

DIALOG(R)File 484:Periodical Abstracts Plustext
(c) 1999 UMI. All rts. reserv.

03971950 SUPPLIER NUMBER: 98458724 (THIS IS THE FULLTEXT)

Emerging concepts of health and health promotion

Raphael, Dennis

Journal of School Health (IJSH), v68 n7, p297-300

Sep 1998

ISSN: 0022-4391 JOURNAL CODE: IJSH

DOCUMENT TYPE: Commentary

LANGUAGE: English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 2588

ABSTRACT: Raphael explores the emerging conceptions of health and health promotion and considers the implications for school health personnel. He presents examples of practical activities that incorporate these emerging ideas.

TEXT:

The meanings of health and health promotion have been transformed over the past decade. Influenced by the World Health Organization (WHO), health is seen as more than avoiding illness. Similarly, health promotion involves more than helping people to choose healthy lifestyles. An emphasis on values to guide health promotion activities is apparent as is a focus on the broader determinants of health. This commentary explores these emerging conceptions and considers the implications for school health personnel. Examples of practical activities that incorporate these emerging ideas are presented.

HEALTH PROMOTION PRINCIPLES AND VALUES

Health promotion in Canada and Western Europe has been influenced by WHO concepts contained in the Ottawa Charter for Health Promotion .1 Health is viewed as a resource for daily living, a positive concept emphasizing social and personal resources, as well as physical capacities. Responsibility for health rests not only with the health sector but goes beyond supporting healthy lifestyles to promoting well-being. It occurs by building healthy public policy, creating supportive environments, strengthening community action, developing personal skills, and reorienting health services.

There is a focus on the broader determinants of health. The Ottawa Charter outlines the prerequisites for health as peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice, and equity. Health promotion professionals are expected to work for health through advocacy, enabling individuals, and mediating among diverse sectors.

Developments Since the Ottawa Charter At the 10th anniversary of the Ottawa Charter, increasing emphasis is on social justice, reducing

inequalities, and enhancing societal cohesion.² There is increasing awareness of the role values play in any health-related activity.³ The United Kingdom Charter for Health Promotion⁴ outlines justice, inclusion, social capital, enterprise, and getting local as priorities: "Economic and social policies over the preceding decades have contributed to an ever-widening gap between rich and poor. Compelling evidence confirms that exclusion - both societal and material - is inextricably linked to ever-rising health and social problems in the UK. Such inequalities limit development for all."⁴

The Action Statement for Health Promotion in Canada⁵ identifies advocating for healthy public policies as the single best strategy to affect the determinants of health. Priority areas include reducing inequalities in income and wealth, strengthening communities through local alliances to change unhealthy living conditions, supporting environments that promote healthy lifestyles, and developing a settings approach to practice. Community development is also a priority.⁵

Finally, The Jakarta Declaration on Health Promotion into the 21st Century⁶ outlines priorities of promoting social responsibility for health, increasing investments for health development, consolidating and expanding partnerships, increasing community capacity, empowering the individual, and securing an infrastructure for health promotion.

Inequalities, Health, and Healthy Public Policy

Clearly, increasing concern exists about economic inequality and potential effects on the health of populations. The evidence of health inequalities in the United Kingdom was first brought together in *Inequalities in Health: The Black Report* and the *Health Divide*.⁷ In Canada, the *Health of Canada's Children Report*⁸ revealed the profound variation in health and well-being between poor and nonpoor children. The Congressional report *Adolescent Health* documented these effects in the United States.⁹ The recent work on health inequalities has been brought together in *Unhealthy Societies: The Afflictions of Inequality*.¹⁰

Health inequalities exist in levels of mortality and morbidity, accidents and injuries, risk behaviors, mental health, school achievement, and family violence. These differences have traditionally been interpreted in terms of risk behaviors resulting from lack of education, faulty lifestyles, and material deprivation. Yet careful analysis indicates that most of the variance in health outcomes among differing social classes is not accounted for by lifestyle factors.¹¹

Recent analyses challenge the "risk group" metaphor. Inequalities in health exist across the socioeconomic gradient not just between poor and nonpoor. The means by which these socioeconomic gradients in health come about are seen as involving the structures and functioning of a society, and how the population responds. A *British Medical Journal* editorial concluded: "What matters in determining mortality and health in a society is less the overall wealth of that society and more how evenly wealth is

distributed. The more equally wealth is distributed the better the health of that society."¹² The economy and other societal factors influence the health of American children. The National Research Council's *Losing Generations: Adolescents in High-Risk Settings*¹³ identified issues such as income and employment, and quality of families and neighborhoods as determinants of health.

In Canada, economic inequality has been kept in check by progressive taxation laws and strong social programs; recently however, inequality is increasing.¹⁴ In the United States, inequality in income and wealth has been increasing the past 20 years.¹⁵⁻¹⁷ In 1977 the wealthiest 5% of Americans captured 16.8% of the nation's income; by 1989 that same 5% was capturing 18.9%. During the Clinton presidency the wealthiest 5% have increased their take of the total to over 21%, "an unprecedented rate of increase."¹⁸ Inequality in the distribution of wealth is even greater. In 1983, the wealthiest 5% of Americans owned 56% of all the wealth in the United States; by 1989, the same 5% had increased their share to 62%.¹⁹

Wilkinson¹⁰ argues that economic inequality affects health by weakening social cohesion and increasing malaise. This is all associated with decreased personal control, an important determinant of health.²⁰ The outcomes of this "societal disintegration" are the health-related inequalities noted earlier. The cause of economic inequality is not mysterious: "The growing gap between rich and poor has not been ordained by extraterrestrial beings. It has been created by the policies of governments."²¹ Health workers usually focus on more immediate issues, but need to be aware of the larger dimensions of inequality issues.

IMPLICATIONS FOR SCHOOL HEALTH PERSONNEL

Societal level analysis can overwhelm school health personnel whose day-to-day activities may not directly concern these broader issues. Yet these issues affect children and need to be considered as part of health work.²² To develop means by which this can be done, my colleagues and I have used the concept of "quality of life" to develop practical programs to make a difference at the school and community level. Quality of life represents a surrogate for all the broader issues outlined previously.

The "Quality of Life Model" recognizes that individuals have physical, psychological, and spiritual dimensions. It also acknowledges people's need to belong, and to distinguish themselves as individuals by pursuing personal goals and making their own choices. Detailed discussion of the "Quality of Life Model" appears elsewhere.²³⁻²⁵

Quality of life is defined as the degree to which a person enjoys the important possibilities of his or her life. Quality of life is considered within three areas. Being reflects "who one is" and has physical, psychological, and spiritual components. Belonging is concerned with the fit between a person and his or her physical, social, and community environments. And Becoming refers to activities carried out to achieve personal goals or aspirations. Becoming involves practical activities,

leisure pastimes, and activities that help one to cope and grow. This model formed the basis for developing the community quality of life approach.

COMMUNITY-LEVEL QUALITY OF LIFE

A means was developed for community health workers to identify issues that affect the health and well-being of community members, including children and youth. It drew upon the health promotion values and themes outlined earlier, the model of quality of life, and the mandate of working to improve the health of community members. In work with youth, staff worked closely with local schools and teachers (Figure 1).

Methods

Youth were involved as were low-income adults, seniors, and New Canadians in two Toronto communities. Staff also heard from service providers and elected representatives. To see the world through the eyes of the people spoken to, staff used discussions and interviews. These interviews were written up as narratives.

Interviewers asked: What is it about this neighborhood or community that makes life good for you and the people you care about? Staff also asked about things that did not make life good. Community members told how they coped with problems and services they desired. Representatives told of their roles and how they helped the community. And service providers told of their agencies and their activities. Discussions and interviews were tape-recorded and used to generate notes and quotations. Write-ups were provided to interviewees to confirm their accuracy. Examples of Findings

Youth groups identified positives such as neighborliness, community involvement and solidarity, leisure and recreation activities, parkland and open space, public transportation, education and school, access to amenities and the local health center. Negatives involved crime and safety, racism, poor public housing, family and social problems, reduction in services, and school-related problems. These themes provide insight regarding the range of factors that support or inhibit health and well-being and form the basis for concerted community action to address these issues. Community reports and a manual are available elsewhere.²⁶⁻²⁸

Implications

The approach incorporates advanced thinking about the nature of health, its determinants, and the importance of community members' perceptions. It provides a means for school health personnel to deal with issues that influence children and youth's health but is beyond the traditional focus of health education and behavior change.

The approach and questions worked well with students from a range of racial/ethnic backgrounds as young as 11 and old as 20. By seeing the world "through the eyes of" participants, workers can consider the wider factors that influence quality of life, health, and well-being. Once such activities are conducted, school health personnel can move, in cooperation with others, to develop community-based action to address the issues that effect students' health and well-being.

(Chart Omitted)

Captioned as: Figure 1

Person-Centered Quality of Life

Staff work on person-centered quality of life culminated in development of the "Adolescent Quality of Life Profile." Like the community-level quality of life work, it draws upon a broad framework toward health. It was developed to identify the specific needs of individual children and inform appropriate responses.

In group meetings, high school students were asked, "What does the term quality of life mean to you?" and

"What are some areas of concern to adolescents?" Responses were developed into instrument items. Adolescents' contributions were included as were items suggested by the literature. The health literature was used to identify issues such as alcohol and tobacco use, nutrition, fitness, and sexual knowledge.

The "Profile" consists of 54 items, six in each of nine subdomains. A study with 175 adolescents found it to be reliable and valid, and scores predicted use of alcohol and tobacco. The "Profile" is being used to assess the effects of a youth leadership camp and the quality of life of gay and bisexual youth in Ontario. Further details on the "Profile" and implications for promoting adolescent health were published elsewhere.²⁹

CONCLUSION

School health personnel can incorporate these new ways of thinking about health in their activities. The community quality of life approach allows for exploration and response, in cooperation with others, to community-level issues. At an individual level, the "Adolescent Quality of Life Profile" can direct attention to a broad range of issues including personal development opportunities, environments, and community resources.

Choices school health personnel make concerning their activities are influenced by their own values, their employment context, and the constraints under which they operate? Incorporating these approaches into health-related activities would be an exciting development. Recent volumes on People-Centred Health Promotion² and Community Organizing and Community Building for Health³⁰ provide means of implementing these ideas.

Reference:

References

Reference:

1. Ottawa Charter on Health Promotion . Geneva: World Health Organization; 1986. Available online at; <http://www.monash.edu.au/health/course-manual/health.html>
2. Rootman I, Raeburn J. People-Centred Health Promotion . Toronto, Ontario: Wiley; 1997.
3. Seedhouse D. Health Promotion : Philosophy, Prejudice and Practice. New York, NY: Wiley; 1997.
4. Coronary Prevention Group. UK Charter for Health Promotion .

London, England: School of Hygiene and Tropical Medicine; 1997. Available online at: <http://www.healthnet.org.uk/media/press/charterlocal.html>

5. Canadian Public Health Association. Action Statement on Health Promotion . Ottawa: 1996. Available online at: <http://www.cpha/cpha.docs/Action Statement.eng.html>.

6. The Jakarta Declaration on Health Promotion Into the 21st Century. Geneva: World Health Organization; 1997. Available online at: <http://rubble.ultralab.anglia.ac.uk/Declare.htm>

7. Townsend P, Davidson N, Whitehead M, eds. Inequalities in Health: The Black Report and the Health Divide. New York, NY: Penguin; 1992.

8. Canadian Institute on Children's Health. The Health of Canada's Children: A CICH Profile. Ottawa: Canadian Institute of Child Health; 1994.

9. Adolescent Health. (3 volumes). Washington, DC: Congressional Office of Technology Assessment; 1991.

10. Wilkinson R. Unhealthy Societies: The Afflictions Of Inequality. New York, NY: Routledge; 1996.

11. Rose G, Marmot MG. Social class and coronary heart disease. Br Heart J. 1981;1:13-19.

12. Editorial: The big idea. Br Med J. 1996;April 20:985. 13. National Research Council. Losing Generations: Adolescents In High-risk Settings. Report Of The Panel On High Risk Youth. Washington, DC: National Academy Press; 1993.

Reference:

14. Statistics Canada. (Dec. 20, 1997). The Daily: Family Incomes, Lower Income Families Lost Ground While Higher Income Families Registered Gains. Ottawa: 1997.

15. Danziger S. How the rich have fared, 1973-1987. A Econ Rev. 1989; 79:310-314.

16. Blackburn ML, Bloom D. Earnings and income inequality in the United States. Pop Dev Rev. 1987;13:575-609. 17. Fritzell J. Income inequality trends in the 1980s: A five ,untry comparison. ACTA Sociologica. 1993;36:47-62. 18. Up, down and standing still. Economist. 1996;February 24:30, 33. 19. Wolff EN. Top Heavy: A Study of the Increasing Inequality of Wealth in America. New York, NY: Twentieth Century Fund; 1995. 20. Wallerstein N. Powerlessness, empowerment, and health: implications for health promotion programs. Am J Health Promo. 1992;6(3): 197205.

21. Montague P. Economic Inequality and Health. Rachel's Environment & Health Weekly #497. Annapolis, Md: Environmental Research Foundation; 1996. Available online at: <http://www.monitor.net/rachel/r497.html>

22. Raphael D. Public health responses to health inequalities. Can J Public Health. in press

23. Raphael D, Brown I, Renwick R, Rootman I. Quality of life: what are the implications for health promotion ? Am J Health Behav. 1997;21:118-128.

24. Raphael D, Renwick R, Brown I, Rootman I. Quality of life indicators and health: current status and emerging conceptions. *Soc Ind Res.* 1996;39:65-88.

25. Renwick R, Brown I. Being, belonging, becoming: The Centre for Health Promotion model of quality of life. In Renwick R, Brown I, Nagler M. eds. *Quality of Life in Health Promotion and Rehabilitation: Conceptual Approaches, Issues, and Applications.* Thousand Oaks, Calif: Sage; 1996.

Reference:

26. Raphael D, Steinmetz B, Renwick R. *The People, Places, and Priorities of Riverdale: Findings From the Community Quality of Life Project.* Toronto, Ontario: Dept. of Public Health Sciences; 1998. Available online at: <http://www.utoronto.ca/qol>

27. Steinmetz B, Raphael D, Renwick R. *The People, Places, and Priorities of Lawrence Heights: Findings From the Community Quality of Life Project.* Toronto, Ontario: Dept. of Public Health Sciences; 1998. Available online at: <http://www.utoronto.ca/qol>

Reference:

28. Raphael D, Steinmetz B, Renwick R. *How to Carry Out A Community Quality of Life Study: A Manual.* Toronto, Ontario: Dept. of Public Health Sciences; 1998.

29. Raphael D, Rukholm E, Brown I, Hill-Bailey N, Donato E. The quality of life profile - adolescent version: Background, description, and initial validation. *JAdolesc Health.* 1996;19:366-375. 30. Minkler M. *Community Organizing and Community Building for Health.* New Brunswick, NJ: Rutgers University Press; 1997.

Author Affiliation:

Dennis Raphael, Dept. of Public Health Sciences, University of Toronto, McMurich Bldg., Toronto, Ontario, Canada M5S 1A8 or d.raaphael@utoronto.ca. Funding for the "Community Quality of Life Project" was provided by the Jessie Ball duPont Fund of Jacksonville, Fla. Portions of this paper were presented at the 71st annual meeting of the American School Health Association, Daytona Beach, Fla., October 24, 1997. This article was submitted January 12, 1998, and revised and accepted for publication May 4, 1998.

Copyright American School Health Association 1998

DESCRIPTORS: Health; Health education; Schools

SPECIAL FEATURES: Illustration References

Promoting oral health in older people

Karen Hardcastle
considers the
common dental
problems
experienced by
older people and
their treatment
and prevention

Oral health is a fundamental aspect of well-being, especially for older people. In 1985, 18% of the population were pensioners, and between 1985 and 2001 the total number will have increased by 31.1%.¹

In dentistry it is often older people who fall through the net because they cannot afford treatment (claiming a pension does not exempt a person from dental charges).

Domiciliary visits can be arranged free of charge from some dentists. Older people who are housebound and have a problem with mobility can obtain information about this from either the local health authority or from the dental directory, which can be found at the local library. Other information, such as listings of NHS dentists, wheelchair access and languages spoken at dental practices, is also available from the dental directory.

Visual acuity decreases with age, which may make it difficult for an older person to see plaque on the surfaces of teeth. Manual dexterity can also deteriorate for a number of reasons, such as arthritis or rheumatism. This may be combated by using an electric toothbrush or aids, such as rubber handles for ordinary toothbrushes, which are available from community occupational therapists.

Periodontal disease

Periodontal disease is the general term to describe plaque-induced disease of the periodontium, that is the supporting tissues of the teeth. It can range in intensity from gingivitis to periodontitis and can be an acute or chronic condition.

Older people will normally have a certain amount of gum recession and can be prone to periodontal disease because of a build-up of plaque through incorrect brushing techniques. This will lead to a build-up of debris, halitosis, sore and bleeding gums (especially when brushing), gingival recession and pockets, tooth mobility, pain and general discomfort.

A visit to a dentist should be recom-

mended to establish the severity of the problem and start a course of treatment that includes intensive cleaning and oral hygiene instruction.

Root caries

Plaque control is just as important in preventing root caries as it is in minimising periodontal disease. Root caries can cause sensitivity, discolouration, cavities and pain. People should be advised to avoid sugary snacks, use a non-abrasive desensitising fluoride toothpaste and visit a dentist for dietary advice, cleaning and restoration, if needed.

Denture problems

Dentistry in older people can be complicated, as they may have a combination of dentures and natural teeth. Problems can vary from ill-fitting dentures to fungal infections such as denture stomatitis and angular cheilitis (a condition characterised by a drying or chapping of the corners of the mouth). These can cause soreness, discomfort, ulceration and affect general well-being.

Older people may keep dentures for long periods, but ideally they should be changed at least once every five years. Good oral hygiene and denture care advice is vital. Denture wearers should clean them thoroughly and re-

move them overnight, soaking them in water. They should visit a dentist at least once a year.

Xerostomia

Xerostomia is dryness of the mouth owing to lack of saliva. This may be caused by the salivary glands not functioning properly, blockage of the salivary ducts or the action of certain drugs.

The presence of saliva is vital to oral health and its absence can cause problems. A person with a dry mouth can have great difficulty chewing and swallowing and will be susceptible to periodontal disease, caries, bacterial and fungal infections of the mouth.

A dentist can evaluate the problem, take a detailed medical history and prescribe artificial saliva, if necessary.

Oral cancer

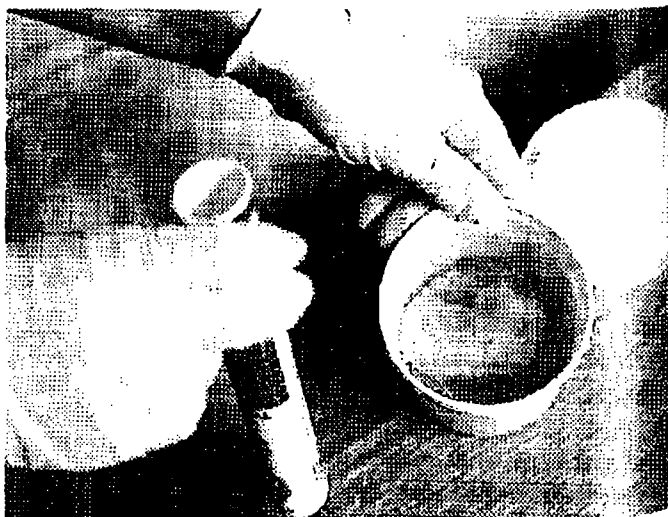
Oral cancer usually affects the lower lip or the tongue. The cause is unknown, but several factors may be involved: tobacco-chewing or smoking, chronic irritation from alcohol, micro-organisms (syphilis, candida, viruses), ultra-violet light, iron deficiency and AIDS.

As lip cancer is usually recognised and treated promptly, most patients can be cured. However, the cure rate is lower for tongue cancer. Oral cancer may appear as an ulcer, a lump or as a

Abstract

Dental health can be a neglected area in the care of older people. This article considers some of the common dental problems experienced in older age and discusses strategies for treatment and prevention.

Key words:
older people, oral
health, health
promotion



Counselling people with HIV about pregnancy

red, white or brown patch. It spreads to the jaw and lymph nodes in the neck, where it may cause a secondary tumour.

Any ulcer lasting more than three weeks, as well as most lumps or coloured lesions, should be investigated by biopsy by a dentist or specialist to exclude cancer.

There are about 2,000 new cases of oral cancer a year; of these, 900 cause death.² About 40% of cases are referred to specialists following a dental check-up, and cases that are detected earlier have a better prognosis. It is therefore essential to educate and inform older people of the risks and to view dentists as a vital screening service.

The importance of regular dental examinations

Studies on periodontal disease have emphasised the importance of regular professional cleaning in addition to daily plaque removal. It is the dentist's responsibility to ensure that this is carried out effectively at intervals, depending on individual requirements.

There are numerous other disorders that can occur in the oral cavity. These include fungal infections and the oral manifestations of systemic infections, such as AIDS, as well as other systemic conditions. All these conditions may benefit from early diagnosis and strengthen the case for regular visits to the dentist.

Poor oral health can lead to altered dietary habits and this, in turn, can affect teeth and put people at risk of nutritional deficiencies that affect general health.

