanti- tative	outcome
4. Reduce hot-water scalding requiring medical care to 2,000/yr.	specific	quanti- tative	outcome
5. Reduce deaths from home fires to 4,500/year	specific	quanti- tative	outcome
6. Reduce deaths from firearms to 1,700/year	specific	quanti- tative	outcome
B. Risk Reduction			
1. 75% of cars with automatic restraint protection	specific	quanti- tative	process
2. 75% of homes with smoke detectors	specific	quanti- tative	process
C. Service Improvement			
1. 75% of towns with population< 10,000 can be reached by ambulance in 20 mins.	specific	quanti- tative	process
2. All injured persons will have access to trauma or burn centers	specific	qualit- tative	process
3. 90% of population will have access to poison center	specific	quanti- tative	process
D. Data Requirements			
1. 75% of states will have unified injury data	specific	quanti- tative	process

between selected countries. Ireland has a similar population base and per capita GNP (Gross National Product) to Israel. Data from the United States were included in the crossnational comparisons because the monitoring of accidental deaths forms the basis of its evaluation of its progress toward the WHO targets. Sweden was selected as an example of a country with an extensive social service system and a relatively high GNP. The countries included in the WHO data base on quantitative indicators of the health targets for the European region are listed in Appendix A.

INTERNATIONAL COMPARISON OF MORTALITY STATISTICS

Comparison between countries on health status and the health-care system can be made on a variety of indicators (see Rosen, 1987 for the full range of indicators and the Quantitative Indicators of WHO, 1987 for data). However, there is no question that health and social services available are affected by the GNP in each country. As Table 2 shows, the United States and Sweden can be ranked among the wealthiest countries, with GNPs of over $10,000 per

TABLE 2. Comparison of Selected Countries on Life Expectancy, All-Age Accident Mortality Rate, and Health Resources

	ISRAEL	U.S.	SWEDEN	IRELAND
Data Year	1984	1983	1984	1983
Population in Thousands	4,200	234,000	8,400	3,500
Life Expectancy				
Male	73.2	71.0	73.9	70.3
Female	76.7	78.3	80.1	76.0
Accident Mortality (all ages, SMR per 100,000)				
all external causes	40.1	39.5	61.0	53.4
motor vehicle accidents	11.6	18.6	9.7	18.1
Per Capita GNP ($)	5,148	14,013	11,907	5,205
Health Share in GNP	7.3%	10.6%	9.8%	7.4%

capita income. Israel and Ireland have more moderate levels of income. Life expectancy is highest in Sweden and lowest in Ireland. Women in all countries enjoy longer life expectancy, from seven years in the United States to only 3.5 years in Israel.

Accident mortality is based on the sum of ICD-9[3] codes for accidents (E47-E53), which represent deaths from motor vehicle and traffic accidents; accidental poisoning; falls; accidents caused by fires, drowning, machinery, firearms; accidental drug ingestion; and the delayed effects of accidents. The relationship with a given country's GNP is not straightforward, since Israel and the United States rank the lowest, with Ireland and Sweden within the midrange. Other countries such as France and Hungary have high mortality rates, both for all ages (e.g., Hungary has an SMR of 77.2 from all external causes), and among the elderly in particular (WHO mortality data, 1986). The most likely explanation of the variability in accident rates among countries is that while standard of living is associated with mortality from accidents, other social variables reflecting life style also play their role. In analyses of young-adult mortality, social indicators such as ethnic diversity and literacy rates together with GNP explain variance among different countries in mortality from accidents, primarily motor vehicle accidents (Goldsmith, 1986).

In Table 3, the relative distribution of causes of accident mortality in older-age and gender groups is presented. Shown in the tables are SMRs among men and women separately, for the ages of 65-74 and over 75. The United States has a low level of mortality from each type of accident. Israel has particularly high rates of mortality from other external causes (for example, burns and poisoning) in both men and women, and from falls among women over age 75. Ireland has a low level of all-cause accident mortality among those under age 75. However, there is a relatively high mortality rate from motor vehicle accidents among both men and women and from falls among women over age 75. In Sweden, those over age 75 have a relatively high mortality rate from falls, and there is a high rate of mortality for men from other external causes.