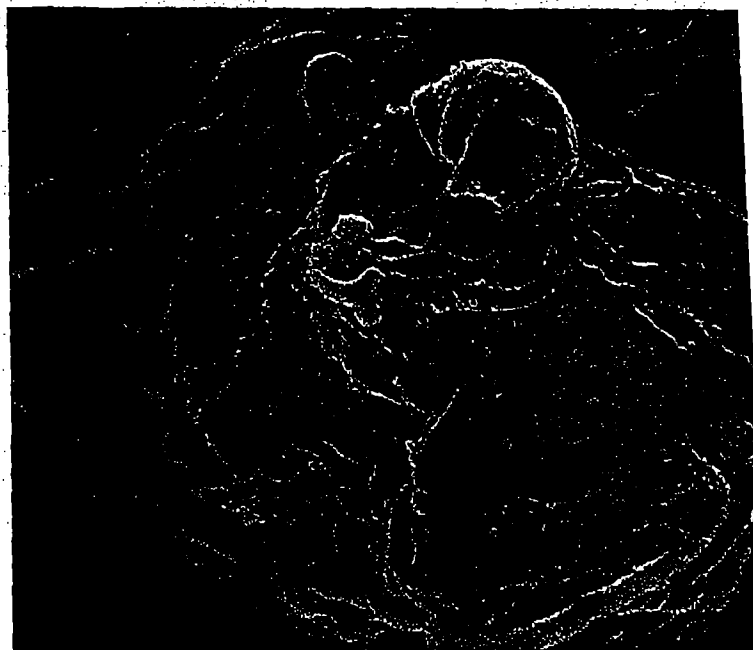
It is up to dental and other health professionals to put across a united message to ensure that older people are educated to realise that oral health problems are largely preventable. **NT**

1. Todd, J.E. *Adult Dental Survey, UK*. London: HMSO, 1989.

2. Hunt, J. Free check-ups urged to combat oral cancer. *BDA News* 1994; 7: 7, 1.

Karen Hardcastle, RDN, OHE, is a dental nurse and oral health educator in a dental surgery in London

To help couples with HIV who want to have a child, Tracey Chester, Corinne Moore and Jo White produced a special information booklet. Here they summarise the main points



An electro-micrograph image of an HIV-infected T-cell

HIV and AIDS are major causes of morbidity and mortality in young people. As many as 50% of all new infections occur in women aged 14-24.¹

Studies have shown the rate of vertical transmission to be 15% in Europe, increasing to 30% in some parts of the world.² Recent research indicates that the figures may be much lower and a number of factors contribute to this, including the use of antiretroviral therapy in pregnancy and the perinatal period, avoidance of breast-feeding and possibly the mode of delivery.³⁻⁵

This optimistic outlook, together with a wider choice of treatment options and the possibility of living longer, healthier lives, means that more couples with HIV are considering having children.

Health care professionals providing services need to be aware of the difficult and stressful decisions individuals with HIV may have to make in terms of their health, sexuality and reproductive lives. For both men and women, having a child may confirm a certain status in their community and be perceived as an investment for the future.

The cultural expectation to have children may be greater if there has been a previous death of a child in the family, especially if the extended family and other members of the community are not aware of the diagnosis.

Children are often seen as bringing stability and purpose to a relationship, increasing feelings of security both in emotional and economic terms.

Pre-conception issues

Many life-threatening, chronic diseases can be transmitted from parent to child, and careful consideration of the issues involved is always essential.

For a couple considering pregnancy where HIV is an integral part of the decision-making, the issues require time for exploration and discussion. The impact of thinking about a potential pregnancy, the practicalities of how to achieve pregnancy and the possible, financial implications cannot be underestimated.

There are several important points to consider, if possible, before conception.

One of the most crucial is the health of the prospective parents. If a woman

Abstract

This booklet provides a basis for discussion between couples considering pregnancy where HIV is an issue for one or both partners.

Key words: HIV/AIDS, pregnancy, counselling

Older Community-Dwelling Adults' Attitudes Toward and Practices of Health Promotion and Advance Planning Activities

Terri R. Fried, MD,* Roberta R. Rosenberg, MS,[†] and Lewis A. Lipsitz, MD[†]

OBJECTIVE: To describe the attitudes toward and practice of health prevention and advance planning measures by a group of community-dwelling older adults and to examine the effect of age on these practices.

DESIGN: A descriptive study performed by mail survey.

PARTICIPANTS: Members of a research registry who were 65 years of age or older.

MEASUREMENTS: By means of a written questionnaire, we asked about knowledge of various health prevention and advance planning topics, including exercise, cholesterol screening, rectal examination, influenza vaccination, sigmoidoscopy, mammography, prostate cancer screening, organ donation, autopsy, health care proxy, and advance directives. Of those who knew about the topic, we asked if the respondent had discussed it with a physician, who initiated the conversation, and if the respondent participated in the activity. We also asked how important the topic was to the respondent.

RESULTS: We received 598 completed surveys, a response rate of 83%. Respondents had a mean age of 74 years, were predominately white (96%), and were well educated, with 44% having completed college. The respondents were all knowledgeable about the topics, and, with the exception of sigmoidoscopy, organ donation, and autopsy, more than 70% thought these topics were important. In the case of health screening and prevention activities, a large percentage of respondents reported having discussed the topic with a physician, and a slightly smaller percentage reported regular participation. In the case of health care proxies and advance directives, however, only about one-half of those who had made these arrangements said they had discussed them with a physician. When discussion did occur, it was much more likely to have been initiated by the respondent. Controlling for level of education, age was inversely associated with the

likelihood of a woman reporting she had undergone mammography ($P < .05$). Age, however, was not associated with decreased frequency of undergoing other screening tests.

CONCLUSIONS: Among a group of well educated older adults, reported interest in and compliance with health screening, health promotion, and advance planning activities were high. However, sigmoidoscopy, a relatively more invasive procedure that is generally recommended as a screening tool, is reported less likely to be practiced than prostate cancer screening, a less invasive procedure without such recommendation. Older adults state they are pursuing health care proxies and advance directives, often without the involvement of their physicians. Of the screening tests about which we asked, age was associated only with less frequent practice of mammography. *J Am Geriatr Soc* 43:645-649, 1995.

The concept that older adults can derive significant benefit from health promotion and screening activities has been advanced in the medical literature.^{1,2} Despite this, several studies have shown that physicians' use of these health promotion measures with their patients falls short of expert recommendations^{3,4} and that their use is even lower with older compared with younger adults.⁵ Similarly, surveys of older adults' use of screening tests such as mammography, Papanicolaou smears, and fecal occult blood checks find that older patients undergo these tests infrequently and that age is inversely associated with their use.^{6,7} These studies do not distinguish between lack of patient interest in these tests and lack of patient opportunity if the tests are not offered by their physicians. Older adults may, in fact, be very interested in health promotion activities. When asked about a variety of "health-seeking" activities not dependent on physician participation, including regular exercise, eating a healthy diet, wearing seatbelts, and avoiding smoking, older adults were significantly more conscientious than their younger counterparts.⁸

We asked a group of older adults about their knowledge of, discussion with physicians about, and practice of a variety of health promotion, screening, and advance planning activities. Our hypotheses were that a group of motivated older adults would have high interest in and compliance with these activities and that discussion about and performance of some of these practices would occur at *their* rather than the doctor's initiative. We also thought that their interest would not correlate well with published guidelines for screening and

From *Rhode Island Hospital and Brown University, Providence, Rhode Island; and †Hebrew Rehabilitation Center for Aged and Harvard Division on Aging, Boston, Massachusetts.

Supported by an Older American Independence Center Grant (AG08812) and Teaching Nursing Home Award (AG04390) from the National Institute on Aging, Bethesda, Maryland.

Presented at the 50th Annual Meeting of The American Geriatrics Society, New Orleans, Louisiana, November 1993.

Address correspondence to Terri R. Fried, MD, Division of Geriatrics, Rhode Island Hospital, 593 Eddy St., Providence, RI 02903.

prevention. Finally, we sought to examine the effects of age on the practice of these activities.

METHODS

We conducted a survey of all of the members of the Harvard Cooperative Program on Aging, a registry of older adults who wish to participate in studies about aging and who are recruited through advertisements placed in senior centers and journals with large numbers of older subscribers. We inquired about their knowledge of a variety of health promotion, screening, and advance planning activities, including exercise, cholesterol screening, influenza vaccination, rectal examination, sigmoidoscopy, mammography (for female respondents), prostate cancer screening (for male respondents), organ donation, autopsy, health care proxy, and advance directives (defined as written instructions about future treatments, such as a Living Will) by asking if they "know about the topic?". For those who stated they knew about the activity, we asked if they had "discussed it with their physician" and "who brought up the topic." In the case of exercise and screening tests, we asked if the respondent "practiced these on a regular basis." In the case of advance planning topics we asked if the respondent had "arranged for them." A previous survey completed by members upon joining the registry provided information about demographics and diagnoses for both the respondents and nonrespondents.

We compared respondents with nonrespondents using the Student's *t* test for continuous variables and the Fisher's

Exact Test for discrete variables. We then examined frequency distributions to describe the respondents' answers to the survey questions. Using the Fisher's Exact Test, we examined whether age category (65-74, 75-84, ≥ 85) was related to the performance of or arrangement for these activities. Examining the relationship of age to other demographic variables, we determined that age was inversely associated with education. We therefore controlled for level of education in our analyses using the Mantel-Haenszel stratified chi-square test for association.

For all statistical tests, a two-tailed *P* value $< .05$ was considered statistically significant.

RESULTS

Of the 909 registry members who received the survey, 720 (79%) were age 65 or older. We received 598 completed surveys from this group for a response rate of 83%. The respondents had a mean age of 74 years, 64% were female, and 96% were white. (Table 1). The group was highly educated, composed of 44% college graduates and 30% graduates of graduate school. Slightly more than half were married. Two-thirds were no longer working, and one-half participated regularly in volunteer work. Compared with the older population in general, of whom 17% smoke,⁹ only 5% of the participants smoked. As determined by a self-report of chronic diseases, 23% had no disease, 59% had one, and 18% reported two or more. Only 17% had been hospitalized in the previous year. On a scale of self-rated health status

Table 1. Description of Respondents (n = 598)

	Mean $\pm$ SD (Range)		n	(%) [*]
Age	74.0 $\pm$ 5.5 years (65-93)	65-74	308	(51)
		75-84	256	(43)
		85+	34	(6)
Health status (1 = excellent, 4 = poor)	1.7 $\pm$ 0.7 (1-4)			
	n	(%)		
Sex				
Female	382	(64)		
Male	215	(36)		
Race				
White	571	(96)		
Non-white	27	(4)		
Education (highest grade completed)				
Grade school	4	(1)		
High school	148	(25)		
College	261	(44)		
Graduate school	177	(30)		
Work status				
Retired	397	(66)		
Full/Part time	194	(32)		
Volunteer status				
Participant	294	(49)		
Nonparticipant	298	(50)		
Smoker				
Yes	28	(5)		
No	563	(94)		

* Percentages less than 100 indicate missing data.

graded from 1 = excellent to 4 = poor, the mean score was 1.7.

Nonrespondents did not differ from respondents in terms of age, sex, race, or self-reported health status. However, nonrespondents were more likely to be smokers (11% vs 5%, $P = .013$ Fisher's exact test).

The respondents' knowledge about the activities in the survey was high (Table 2). Sigmoidoscopy was the only practice about which fewer than 88% of the respondents knew. Among the respondents who knew about the activity, participation in cholesterol, prostate cancer, and mammography screening were most important to them (Table 2). Participation in an exercise program, receiving influenza vaccination and rectal exams, and arranging for a health care proxy and advance directives were also considered very important. In contrast, only 61% of those who knew about sigmoidoscopy, or 40% of the respondents, thought it was important, and slightly more than 40% regarded organ donation as important.

For most of the screening and prevention activities, such as cholesterol, prostate cancer screening, and mammography, the majority of respondents reported having discussed the topic with their physician and a slightly smaller percentage reported regularly having the test (Figure 1). Fewer than half of the respondents who reported discussion of sigmoidoscopy with their physician elected to undergo it on a regular basis. In the case of the health promotion activity, exercise, more respondents reported participation than discussion of exercise with their physician. Half of the respondents said they had arranged for a health care proxy, and slightly less than half said they had advance directives. However, only one-half of those who have made such arrangements said they had discussed them with their physician. Although a much smaller percentage of respondents said they had arranged for organ donation, a similarly small proportion of those respondents reported having talked about it with their physician.

In the case of screening tests, the respondents stated that the physician usually initiated discussion of the topic (Figure 2). However, the respondents said that they themselves more often introduced the topics of exercise and influenza vaccination. Among those who discussed advance planning issues,

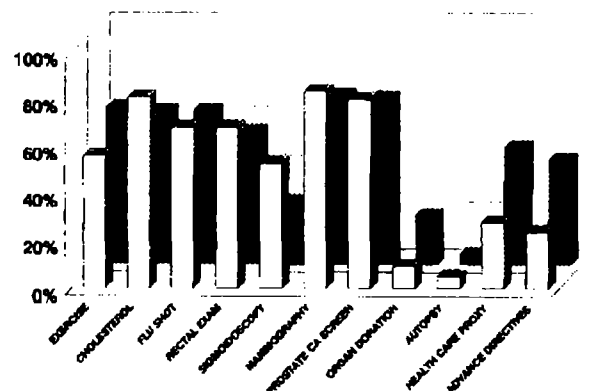


Figure 1. Percent of respondents who discussed each topic with their physician (white bars) and who participated in the activity (black bars). Data reported as percent of respondents who knew about the topic, restricted to women for mammography and men for prostate cancer screening.

the respondents stated they were overwhelmingly the ones who introduced the subject. Only rarely did they report either physicians or family members initiating any of these discussions.

Age was significantly associated with the practice of many of the activities (Table 3). Because age was significantly associated with level of education (data not shown), the analysis of the relationship between age and performance was stratified by education level. With the reference age of 65 to 74, those in the age group of 75 to 84 were significantly more likely to report getting an influenza vaccination. Those women in the age groups of 75 to 84 and ≥ 85 were significantly less likely to report undergoing mammography, with the oldest women only one-half as likely as the youngest. In contrast, men aged 75 to 84 were more likely to report undergoing prostate cancer screening than their younger counterparts, but there was no difference between the youngest and oldest groups. Those 85 and older were 1.5 times more likely to report having chosen a health care proxy than the youngest group.

Table 2. Respondent's Knowledge of and Attitude Toward Activities

Activity	Percentage of Respondents Who Know About Activity (n = 598)	Percentage of Respondents Who Think Activity is Important (among those who know about activity)*
Exercise	93	78
Cholesterol	96	87
Influenza vaccination	95	72
Rectal exam	95	77
Sigmoidoscopy	66	61
Mammography	96	84
Prostate cancer screen	89	89
Organ donation	97	42
Autopsy	93	26
Health care proxy	90	75
Advance directives	88	74

* Restricted to women for mammography and men for prostate cancer screening.

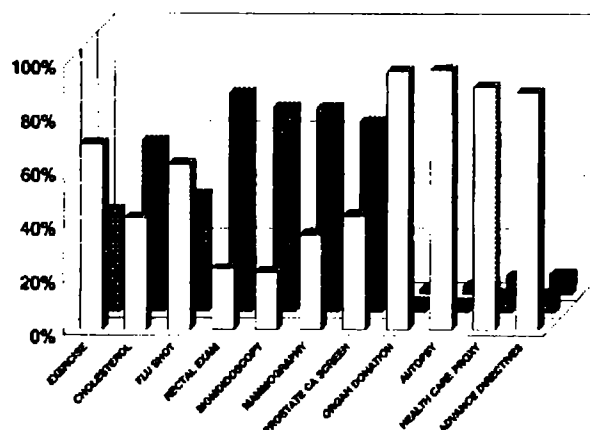


Figure 2. Percent of those initiating discussion about a topic who were respondents (white bars), physicians (grey bars), or family members (black bars). Data reported as percent of respondents who had discussed each topic with a physician, restricted to women for mammography and men for prostate cancer screening.

DISCUSSION

Our results suggest that among a select group of well educated and health-conscious (suggested by the low percentage of smokers) group of community-dwelling older adults, interest in a variety of preventive health and advance planning activities is very high. Our respondents represent a group likely to be highly biased in favor of health promotion measures, both because of their self-selection as participants in a research registry and as those who completed our survey. This group reports that physicians discuss many screening tests and prevention activities with their patients, such as cholesterol screening, mammography, and influenza vaccination. However, many report participation in activities such as a regular exercise program or establishing health care proxies and advance directives independent of discussions with their physicians. When discussions do occur about these latter activities, they are most often reported to be initiated by the patient. Respondent knowledge of and report of participation in a more invasive screening test, sigmoidoscopy, is considerably lower. Only a little more than half of the respondents who knew about sigmoidoscopy said they had discussed the procedure with their physician, and slightly more than one-quarter said they had the procedure on a regular basis. Notably, discussion and practice of prostate cancer screening, which at the time of this survey was not supported

by any practice guidelines, was much more prevalent than that of sigmoidoscopy, which did have such support.¹⁰ This discrepancy highlights the effect of patient attitudes on the performance of recommended screening tests and suggests that patient preferences are influenced more by the perceived discomfort of a test than by strict practice guidelines.

Although the study has several limitations, it does provide several valuable conclusions. The results of this survey cannot be generalized to the older population at large, and respondents' reports of discussions and practices were not corroborated. However, by assessing the perceptions of a well educated and motivated group of community-dwelling older adults, we can examine the best-case scenario of health promotion efforts in older patients. This study demonstrates that the best case is very good, with patients demonstrating great interest in and compliance with preventive health and advance planning measures. Their participation in some activities was largely self-initiated. This suggests that the results of studies showing low participation in health promotion measures by older adults^{6,7} may, in part, be attributable physicians' failure to offer these activities, as is supported by the finding that physician recommendation in one study was the most important factor influencing women to have mammograms.¹¹

The attitudes and practices of our study population support an alternative to the methods commonly discussed in the literature for changing the behavior of physicians who fail to comply with recommendations about screening tests or advance directives. These methods are aimed at physicians and include the strategy of educating influential local physician opinion-leaders.¹² Perhaps, instead, we should be educating influential local *patient* opinion-leaders, who would inform their friends about the topics they should be discussing with their physicians.¹³ Our results also suggest that more invasive screening tests, such as sigmoidoscopy, will meet with much lower levels of acceptance than less invasive ones, including those without clear endorsement by the medical community.

The rate of 50% completion for health care proxies is much higher than the approximately 15% rate achieved in recent intervention trials designed to promote completion of advance directives.^{14,15} However, the finding that approximately half of those patients who arranged for health care proxies and advance directives did not discuss them with their physicians is troubling. Comments written in by respondents on the survey indicate that some of these patients completed forms with their lawyers without the involvement of their physicians. Although it is encouraging that patients

Table 3. The Activities for Which Participation Is Associated with Age

Activity	Relative Risk of Participation Age 75-84* (95% Confidence Interval)	Relative Risk of Participation Age ≥85* (95% Confidence Interval)
Influenza vaccination	1.16 (1.04, 1.28)**	1.20 (0.94, 1.53)
Mammography	0.86 (0.78, 0.95)**	0.48 (0.36, 0.66)**
Prostate cancer screening	1.28 (1.08, 1.51)**	0.87 (0.47, 1.60)
Health care proxy	0.98 (0.84, 1.15)	1.50 (1.07, 2.08)**

* Reference age 65-74.

** $P < .05$.

learn about and execute advance directives from a variety of sources, one intent of advance directives is to foster physician-patient communication, not to replace it. Advance directives completed in the absence of discussion with physicians deprives the physicians of a valuable opportunity to learn about the values and wishes of their patients.

Older adults' desire for and benefit from preventive health services must be considered in the health policy debates about the use of screening tests.^{16,17} Of the screening tests about which we asked, only the use of mammography decreased with advancing age. There was no significant difference in the use of the other screening tests among the age groups divided into what is commonly considered "young-old" (65-74), "old-old" (≥ 85), and those in between (75-84). The practice of prostate cancer screening was even greater in the 75 to 84-year-old age group compared with those 65 to 74. However, there are few data about the effectiveness of primary prevention measures, such as cholesterol screening, in the oldest old. Whereas such screening is likely to benefit those "young-old" patients whose life expectancy can be 20 or more years, the oldest old may well benefit more from interventions such as influenza vaccinations and discussions about advance directives. On the other hand, the robust oldest old, who may also have a life-expectancy of greater than 5 years, may also benefit from some screening measures, including mammography. The demonstration that older patients ask for and their physicians order screening tests makes imperative the collection of data on the efficacy and cost-effectiveness of various preventive measures in older people.

REFERENCES

1. Lavizzo-Murphy R, Diserens D. Preventive care for the elderly: A concept whose time has come. *Occup Med* 1990;5:827-835.
2. Black J, Kapoor W. Health promotion and disease prevention in older people: Our current state of ignorance. *J Am Geriatr Soc* 1990;38:168-172.
3. Schwartz JS, Lewis CE, Clancy C et al. Internists' practices in health promotion and disease prevention: A survey. *Ann Intern Med* 1991;114:46-53.
4. Woo B, Woo B, Cook EF et al. Screening procedures in the asymptomatic adult: Comparison of physicians' recommendations, patients' desires, published guidelines and actual practices. *JAMA* 1985;254:1480-1484.
5. Black J, Sefcik T, Kapoor W. Health promotion and disease prevention in the elderly: Comparison of house staff and attending physician attitudes and practices. *Arch Intern Med* 1990;150:389-393.
6. Chao A, Paganini-Hill A, Ross R, Hendersen BF. Use of preventive care by the elderly. *Prev Med* 1987;16:710-722.
7. Anda RF, Sienko DG, Remington PL. Screening mammography for women 50 years of age and older: Practices and trends: 1987. *Am J Prev Med* 1990;6:123-129.
8. Russell RB. Health-seeking behavior among the elderly. *Gerontologist* 1986;26:556-559.
9. Schick FL, Schick R. *Statistical Handbook on Aging Americans*. Arizona: Onyx Press, 1994, pp 105.
10. Hayward RSA, Steinberg EP, Ford DE et al. Preventive care guidelines. 1991. *Ann Intern Med* 1991;114:758-783.
11. Grady KE, Lemkau JP, McVay JM, Reisine ST. The importance of physician encouragement in breast cancer screening of older women. *Prev Med* 1992;21:766-780.
12. Greco PJ, Eisenberg JM. Changing physicians' practices. *N Engl J Med* 1993;329:1271-1274.
13. Suarez L, Nichols DC, Brady CA. Use of peer role models to increase Pap smear and mammogram screening in Mexican-American and black women. *Am J Prev Med* 1993;9:290-296.
14. Hare J, Nelson C. Will outpatients complete living wills? A comparison of two interventions. *J Gen Intern Med* 1991;6:41-46.
15. Sachs GA, Stocking CB, Miles SH. Empowerment of the older patient? A randomized, controlled trial to increase discussion and use of advance directives. *J Am Geriatr Soc* 1992;40:269-273.
16. Cassel CK. Breast cancer screening in older women: Ethical issues. *J Gerontol* 1992;47:126-130.
17. Nattinger AB, Goodwin JS. Screening mammography for older women: A case of mixed messages. *Arch Intern Med* 1992;152:922-925.



*Bob Graham
Florida*

FAX TRANSMITTAL SHEET

TO: <i>Chris Jennings</i>	PHONE:
FROM: <i>Matt Barry</i>	PHONE:
DATE: <i>5/4/99</i>	TIME:
NUMBER OF PAGES (including cover): <i>7</i>	524 Hart Senate Office Building, Washington D.C. 20510

COMMENTS:

PLEASE DELIVER THE FOLLOWING PAGES TO THE PARTY LISTED ABOVE.

If there is a problem in transmission, please call (202) 224-3041

TO: Chris Jennings
Deputy Assistant to the President for Health Policy

FROM: Matt Barry 
Office of Senator Bob Graham
(202) 224-6544 (direct)
(202) 224-2237 (fax)
Matt_Barry@graham.senate.gov (e-mail)

SUBJECT: Update on Medicare Reform Discussions

DATE: May 4, 1999

I just wanted to touch base briefly in response to the meeting we had a few weeks ago where you came in to talk about Medicare reform with Senator Graham. Last week, you should have received a letter from Senator Graham (dated April 26) indicating some items both our offices were going to follow up on. I just wanted to confirm that you received the letter and to indicate that Senator Graham has asked me for an update, particularly on the items involving the historical BCBS analysis and the Federal tobacco suit/prescription drug piece. I also wanted to send you a revised version of our Medicare prevention proposal which has become much more detailed since the last draft you were provided (see attachment). FYI, we are going to draft this proposal into a bill in the next few days and then intend to circulate it for support prior to introduction in the next week or two.

Attachment

DRAFT (5/3/99) -- FOR INTERNAL USE ONLY -- DRAFT (5/3/99)

**MEDICARE MODERNIZATION AND
QUALITY OF LIFE IMPROVEMENT ACT OF 1999**

SECTION I. APPLIED AND GENERAL RESEARCH

A. NEW APPLIED RESEARCH INITIATIVE

1. Despite significant advancements in general research for health promotion and disease prevention among the elderly, there has been a failure in translating that research into practical interventions.
2. \$25 million shall be made available to the Department of Health and Human Services to conduct new applied research in the field of health promotion and disease prevention for the elderly. Any new applied research effort must reflect the medical, behavioral, and social aspects of care for the elderly, including the cost-effectiveness and quality of life impacts stemming from any initiative.
3. The Health Care Financing Administration shall exercise appropriate administrative discretion in responding to preventive health issues affecting Medicare beneficiaries. In addition, Section 1861(a)(1)(A) of the Social Security Act is amended to read "prevention and treatment".
4. Any new applied research effort shall be developed, monitored and evaluated by an inter-agency work group and be based upon approaches of proven utility as reflected in the recommendations of the U.S. Preventive Services Task Force. This inter-agency work group shall be chaired by the Secretary of Health and Human Services, and consist of the agency heads, or their designees, of the Health Care Financing Administration, the Centers for Disease Control and Prevention, the Agency for Health Care Policy Research, the Administration on Aging, and the National Institute on Aging.
5. Among the topics that shall be the subject of new applied research are:
 - a. A study on the effectiveness of using different types of providers of care (e.g., non-physicians) and alternative settings (e.g., community-based settings such as senior centers) for the implementation of a successful health promotion and disease prevention strategy.
 - b. A study to identify the most effective means of educating and incentivizing beneficiaries and providers about the importance of health promotion and disease prevention for the elderly and increasing utilization of both new and existing prevention services.
 - c. Other study topics can be added by the Secretary with timely notification to the Congress of any additions.
6. We encourage the Health Care Financing Administration to expand its efforts to study and

DRAFT (5/3/99) – FOR INTERNAL USE ONLY – DRAFT (5/3/99)

test the most promising behavioral modification of risk factors associated with health promotion and disease prevention for all Medicare beneficiaries.

7. We recommend that the National Library of Medicine develop and maintain a national clearinghouse of innovative and successful health promotion and disease prevention interventions targeting all Medicare beneficiaries in a variety of settings from both published and unpublished sources.
8. The Secretary of Health and Human Services shall provide a report to Congress by no later than December 31, 2002 that addresses the following:
 - a. the results of the overall applied research efforts,
 - b. whether or not (as a result of the applied research efforts) certain health promotion and disease prevention benefits or education efforts should be added to the Medicare program (including discussions on quality of life and cost-effectiveness for each proposal),
 - c. the utility of, potential for, and issues surrounding Medicare-sponsored health risk appraisals and targeted follow-up, and
 - d. how best to increase utilization of existing and recommended health promotion and disease prevention services (including an education and public awareness component, discussion of financial incentives - for providers and beneficiaries - to improve utilization, and other administrative means of increasing utilization).

B. ADVANCING ORIGINAL RESEARCH IN THE FIELD OF PREVENTION AND THE ELDERLY

To encourage ongoing, original research in the field of health promotion and disease prevention for the elderly, new funding in the amount of \$100 million over five years shall be made available to the National Institute on Aging. Research efforts shall focus on ways to improve quality of life for the elderly, to develop better ways to prevent or delay the onset of chronic illness and disability, and to develop new means of assessing the long-term cost effectiveness of health promotion and disease prevention efforts for the elderly. Research findings, funded by this title, that are scientifically valid and are demonstrated to prevent or delay the onset of chronic illness or disability among the elderly shall be forwarded, in accordance with Section VI of this title, to the National Academy of Sciences' Institute of Medicine for consideration in their efforts to assess all current literature and best practices in the field of health promotion and disease prevention among the elderly.

SECTION II. NEW PREVENTION BENEFITS

1. Individual Benefits - The following preventive benefits are added to the existing Medicare Preventive Benefits Package:
 - a. counseling for smoking cessation by a physician or when prescribed by a

DRAFT (5/3/99) – FOR INTERNAL USE ONLY – DRAFT (5/3/99)

- physician,
 - b. screening for hypertension,
 - c. counseling for hormone replacement therapy, and
 - d. screening for early detection of glaucoma.
- 2. **Elimination of Co-Payments** - In order to promote increased utilization of the preventive benefits described in Section II(1), co-payments shall be eliminated for these benefits.
- 3. **Population-Based Education Effort** - The Health Care Financing Administration, in collaboration with the Centers for Disease Control and Prevention, shall develop a national falls prevention education and awareness campaign to reduce the number of injuries and disabilities stemming from falls among at-risk Medicare beneficiaries.
- 4. **Program Integrity** - The Health Care Financing Administration, in collaboration with the Office of the Inspector General, shall integrate the benefits described in Section II(1) with existing program integrity measures.

SECTION III. NEW, LIMITED PREVENTION-RELATED OUTPATIENT PRESCRIPTION DRUG BENEFIT

- 1. **Limited prevention-related outpatient drug formulary for all Medicare beneficiaries, regardless of their enrollment in fee-for-service or Medicare +Choice, including -**
 - a. outpatient drugs used as part of an approved smoking cessation program,
 - b. outpatient drugs used in the treatment of hypertension,
 - c. outpatient drugs used as part of an approved hormone replacement therapy program, and
 - d. outpatient drugs used in the treatment of glaucoma.
- 2. **Financial Assistance** - Financial assistance would be provided to low-income Medicare beneficiaries below 135% of the Federal poverty level in the form of eliminating drug co-payments and deductibles as described in Section III(5)(a) and (e).
- 3. **Administration of Outpatient Drug Benefit** - The drug benefit shall be administered through a competitive bidding model that utilizes pharmacy benefit management organizations or entities similarly qualified to negotiate and administer an outpatient prescription drug benefit under contract with the Health Care Financing Administration.
- 4. **Comprehensive Medicare Drug Benefit Study** - The National Academy of Sciences' Institute of Medicine shall conduct a study of the feasibility and issues involved in developing, administering, and financing a comprehensive Medicare outpatient prescription drug benefit and shall report to Congress by no later than June 30, 2001. As part of the report, the Institute of Medicine shall develop a prioritized list of drug

10 94565557 P.06/07

DRAFT (5/3/99) – FOR INTERNAL USE ONLY – DRAFT (5/3/99)

categories that could be added to the benefit based on the availability of funding.

5. **Payment Structure -**
 - a. Deductible - \$50 (except as noted in Section III(2)).
 - b. Co-Insurance - 20% percent beneficiary co-insurance.
 - c. Annual Cap on Benefit - \$600.
 - d. Part B Premium Increase for Drug Benefit - \$10 (indexed to annual cost of living increases).
 - e. Co-Payments - \$5 (except as noted in Section III(2)).
 - f. Medicare +Choice Payments - Payments to Medicare +Choice plans shall be adjusted to reflect the cost of adding the benefits described in Section III(1).
6. Adding additional drug benefits - In the event the Federal government recovers funds stemming from its efforts to sue the tobacco industry for the recovery of Federal dollars related to the treatment of tobacco related illness, those funds shall be used to enhance the drug benefit described in Section III(1), and consistent with the recommendations of the Institute of Medicine's recommendations as described in Section III(4), by paying for new categories of outpatient prescription drugs.

SECTION IV. BI-ANNUAL REPORT

1. Beginning January 1, 2001, and every subsequent two years, the Medicare Payment Advisory Commission shall report to Congress on its assessment of the Medicare program's benefit package and evaluate the degree to which it is actuarially equivalent to private sector health benefit programs.
2. Included in the report, MedPAC shall make recommendations on benefit changes that should be considered by Congress that would keep Medicare a modern and competitive program in relation to private sector health benefit programs.

SECTION V. INSTITUTE OF MEDICINE FIVE YEAR MEDICARE PREVENTION BENEFIT REPORT AND RECOMMENDATIONS

1. Beginning five years after the date of enactment of this title, and every subsequent five years, the National Academy of Sciences' Institute of Medicine shall conduct a comprehensive study of current literature and best practices in the area of health promotion and disease prevention for all Medicare beneficiaries.
2. This five year study will assess clinical and cost effectiveness issues, utilization of covered benefits (including any barriers to or incentives to increase utilization), and quality of life issues associated with both covered and non-covered health promotion and disease prevention benefits or outpatient prescription drugs that would effect all Medicare beneficiaries.
3. The IOM's report shall include recommendations that prioritize the benefits, including

DRAFT (5/3/99) – FOR INTERNAL USE ONLY – DRAFT (5/3/99)

outpatient prescription drugs, and make any modifications to the existing Medicare preventive benefit package.

4. Congress shall have the opportunity, upon reviewing the IOM's recommendations, to reject the IOM's recommendations and continue funding the existing benefit package or approve the IOM's recommendations and make funding available for the modified benefit package.

Public Health Nursing Vol. 13 No. 1, pp. 65-71
0737-1209/96/\$10.50
© Blackwell Science, Inc.

Older Adults' Experience of Health Promotion: A Theory for Nursing Practice

Marilyn Frenn, R.N., Ph.D.

Abstract Understanding older adults' experience of health promotion is essential in effectively preserving health and functional ability and thereby reducing health care costs among members of this rapidly expanding group. During 5 months of participant observation of 80 older adults (ages of 62-88), data from 31 semistructured interviews, as well as the Health Self-Determinism Index (HSDI) designed to measure intrinsic motivation for health (Cox, Miller, & Mull, 1987), were analyzed using methods common to grounded theory (Glaser & Strauss, 1967). Patterns central to maintaining health that provide essential theoretical grounding for health promotion practice with older adults were discovered.

This is a time when exploding health care costs threaten health care benefits on which many older adults have come to depend. Health care professionals, therefore, must understand and capitalize on clients' ways of promoting their own health. Leveille, LaCroix, Hecht, Gorthaus, and Wagner (1992) stated that we can meet the health care needs of an increasingly older population at 62% of the current cost if we preserve functional independence and prevent disability.

Improved community health is defined by the community, not the professional (Schroeder, 1994). Qualitative methods offer greater utility and power for the examination of health concepts and the subsequent development of consumer-sensitive interventions than do conventional approaches (Lincoln, 1992). Munhall (1993) described qualitative approaches as being a means to develop initial levels of theory within the domain of nursing. Problems

that occur when theories are borrowed from other disciplines such as dependence on deducing hypotheses from unrelated contexts or populations were cited. The purpose of this study was to examine older adults' experience of health promotion as a basis for developing the factor-isolating and factor-relating steps of theory that might guide nursing practice in promoting health with this important group of clients.

METHOD

A simultaneous process of collecting, coding, and analyzing data congruent with grounded theory (Chenitz & Swanson, 1986; Glaser & Strauss, 1967; Strauss, 1987) was used in the collection and analysis of the data. Schulz (1987) stated that the use of an instrument as well as qualitative sources of data may provide a more holistic view of the phenomena of concern to nursing. Therefore, the Health Self-Determinism Index (HSDI) (Cox, Miller, & Mull, 1987) was used to gather client perspectives related to intrinsic motivation for health. Intrinsic motivation for health is defined as the human need to be competent and self-determining with respect to the environment (Deci, 1980).

The HSDI was used within the "emergent fit" mode of grounded theory (Artinian, 1986). This means that the investigator considered prior research, but pursued the present inquiry with openness to perspectives offered by older adults.

Three research questions were used to focus the inquiry concerning older adults' experience of health promotion: 1) How do older adults go about maintaining or promoting their health? 2) What influences older adults' health promotion efforts? and 3) What aspects of the environment, or contexts, do older adults describe as relevant to promoting their health?

Marilyn Frenn is Assistant Professor, Marquette University, College of Nursing, Milwaukee, Wisconsin.

Address correspondence to Marilyn Frenn, R.N., Ph.D., Marquette University, College of Nursing, P.O. Box 1881, Milwaukee, Wisconsin, 53201-1881.

SETTING AND SAMPLE

An assumption of qualitative research incorporated in this study was that reality is socially as well as personally constructed, and the context of the inquiry is of special importance (Riley, 1992). An urban midwestern community center that housed a nursing clinic where older adults gathered for a federally subsidized meal program was selected. A nurse practitioner in the clinic provided care for about 25 elderly clients each day. There were 70-80 individuals seen on a regular basis.

Demographic data were not available for all of the persons included in participant observation. Respondents participating in semistructured interviews included 18 men and 13 women with a mean age of 73 years. Twenty-two interviewees lived with their spouses, seven lived alone, and two lived with persons other than a spouse. Thirty interviewees were Caucasian and one was African American. Fourteen of the interviewees' household incomes were at or below \$10,000, 14 were between \$10,000 and \$30,000, and three interviewees stated their income was greater than \$30,000 per year. Eleven interviewees completed high school; of these two had additional education but did not receive college degrees. The remaining 18 interviewees' education ranged between the 6th- and 11th-grade levels.

APPARATUS

Qualitative and quantitative data in this study were collected in 5 months of data collection through semistructured and structured client interviews. Field notes were taken in and around the community center, ranging from 1-3 hours per day, 3-5 days per week when older adults were present, prior to and during their meal. Demographic data including age, income, ethnicity, education, and medical problems were collected at the end of the interview to better describe the respondent sample.

Semistructured Interview Guide

A semistructured interview guide was constructed by the investigator to elicit what older adults experienced as helpful in maintaining or improving their health. The interview guide had been previously developed based on review of the literature related to wellness/health promotion. This was used to understand client experience in this study and was reported by a group of middle-aged and older adult clients during a cardiac rehabilitation program (Frenn, Borgeson, Lee, & Simandl, 1989).

As in the Frenn et al. (1989) study, respondents were asked to describe their health, what they thought was important in staying healthy, and what they actually were doing to promote their health. They were also asked to give examples of how they began to promote their health,

what helped or hindered them in promoting their health, and to share any other thoughts they thought were important in maintaining or promoting their health.

Interviews were conducted individually and usually lasted 30-45 minutes. Interviews were not repeated, but participant observation data were used to confirm or disconfirm and to expand on data gathered in the interviews. The 31 respondents who were interviewed constituted the older adults willing to share information in that format. Other elders expressed willingness for the investigator to join them during their meal, because they did not want to miss the opportunity to relate to others. Insights shared by older adults gathered at their tables were recorded in field notes.

Health Self-Determinism Index (HSDI)

The HSDI statements were used as qualitative probes regarding health motivation. The HSDI, a 17-item, Likert-type scale instrument, had been used with older adults living in the community. Acceptable internal consistency ($\alpha = 0.78$) was demonstrated and 56% of the variance in factor analysis was accounted for (Cox et al., 1987). Chronbach's alpha coefficient in the present study was 0.67 ($N = 31$). Although triangulation among qualitative and quantitative data was originally intended, quantitative data from the HSDI were not included in this report because of the low alpha.

Field Notes

Participant observation data collected in the community center were recorded in field notes. Observational, methodological, and theoretical notes (Glaser & Strauss, 1967; Mariano, 1995) were taken in the community center, during the interviews, and throughout analysis. These notes guided further interview probes and data analysis. Rodgers and Cowles (1993) described the necessity of synthesizing the three types of notes to produce dense description and ultimate trustworthiness of the emerging theory.

PROCEDURES

Following institutional review for protection of human subjects, a description of the study was placed in the meal program room and on the outer door of the nursing clinic. The study also was explained verbally to potential respondents during participant observation. To enhance sampling validity as identified by Krippendorff (1980), members of each of the naturally occurring conversation groups in the meal program were asked if they would be willing to share their perspectives about health in a tape-recorded interview. Written permission was requested prior to the interviews.

The semistructured interview questions were asked first, followed by additional questions that emerged from previ-

ous interviews or participant observation. The HSDI then was verbally administered and the respondent invited to comment as the questions were asked.

Copies of the typed transcripts containing the semistructured interview and verbal HSDI data were independently coded by the investigator, and three masters prepared nurse cocoders to enhance reproducibility and consensus of the coding categories. Interrater agreement, without discussion, was 50%–75%. When codes were discussed, agreement was 100%. The investigator recoded the first three interviews after completion of all interviews to examine stability in coding. A 90% agreement was found between the first and second coding.

The codes generated from line-by-line analysis of the interviews were noted on an evolving outline of roughly ordered concepts. Semantic validity, as identified by Krippendorff (1980), was enhanced through respondent verification of the data, during participant observation, and by reporting samples of data using respondents' own words.

To enhance product validity (Krippendorff, 1980), perceptions shared by respondents were further explored with subsequent respondents after they completed the semistructured interview. Data obtained through interviews, participant observation, and extant literature were compared using the constant comparative method (Glaser & Strauss, 1967). The patterns ultimately discovered were then compared with analogous patterns reported in the literature for the purpose of enhancing the process-oriented validity (Krippendorff, 1980). Process oriented validity is the degree to which the categories of analysis are supported by valid theory.

RESULTS

Grounded theory leads to the discovery of a basic social process (Strauss, 1987). A process called Going about Health emerged from the present analysis (Figure 1). Older adults' statements and observed behaviors of what they actually did to promote their health constituted the major patterns of Going about Health. Older adults' statements and observed behaviors that led to and affected the maintenance of the behaviors they saw as promoting their health were called influencing patterns. Aspects of the older adults' experience that formed the context for what they actually did to maintain their health were called contextual factors.

MAJOR PATTERNS

For purposes of this study, patterns were defined as the naturally occurring configurations of relationships among elements of the phenomena being studied. Major patterns, components, and constructs are shown in Figure 2.

Interview and participant observation data led to discov-

ery of constructs that in turn led to discovery of larger components and finally the major patterns. Major patterns included maintaining relationships, attending to health behaviors, and staying active. For example, a number of respondents described walking as something they did to promote their health. An 87-year-old man said, "I attribute my long life to walking. . . . I go all over. I love to go down to the river, walk the falls and listen to the birds."