The mortality data confirm that falls rank as the largest single cause of accidental death among the elderly, and should therefore be given priority in accident-prevention programs. This was also

TABLE 3. Comparison of Standardized Mortality Rates from Accidents: U.S., Israel, Ireland, Sweden, Rate per 100,000, 1983, 1984

Men & Women Aged 65+

Country

Accident		U.S.	Israel	Ireland	Sweden
motor vehicle					
age 65-74:	m	23.1	22.5	31.1	15.0
	f	12.2	24.2	15.9	7.7
age 75+:	m	42.3	46.0	52.8	35.4
	f	16.1	19.7	31.1	11.0
falls					
age 65-74:	m	13.6	8.4	18.7	19.2
	f	7.5	12.9	14.3	13.3
age 75+:	m	71.3	65.1	79.2	138.5
	f	61.1	98.7	155.7	136.2
other external					
age 65-74:	m	34.9	60.8	19.5	72.0
	f	15.7	46.8	12.1	27.1
age 75+:	m	74.2	174.4	56.7	107.5
	f	42.2	110.1	43.6	44.4
Total from accidents					
age 65-74:	m	71.6	91.7	69.3	106.2
	f	35.4	83.9	42.3	48.1
age 75+:	m	187.8	288.4	188.7	281.5
	f	119.4	228.5	230.4	191.6

the recommendation of the WHO in selecting priority areas for research in the HFA program (WHO, 1988b).

HEALTH POLICY FOR THE YEAR 2000 IN ISRAEL

Tentative quantitative targets for the year 2000 were suggested for Israel based on a 25% reduction in the current mortality from accidents. The formulation that Israel could adopt could be presented in the following manner.

By the year 2000:

- Mortality from all external causes among those aged 65-74 will not exceed 65/100,000.
- Mortality from all external causes among those aged 75 and over will not exceed 193/100,000.
- Deaths from motor vehicle accidents among those aged 65-74 will not exceed 18/100,000.
- Deaths from motor vehicle accidents among those age 75 and over will not exceed 24/100,000.
- Deaths from falls among those aged 65-74 will not exceed 8/100,000.
- Deaths from falls among those aged 75 and over will not exceed 63/100,000.

In 1989, the Israel Ministry of Health published the following target on accident prevention, relevant to the elderly:

> Reduction of motor vehicle deaths by 15%, occupational and other accidents by 25%. (Israel Ministry of Health, 1989, p. 27)

The measures suggested for achieving these goals include: (1) implementation of the plan by the Ministry of Transport to expand infrastructure, education, and law enforcement to reduce motor vehicle accidents; (2) update and enforce regulations regarding building codes and consumer product safety; (3) improve education for the prevention of accidents, especially among high-risk groups such as the elderly; (4) training in first-aid skills; and (5) establish routine information system on accidents and their causes.

Although these targets are more specific than those previously published, they are not quantitative, except for the general mortality target. Each of these intermediate goals could have been formulated in a specific, quantitative fashion, allowing researchers to later assess whether goals have been attained.

PLANNING FOR FALL PREVENTION

There is a general trend in Western countries to register a decline in fall mortality (WHO Working Group, 1984). The reasons for this

downward trend are as yet unknown, although Deborah Lambert and Richard Sattin (1988) have speculated that it may be due to improvements in housing construction that have reduced environmental hazards; increased dietary intake of calcium and estrogen replacement therapy for women, which has improved bone strength; and improved medical care and services, which has reduced case-fatality rates. In Israel, the rate of fall mortality has declined from 1974 to 1986, so that the rate of fall mortality among those aged 65-75 had already decreased by 1986 to 8.3/100,000, a level that almost achieves WHO's HFA target (Cwikel, 1990; WHO Vital Statistics, 1988). However, whether or not this temporal trend will be maintained is uncertain; it requires a longer-term follow-up.

Despite the reductions in mortality, falls remain the primary cause of accident morbidity and mortality among the elderly; preventive intervention is essential. What models for prevention programs are available? At present there is a dearth of evaluated, effective, fall-prevention programs in the literature (Gibson, Andres, Isaacs, Radebaugh & Worm-Peterson, 1987; Sattin, Nevitt, Waller, & Seiden, 1989). In several countries, accident-prevention programs are being planned or are in progress in order to reduce falls and their adverse outcomes, and other home accidents among the elderly. Most of the programs described in the literature have been either among a select group (e.g., within a medical cachement area) or on the community level; there are few at the national level. In Table 4, five different types of community programs for the prevention of falls, injuries, or home accidents are presented. They are described by study design, intervention methods, outcome measures, and sectorial involvement in the intervention program.

The most comprehensive program was attempted in Sweden, where education and home-hazard checklists were used by health and welfare workers in home visits to increase awareness of how community-dwelling elderly could make their homes safer (Schelp & Svanstrom, 1987). The intervention was part of community-wide effort to reduce accidents in all ages, with a focus on home, occupational, and road accidents. The intervention was undertaken after accident morbidity, and mortality monitoring identified these as the most prevalent types of accidents. Although there was a reduction in the rate of home accidents among the elderly, and among those

TABLE 4. Summary of Exemplary Community Fall-Prevention and Home-Accident Prevention Programs

Place/ Name of Study/ Authors	Design and Description of Program
Birmingham, UK. Home Physio- therapy for Fallers (Obonyo, Drummond, Isaacs, 1984)	Random allocation to two treatment groups. One group received long course (average 12 sessions) of home physical therapy. The second group received short course of less than 3 visits.
Portland, OR, USA Kaiser Permanente (Hornbrook & Wingfield, 1986)	Randomized Trial, N=2,500 Control group & experimental group received home safety audit & publication. Experimental group received assistance in completing home repairs, health education workshops, and screening for vision/hearing decifits.
Skaraborg County, Sweden Community Intervention, (Schelp & Svanstrom, 1987)	Quasi-experimental community study with pre- and post-intervention measures. One town with accident prevention program and one town without. Exhibits & home visits with hazard checklist, advice on safety products.
San Francisco, CA, USA. Community & Home Injury Prevention Project for for Seniors (CHIPPS) (Dowling et al., 1988; Saunders et al., 1988)	Pre-test, post-test design with participants as own controls. 400 ambulatory fallers received home safety audit & medication profile, home repair & pharmacist counselling.
Jerusalem, Israel Ministry of Health Fall Prevention National Media Campaign (Ben-Sira, 1989)	Pre-test, post-test of media campaign aired on national prime-time TV about fall prevention in living room & bathroom. Effect of campaign tested in 2 neighborhoods, with supplemental lectures and individualized counseling.

Outcome Measures/ Results	Sectorial Involvement
Falls, changes in balance mobility after 4 months. Results: Both groups improved in balance & mobility.	Community medical practice.
Falls & fall-related use of medical services, 24 months follow-up Preliminary results: Reductions in both groups in self-reported falls.	HMO Primary Care.
Home accident injuries, awareness of risks. Falls. Results: Decrease in home accidents among the among elderly in 3-year follow-up.	Municipality, National Health Service, Welfare Services. Part of all-age, multi-sector program.
ADL, fear of falling, falls. Falls monitored for 6 months prior to and & after intervention.	Dept. of Public Health, youth volunteers, local business, community council.
Awareness of home hazards, reduction in home hazards. Results: 36% recalled TV spots, but only small percentage (1-7%) changed specific home hazards in - month follow-up.	National health education depart- ment of the Ministry of Health, public television, public health nurses.

over age 75 in particular, age-specific rates of falls and information on burns and other specific types of accidents were not reported. Knowledge of accident risks improved in the total study population.

Increasing awareness of environmental hazards and the preventability of accidents is a process goal, assumed to be critical in behavior directed toward accident prevention. Most of the programs used a combination of process and outcome evaluation measures. The Israeli national fall-prevention media campaign used process outcome measures, partly because the follow-up was only for six months (Ben-Sira, 1989). A longer follow-up period would have permitted the examination of changes in fall and home accident morbidity, and might have supported the hypothesis that awareness of accident risks reduces the incidence of accidents.

Since four out of five programs combined different intervention strategies, it is somewhat difficult to ascertain which element of the program (e.g., home-safety checklists, health education, screening for sensory problems, medication review) was in fact efficacious. The exception was the study by Obonyo, Drummond & Isaacs (1984), which compared two "dosages" of physiotherapy (3 vs. 12 visits), and in which the smaller dosage was found to be as effective in preventing future falls as the larger one.

The CHIPPS program in San Francisco and the Skaraborg County Project in Sweden demonstrated creative coordination between different sectors in the public service (Dowling, Pasick, Looper, Saunders, Jablon, 1988; Schelp & Svanstrom, 1987). Especially notable is the use of youth volunteers and volunteers from pensioners' organizations to make home repairs and home visits, respectively.

Some of the preventive programs, such as the CHIPPS program or the home physiotherapy program, were directed at older persons who had already fallen and thus constitute a high-risk group. Other programs were aimed at the general public, community-dwelling elderly, or medical practitioners coming into contact with the elderly or a combination of groups. One indirect consequence of some of the community accident-prevention programs is that they raise the level of awareness among the health-care practitioners to issues of accident prevention. However, this process goal was not directly measured in any of the programs.