Respondents also identified going somewhere to exercise, personal exercise at home, dancing, work at home, purposeful work, and sports as promoting their health. These theory constructs led to naming exercise as the first component of the emerging pattern Staying Active (Figure 2).

Although exercise might have been part of the pattern Attending to Health Behaviors (Figure 1), respondents also described social activity as a way to promote their health. The following observational note taken during participant observation is illustrative of data leading to development of this theory construct:

A 76-year-old man said, "If you stay active you don't need a doctor." He stays active by fixing toys for the younger children, building cabinets for the teens' video equipment, volunteering in the meal program when the paid coordinator was on vacation, doing errands in the afternoon, and watching baseball in the evenings.

Similarly, respondents described balance between staying active and sufficient rest and sleep as being important to staying healthy. Moving from the factor-isolating to the factor-relating stage of theoretical development, the three components Exercise, Social Activity, and Rest and Sleep formed the pattern Staying Active (Figure 2).

The other two major patterns, Maintaining Relationships and Attending to Health Behaviors (Figure 2), similarly were formulated from the data. For example, a 67-year-old woman said, "I think when you give to somebody else you get back twice as much." These data, along with those provided by other respondents, led to the component Reciprocal Caring (Figure 2). Reciprocal Caring, along with Companionship, formed the major pattern Maintaining Relationships (Figure 2).

Another woman provided an example of the relationship between the major patterns Maintaining Relationships and Attending to Health Behaviors when she said, "I think these centers are great, because we get to talk to other people, even if it's only for an hour. Because we come here to eat, it's just enough to get out of the house and talk to someone else." The meal program functioned for these urban older adults in much the same way as Bonder (1994) described the social support networks functioning for rural elders around grocery stores, post offices, and banks.

GOING ABOUT HEALTH

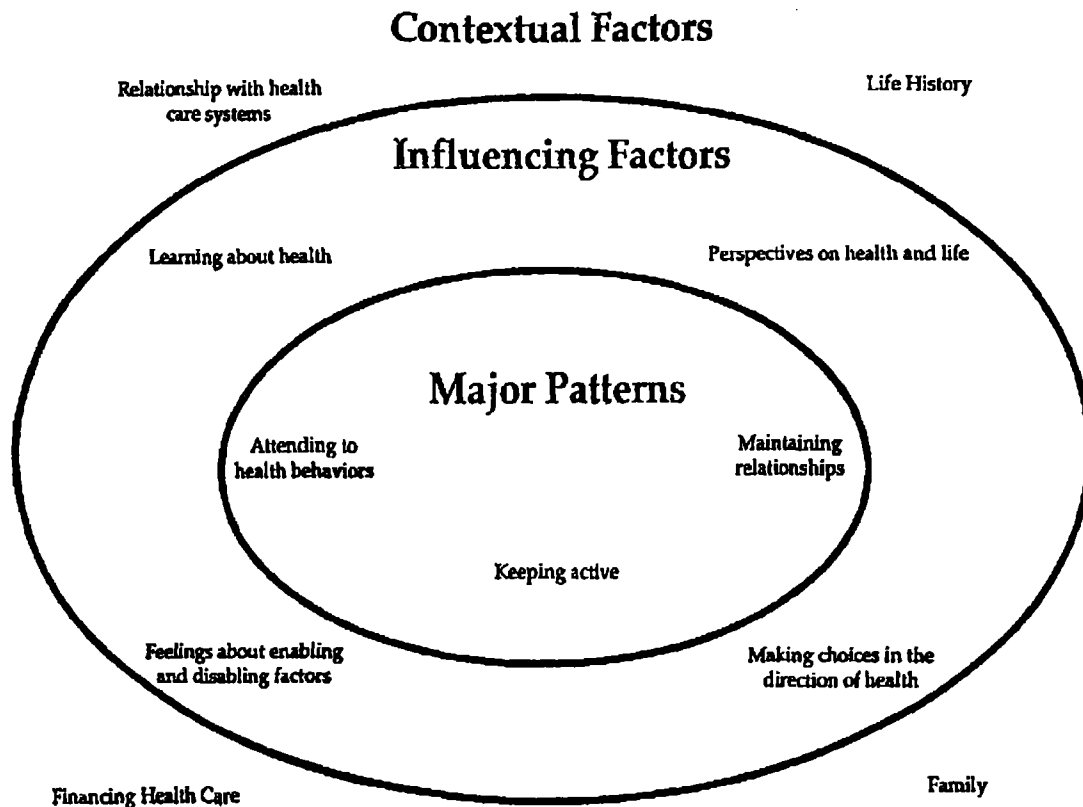


Figure 1. Going about Health: A theory for nursing practice.

The patterns Staying Active, Maintaining Relationships, and Attending to Health Behaviors were central in that they pattern consistently were experienced by older adults as promoting their health. Lack of these major patterns was similarly related to ill health.

Hansson and Carpenter (1994) suggest that we understand the role relationships play in health by studying their consequences. In the current study, a man who had a pattern of poor relationships throughout his life experienced a myocardial infarction. Nurses helped him reconnect with essential services to support his recovery, and listened as he grieved the fact that few, if any, people came to visit him during his hospitalization. This is not to say that poor relationships and myocardial infarctions are always connected experiences, but that regaining relationships was essential for this man to pursue health.

INFLUENCING PATTERNS

Influencing patterns (shown in Figure 1) included Making Choices in the Direction of Health, Learning about Health, Perspectives on Health and Life, and Feelings about Enabling and Disabling Factors. The first influencing pattern, Making Choices in the Direction of Health (Figure 1), included Motivation, Moderation, and Coping with Chronic Health Problems. In addition to the constructs of intrinsic motivation, which were Self-Determination and Perceived Competence, older adults shared three important components of motivation: External Forces, the Way They Were Raised, and New Awareness. A 77-year-old man described his "new awareness": "Once I found out it wasn't good to eat organ meats. Well, I quit them. And that was a little bit hard too. But not anymore. Today I

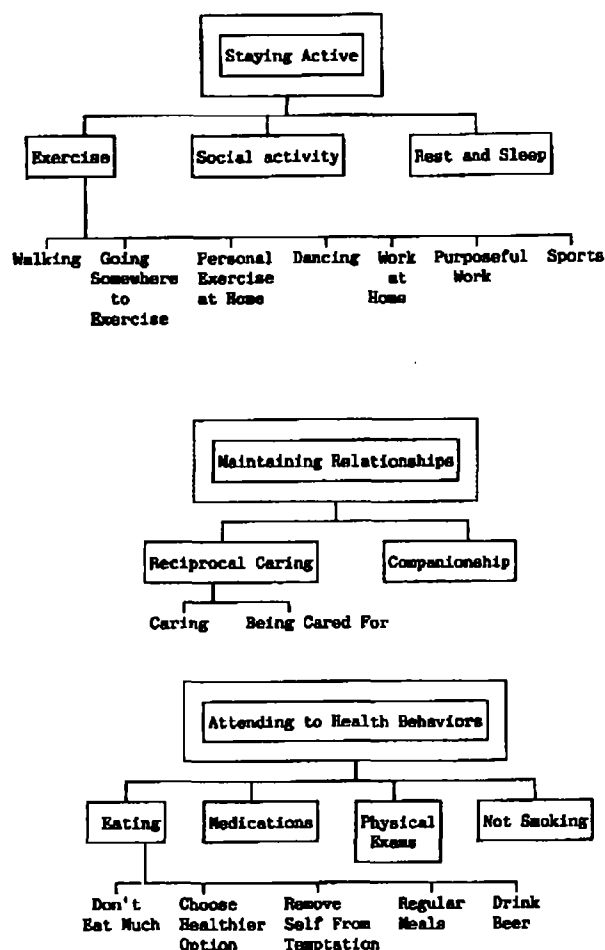


Figure 2. Major patterns, components, and constructs.

think it would repulse me, I'm not sure. But I know it isn't good for you, so I wouldn't eat it."

Older adults learned by reading, watching others, and teaching themselves. For example, a respondent reported that he learned from watching his uncle who had not stayed active, become ill, "and now he's pushing up daisies." Respondents also reported teaching themselves: "I am (sic) into the doctor about 25 years ago," said an 87-year-old man. "He said, I should use this Metamucil. I did for a little while, but just by chance, I ate an apple about 7 P.M., and that settled my stomach much better than Metamucil. And, from that time on I eat apples—two or three every evening around 7 P.M."

Health and life were very intertwined in older adults' experience. The respondents mainly described their health as being good despite chronic illness and "okay for my age."

As a group, respondents' views on what was important

for staying healthy were much the same as what they reported they actually did to stay healthy. However, individual respondents surprised themselves upon discovering differences between what they said was important and what they were actually doing. For example, having said that staying active was important to health, chagrin spread over the face of a 77-year-old man when he was asked to describe what he was doing to stay active. He said, "I really need to walk more."

Feelings about Enabling and Disabling Factors (Figure 1) constituted the last pattern influencing health. Enabling factors included spouse, life history, and health professionals. Disabling factors included illness, that health behaviors were hard to accomplish, spouse, previous patterns, and societal disablers. The issue was how the older adult in this study felt about the enabling and disabling factors, rather than the factors themselves; respondents' spouses, for example, were described both as enabling and disabling.

THE CONTEXT OF GOING ABOUT HEALTH

Contextual factors (Figure 1) were important to Going about Health in that they formed the environment in which the process occurred. They included Life History, Family, Relationship with Health Care System, and Financing Health Care.

Respondents described Going about Health as being very intertwined with their life. As one 65-year-old woman said, "I've been a widow for 26 years. I raised my children through high school and college myself. That's why I live in the (housing) project, because without the project I couldn't have done it. But, all three of them went to high school and college, and graduated, and all three holding down good jobs, and have their own homes, so my work is done. I finally can put my head on the pillow and sleep." The respondents' families of origin, as well as their current family relationships, provided a context through which they enacted the process of Going about Health (Figure 1). Said a 67-year-old man about his wife, "Yeah, I think we're good for each other, you know. And we'll just have to get out and walk and watch our diet."

Respondents identified health care systems, the nursing clinic in the community center, and relationships with physicians as major components of their context of good health practices. The major client responses concerning the nursing clinic were that the nurses took their blood pressure, were good listeners, and were nice people. Respondents stated they were glad to be able to see physicians when they were sick even though physician services were not available at the community center clinic. Relationships, trust, and making choices about their own health were described as important.

TABLE 1. *Areas of Convergence of Extant Research-based Theories with Major Patterns*

Extant Research	Maintaining Relationships	Attending to Health Behaviors	Staying Active
Kolanowski & Gunter (1985)	X	X	X
Boyle & Counts (1988)		X	X
Craig (1994)	X		
Brown & McCreedy (1986)		X	X
Walker et al. (1988)	X	X	X
Pender (1990)	X	X	X
NANDA (1994)	X	X	X
Omaha System (Martin & Scheet, 1992)	X	X	X

Older adults with low income identified finances as a contextual factor more readily than did those with greater income. Differences in the patterns of Going about Health were not apparent by respondents' incomes. Rather, dealing with life challenges and low income was described as an additional burden that had to be addressed before health promotion could be pursued. Cutler and Coward (1992) noted similar problems in that urban elders tend to have low incomes and inadequate housing when compared to their rural and suburban counterparts.

The overall process of Going about Health was summarized by what a 65-year-old woman said, "Childhood, don't leave you. Because it's there, the whole pattern. . . . When you're raised up like that you don't change it." Another 65-year-old woman elaborated, "The coming and going, you know, the process, and it's unavoidable for everybody. You're born, you live, and you die. And, therefore, if you make it to old age, it's beautiful, and you're very lucky."

DISCUSSION

The view that the generation of knowledge in nursing evolves through analysis of constancy or inconstancy patterns in different situations, age groups, or cultures over time (Stevenson, 1988) was central to the present study. In accordance with the grounded theory approach (Strauss, 1987), other theories were first analyzed for areas of convergence. (See Table 1.)

Kolanowski and Gunter's (1985) qualitative study with older women resulted in patterns that were very similar to those reported in the present study. Boyle and Counts (1988) found patterns similar to Attending to Health Behaviors and Staying Active in their study of Appalachian elders, but did not find maintaining relationships to be central to health in that context.

In contrast, Craig (1994) found extensive support for the centrality of maintaining relationships among rural Great Plains elders, but did not describe the patterns Attending to

Health Behaviors or Staying Active as central to residents' health. Similarly, Ruffing-Rahal (1989) identified core themes of well-being among 27 midwestern, independently living elders as including activity, affirmation, and synthesis. Ruffing-Rahal's categories of affirmation and synthesis were similar to the influencing pattern subcomponents Motivation and Values by which Elders Live, identified in the present study. Thus, cultural and regional differences may lead to some variance in centrality of the major patterns, but the three patterns consistently were reported in other qualitative studies (Craig, 1994; Ruffing-Rahal, 1989).

Day (1991), in a qualitative study of a subsample of 20 aging women taken from a longitudinal, national quantitative study, recommended that health professionals address the meaning of individual goals, and plan health interventions specifically to enable older women to achieve them. Day also identified the growing consensus among researchers that strategies for successful aging must be sought not only in individual biological and psychological potential, but also in broader social influences and opportunities for health and well-being.

Because this was a study focused on developing theory to guide nursing practice, classification systems relevant to health promotion phenomena also were examined relative to the major patterns. Among such systems, Pender (1990) developed a taxonomy of expressions of health. The North American Nursing Diagnosis Association (NANDA) Taxonomy I Revised (Carroll-Johnson, 1991) and Omaha Classification Systems (Martin & Scheet, 1992) also were used for comparison with major patterns in the present study.

The major patterns were closely analogous to Pender's classification, the NANDA patterns Moving, Relating, and Exchanging, and categories within the Omaha System. The influencing patterns and contextual factors identified by older adults in Going about Health (Figure 1) were not identified in the previously cited research and classification systems. Although each influencing pattern and contextual

factor had also been reported in other extant research, the relationships among the patterns discovered in Going about Health had not been previously reported.

As a great deal of congruity was found between major patterns in Going about Health and in extant research and classification systems, these patterns may be useful in health promotion practice among older adults. With further study, constructs within the major patterns may be useful additions to ongoing taxonomic development.

Further research is needed to examine influencing patterns and contextual factors related to health promotion among older adults from other ethnic and socioeconomic groups. Differences between "young old" and "old old" have been reported (Hazan, 1994). However, the focus of the present study did not elicit such differences, nor were gender-specific differences found. Further research is planned to explicate context specific factors as well as age-related patterns of promoting health.

ACKNOWLEDGMENTS

This study was supported in part by an Individual National Research Service Award (NR05946-02) funded by the Center for Nursing Research National Institutes of Health.

REFERENCES

- Artinian, B.M. (1986). The research process in grounded theory. In W.C. Chenitz & J.M. Swanson (Eds.). *From practice to grounded theory: qualitative research in nursing* (pp. 16-23). Menlo Park, Calif.: Addison-Wesley.
- Bonder, B.R. (1994). Growing old in the United States. In B.R. Bonder & M.B. Wagner (Eds.). *Functional performance in older adults* (pp. 4-11). Philadelphia: F.A. Davis.
- Boyle, J.S., & Counts, M.M. (1988). Toward healthy aging: a theory for community health nursing. *Public Health Nursing*, 5(1), 45-51.
- Brown, J.S. & McCready, M. (1986). The hale elderly: health behavior and its correlates. *Research in Nursing & Health*, 9, 317-329.
- Carroll-Johnson, R.M. (1991). *Classification of nursing diagnoses: proceedings of the ninth conference*. Philadelphia: J.B. Lippincott.
- Chenitz, W.C., & Swanson, J.M. (1986). Qualitative research using grounded theory. In W.C. Chenitz & J.M. Swanson (Eds.). *From practice to grounded theory: qualitative research in nursing* (pp. 3-15). Menlo Park, Calif.: Addison-Wesley.
- Cox, C.L., Miller, E.H., & Mull, C.S. (1987). Motivation in health behavior: measurement, antecedents, and correlates. *Advances in Nursing Science*, 9, 1-15.
- Craig, C. (1994). Community determinants of health for rural elderly. *Public Health Nursing*, 11(4), 242-246.
- Cutler, S.J., & Coward, R.T. (1992). Availability of personal transportation in households of elders: age, gender and residence differences. *Gerontologist*, 32, 77.
- Day, A.T. (1991). *Remarkable survivors: insights into successful aging among women*. Washington, D.C.: Urban Institute Press.
- Deci, E. (1980). *The psychology of self-determinism*. Lexington, Mass.: Lexington Books.
- Frenn, M., Borgeson, D., Lee, H., & Simundl, G. (1989). Lifestyle changes in a cardiac rehabilitation program: the client perspective. *Journal of Cardiovascular Nursing*, 3, 43-55.
- Glaser, B.G., & Strauss, A.L. (1967). *The discovery of grounded theory: strategies for qualitative research*. Chicago: Aldine.
- Hansson, R.O., & Carpenter, B.N. (1994). *Relationships in old age: Coping with the challenge of transition*. New York: Guilford Press.
- Hazan, H. (1994). *Old age: constructions and deconstructions*. Cambridge, England: Cambridge University Press.
- Kolanowski, A., & Gunter, L.M. (1985). What are the health practices of retired career women? *Journal of Gerontological Nursing*, 11(12), 22-30.
- Krippendorff, K. (1980). *Content analysis—an introduction to its methodology*. Beverly Hills, Calif.: Sage Publications.
- Leveille, S.G., LaCroix, A.Z., Hecht, J.A., Gorthaus, L.C., & Wagner, E.H. (1992). The cost of disability in older women and opportunities for prevention. *Journal of Women's Health*, 1, 53-61.
- Lincoln, Y.S. (1992). Sympathetic connections between qualitative methods and health research. *Qualitative Health Research*, 2, 375-391.
- Mariano, C. (1995). The qualitative research process. In L.A. Talbot (Ed.). *Principles and practice of nursing research* (pp. 463-491). St. Louis, Mo.: Mosby.
- Martin, K.S., & Scheet, N.J. (1992). *The Omaha system: applications for community health nursing*. Philadelphia: W.B. Saunders.
- Munhall, P.L. (1993). Language and nursing research. In P.L. Munhall & C.O. Boyd (Eds.). *Nursing research: a qualitative perspective* (2nd ed. pp. 5-38). New York: National League for Nursing.
- NANDA (1994). *Nursing diagnoses: definitions & classification*. Philadelphia: North American Nursing Diagnosis Association.
- Pender, N.J. (1990). Expressing health through lifestyle patterns. *Nursing Science Quarterly*, 3, 115-122.
- Riley, M.W. (1992). Forward. In M.G. Ory, R.P. Abeles, and P.D. Lipman (Eds.). *Aging, health, and behavior*. London: Sage Publications.
- Rodgers, B.L., & Cowles, K.V. (1993). The qualitative research audit trail: a complex collection of documentation. *Research in Nursing and Health*, 16, 219-226.
- Ruffing-Rahal M.A., (1989). Ecological well-being: a study of community-dwelling older adults. *Health Values*, 13(1), 10-19.
- Schroeder, C. (1994). Community partnerships and medical models of health? I don't think so. . . *Public Health Nursing*, 11(5), 283-284.
- Schulz, P.R. (1987). Toward holistic inquiry in nursing: a proposal for synthesis of patterns and methods. *Scholarly Inquiry for Nursing Practice*, 1(2), 135-146.
- Stevenson, J.S. (1988). Nursing knowledge development: into era II. *Journal of Professional Nursing*, 4, 152-162.
- Strauss, A.L. (1987). *Qualitative analysis for social scientists*. Cambridge, England: Cambridge University Press.
- Walker, S.N., Volkan, K., Sechrist, K.R., & Pender, N.J. (1988). Health-promoting life styles of older adults: comparisons with young and middle-aged adults, correlates and patterns. *Advances in Nursing Science*, 11 (1), 76-90.

Conference paper

Health promotion and primary care.

The Society's Annual Lecture for 1997, presented by D Pereira Gray
at the RSH Annual General Meeting on 17 June, 1997

**Professor Denis
Pereira Gray**
OBE, MA, FRCGP,
HonFRSH
General Practitioner,
Exeter;
Director of the
Postgraduate Medical
School, University of
Exeter;
Director of Postgraduate
General Practice
Education for the South
West

Key words

Health promotion; personal care; primary care; population; records

Introduction

I would like to thank the Royal Society of Health for inviting me to deliver this lecture. The Royal Society of Health has a well deserved reputation which, since its foundation in 1876, continues to grow. It is a special pleasure for me to be invited to address this Society whose work I have admired for so long.

HonFRSH

Today I was privileged to become an Honorary Fellow of this Society and I would like to thank the Council of the Society very much and say how much I appreciate it.

Dr Bashir Qureshi

I would like to thank Dr Bashir Qureshi for support and this generous invitation. It has been a pleasure working with him over the years, since the time when we served together on the Communications Division of the Royal College of General Practitioners in 1983. He and I share many interests, including medical editing, and we are both still members of the Council of the RCGP. On behalf of all his colleagues I would like to congratulate him on being elected the first General Practitioner Chairman of the Council of such an important body as the Royal Society of Health.

Definitions

Since health promotion covers such a wide field, I would like to begin by defining the concept I shall be using.