DISCUSSION

The comparative analyses of mortality statistics provide a valuable data source when health policy is being considered. It indicates the low levels of mortality already attained by some countries (usually with high GNP and extensive health and social services), indicating levels at which to set similar attainable goals. Israel, for example, should devote specific attention to falls prevention and accidents from other external causes, while in other countries, such as Ireland, more attention may be needed to prevent deaths from motor vehicles. Although mortality from accidents appears to be decreasing among older persons, the decrease does not appear to be sufficient to absolve health planners and practitioners from ensuring its continued decline. For example, hip fractures in the elderly are usually the result of a fall. Dafna Alkalay (1982) analyzed the rate of hip fractures over a decade in the Negev region of Israel, and found that there was an increase over and above what could have been expected from the increase in the numbers of elderly persons. Similar results have been reported from Scandinavia (Fransen & Kruse, 1983; Lundkvist & Jensen, 1989).

These analyses rely heavily on mortality statistics which have a number of inherent problems in terms of translation into public policy. Despite the basis of mortality on uniform ICD codes, there may be varying interpretations from country to country on how to code specific instances of accident mortality (Van Atteveld, Broeders, & Lapre, 1987). If the error is systematic and not random, this can adversely bias the reported statistics. However, the countries selected for comparison were known for reliable reporting (Rosen, 1987).

The lack of detail in these mortality statistics makes it very difficult to know what the exact causes are that contribute to the "other external causes" category and therefore hampers attempts to identify high-risk groups or plan preventive interventions.

Another important caveat on using these data for planning preventive interventions stems from the difficulty in relating morbidity to mortality. We assume that to achieve the 25% reduction in mortality, an even greater decrease in morbidity (e.g., injurious acci-

dents) is required. There are no standard reporting guidelines for nonfatal accidents, which are, after all, the bulk of accidents. It is necessary to develop unified codes based on an international consensus that will reflect accident morbidity such as falls, pedestrian accidents, poisonings, and burns. Reliance on self-reporting by the elderly of accident incidence can easily underestimate the true incidence of accidents, particularly those that do not result in a visit to a medical practitioner (Cummings, Nevitt, & Kidd, 1988).

In the meantime, we will need to rely on available morbidity data. In 1985, the Israel Central Bureau of Statistics conducted a survey of a representative sample of Israeli people over the age of 60. An analysis of survey data on those 65 and over indicated that the annual incidence rate of falls was 25% of all respondents (Cwikel, 1990); also, 1.9% reported being involved in a motor vehicle accident and 1.2% reported another type of accident (e.g., burn, poisoning) (Israeli Central Bureau of Statistics, 1986). These data can form the basis by which to monitor changes in accident morbidity among the elderly. A repeat survey is being planned which will provide data on the changes in accident morbidity over time.

How can policy and program planners contribute to the target of accident prevention? On the regional and national levels of service delivery, health and social planners need to lobby for safer environments in both the public and private sector. Many accidents are attributable to poor lighting, uneven or slippery walking surfaces, lack of handrails, and unsafe stairways, all of which can be altered architecturally in public housing. In the major cities, there are areas where older residents are concentrated in such housing, and volunteers, both young and older, can be mobilized to make safety improvements there.

On the local level, health care practitioners should be able to identify older persons at high risk for home accidents. The preferable outreach model is a multidisciplinary geriatric team that encourages identification of treatable medical, social, and functional problems in this population. Some of these social risk factors include: living alone, depression, cognitive decline, poor functioning in activities of daily living, and poor self-rated health (Cwikel, Fried, & Galinsky, 1990). Medical risk factors include deformities of the lower limbs; specific medical diagnoses, such as Parkinson's or

heart disease; use of psychotropic medications, tranquilizers and polypharmacy; gait and balance disturbances; poor vision and hearing; and a previous history of home accidents (Cwikel, 1990; Gibson et al., 1987). Geriatric team members in a home visit can evaluate environmental hazards and suggest improvements. Attention should be paid to hazards such as small, slippery rugs; cluttered passageways; wires along the floor; poor lighting; and unsafe storage of poisons and cleaning materials. Handrails are needed in the stairways and grab bars in the bathroom. Health practitioners also have a role in educating their clients about what they themselves can do to keep the home environment safe and to prevent accidents.