Primary care

Strangely, although primary care is now a term on everyone's lips in Health Service planning, it has never been precisely defined. I use it in its Health Service context to include all care provided by multi-professional primary health care teams, that is - including district nurses, general practitioners, health visitors, practice nurses, and practice-based midwives and physiotherapists.

Prevention

Twenty years ago this year, in the James Mackenzie Lecture of the RCGP, the nine stages in which a doctor or health professional can work were listed:

1. The prevention of disease
 2. The pre-symptomatic detection of disease
 3. The investigation of disease
 4. The diagnosis of disease
 5. The management of disease
 6. The management of the complications of disease
 7. Rehabilitation
 8. Terminal care
 9. Counselling the bereaved
- (Pereira Gray, 1978)

I repeat them here because these nine stages of management follow a natural progression which starts with the prevention of disease. This list is a hierarchy in which prevention is the most important activity of all. Health promotion, when safe

Health promotion and primary care

and effective, is the supreme objective of the doctor and nurse.

Classification

Prevention can be classified in three stages: primary prevention, that is, stopping illness ever starting, for example by immunisations - this is obviously the most desirable form; secondary prevention, which is the presymptomatic detection of disease, such as cervical screening or blood pressure screening, when the problems are present, but the patient is unaware of them; and thirdly, tertiary prevention, which is the process of preventing complications after disease has become established - a process which is also part of good clinical care.

Health promotion

When reading for this talk, I discovered that the term health promotion in the UK is usually confined to activities before the development of an illness. However, as a generalist (Pereira Gray *et al.*, 1994) I see an analogy with accident prevention for example, in promoting road safety. It is of course important to improve roads, alter speed limits and improve the design of cars i.e. all before any crash occurs, but it is also normal to work on safety devices, driver training, and indeed rescue services after accidents have occurred.

Health promotion policy should, I suggest by analogy, be as comprehensive as the promotion of road safety. One interesting implication is that this means that good care after illness has developed should be included. Health promotion here is therefore used to mean any activity designed to improve the quality of, or extend human life. I am not using it just in terms of actions undertaken in or through the Health Service, but including legislation.

A story of success

Let's begin with the good news! At a time when there is so much gloom and doom especially in the NHS, it is important to stand back and look at the major health indices which chart

the progress or deterioration in the health of our population.

The nineteenth century, as it recedes into history, is acquiring the aura of a golden age. This country certainly achieved then much of which it can be proud, but it began this century with some outstanding challenges to health. My grandfather, as the first family doctor in our practice, worked in Exeter in 1900 with an infant mortality of 80 per 1000 live births and an expectation of life around the age of 50. I still work in the same practice and have many older patients who tell me about lost brothers and sisters, or describe families of eight or ten children with an expectation in the family that several would never grow up.

Yet today on average in the United Kingdom, we have an infant mortality lower than at any time in our history. By the middle of the twentieth century the infant mortality had fallen to about 40, but now it is down to 6 deaths per 1000 live births. The average expectation of life is longer than ever before, and has now reached 80 for females, which used to be regarded in my youth as being really old. As for men, the vulnerable sex, the life expectation for males in the UK is the fourth best in Europe (Secretary of State for Health, 1996). Furthermore, all these key markers of life and health are continuing to improve.

My point is simply that the end-points of health promotion are measurable, are public, and are progressively improving.

The high point of the hospital era was reached this century between 1960 and 1970, perhaps marked by Enoch Powell's Hospital Plan of 1962. Since then emphasis has progressively moved towards primary care - the term you have chosen for your lecture this year. Indeed the main thrust of policy in the new NHS is now towards a primary care led NHS (Secretary of State for Health, 1996).

The many people in primary care and public health know full well the reasons for this shift. However, for

others here may I briefly recite the key issues which form the logic for a primary care lead. A fuller treatment has been described by the Conference of Academic Organisations of General Practice (Pereira Gray, 1996).

The individual patient and personal care

At the beginning of this century, the proportion of people who had been to a university in the population was small, under 5%. There was no radio, no television, or mass media of the kind we know now and most people were relatively ignorant.

People as patients sought knowledge as they sought care and a large part of the role of professional people such as my grandfather was teaching, in the old sense of giving information. Doctors were respected partly because they were among the few who were known to be educated and because they did have much more knowledge than most of their patients.

The twentieth century has seen a huge dissemination of knowledge. As many as a third of all young people now go to a university in their late teens, more than ever before are enrolling for university courses during their career and mature students are the fastest growing group in my university (University of Exeter, personal communication, 1997).

The mass media bring today's knowledge and today's controversies to the front pages of our newspapers and to all our television screens. In short, knowledge is more freely available and much more widely shared.

The information age

We in Britain have a special interest in the great ages of history and world-wide revolution, since Britain led the industrial revolution and became a leading world power as a result. However, I suggest the industrial revolution is now over and we can best make sense of our lives by seeing ourselves living in the early years of a new era, a post-industrial age, or a post-modern age as it is now often called,

Health promotion and primary care

which we can call the information revolution. Davidson and Rees-Mogg (1997) call this the 'information age'.

The industrial revolution was built on the manufacturing industry, which is now steadily declining as a share of this country's income, yet Professor Marris of the University of London reports that our real per capita gross national product (GDP) continues to grow at a relatively steady average rate of about 2% pa (Marris, 1995; Rees-Mogg, 1995). Almost half of employment is now in service industries, so Britain is increasingly living on the information and services we sell.

The industrial revolution diminished people. Knowledge was relatively rare and hard won, and available only to the few. It constrained the majority of people to work in factories. There they worked like machines, even being controlled by machines, doing boring, repetitive jobs, in which thinking was discouraged and made almost impossible. People were confined within specific places, working at specific times, in predetermined and specific ways. In short, people were depersonalised.

The symbol of the industrial age was the factory, whereas the symbol of the information age is the Internet linked to a personal computer. For the first time in history the word personal has become central to the symbol of our age.

Now, in the information age, people are being liberated as never before. Knowledge is much more readily available, it is becoming cheap, and it is widely shared. Thinking is encouraged and increasingly rewarded. Information brings power, and people are becoming more powerful, hence the title used by Davidson and Rees-Mogg (1997) in their recent book *The Sovereign Individual*.

There are profound implications for all of us in relation to health promotion. The medicine of the industrial age was about authority - doctors, whether in public health, hospital, or general practice tended to do things to people. Taking blood

pressures, doing cervical smears and mammograms were the symbols of this and much care in both general practices and hospitals became more and more factory like.

Nowadays by contrast, the big health promotion issues are patient centred, i.e. are about human behaviour. Drug taking is one of the greatest health issues of our time. The central issue is what people decide to do for themselves. The so-called lifestyle issues of smoking, eating, drinking, exercising, and risk-taking behaviour dwarf in importance doctor/nurse-centred programmes such as cervical screening.

Need for judgement

Applying this theory to health promotion and primary care we can better understand what is already happening. The responsibility is shifting to emphasise the personal responsibility of the patients themselves for their own behaviour. As long ago as 1975, Lalonde, in Canada, saw that lifestyle was a major determinant of health, and so it is today. An old Chinese proverb states that we are what we eat. Smoking is so unhealthy that heavy smoking stops most people growing old. For example, in our practice in Exeter of 143 patients aged over 80, only 5 smoke! (Pereira Gray, 1995).

However, although people nowadays have much more information they are much more worried by it. Information is not emotionally neutral. For the first time in history people are becoming swamped or overwhelmed by knowledge and need help with setting it in perspective and applying what may be intensely worrying information in relation to them personally. One reaction to being swamped is to seize on true but irrelevant facts and cling to them, often pathetically. The grossly obese patient who assures the family doctor that they are working on their weight because they are using skimmed milk is a common example.

Increasingly what patients want and need from primary health care

teams is not information, which they increasingly have, but time to discuss, interpret, and set it in perspective (Paterson, 1997). What they seek now from their primary care doctors and nurses is more and more professional discussion, personalised as much as possible, a balanced perspective, i.e. judgement.

Planning a health promotion policy

There are now several hundred health promotion interventions which have been suggested and many have been proved to promote health. How do we decide what is important? How do we choose? And, when we have chosen, how do we convey the messages?

I offer ten principles:

1. The resources for health promotion will always be limited and so should be used as effectively as possible. The health gain sought should be calculated and costed.
2. Controversy is inevitable and health promotion will always be in the public arena. Therefore health promotion messages must be as attack proof as possible; they must be based on evidence which has been replicated.
3. Learn from the advertising industry. Keep the message simple. Repeat it many times. Emphasise the positive aspects of the message. Avoid detail.
4. Central direction can never be effective alone. It is therefore essential to win the hearts and minds of those in the 'front line of the NHS' (RCGP, 1987), i.e. in primary care, because it is they who are in day-to-day touch with the population. One seventh of the whole population sees a general practitioner every fortnight (OPCS, 1991).
5. Plan a national campaign with the broadest possible alliances. Don't rush it. It is better to be a bit late and united, than to risk going off at half cock.
6. Advice must be relevant to as many people in the country as possible.

Health promotion and primary care

7. The message must be practical and possible to put into effect. In particular it must be affordable by people living on social security.
8. That minimising the effects of poverty is a legitimate health target.
9. Be positive as far as possible. Always telling people not to do things, especially things that they enjoy, is not helpful.
10. Choose targets that are measurable, like the Health of the Nation campaign (Secretary of State for Health, 1992) and then monitor and publish change and progress towards all targets regularly.

The health promotion messages

(a) Positive messages

There are at least five health promotion messages which are positive and which are all well validated scientifically. None of them is likely to be rescinded in the near future and all are old.

(1) Take regular exercise

The benefits of taking regular exercise are now scientifically well validated and clear cut. It appears to protect against serious cardiovascular disease, including coronary thrombosis, it reduces obesity, which itself has a whole range of secondary unwelcome consequences (Fentem, 1994; Killoran *et al*, 1994; Morris, 1994), and it promotes a feeling of well being and has some benefit in depression. In women regular exercise even offers some protection against breast cancer, the commonest cancer in British women.

We all need to agree on the message: to say 20 minutes, three times a week is enough, as long as you feel your heart beating or you start to sweat a bit.

(2) Eat more fruit and vegetables

Research suggesting that eating more fruit and vegetables is beneficial is continuing to grow in strength (Steinmetz and Potter, 1991; Gaziano *et al*, 1995; Gillman *et al*, 1995;

Huijbregts *et al*, 1997).

(3) Enjoy alcohol in moderation

Whilst there is an unfortunate public debate about exactly how much alcohol is appropriate and about what colour wine to drink, the case for settling on say up to 20 units per week for both sexes is good (RCGP, 1986). The case against having more than 20 units per week is based on undesirable behaviour associated with alcohol consumption occurring in the home or on the roads as much as on the argument about physical damage to the body.

(4) Enjoy breast feeding

The benefits of breast feeding have been known for many years and have not been challenged, yet only a minority of British babies are breast fed.

(5) Poverty

Reducing the effects of poverty is a legitimate health objective (Black Report, 1980; Fiscella and Franks, 1997).

(b) Negative messages

We cannot avoid negative messages but they need to be kept at a minimum and focused on essentials. I suggest there are five which stand out:

- i. Never smoke (Ashford and Pearson, 1970)
- ii. Reduce the consumption of fats. The Royal Society of Health has distinguished food scientists amongst its membership and has already contributed to this.
- iii. Don't drink and drive.
- iv. Have a 'flu jab if you are over 70 (Wiselka, 1994; Ahmed *et al*, 1995).
- v. Don't take drugs

The stakes are high, if this advice was followed, tens of thousands of lives would be saved.

Social=Public Policy

It is good news that for the first time a British Government has appointed a Minister of Public Health. However, many general practitioners believe

that the optimum department to host such a minister is the Treasury! - but we welcome Tessa Jowell's appointment to the Department of Health very much.

Legislation

Government policy also needs to concentrate on a small number of key principles whereby social policy as introduced and administered by Government affects health and so health promotion.

As a family doctor, I am of course well aware of the inherent problems in calling for legislation to restrict activities of other people. It is good we have an active civil rights/human rights lobby in this country. But all of us who want to improve the public health and the Health of the Nation (Secretary of State for Health, 1992) have to face the fact that sometimes legislation is the most effective and can, on occasions, be the only way to achieve major health gains. To this extent Parliament functions to promote health by primary prevention.

Such legislation should ideally be carried in the House on a free vote, be supported on cross party lines, and only be proposed on the basis of high quality research evidence.

I offer only a few examples which are topical in this country in this very month.

1. Proposed ban on advertisements and sponsorship for cigarettes

First the recent announcement that the new Government will act to ban advertisements and sponsorship by tobacco companies is welcome news. Dr Qureshi and I were both involved in the Royal College of General Practitioners as long ago as 1983 in supporting this policy and, although it is still controversial, it is long overdue.

2. Health and wealth

I am aware of the sensitivities in introducing into an academic setting issues of health and poverty.

Health promotion and primary care

It is an important tradition in our society that professional bodies and registered charities, including both the RSH and the RCGP, should avoid party political activity.

However, general practitioners have a special and privileged role in society. We are the one profession which has the widest contact with the whole population across all social classes. In the waiting room in our practice, a homeless patient can, and has, sat next to a member of the House of Lords (WHO, 1978). We are ever conscious when we do home visiting in the deprived council estates that we are the only professionals, classified in the Registrar General's social class I group, with whom hundreds of our patients ever meet or talk. We alone sit in their homes and talk with them about their families.

We alone among the professions must understand the impact of poverty, since we see it first hand and observe its effects. More than any other profession and more than any other branch of the medical profession, general practitioners have a direct professional concern with the relationship between health and wealth.

The simple scientific truth is that wealth promotes health (Fiscella and Franks, 1997). This seems to be true in all societies. The Black Report (1980) showed that the expectation of life for a child born into a social class V home was about five years less than for a child born into a social class I home. Many diseases and conditions, such as trauma through accidents, have a likelihood of happening that is five or more times higher in social class V than I. It is a special privilege for me to deliver this annual lecture in the presence of Sir Douglas Black himself.

Social policy must take these facts into account and seek ways of ameliorating poverty and reducing its effects in a civilised society that is still the richest in the world (Green, 1996).

1996).

3. Encouraging work

Encouraging work may seem an odd priority for health promotion. However, Beale, from general practice, with Nethercott (1988) showed that unemployment in a local factory increased illness. It is everyday experience in the consulting room that people out of work are less happy, more introspective, and more likely to become depressed. Work gives purpose to the day and identity to the person. It usually raises living standards and reduces, although does not abolish, poverty.

However we all need to consider the radical changes in our society in which the very existence of enough work can no longer be assumed. Rifkin (1995) has already written a book entitled *The End of Work*. We need to rethink the nature and purpose of work, paid, voluntary and family support, perhaps along the lines of the emerging policies of the Royal Society of Arts (1997).

4. Traffic calming

Lastly, the policy of building humps in roads is unpopular with bus, taxi, and ambulance drivers and many citizens including GPs! However, in Exeter we were privileged to pilot the scheme in Burnthouse Lane, a big socially deprived Jarman (1986) index, Council estate, where our practice has many patients. The result was that an outlay of £210,000 led to a reduction of 6.6 personal accidents per year before 1990 to an average of 1.3 per year now. A similar city centre calming scheme has reduced the accident rate from 8.1 pa to 2.3 pa.

Although this appears to be a saving of only a few lives/accidents, the calming measures have to be paid for only once, require little or no maintenance, and the benefits continue year on year (Express & Echo, 1997). Health professionals must respond to evidence of this kind.

Health promotion in primary care = personal policy

I have left until last the contribution which primary care in its main UK form of general practice can make to health promotion. I have done so as I hope I have made it clear that there is much that others can and should be doing, especially Government. However, one of the great advantages of the British system of health care is that we have a national Health Service, not a national Sickness Service and the amount of health promotion now being undertaken is considerable.

First we must clarify why primary care is so important.

(a) Public health medicine and general practice

Public health medicine and general practice/primary care are two disciplines which have much in common. They are both concerned with the health of the nation, by which I mean the health of the whole population of the country. In particular they are the only two medical disciplines which are centrally concerned with the whole population and with those who are not consulting or using services, as much or even more, than those who are not. Public health medicine has the expertise in relation to big populations, especially national findings and statistics, regional and area findings and patterns, and contributes greatly to our understanding. Public health medicine in this country has a great history in population medicine and has often led world thinking.

However, public health medicine is not concerned with individual people. Its practitioners do not consult with patients or see them face to face. It is an impersonal specialty as far as patients are concerned, although it can be highly personal when for example it legitimately lobbies Government and authorities for reforms (Stewart *et al*, 1995).

General practice/primary care, by contrast, is highly personal, consisting every day of a long series of negotiations face to face with people of

Health promotion and primary care

both sexes, all ages, and all social classes. It applies its preventive role in this way. It is also concerned with population medicine, but the medicine of small populations of between 2 and 30,000. It is the most personal of all forms of medicine and it involves every day the feelings of patient, doctor and nurse. It essentially involves interpersonal skills and continuing discussion and negotiation with individuals about what is an appropriate way to live their lives.

We need to draw these distinctions clearly in our minds because both disciplines need each other. They both need separate, albeit complementary research, separate university representation, and separate professional organisations.

(b) The multi-disciplinary primary health care team

Originally most care was primary care and most people who developed illness were treated and died at home. The rise of the hospital was marked by the nation-wide building of the voluntary hospitals in London and in most provincial cities between 1725 and 1825. My own in Exeter was built in 1741. The great teaching hospitals, like Barts, originated as early as 1100, but most were built in London in the early nineteenth century (Stevens, 1966).

The transformation in the organisation of primary care in the NHS has occurred within a single generation and it has been a great privilege for me to have seen it happen. I am old enough to have joined a single-handed general practitioner, my father, and to have worked in a practice without a secretary, treatment room, nurse, health visitor, attached midwife, physiotherapist, or community psychiatric nurse.

Now we have all these in a single, average-sized general practice, with two treatment rooms, the second designed to meet the need of the physiotherapists. General practice has become different from general practitioners, general practice is now

a multidisciplinary process in which the general practitioners are the medical members of the team.

(c) Contact with the population

Patients on average see general practitioners as often as five times a year (OPCS, 1991a) and remain registered for an average of 11 years (St Leonard's Medical Practice, personal communication). The contact with the whole population is unequalled by any other profession in society.

(d) Management in primary care

Of all the problems which the population brings to the NHS, 87% are managed entirely within the primary health care team (OPCS, 1991a). Only 13% of patients are referred to a hospital consultant (OPCS, 1991b) and half of those are for routine surgery. For many years, the reality of the NHS has been that it has been primary care led - it is only the policy that is new.

(e) Responsibility in the home

Of the most vulnerable group in our society, the elderly i.e. the over-75s, on any day of the week, 95% are at home in the care of a primary health care team.

(f) Saving lives

I have been working as a general practitioner for 35 years. For most of my professional life it has been assumed that primary care dealt with personal problems, personal preventive medicine, chronic disease, and terminal care, but the business of saving lives was essentially a matter for hospitals. Not any more!

The enormous advances of the pharmaceutical industry, in which Britain is a world player, coupled with the comprehensive nature of medical records covering all diseases in 98% of the population, has opened up a new possibility of saving lives in primary care.

Professor Sackett's helpful approach of converting outcomes into "numbers needed to treat" has shown us how few

patients need to be treated for many common conditions for tertiary prevention in primary care to save lives.

For example, for a condition as common as myocardial infarction, which already affects 2% of the over 25s, i.e. 1 in 50, it needs only 11 patients to be treated with cholesterol-lowering drugs to save a life in 5 years (Scandinavian Simvastatin Survival Group, 1994; Bradley *et al.*, 1997). For patients with transient ischaemic attacks, a small dose of aspirin will save a life or a stroke every five years, if as few as six patients are treated.

Space and time do not allow me to discuss it all, but most of it and its rationale are well known. What is not so well known, and what is often not appreciated, is the sheer amount and the scope. In this, the concluding section, I simply list some quantities to illustrate health promotion in the multidisciplinary primary care team in Exeter in which I work. In doing so I emphasise the word multidisciplinary, as many of the results I shall be reporting to you were of course the work of practice nurses, district nurses, and health visitors as well as administrative staff monitoring quality assurance in the practice.

I am not going to present a long list of health promotion activities, but I would like to make just three points: first there is a long list, a very long list! Secondly, I will offer just a few examples to illustrate themes. Thirdly, the total quantity of health promotion activity in primary care is much greater than has previously been reported.

Limitations

Before presenting anything I would like to list the many limitations of these data. First, they come not only from one single general practice, but from the personal list (Percira Gray, 1979) of only one single practitioner. The results reflect care of course from the whole multidisciplinary team. Clearly one cannot extrapolate from a population of only 1117.

Health promotion and primary care

Secondly, they are not comprehensive; there are many other health promoting activities in addition to those described which have been chosen to indicate the types of activity in the categories of primary, secondary and tertiary prevention in primary care.

Thirdly, there is a major problem about annual and cumulative data. Each year certain health promoting activities are undertaken for certain groups of patients. However, in addition, certain activities such as gathering blood pressure readings or immunising against tetanus do not need to be repeated each year, but accumulate over five or more years. Meanwhile some annual activities need to be repeated. In the following tables cumulative information is reported including some repetitive annual interventions as shown.

Yet another difficulty is that searching and analysing takes time in computer use and staff, so several of the searches to be reported have been done in preparation for this lecture on different dates over time. The numbers for some patient groups (n=) have therefore varied on different dates, even for the same age group.

All this creates problems in counting total health promotion activity. Eventually, as computer records become complete such problems will disappear, but nowhere in the world are primary care data yet fully up to date over lifetime records for thousands of patients. Computer use is, however, as advanced in general practice in the UK as anywhere in the world, so it seems reasonable to report state of the art record keeping.

However, since the Royal Society of Health has always blended both theory and practice in the promotion of health, I will endeavour to do the same, by presenting these results, warts and all (Tables 1, 2 and 3).

Conclusions

Services of health promotion
and primary care should be based on

Table 1 Personal preventive care for patients registered with the author - Primary prevention

	Relevant number of patients	Number achieved	% achieved
Contraception (All forms)	16-49 female (n=206)	87	1
Sterilisation (M+F)		38	172
Pregnant	(n=12 in 1996)	12	
Trying to conceive	(n=10) current	10	
Preconceptional care	Women pregnant 1/1/95 to date (n=29)	5	17
	Evidence recorded before pregnancy		
Immunisations	Under 5s (n=73)	73	100
Measles			
Pertussis		365	
Polio		different	
Tetanus		immunisa-	
Hepatitis		tions	
Rubella	12-44 female (n=234)		97
	Evidence = antibodies or injection	225	
Influenza immunisation	Over 75s (n=52)	34	65
Tetanus immunisation (adults)	Adults 25+ (n=816)	792	97
Ever recorded			
Advice on lifestyle	15+ all adults		
Recorded smoking histories	n=930	894	96
Advice on reducing smoking	251 smokers	259	100
		(Some recorded more than once)	
Number recorded as "stopped smoking"	15+ adults (n=930)	211	23
Still smoking in 1997	209 [Health of the Nation target=20%]		22
Exercise advised	16+ all adults (n=897)	Recorded ever	
		276	31
Exercise adequate	16+ all adults (n=897)	Recorded ever	
	Evidence = recorded on computer	116	13
Hormonal replacement therapy	Females 50-65 (n=212)	58	27
Breast feeding (last 7 years)	(n=13)	23	34

Health promotion and primary care

Table 2 Secondary prevention (Defined as health promotion in the presence of a problem or disease but in the absence of symptoms or complaints)

	Relevant number of patients	Number achieved	% achieved
Alcohol histories	Adults 16+ (n=897)	862	96
Alcohol consumption	Adults 16+ (n=897)		
Recorded as problem drinkers, ever		107	12%
Antenatal care	Number of females pregnant in last 5 years (=73)		identified
	Number of antenatal appointments	427	
Blood pressure screening	Adults 25+ (n=816)	791	96
Breast examination recorded as taught	Females 18+ (n=401)	244	61
Breast cancer family history, first degree	Females 18+ (n=401)	37	9
Cervical cytology	Females 18+ (n=401)	358	89
Cholesterol screening ever recorded	Adults 25+ (n=799)	551	69
Postnatal care	Females pregnant (last 5 years) including miscarriages (n=73)	66	90
Child health surveillance	Number of children under 5 (n=68)	180	88
Checks at birth, 8 weeks, 3.5 years	Check ups		
Elderly screening	Adults aged 75+ (n=48)	45	94
Family history: primary thrombosis (first degree relative)	}	122	
Family history: Ca colon (first degree relative)	}(n=1117)	1	
Family history: diabetes (first and second degree relative)	}	221	
Family history: glaucoma (first degree relative)	}	15	
[Mammography Secondary care invitation]	Females 50-65 (n=212)	98	46

research. Policies whether at government or personal level should be based on evidence and fashions should be avoided. Findings should always be replicated before being introduced as policy.

Priorities should be based not only on what is likely to produce the greatest health gain, but what is possible in practice and what is likely to stand the test of time. Policies in which national Government policy and public health policy can be strongly integrated with personal care in primary care should have particular priority, as the effects are likely to be synergistic.

Whole population

Primary care in the UK has several special features which are not usually present in most Western countries. First it offers a comprehensive service to the whole population, with 98% of the population registered (South Western RHA, 1990, personal communication). No other country offers better access especially to poorer people, who have the greatest health needs. No other country has developed either multidisciplinary primary health care teams or primary care computing to the same extent.

One of the main weaknesses in many national systems is the failure of uptake and inability to reach the more socially deprived members of the society. Many of these figures from British primary care, which reach 90% or more, cross all social groups.

We now see for the first time in any country many practices recording health promotion interventions and information for over 95% of the whole registered population. Immunisation rates of 100% have become common. For the first time in Britain babies are no longer dying of measles. Obviously there are many gaps and many figures need to be greatly improved, but given the numbers that average general practices now have, clearly these results are not just theoretical possibilities, but are becoming realities in day-to-day primary care.

Indeed the current assumption that

Health promotion and primary care

Table 3 Tertiary prevention (The prevention of complications in established disease)

	Relevant number of patients	Number achieved	% achieved
Asthma	Whole list = 1117 99 (9% of list)	Advice=99	100
Diabetes	Whole list = 1117 37 (3% of list)	Advice=37 HbA1c averaged over all 37	Mean achieved HbA1c=7.4%
Hypertension	Adults 25+ 118 (15%)	Advice 118	100
Hypertcholesterolaemia	Adults 25+ 142 (18%)	Advice 140	99
Hypertglyceridaemia	Adults 25+ 143 (18%)	Advice 135	95
Influenza immunisation for diabetics	Number of patients with diabetes = 37	30	81
Influenza immunisation for COAD	Number of patients with COAD/emphysema (n=28)	18	64
Influenza immunisation for heart failure	Number of patients with CHF (n=9)	6	67
Influenza immunisation for asthma	Number of asthmatics = 99		
Myocardial infarction	Number of patients with MI (n=16)= 2% of adults over 25	16	100
	Number on aspirin or warfarin =		
	Number with cholesterol = or > 5.5mmol (n=6)	6	100
Transient ischaemic attacks	On statins Number of patients with TIA (n=8) Number on aspirin	8	100

Notes for all tables

It follows that the grand total of computer recorded personal preventive activities recorded represents a minimum, and the total actually done but not yet entered is much greater. However, this represents the state of recording in our practice at this time.

The grand total at June 1997 is 8098, an average of 7.25 personal preventive interventions for each man, woman and child registered on my list.

the most effective means of health promotion is through legislation, whose great importance I have recognised, cannot be held to be true at least until the effectiveness of personal health promotion through primary, secondary, and tertiary care together have been counted and the health gains calculated. Preventive care is the second commonest reason in our practice for a patient coming through the door. This is not a National Sickness Service, as is sometimes suggested (Ferguson, 1997), but increasingly a National Health Service.

It follows that we need to find new ways of giving general practitioners and primary care nurses new forms of job satisfaction since advising, persuading, and monitoring the uptake and maintenance of treatments of this kind are new clinical skills and should lead to new satisfactions for primary health care teams.

By listing so many of the current day-to-day interventions offered in general practice across the country, I have tried to show the extent of health promotion in primary care today. In particular, I suggest that the quantity has never before been fully established and appreciated.

Even for a single list of patients, let alone a single practice, in my case as few as 1117 people, 8098 different health promoting activities are already recorded, an average of seven and a quarter per person, for every man, woman, and child. Although this is very crude it is a new figure which has not previously been reported. It seems appropriate in response to your kind invitation that this figure should appear at an AGM of the Royal Society of Health, which has done so much, for so long, to encourage this work.

Three partnerships

In conclusion, let us value our Health Service, which is still one of the best in the world, and let us develop health promotion further through three partnerships: first on the professional side between public health and

Health promotion and primary care

primary care, and then within primary care between all the members of the multi-professional team, and then thirdly, between medicine as a whole and patients as people.

Acknowledgments

I would like to thank my partners Drs Russell Steele, Kieran Sweeney, Philip Evans, and Helen Keenan with whom the practice database has been developed. Mrs Christine Pike has undertaken the searches and Mrs Joy Choules has greatly assisted in the preparation. The St Leonard's Medical Practice is an NHS research general practice and is grateful to the NHS R & D Directorate for support. The Institute of General Practice has been the driving force locally for research in primary care. My wife has constantly encouraged me throughout my time in practice.

References

- AHMED A H, NICHOLSON K G and NGUYEN-VAN-TAM J S (1995). Reduction in mortality associated with influenza vaccine during the 1989-90 Epidemic. *Lancet*; 346, 591-595
- ASHFORD J R and PEARSON N G (1970). *Who uses the Health Services and why?* London: Royal Statistical Society
- BEALE N and NETTHERCOTT S (1988). The nature of unemployment morbidity. *Journal of the Royal College of General Practitioners*; 38, 197-202
- BLACK REPORT (1980). Chairman, Sir Douglas Black. *Inequalities in Health. A Report of a Research Working Group*. London: DHSS
- BRADLEY E, MORGAN S, SMITH H et al (1997). Preventive care for patients following myocardial infarction. *Family Practice*; 14, 220-226
- BRITTAN S (1996). Comparisons are odious. *Financial Times*, p20. 25 April
- DAVIDSON J D and REES-MOGG W (1997). *The Sovereign Individual*. London: Macmillan
- EXPRESS & ECHO (1997). Humps save city millions. p1. 6 February. Exeter
- FENTIM P (1994). Benefits of exercise in health and disease. *BMJ*; 308, 1291-1295
- FERGUSON J (1997). Lecture. Unpublished, University of Exeter
- FISCHELLA K and FRANKS P (1997). Poverty or income inequality as a predictor of mortality longitudinal cohort study. *BMJ*; 314, 1724-1727
- GAZIANO J N, MANSON J E, BRANCH I G et al. (1995). A prospective study of consumption of carotenoids in fruits and vegetables and decreased cardiovascular mortality in the elderly. *Ann Epidemiology*; 5, 255-260
- GILLMAN M W, CUPPLES L A, GAGNON D et al (1995). Protective effects of fruit and vegetables on development of stroke in men. *JAMA*; 273, 113-117
- HUIJBREGTS P, FESKENS E, RASANEN L et al (1997). Dietary pattern and 20 year mortality in elderly men in Finland, Italy, and the Netherlands: 1512 longitudinal cohort study *BMJ*; 315, 13-17
- JARMAN B (1986). Identification of underprivileged areas. *BMJ*; 286, 1705-1709
- KILLORAN A J, FENSTEM P and CASPERSON C (Eds) (1994). *Moving On: International Perspectives on Promoting Physical Activity*. London: Health Education Authority
- LALONDE M (1975). *A New Perspective on the Health of Canadians*. Ottawa, Canada: Department of Information
- MARRIS R (1995). Growth is the best way to survive dislocation. *The Times* p29. 3 October
- MORRIS J (1994). Exercise in the prevention of coronary heart disease: today's best buy in public health. *Med Sci Sport Exerc*; 26, 807-814
- OFFICE OF POPULATION CENSUSES AND SURVEYS (1991). *General Household Survey 1989*. (a) Table 4.30. (b) Table 4.33. London: HMSO
- PATERSON C (1997). Problem setting and problem solving: The role of evidence-based medicine. *Journal of the Royal Society of Medicine*; 90, 304-306
- PEREIRA GRAY D J (1978). Feeling at home. James Mackenzie Lecture 1977. *Journal of the Royal College of General Practitioners*; p7. 28. 6-17
- PEREIRA GRAY D J (1979). The key to personal care. *Journal of the Royal College of General Practitioners*; 29, 666-678
- PEREIRA GRAY D (1995). Primary Care and the Public Health. Harben Lecture. *Health and Hygiene*; p56. 1, 19-62
- PEREIRA GRAY D, STEELE R, SWEENEY K and EVANS P (1994). Generalists in medicine. Editorial. *BMJ*; 308, 486-487
- PEREIRA GRAY D (1996). *Developing Primary Care - the Academic Contribution*. Exeter, Conference of Academic Organisations
- POWELL E (AS SECRETARY OF STATE FOR HEALTH AND SOCIAL SECURITY) (1962). *The hospital building plan*. London: HMSO
- REES-MOGG W (1995). Britain must try harder. *The Times* 5 October
- RIFKIN J (1995). *The End of Work: The Decline of the Global Labour Force and the Dawn of the Post Market Era*. New York: GP Putnam & Sons
- ROYAL COLLEGE OF GENERAL PRACTITIONERS (1986). *Alcohol - A Balanced View: Report from General Practice* 24. London: RCGP
- ROYAL COLLEGE OF GENERAL PRACTITIONERS (1987). *The Front Line of the Health Service Report from General Practice* 25. London: RCGP
- ROYAL SOCIETY OF ARTS (1997). Redefining work. A discussion paper. *RSA Journal*; 145, 7-13
- ROYAL SOCIETY OF HEALTH (1997). *The Royal Society of Health*. London: RSH
- SCANDINAVIAN SIMVASTATIN SURVIVAL STUDY GROUP (1994). (Known as the 4S study) Randomised trial of cholesterol lowering in 4444 patients with coronary heart disease. *Lancet*; 344, 1383-1389
- SECRETARY OF STATE FOR HEALTH (1992). *The Health of the Nation*. London: HMSO
- SECRETARY OF STATE FOR HEALTH (1996). *The NHS - A Service with Ambitions*. p49 London: The Stationary Office
- STEINMETZ K A and POTTER J D (1991). Vegetables, fruit, and cancer. *Cancer Causes Control*; 2, 325-357
- STEVENS R (1966). *Medical Practice in Modern England*. New Haven and London: Yale University Press
- STEWART M, BROWN J B, WESTON W W et al (1995). *Patient-centred medicine: Transforming the Clinical Method*. Thousand Oaks, CA: Sage Publications
- WISSELKA M (1994). Influenza, diagnosis, management and prophylaxis. *BMJ*; 308, 1341-1345
- WORLD HEALTH ORGANISATION (1978). *Alma Ata Declaration 1977*. Geneva: WHO & UNICEF

Comparison of Recruitment Strategies and Associated Disease Prevalence for Health Promotion in Rural Elderly¹

DIANE GREENBLATT IVES, M.P.H.,*² LEWIS H. KULLER, M.D., DR.P.H.,*
RICHARD SCHULZ, PH.D.,† NEAL D. TRAVEN, PH.D.,*
AND JUDITH R. LAVE, PH.D.‡

**Department of Epidemiology, Graduate School of Public Health; †Department of Psychiatry, School of Medicine; and ‡Department of Health Services Administration, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania 15261*

Background. Although interest in health promotion for the elderly is increasing, the issues of recruitment into such programs and self-selection have not been well explored. While clinical studies require high participation levels and expensive recruitment, community efforts are satisfied with recruiting small numbers of volunteers from poorly defined populations. These small samples may not be representative of the populations at risk.

Methods. As part of the Rural Health Promotion Project, a Medicare demonstration, community-based recruitment methods were evaluated and participant characteristics were compared. A total of 3,884 individuals ages 65-79 were recruited in northwestern Pennsylvania, using four sequential recruitment strategies, varying in aggressiveness. The methods were: (A) mail only, (B) mail with phone recruitment follow-up, (C) mail with phone recruitment and scheduling, and (D) mail with aggressive phone recruitment and scheduling.

Results. Recruitment yields were Method A, 13.5%; B, 21.1%; and C, 31.6%. The most aggressive Method (D) yielded 37.0% participation. More aggressive methods (C and D) recruited more educated individuals. No other demographic or health status differences were noted.

Conclusion. These data show that large numbers of the elderly can be recruited into a health promotion program using aggressive methods and professional interviewers. © 1992 Academic Press, Inc.

INTRODUCTION

There is growing consensus that disease prevention for the elderly is both desirable and potentially effective, but little is known about their willingness to participate in preventive programs. The present study was designed to address this issue and to compare the effectiveness of different recruitment methods in a rural elderly population.

The design of the study and choice of recruitment strategies were based on existing literature showing that recruitment yield is maximized to the extent that (a) the study is marketed through mass media (using newspaper, television, and radio) preceding actual recruitment (1-6), (b) there is telephone contact between recruiter and potential participant (7), (c) there is support from local physicians and health facilities (1, 2, 8-11), and (d) recruiters carefully consider special needs of the elderly such as hearing and mobility problems, cognitive impairment, and suspicions about research (12-14). Previous health promotion programs have achieved very low recruitment yields, mostly below 13% (15, 16).

¹ Research supported by HCFA Cooperative Agreement 95-C-99159/3.

² To whom reprint requests should be addressed.

RECRUITMENT OF ELDERLY FOR HEALTH PROMOTION

583

Associated Disease
Rural Elderly¹JER, M.D., DR.P.H.,*
N, PH.D.,*Department of Psychiatry,
Education, Graduate School
Pennsylvania 15261

As the population ages, the issues
can well explored. While
recruitment, community
poorly defined popu-
lations at risk.

Medicare demonstration,
participant characteristics were
in northwestern Pennsyl-
siveness. The methods
, (C) mail with phone re-
cruitment and scheduling.
; and C, 31.6%. The most
sive methods (C and D)
health status differences

They can be recruited into a
interviewers. © 1992

1 for the elderly is both
about their willingness to
was designed to address
recruitment methods in a

strategies were based on
limited to the extent that
newspaper, television, and
telephone contact between
support from local physicians
likely consider special needs
cognitive impairment, and
promotion programs have
15% (15, 16).

59/3.

The Rural Health Promotion Project (RHPP) was a Medicare-funded preventive health demonstration project under which beneficiaries were provided health screenings and risk factor interventions. The demonstration resulted from a congressional mandate requiring Medicare to evaluate the use of health promotion services in both urban and rural areas. It was designed to examine the use of preventive health services, to determine whether such services lead to decreased use of other health care services, and to assess their impact on long-term health outcomes. The entire project was carried out by the local health care providers, including hospital staff in the rural areas. A five-county area in rural northwestern Pennsylvania was selected as the site for the demonstration. A health risk appraisal (HRA) interview was used to determine disease risk factors specific to each participant, and seven educational interventions were offered, including nutritional counseling for hypercholesterolemia; weight reduction counseling for overweight hypertensives, hypercholesterolemics, and diabetics; diabetes education; smoking cessation; alcohol counseling; evaluation for dementia and/or depression; and influenza immunization. Eligible participants were informed that they would be randomly assigned to one of two treatment groups differing by location of service (hospital-based vs physician-based) or a control group. The HRA and health promotion services were part of a "waivered" Medicare benefit of the program and were therefore reimbursable to providers.

This study was designed to address three issues regarding health promotion research in elderly populations. First, we attempted to determine whether elderly individuals would volunteer to participate in a health promotion program offered to them at no cost. Second, we examined recruitment response rates using four different strategies varying by degree of aggressiveness. The objective was to determine whether the more aggressive, costly, and time-consuming methods truly resulted in a sufficiently higher recruitment yield. Finally, we compared the demographics, disease risk factors and self-reported disease history of the individuals from each method to determine whether differences existed in the characteristics of participants attracted by the various strategies.

METHODS

A dataset of all Medicare beneficiaries living in the catchment area was provided by the Health Care Financing Administration (HCFA). Because this was a study of community-dwelling beneficiaries, individuals with nursing home addresses or with forwarding addresses to other formal caregivers and banks were excluded before recruitment began. Recruitment was attempted for all 22,769 remaining individuals ages 65 to 79 years. In addition to the age requirement, eligibility required individuals to reside in a participating county and be a current Medicare Part B subscriber (Part B is optional and covers outpatient and physician office visits). Exclusions were the institutionalized, bedridden or those unable to leave home, and individuals with life-threatening cancers diagnosed within 5 years of the study. Recruitment extended over 8 months from May 1 to December 31, 1989. Prior to actual recruitment, press releases describing the demonstration were sent to newspapers and radio and television stations, and posters

containing brochures were placed in local stores, hospitals, physicians' offices, and senior and community centers.

Four recruitment strategies were tested. Each subsequent method used the strategy from the previous method with the addition of a more aggressive component. The initial recruitment method (Group A or "mail only") was a progressive mailing to the entire 22,769 potentially eligible individuals, and took place from April through October 1989. ZIP codes were used to track mailings in the various geographic areas. The mailing included a personalized letter describing the demonstration and supporting organizations (local hospitals and physicians, Medicare, and the University of Pittsburgh), a toll-free number to be used for obtaining more information, and a personalized coupon valued at \$30 to be exchanged for the HRA interview. Also included was a brochure describing benefits of the study such as health screening, flu shots, dietary information, and measures for blood cholesterol, blood sugar, and blood pressure. Emphasis was placed on provision of all services by local providers and complete coverage of all project services under Medicare.

In the second recruitment strategy, a subset of the beneficiaries who received the mailing were contacted by telephone (Group B or "mail with general phone recruitment"). The calls were made in the same ZIP code sequence in which the mailings were completed. These calls were made to verify receipt of the mailing, encourage participation, and answer questions. Reference to the low-risk, no-cost, and local-provider aspects of the demonstration were also emphasized by the caller. Calls were made to a ZIP code area until the local providers had reached their scheduling capacity, then were made to the next eligible ZIP code area.

The third recruitment strategy used more assertive telephone efforts (Group C or "mail with phone call scheduling"). After the general phone calling had been completed, a sample of individuals in one specific community was targeted for additional contact. These individuals received the same information by telephone as Group B. In addition, interviewers attempted to induce participation by scheduling an appointment for the HRA at the end of the call. This method made signing up for the program more convenient and encouraged subjects to make an immediate decision about participation.