CONCLUSIONS

Despite the supporting data and documents made available by the World Health Organization, the attainment of HFA-2000 targets may remain wishful thinking unless specific steps are taken to ensure that global goals become local health and social policy. Using comparative analyses of policy and mortality statistics, it is possible to recommend priorities in accident prevention, and develop quantitative guidelines that can form the basis of attainable health policy. Once targets are program-specific and quantifiable, monitoring of accident morbidity and mortality will indicate the extent to which Health for All-2000 targets have been attained. It is necessary to delineate both process goals and outcome goals, so that the relationship between morbidity and mortality, for example, can be monitored. Ultimately, however, health policy requires implementation. A review of programs conducted in different countries indicates that both community and national programs with a multi-sectoral approach are feasible strategies for the prevention of accidents in the elderly.

NOTES

1. WHO together with the Karolinska Institute of Sweden; Swedish health, welfare and insurance groups; the European Consumer Product Safety Association; and the Centers for Disease Control of the United States sponsored the First World Conference on Accident and Injury Prevention in Stockholm, Sweden, on September 17-20, 1989.

2. Many American researchers, taking their cue from Haddon (1970), prefer

to use the term "injury control or injury prevention" which avoids such connotations. We continue to use the word "accident" to correspond to the WHO terminology.

3. International Classification of Diseases, 9th Edition.

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APPENDIX A

Countries Included in WHO Data Base 1986

Albania	Malta
Austria	Monaco
Belgium	Morocco
Bulgaria	Netherlands
Czechoslovakia	Norway
Denmark	Poland
Finland	Portugal
France	Rumania
Germany, Democratic Republic	San Marino
Germany, Federal Republic of	Spain
Greece	Sweden
Hungary	Switzerland
Iceland	Turkey
Ireland	USSR
Israel	United Kingdom
Italy	Yugoslavia
Luxembourg	

ג'וינט ישראל
מכון ברוקדייל לגרונטולוגיה
והתפתחות אדם וחברה בישראל

JOINT (J.D.C.) ISRAEL
BROOKDALE INSTITUTE OF GERONTOLOGY
AND ADULT HUMAN DEVELOPMENT IN ISRAEL

מניעת תאונות אצל קשישים:
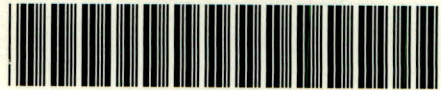### מעבר ממדיניות של "בריאות לכל" לאסטרטגיה חברתית

פרסומי מחקר

ג'ולי צוויקל
תמרה ברנע

המכון

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.

20477

שם המחבר צווייהל, ג'ולי: ברנע, תמר

שם הספר מניעת תאונות אצל קשישים:

מעבר ממדיניות של "בריאות...

חתימה	תאריך	שם השואל
		מכון ברוקדייל: הספריה

מניעת תאונות אצל קשישים:

מעבר ממדיניות של "בריאות לכל" לאסטרטגיה חברתית

ג'ולי צוויקל   תמרה ברנע

תקציר

ב-1980 פרסם ארגון הבריאות העולמי (WHO) שורה של יעדי בריאות שנועדו
לשמש קווים מנחים לתכנון מדיניות הבריאות במדינות החברות בארגון.
פרסום היעדים הללו היה חלק מיוזמת הארגון ל"בריאות לכל עד שנת 2000"
(HFA-2000). אולם, המעבר מיעדי בריאות כלליים לקווים מנחים לביצוע
תכניות רווחה ובריאות הוא תהליך מורכב. המאמר מדגים תהליך זה
באמצעות ניתוח מניעת תאונות אצל קשישים שבוצע על-ידי חוקרים
ישראלים. במסגרת הניתוח נעשה שימוש במספר סוגים של נתונים. בתחילה
נעשתה השוואה בין הקווים המנחים של מדיניות הבריאות שפורסמו על-ידי
WHO, לבין אלה שפורסמו בארצות-הברית ובישראל, על-פי מצדים ספציפיים.
לאחר מכן נערכה השוואה בין ישראל, ארצות-הברית, שוודיה ואירלנד,
לגבי נתוני תמותה כתוצאה מתאונות בקרב בני 65 ומעלה. זאת כדי לבחון
את מרכיביה השונים של התמותה ולהצביע על עדיפויות שונות במניעת
תאונות. מובאות מספר המלצות ספציפיות לנקיטת מדיניות למניעת תאונות
בקרב הקשישים בישראל ונערכת השוואה בין המלצות אלה לבין ההמלצות
שאומצו על-ידי משרד הבריאות בישראל. לבסוף, מתוארות תכניות לדוגמה
למניעת תאונות הנקוטות במספר ארצות, אשר יוכלו לשמש כמודלים
המתרגמים יעדים כלליים לתכניות חברתיות ספציפיות.