A fourth recruitment strategy used intensive recruitment by trained telephone interviewers (Group D or "mail with aggressive phone recruitment and scheduling"). This strategy took place within a limited geographic area in the same community as Group C. The interviewers tried to contact everyone on the modified HCFA eligibility list in that area who had not yet completed an HRA or eligibility form. All individuals contacted in this area had previously been exposed to the general mailing, and some had been contacted by telephone under the earlier recruitment strategies.

In this recruitment effort, two experienced phone recruiters based at the university used a map to identify specific sectors of the community by street. Phone calls were made to individuals receiving the mailings and residing at these street addresses. Aggressive efforts included asking the individuals to specify reasons for nonparticipation. Strong encouragement to participate was given by emphasizing the importance of health promotion and preventive health care. Once in-

RECRUITMENT OF ELDERLY FOR HEALTH PROMOTION

585

als, physicians' offices,

quent method used the a more aggressive com- il only") was a progres- ividuals, and took place to track mailings in the ized letter describing ospitals and physicians, number to be used for valued at \$30 to be ex- chure describing benefits formation, and measures Emphasis was placed on e coverage of all project

eneficiaries who received with general phone le sequence in which the fy receipt of the mailing, nce to the low-risk, no- were also emphasized by cal providers had reached elligible ZIP code area. lephone efforts (Group C al phone calling had been munity was targeted for information by telephone ce participation by sched- This method made signing objects to make an imme-

nent by trained telephone recruitment and schedul- geographic area in the same act everyone on the mod- et completed an HRA or d previously been exposed l by telephone under the

scruiters based at the uni- mmunity by street. Phone nd residing at these street viduals to specify reasons ate was given by empha- tive health care. Once in-

terest was expressed, eligibility was established and HRA appointments were immediately scheduled. Potential participants were considered unreachable after eight unsuccessful phone calls. Three additional mailings that informed individuals without telephone or with unlisted phone numbers of attempts at contacting them for recruitment were also carried out in this area.

To summarize, each recruitment strategy was superimposed upon the previous strategy. Recruitment strategy A included those people who only received a mailing. Recruitment strategy B included those people who received both a mailing and a general telephone call. Recruitment strategy C included people living in half of a defined geographic area who received a mailing and the phone call with scheduling. Recruitment strategy D included people who lived in the other half of the defined geographic area and were aggressively phoned by trained interviewers.

During all four recruitment strategies (A-D), the identifying information collected included name, address, phone number, name of primary care physician, and preferred time for recontact. Successful recruitment was defined as the completion of an HRA, which included self-reported demographics, disease history and symptomatology, and habits. Standardized screening instruments for possible depression and dementia were used (17, 18). Blood pressure, height, and weight were measured, and blood samples for total and HDL cholesterol and random blood sugar were collected and analyzed at a central laboratory at the University of Pittsburgh. All individuals administering the HRAs had completed a training session that included protocol procedures, administration of questionnaires, and blood pressure certification.

Statistical analysis of categorical independent variables was performed using the χ^2 test of association across the four recruitment groups. For continuous variables, a one-way analysis of variance was used to test for differences across recruitment groups. SAS statistical analysis software was used for all data analyses (19).

RESULTS

After the 8-month recruitment period, 3,884 HRAs (43.2% male, 56.8% female) were completed for Medicare Part B beneficiaries 65-79 years old living in the five-county catchment area. The entire RHPP population was white. Mean age of participants was 71 years, with the following distribution: 41.6% were 65 to 69 years, 37.8% were 70 to 74 years, and 20.7% were over 74 years. Over 98% of the beneficiaries in this geographic area subscribed to Medicare Part B, which is almost identical to the proportion of beneficiaries nationally who are covered by Part B.

Response rates were defined as the proportion of completed HRAs to the total number of persons assigned to each recruitment method (Table 1). The more aggressive recruitment efforts resulted in the greater response rates, ranging from 13.5% for the least aggressive Group A to 37.0% for the most intensively recruited Group D.

There were essentially no differences in the demographic characteristics of the beneficiaries recruited by each strategy (Table 1). Only education level differed

TABLE 1
RESPONSE RATES AND DEMOGRAPHIC CHARACTERISTICS OF RHPP PARTICIPANTS BY
RECRUITMENT STRATEGY

	Method of contact ^a				Total	P value
	Group A	Group B	Group C	Group D		
Total contacted (N)	16,086	4,342	1,302	1,039	22,769	—
Completed HRAs	2,172	917	411	384	3,884	—
Response rate (HRA/N)	13.5%	21.1%	31.6%	37.0%	17.1%	—
Mean age $\pm$ SD (years)	70.9 $\pm$ 3.8	70.8 $\pm$ 3.9	71.4 $\pm$ 4.0	71.4 $\pm$ 4.2	71.0 $\pm$ 3.9	0.0076
% Male	43.2%	42.1%	42.1%	44.8%	44.3%	0.79
Mean education (years)	10.9 $\pm$ 2.6	11.1 $\pm$ 2.6	11.6 $\pm$ 2.6	11.7 $\pm$ 2.3	11.1 $\pm$ 2.6	<0.0001
% Completing high school or above	55.9%	61.5%	67.9%	72.6%	60.1%	<0.0001

^a Group A, Mail only; Group B, mail with phone recruitment and follow up; Group C, mail with phone call recruitment and scheduling; Group D, mail with aggressive phone recruitment and scheduling.

significantly among groups ($\chi^2 = 79.39$, $P < 0.0001$). Group D was significantly more educated than Group A (11.7 and 10.9 years, respectively). The percentage of Group A respondents completing at least high school was 55.9%, significantly lower than the 72.6% in Group D ($\chi^2 = 51.83$, $P < 0.0001$).

By attempting to contact every Medicare beneficiary in the aggressively recruited Group D, we determined the recruitment status of each individual in this group (Table 2). This group consisted of 1,039, including 384 who were successfully enrolled by completing the HRA (response rate of 37%). Reasons for not being eligible were also ascertained: 45.6% of the 183 ineligible did not feel they were able to travel to the hospital or physician's office for the study; 21.7% had been diagnosed with a life-threatening cancer within the 5 years before the study; 11.9% were not in the age range, probably due to a time lag between production of the HCFA list and recruitment; and 5.4% were ineligible because they did not subscribe to Medicare Part B.

Table 3 details selected risk factor prevalence by recruitment strategy, as evaluated during the HRA. The only differences observed in risk factors were with obesity and elevated blood pressure. For all groups combined, the mean total

TABLE 2
RHPP AGGRESSIVE RECRUITMENT, GROUP D

Participant status	N	(%)
Total sample	1,039	
Eligible and enrolled	384	(37.0)
Volunteered but ineligible	183	(17.6)
Deceased	23	(2.2)
Refused/not interested	255	(24.5)
Unable to contact (with phone, no answer after 8 attempts)	77	(7.4)
Unable to reach: (no phone/unlisted phone, three follow-up mailings)	117	(11.3)

RECRUITMENT OF ELDERLY FOR HEALTH PROMOTION

587

PP PARTICIPANTS BY

D	Total	P value
1	22,769	—
2	3,884	—
3	17.1%	—
4.2	71.0 ± 3.9	0.0076
5	44.3%	0.79
2.3	11.1 ± 2.6	<0.0001
6	60.1%	<0.0001

; Group C, mail with phone call and scheduling.

oup D was significantly
ctively). The percentage
was 55.9%, significantly
01).

in the aggressively re-
of each individual in this
384 who were success-
37%). Reasons for not
eligibles did not feel they
for the study; 21.7% had
5 years before the study;
lag between production
ble because they did not

commitment strategy, as evaluation risk factors were with combined, the mean total

D	(%)
39	
84	(37.0)
83	(17.6)
23	(2.2)
55	(24.5)
77	(7.4)
17	(11.3)

TABLE 3
RHPP Risk Factor Profile by Recruitment Strategy

Risk factor	Group A (%)	Group B (%)	Group C (%)	Group D (%)	<i>P</i> value
Cholesterol $\geq$ 240 mg/dl	31.1	31.8	31.4	26.0	0.19
Glucose $\geq$ 200 mg/dl	6.0	6.1	4.4	6.5	0.56
Wt $\geq$ 20% over ideal ^a	32.1	32.9	22.7	27.3	<0.001
Elevated blood pressure ^b	20.0	20.8	19.0	14.1	0.033
Possible depression ^c	8.5	8.6	7.3	6.2	0.41
Possible dementia ^d	8.2	8.5	7.6	5.0	0.15
Smoker	12.8	9.9	13.4	12.0	0.12
$\geq$ 5 drinks/day	2.0	1.5	1.5	3.1	0.24

^a Based on Metropolitan Life tables (20) for height and weight adjusted for age.

^b Systolic pressure ≥ 160 mm/Hg and/or diastolic pressure ≥ 90 mm/Hg.

^c Based on Center for Epidemiologic Studies of Depression (CES-D ≥ 16) (17).^d Based on Mini-Mental State Exam (MMSE ≤ 23) (18).

cholesterol (TC) was 220.5 mg/dl, and the mean random blood sugar was 119.1 mg/dl. Fifty-three percent of those interviewed indicated that they consumed no alcohol at all.

Selected self-reported disease history by recruitment strategy is described in Table 4. As with the risk factors, there were few differences noted, with the exception of arthritis, which was significantly lower in Group D ($\chi^2 = 13.41$, $P < 0.005$). Of those reporting history of hypertension, 80.4% of the total group of 3,884 reported currently being treated. There were no differences by recruitment group in proportion of hypertensives currently under treatment.

DISCUSSION

The goal of this analysis was to evaluate methods of recruitment of elderly individuals to a prevention program using existing community resources in a rural area. The recruitment rates from the four methods varied from 13.5 to 37.0%, with the greater yield for the more aggressive methods.

Even though the response rate in the RHPP for Group A (mail only) was only 13.5%, this compares favorably with rates from other similar studies. For example, this response rate is higher than the response rate achieved in the Coronary

TABLE 4
RHPP SELF-REPORTED DISEASE HISTORY BY RECRUITMENT STRATEGY

Condition	Group A (%)	Group B (%)	Group C (%)	Group D (%)	P value
Heart attack	13.6	14.1	14.6	14.7	0.91
Angina	16.7	16.0	14.8	15.4	0.76
Hypertension	45.7	44.2	42.6	42.2	0.43
Stroke	5.7	5.9	6.8	5.5	0.83
Diabetes	17.0	16.4	12.7	16.1	0.18
Arthritis	54.9	53.1	51.3	45.1	0.004

Primary Prevention Trial (CPPT) effort (15). In the CPPT, highest mailing response rates were seen using voter registration lists (up to 12.7%), followed by organized group mailing lists (up to 8%), and last by direct mail services (up to 3.6%). It is possible that our slightly higher Group A response could be attributed to the concurrent media campaign.

The Group A response rate was also considerably higher than that obtained by the Rutgers Medical School Senior Citizen Health Maintenance Project (RMS) (16). This project was remarkably similar to RHPP in many ways. Under RMS, free health promotion services were offered to Medicare beneficiaries for preventive health services not usually covered under regular benefits. Also like RHPP, the services offered through the RMS project were chosen because they were felt to be the most appropriate to meet the needs of the targeted population while still being considered cost-effective interventions. Under this project, 5,000 individuals were sent mailings asking that they participate in the study. There was only a 7% response rate compared with our 13.5%. It is possible that we had a higher response rate because the RMS project chose the low-profile approach with no concurrent media publicity. Our Group A was exposed to the newspaper, television, and radio campaigns.

If response rates were the only basis on which to judge successful recruitment, the more aggressive strategies would obviously be more productive. However, the costs of each additional effort must be considered. Mass mailings are an effective way to make initial contact with a population, but are inadequate without reinforcement through other methods. Supplementing mailings through the use of media increases exposure, but the use of aggressive media techniques such as high-visibility advertising can be costly. Direct phone recruitment also increases response rates, but productive and experienced interviewers are expensive. In addition, since most recruitment efforts must be completed within a limited time frame, consideration must be given to the tedious and time-consuming nature of phone recruitment.

Although our figures are estimates, we have calculated the cost per recruited participant in each strategy (Table 5). The cost for a general mail strategy in this population was \$4.72 per recruited participant, including printing, postage, and

TABLE 5
ESTIMATED RECRUITMENT COSTS PER PARTICIPANT BY RECRUITMENT METHOD

	Group A	Group B	Group C	Group D
Total sample	16,086	4,342	1,302	1,039
Total recruited	2,172	917	411	384
Response rate	13.5%	21.1%	31.6%	37.0%
Postage/printing/toll free phone ^a	\$10,251	\$4,328	\$1,939	\$1,812
Salary/phone for general phone ^a	—	\$8,528	\$3,822	\$4,650
Salary/phone for professional recruiters	—	—	—	\$26,395
Total costs	\$10,251	\$12,856	\$5,762	\$32,857
Cost per recruited participant	\$4.72	\$14.02	\$14.02	\$85.57

^a Adjusted for number of recruited participants in each group.

RECRUITMENT OF ELDERLY FOR HEALTH PROMOTION

589

, highest mailing re-
12.7%), followed by
t mail services (up to
se could be attributed

1 that obtained by
ce Project (RMS)
y ways. Under RMS,
eneficiaries for preven-
fits. Also like RHPP,
because they were felt
population while still
project, 5,000 individu-
dy. There was only a
that we had a higher
file approach with no
he newspaper, televi-

uccessful recruitment,
productive. However,
Mass mailings are an
are inadequate without
ngs through the use of
ia techniques such as
itment also increases
ers are expensive. In
l within a limited time
e-consuming nature of

the cost per recruited
al mail strategy in this
printing, postage, and

the toll-free phone number. This was the cost per recruited participant for Group A. In Group B, we added the salary and telephone fees of a nonprofessional telephoner to the basic mailing costs, which increased the cost per recruited participant to about \$14. Group C added scheduling of the HRA appointments by the local interviewers, but this did not add any costs to the Group B rate, since these costs were absorbed by the HRA Medicare reimbursement to hospitals. Finally, Group D added salaries and phone expenses of two experienced professional telephone recruiters to the mailing and general calling (adjusted for the Group D sample size). This dramatically increased the cost per recruited participant to \$86. Therefore, about a threefold increase in recruitment rate was approximately 18 times the cost. The Group D costs were substantially higher because of the high percentage of both ineligible and those unable to be contacted. The cost per contacted Group D person was \$31.60. Had the recruitment period been expanded to more than 8 months, the yield would have probably increased in Groups A, B, and C over time as more eligible individuals were seen at hospitals and physicians' offices.

In general, there were few differences in the demographic characteristics, disease prevalence, and disease risk factors among the four strategies used in the recruitment of these 3,884 rural elderly participants. Although mean age, education, obesity, and elevated blood pressure did differ significantly among groups, the associations were weak, nonlinear, or of little practical and clinical significance. From our observations, the various recruitment methods did not attract different types of individuals in terms of demographic or risk factor characteristics.

The recruitment comparisons conducted in this study have several limitations, the most obvious being that the RHPP demonstration was designed with the primary goal of evaluating utilization rather than recruitment. The RHPP population was not a scientifically selected random sample. This self-selection could skew the disease prevalence to those who perceived the services to be of significant value and would result in the recruitment of the more motivated individuals who media and mass mailings often attract (14). Those with the greatest need of preventive services may be individuals with limited access and greater disability. We were also unable to determine whether the higher yield for more aggressive recruitment methods was due to the increased effort through persistent telephone contact efforts, for example, or to the use of different strategies such as providing a specific appointment date.

It should be noted that, although the RHPP population was not a random sample, it resembles the demographic characteristics of the general Pennsylvania elderly population. Census data indicate that 89.8% of Pennsylvania residents overall and 99.0-99.7% of residents in the five rural catchment counties were white. RHPP was all white. Approximately 49% of individuals age 65 and over in the five-county area were male, according to 1987 census estimates. Our RHPP sample was 44.3% male. In 1987, 31.3% were 65-69 years, 25.3% were 70-74 years, and 43.3% were 75 and over (21, 22). RHPP was younger with 41.6% ages 65-69, and 37.8% 70-74. However, due to the noninstitutionalized and ambulatory requirement of the demonstration, we excluded the sicker and most likely older

RECRUITMENT METHOD

Group C	Group D
1,302	1,039
411	384
31.6%	37.0%
\$1,939	\$1,812
\$3,822	\$4,650
—	\$26,395
\$5,762	\$32,857
\$14.02	\$85.57

individuals. In addition, our upper age limit was 79, which does not match the census ranges.

Clearly, the yield could have been further increased by going directly to the individual's home for both the HRA and the physical measurements. Because the demonstration's objective was to determine utilization of hospital-based vs physician-based health promotion services in a rural setting, we would have been unable to determine whether individuals would attend the programs in either provider setting if we had brought the services to their homes. However, from a practical and cost perspective of instituting risk assessments on an in-home basis, this method could be prohibitive in a community program. When in-home recruitment and HRAs were suggested to the local interviewers, it was made very clear that time and staffing limitations made it out of the question.

It is extremely important that the baseline information be of the highest quality and as unbiased as possible. If a practical method for determining eligibility of preventive health services is required, as with the RHPP, then the baseline information not only determines eligibility for services, but also provides a baseline yardstick for evaluation. We compromised somewhat on the quality control by using a short-term staff training consisting primarily of local nurses and other health professionals. It may be preferable to use professional interviewers and nurse epidemiologists from the university for collecting the baseline data, as is often done in epidemiological studies. Again, this would substantially increase the cost of any program.

CONCLUSION

It is possible that in the future, the Medicare program will include a systematic method for monitoring health risk profiles, disability, and specific preventive approaches within the Medicare population. Despite the high utilization of medical care within the "older population," only a fairly aggressive approach is likely to be successful in recruiting eligible individuals in a defined population for preventive health care. The recruitment of eligible individuals is only one step in a successful health promotion program, but obviously a necessary step. The application of a sound preventive medicine approach may be the best, if not the only, approach to maximize active life expectancy among older people. There must be continued efforts to define the best methods of delivering preventive medicine for older individuals. One of the first steps is to improve the recruitment techniques so that those most likely to benefit can be identified and entered into the programs at a reasonable cost.

ACKNOWLEDGMENTS

The authors acknowledge the following individuals for their effort and dedication, which resulted in the success of this project: Gregory Bauer (Andrew Kaul Memorial Hospital, St. Marys, PA), Eleanor Barrett and Susan Lackatos (Clarion Hospital, Clarion, PA), Debra Thomas and Anne Beardsley (Clearfield Hospital, Clearfield, PA), Jean Camberg and Annette Hendricks (DuBois Regional Medical Center, DuBois, PA), Dennis DeAngelo (Elk County General Hospital, Ridgway, PA), Pearl Rockwell and Linda Shaw (Philipsburg State General Hospital, Philipsburg, PA), Libby Sylvis (Punxsutawney Area Hospital, Punxsutawney, PA), Barbara Kolodziej (Data Entry Specialist, University of Pittsburgh), and Nancy Epler and Ronna Gitchel (Telephone Interviewers, University of Pittsburgh).

RECRUITMENT OF ELDERLY FOR HEALTH PROMOTION

591

ich does not match the

by going directly to the
surements. Because the
hospital-based vs phy-
s, we would have been
the programs in either
omes. However, from a
its on an in-home basis,
. When in-home recruit-
it was made very clear
tion.

be of the highest quality
etermining eligibility of
then the baseline infor-
also provides a baseline
the quality control by
local nurses and other
sional interviewers and
the baseline data, as is
ubstantially increase the

will include a systematic
and specific preventive
high utilization of med-
essive approach is likely
ined population for pre-
als is only one step in a
ecessary step. The appli-
the best, if not the only,
r people. There must be
preventive medicine for
recruitment techniques
ntered into the programs

d dedication, which resulted in
spital, St. Marys, PA), Eleanor
Thomas and Anne Beardsley
icks (DuBois Regional Medical
Ridgway, PA), Pearl Rockwell
. Libby Sylvis (Punxsutawney
Specialist, University of Pitts-
University of Pittsburgh).

REFERENCES

1. Ederer F. Practical problems in collaborative clinical trials. *Am J Epidemiol* 1985; 102:111-118.
2. Schoenberger JA. Recruitment in the Coronary Drug Project and the Aspirin Myocardial Infarction Study. *Clin Pharmacol Ther* 1979; 25:681-684.
3. Schrott HG, Merideth N. Recruitment by screening entire communities: The Iowa Lipid Research Clinic experience. *Circulation* 1982; 66:(IV)23-26.
4. Williams DE, Vitiello MV, Ries RK, Bokan J, Prinz PN. Successful recruitment of elderly community-dwelling subjects for Alzheimer's disease research. *J Gerontol* 1988; 43:M69-M74.
5. Agras WS, Bradford RH. Recruitment: An introduction. *Circulation* 1982; 66:(IV)2-5.
6. McDearmon M, Bradford RH. Recruitment by the use of mass mailings. *Circulation* 1982; 66:(IV)27-31.
7. Ford GT, Wallace EL. Effects of donor recruitment methods on population responses. *Transfusion* 1975; 15:159-164.
8. Prout TE. Other examples of recruitment problems and solutions. *Clin Pharmacol Ther* 1979; 25:695-698.
9. Schoenberger JA. Recruitment experience in the Aspirin Myocardial Infarction Study. *Controlled Clin Trials* 1987; 8:74S-78S.
10. Croke G. Recruitment for the National Cooperative Gallstone Study. *Clin Pharmacol Ther* 1979; 25:691-694.
11. Marshall GD. Overview of recruitment to the Coronary Primary Prevention Trial. *Circulation* 1982; 66:(IV)5-9.
12. Kelkey JJ, O'Brien LA, Grisso JA, et al. Issues in carrying out epidemiologic research in the elderly. *Am J Epidemiol* 1989; 130:857-866.
13. Herzog RA, Rodgers WL. Age and response rates to interview sample surveys. *J Gerontol* 1988; 43:S200-S205.
14. Leader MA, Neuwirth E. Clinical research and the noninstitutional elderly: A model for subject recruitment. *J Am Geriatric Soc* 1978; 26:27-31.
15. Levenkron JC, Farquhar JW. Recruitment using mass media strategies. *Circulation* 1982; 66:(IV)32-36.
16. Somers AR, Kleinman L, Clark WD. Preventive health services for the elderly: The Rutgers Medical School project. *Inquiry* 1982; 19:190-198.
17. Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. *Appl Psych Measurement* 1977; 1:385-401.
18. Folstein MF, Folstein SE, McHugh PR. Mini Mental State: A practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975; 12:189-198.
19. Bray GA (Ed.). Obesity in Perspective: A Conference. 1975; DHEW publication no. (NIH) 75-708.
20. SAS Institute, Inc. SAS Procedures Guide, Version 6, 3rd ed. Cary, NC: SAS Institute, Inc., 1990.
21. Pennsylvania Vital Statistics Annual Report, 1987. Department of Health, State Health Data Center, May 1989.
22. County Profiles. Commonwealth of Pennsylvania, Department of Public Welfare, January 1989.

Received December 23, 1991

Revised April 7, 1992

Accepted April 10, 1992

Healthy People 2000



Healthy Endings

A Collaborative Health Promotion Project for the Elderly

Susan C. Slaninka, RN, EdD, and Anna Mae Galbraith, RN, MSN

ABSTRACT

This article describes a collaborative health promotion project between a graduate nursing program at a state university and a small community hospital. The Healthy Endings program provided health promotion education to groups of older adults at a local senior center. Health promotion in this population is vital to prevent complications and decrease risks that affect quality of life. Health promotion programs were designed to be accomplished through three major components: education, health screenings/services, and the referral process. Specific project objectives focused on safety, sensory deprivation, exercise, screening, compliance with medications, and a variety of psychosocial issues. Graduate nursing students functioning proactively in a senior center on a consistent basis were viewed as valuable by both members and staff.

The health care industry continues to change constantly in today's world. Health care economics have become a major force in reducing staff and resources in most facilities in an effort toward cost containment. The advent of managed care has caused a shift in

emphasis from quality of care to cost effectiveness, making it impossible for most health care facilities to continue to provide the quantity and quality of services once common to the hospital setting. As patient length of stay decreases, nurses have been forced to priori-

tize nursing care, and thus have limited time for patient teaching and psychosocial issues.

As a result of these changes, health care facilities have been required to examine new methods of health care delivery. For health care professionals the emphasis continues to be placed on quality of care for the patient and family. Community health nursing is increasingly devoted to assisting patients and their families adapt to illness following hospitalization. Health education is a major emphasis of that effort. Survival of community health programs depends on creative collaborative efforts among institutions. This article describes a collaborative health promotion project (Healthy Starts/Healthy Endings) between a small community hospital and a state university nursing program. The targeted population for this project was a senior citizen population served by the hospital Community Health Education Department. Healthy Endings was complemented by another collaborative project called Healthy Starts that focused on prenatal education in two other community hospitals. This article focuses only on the Healthy Endings portion of that project.

ABOUT THE AUTHORS

Susan C. Slaninka, RN, EdD is Professor of Nursing and Assistant Chairperson, Department of Nursing, West Chester University, West Chester, Pennsylvania, and Anna Mae Galbraith, RN, MSN is Director of Community Health Education, Phoenixville Hospital, Phoenixville, Pennsylvania.

The authors would like to thank the Independence Foundation for funding this project, the staff and older adults from the Senior Center, and Elizabeth A. Haydt and Millie Hill, who served as graduate nursing students for this project and contributed to this article.

Address correspondence to Susan C. Slaninka, RN, EdD, Professor of Nursing and Assistant Chairperson, Department of Nursing, West Chester University, West Chester, PA 19383.

HISTORY OF COLLABORATION BETWEEN THE HOSPITAL AND THE UNIVERSITY

The collaborative partnership between this community hospital and the university undergraduate nursing program was initiated in 1972. Undergraduate nursing students have had clinical experiences

TABLE 1**COMMUNITY HEALTH EDUCATION SURVEY**

Phoenixville AARP & Phoenixville Hospital Community Health Education Needs Your Help!

What kind of health/illness programs are of interest to you and your family?

We would appreciate your filling out the form below by checking off the programs of interest to you. If a subject you are interested in is not listed, please feel free to write it in.

(Optional)

Name _____ Phone Number _____

Address _____ Age _____

- ☐ How safe is your home?
- ☐ Hospital tours
- ☐ Stop smoking class
- ☐ Weight control/new direction
- ☐ Cholesterol class
- ☐ Adult cardiopulmonary resuscitation
- ☐ Exercise and your health
- ☐ Caring for parents
- ☐ Nutrition and you
- ☐ Label reading
- ☐ Cancer support group
- ☐ Breast cancer support group
- ☐ Diabetes support group
- ☐ Living with diabetes
- ☐ Living with high blood pressure
- ☐ Living with intestinal problems
- ☐ Living with arthritis
- ☐ Living with chronic lung disease
- ☐ How assertive are you?
- ☐ Depression
- ☐ Stress and your health
- ☐ Alzheimer's disease—What it is and isn't
- ☐ Summer safety
- ☐ Winter health
- ☐ Drug addiction
- ☐ Alcohol abuse
- ☐ AIDS
- ☐ Medication review
- ☐ Medicare benefits

Specific for:

Men

- ☐ Testicular cancer detection/testicular self-examination
- ☐ Changing roles—Life after age 55
- ☐ Prostate cancer

Women

- ☐ Breast cancer detection/breast self-examination
- ☐ What does my Pap Smear tell me?
- ☐ Cystic breast disease
- ☐ Osteoporosis
- ☐ Medicare benefits

Other

*Reprinted with permission from Phoenixville Hospital
of the University of Pennsylvania Health System.*

at the hospital for more than 25 years on the medical-surgical and maternity units. In 1992 this affiliation was expanded to include the Community Health Education Department and the graduate nursing program. Because the focus of the graduate nursing program was community health nursing, it was logical to include this facility as a clinical experience for graduate nursing students. A major responsibility of the Community Health Education Department is outreach to the community by providing health promotion programs. Having graduate students at the hospital enhanced the ability of this department to expand its offerings. Despite this collaboration, it became clear that the needs of older adults in the community far exceeded the ability to provide the services. Grant funding from a private foundation allowed for the necessary expansion of services through the Healthy Endings project.

TARGETED POPULATION

The older population in the United States, people 65 years or older, numbered 32.2 million in 1992 (Stanhope & Lancaster, 1992). That figure represents 12.7% of the population, approximately one in every eight Americans. *Chronic Care in America: A 21st Century Challenge* (Hoffman & Rice, 1996) states most older people have one or more chronic conditions. The *Survey of Health Indicators of Chester County* (Chester County, Community Needs Task Force, 1995) identifies 42,000 older people residing in Chester County. The leading causes of death in 1992 for people 65 years or older in Chester County were heart disease, cancer, stroke, pneumonia, and chronic obstructive pulmonary disease, totaling 1,881 deaths. Assisting older adults to minimize the impact of these diseases was clearly a priority. The *Chester County Office of Aging Three-Year Plan (1993-1996)*

TABLE 2

PROGRAM OBJECTIVES FOR HEALTHY ENDINGS

1. To supply information that encourages healthy habits for older adults.
2. To motivate older adults to protect their health through compliance with medication regimens.
3. To motivate older adults to protect their health through disease prevention and screening.
4. To assist older adults to minimize the impact of their diseases through exercise and healthy lifestyle behaviors.
5. To increase older adults' understanding of the specific health risks related to sensory deprivation.
6. To explore the impact of psychosocial issues on a healthy lifestyle.

(Spool, 1996) identified the development of community outreach programs addressing informational service needs as the primary goal in the older population. Another goal of that same document encouraged expansion and enhancement of programming in senior centers. The grant-funded project was intended to focus on these two goals.

SETTING DESCRIPTION

The Senior Center facility is located in a converted church recreation building and is open to members from 10 a.m. to 2 p.m. Beyond the center's driveway is an outpatient community center for substance abuse recovery and the fire department. Two churches, a low-income housing development, and several residences are also situated on the same block. Staff members include a director, activities coordinator, receptionist, cook/custodian, and an advisor of financial services.

Most of the clients attending the Senior Center live in the surrounding towns. Paratransit buses provide transportation for many of the clients for a nominal fee. Several clients continue to drive. An average of 35 to 40 clients attend the

center's events on a routine basis. Total membership includes 750 clients. Morning coffee or tea with Danish pastries and hot lunches are served daily. The morning treat is free, but donations are accepted. Everyone staying for lunch must preregister and pay a small fee. The food for the center is provided by an outside organization and is served by some of the staff and volunteers.

Activities at the center include numerous card games, art, ceramic and craft classes, two levels of exercise classes, line dancing, billiards, shuffleboard, and day outings or trips lasting several days. The trips are carefully planned and coordinated by the financial advisor and have included trips to New England and Florida. Day trips include special dinner theater shows, mystery shows, musicals, and holiday spectacles.

HISTORY OF HEALTH PROMOTION PROVIDED BY COMMUNITY HEALTH EDUCATION

Prior to the collaborative partnership with the university nursing program, health promotion pro-

TABLE 3**THE ZUNG SELF-RATING DEPRESSION TEST**

Circle the letter following each statement to indicate how often each of the following statements has applied to you during the past 2 weeks.

A. None or little of the time

C. A good part of the time

B. Some of the time

D. Most or all of the time

Feeling Down?**Statements**

- | | | | | |
|---|---|---|---|---|
| 1. I feel downhearted, blue, and sad. | A | B | C | D |
| 2. Morning is when I feel best. | A | B | C | D |
| 3. I have crying spells or feel like it. | A | B | C | D |
| 4. I have trouble sleeping through the night. | A | B | C | D |
| 5. I eat as much as I used to. | A | B | C | D |
| 6. I enjoy looking at, talking to, and being with attractive men/women. | A | B | C | D |
| 7. I notice that I am losing weight. | A | B | C | D |
| 8. I have trouble with constipation. | A | B | C | D |
| 9. My heart beats faster than usual. | A | B | C | D |
| 10. I get tired for no reason. | A | B | C | D |
| 11. My mind is as clear as it used to be. | A | B | C | D |
| 12. I find it easy to do the things I used to do. | A | B | C | D |
| 13. I am restless and can't keep still. | A | B | C | D |
| 14. I feel hopeful about the future. | A | B | C | D |
| 15. I am more irritable than usual. | A | B | C | D |
| 16. I find it easy to make decisions. | A | B | C | D |
| 17. I feel that I am useful and needed. | A | B | C | D |
| 18. My life is pretty full. | A | B | C | D |
| 19. I feel that others would be better off if I were dead. | A | B | C | D |
| 20. I still enjoy the things I used to do. | A | B | C | D |

From Zung (1965). Reprinted with permission from Archives of General Psychiatry.

grams were held at the Senior Center on a request basis by Senior Center staff. Programs included health fairs, screenings, and health education lectures. In more recent years, the Community Health Education Department surveyed members and staff of the Senior Center to identify health promotion programs of interest. An outcome of that survey was the establishment of a monthly Health Talks program for Senior Center members after

lunch. Programs addressed various issues including living with chronic illness, safety, and psychosocial concerns. A medication review was instituted during Medication Awareness Month which included a pharmacist, nurse, and physician. A Flu Immunization program was initiated as community visiting nurses, the hospital, and the local health department worked together to provide this service.

Through these health program

efforts, a strong cooperative working relationship was established with Senior Center staff who valued the hospital as a resource to address significant senior health issues. Senior Center staff also served as a valuable resource to hospital personnel by identifying health problems and concerns of members that could be addressed through health promotion programs or referrals to appropriate health care services. Because of limited staffing, the

TABLE 4**HEALTH CARE SCALE FOR THE AGED**

Directions: Circle yes or no for Items 1 through 6.

Which of these things are you healthy enough to do without help?

- | | | |
|--|-----|----|
| 1. Go to a movie, church, a meeting, or visit friends. | Yes | No |
| 2. Walk up and down stairs to the second floor. | Yes | No |
| 3. Walk half a mile (about eight ordinary blocks). | Yes | No |
| 4. Heavy work around the house, such as shoveling snow or washing walls. | Yes | No |
| 5. Which of these statements fits you best (choice of the following three)? | | |
| • I am not limited in any of my activities. | Yes | No |
| • I cannot work (keep house) at all now because of my health. | Yes | No |
| • I have to limit some of the work or other things I do. | Yes | No |
| 6. Is there any physical condition, illness, or health problem that bothers you now? | Yes | No |

From Rosow & Breslau (1966). Reprinted with permission from the Journal of Gerontology, 21, 556-559.

health promotion programs could not be expanded beyond monthly meetings. The collaborative partnership with the university was envisioned as an opportunity to enhance health promotion efforts at the Senior Center. Graduate students' participation at the center would allow a more consistent presence of health care professionals and provide continuity for the seniors. Members of the center would have weekly access to a nurse who would be readily accessible to the 30 to 40 members who attend the center daily.

HEALTHY ENDINGS

In the planning phase of this collaborative relationship, a working definition for senior health promotion was adopted for this experience. Both hospital and university participants believed that senior health promotion at the center would be a program that emphasized maintaining health, preventing injury or complications from illness, and identifying psychosocial issues. Health promotion programs would focus on services not readily available to older people, which are different from traditional medical care. Frenn (1996) states the importance of health promotion in the elderly;

it is essential in effectively preserving health and functional abilities, thereby reducing health care costs. In *Healthy Endings*, an emphasis was placed on primary prevention through self-care that encouraged healthy lifestyles, control of chronic illnesses, and identification of health and safety issues for older people. These health promotion efforts were an attempt to increase awareness of community resources available to assist in self-care practices and, when necessary, provide early and timely access to the health care system.

Health promotion programs were designed to be accomplished through three major components: education, health screenings/services, and the referral process. The educational component focused on what the Senior Center members identified as needed programs, what the health risks are for this population, and promoting safety in the environment both at home and at the Senior Center.

ASSESSMENT OF HEALTH PROMOTION NEEDS

An assessment of the issues that affect the targeted population was a beginning point in the planning process. Senior Center members

identified their health promotion needs through several different methods. A survey (Table 1) was developed to identify specific programs of interest to this group. Senior Center staff, through daily observation, also provided input on issues that created difficulties for seniors affecting their health status (e.g., financial issues, hygiene problems, or loss of spouses). Health promotion needs of older people are identified in *Healthy People 2000* (United States Department of Health and Human Services [USDHHS], 1990), which clearly articulates health issues and recommendations for implementation. A more recent document, *Survey of Health Indicators for Chester County* (Chester County Community Needs Task Force, 1995), indicated health issues prevalent for this age group in this particular community. Survey results were also reviewed and identified loneliness and social isolation as prevalent conditions in the county's older population.

After the assessment process was completed, objectives for the project were identified. *Healthy Endings* became a collaborative effort between the university Department of Nursing and the

TABLE 5
HEALTHY ENDINGS EDUCATION OUTCOMES SCALE

Competency	Pre-education Program		Post-education Program		6-Month Follow Up	
	YES	NO	YES	NO	YES	NO
1. Participates in blood pressure monitoring.						
2. Can list their medications.						
3. Can list the correct usage of their medications.						
4. Can list potential side effects and interactions of their medications.						
5. Identifies basic dietary issues in blood pressure control.						
6. Recognizes symptoms to be reported to their physicians.						
7. Describes how to obtain psychosocial support.						
8. States how to access emergency assistance if needed (e.g., 911).						
9. Verbalizes home safety concepts.						
10. Participates in discussion groups relating to loneliness and social isolation.						

Community Health Education Department of this community hospital. Graduate nursing students provided weekly health promotion programs as part of their required clinical practicum courses. The faculty member and the Director of Community Health Education served as supervisors of the planning, implementation, and evaluation of the programs.

PROJECT OBJECTIVES

The program objectives for the Healthy Endings program are listed in Table 2. This program provided health promotion education to groups of older adults at the Senior Center. Several programs were immediately identified and initiated including living with chronic illnesses such as diabetes, hypertension, congestive heart failure, arthritis, and stroke. Other programs included hygiene, incontinence, summer and winter safety, safety regarding chronic illness, medication compliance, exercise, and

depression. Educational programs were provided in both large and small groups. Informal individualized health education also was provided. For those members who were not able to attend the programs, a newsletter was initiated so all could benefit from the information provided.

A second component of the Healthy Endings health promotion project was the provision of various health screenings and services. Breast cancer and depression are issues that are often observed in older people yet frequently neglected by primary care providers. A focus was given to these two major issues affecting older adults. Before a breast cancer screening program was initiated, two breast cancer awareness seminars were held to provide basic information related to breast cancer. Methods of detection were addressed with an emphasis on American Cancer Society (ACS) guidelines (1997) including clinical breast examination, mammogra-

phies, and breast self-examination (BSE). Most of the women knew mammograms were necessary, but less than half of the women had mammography using the ACS guidelines. Fewer women had yearly clinical breast examinations and even less women practiced BSE. The breast cancer screening was scheduled during the following month, and BSE was emphasized by health care providers. Referrals for mammographies were made as needed. Individual follow up was completed to ensure participants' understanding of ACS screening recommendations.

A similar approach was used to address depression. A lecture/discussion was used to introduce the topic of depression. A depression screening was then completed using the Zung Self-Rating Depression Test (Zung, 1965) (Table 3). Nineteen people were screened for depression, with seven requiring follow up. Follow up was again completed to address issues of con-

cern after the screening.

The issue of safety was addressed in various ways: an overview of home safety, medication compliance, winter safety, and summer safety with skin cancer assessment. As in previous programming, a repetitive pattern was used. The safety module began with an overview of safety issues with a focus on safety in the home. Slides and games were used as the teaching methodologies to introduce the topic of safety. Safety assessment was completed using the *National Safety Council Home Safety Check List* (National Safety Council, 1982) to identify older people living in unsafe environments. People having an elevated score were identified and counseled on safety risks and encouraged to incorporate the necessary measures to improve their home environments.

A second focus of the safety module included the issue of medication compliance. Medication reviews were completed to detect unsafe medication practices, knowledge regarding medications, correct administration of medications, and potential for medication interactions with other medications or foods. Small group discussions served to address these issues as Senior Center members arrived that day with their medications in hand.

The last portion of the safety module focused on winter and summer safety and included a skin cancer screening component. Members were instructed on the importance of safety in regard to protection from the sun, and then screening was provided. Other summer safety issues addressed included prevention of hyperthermia and preparation of food. This program was very popular especially because it was a relatively new program at the center.

The third component of the health promotion project addressed the referral process. Referrals were identified through various education, health screening, and service

programs. Staff from the Senior Center also identified people in need of a community resource referral. The referral process required collaboration among a variety of health care providers and agencies. Most frequent referrals included the Visiting Nurses' Association, the Office of Aging, Social Services of the hospital, and local physicians.

EVALUATION OF THE HEALTHY ENDINGS PROJECT

Because evaluation of outcomes was a key priority for this project, a set of evaluation instruments was prepared. Funding from the Independence Foundation allowed the project directors to obtain the services of a consultant, who prepared an evaluation packet that included a client consent form, demographic questionnaire, Health Care Scale for the Aged (Rosow & Breslau, 1966) (Table 4), the Zung Self-Rating Depression Test (Zung, 1965) (Table 3), and the Healthy Endings Education Outcomes Scale (Table 5). These forms were used to gather data essential to the project goals. The *National Safety Council Home Safety Check List* (National Safety Council, 1982) provided by the hospital was added to the data collection package.

The demographic questionnaire contained 24 items for baseline data collection. These included health concerns (e.g., identification of illnesses, medication use, and disabilities) and social factors (e.g., marital status, living arrangements, social activities, and support network availability). The demographic questionnaire was completed prior to the start of the educational program.

Rosow and Breslau's (1966) Health Care Scale for the Aged is a six-item, cumulative scale which measures a respondent's self-report of functional health. The tool assesses one's perception of an ability to perform various physical and social activities that could be

impaired by health-related activities. The Health Scale for the Aged requires the respondents to circle "yes" or "no" for each item. The response indicates agreement or disagreement with each of six statement choices offered in the instrument. A .91 coefficient of reliability was reported by the developers of the scale. In support of validity, Rosow and Breslau (1966) found that 17% of respondents indicated their health fell into the lowest portion of the worst category. This percentage was similar to that of the American population of elderly, and they argued that the scale did measure self-assessed health in people age 65 and older.

The Zung Self-Rating Depression Test (Zung, 1965) was developed to gauge whether or not patients were at risk for depression. The test consists of 20 statements—each of which relate to a specific characteristic of the disorder. Ten statements are negative indicators, and 10 are positive and are rated according to the degree each applies over the past 2 weeks to the person taking the test. The test can be used to gauge a person's emotional state and to assess whether the person is at low, moderate, or high risk for depression. In one recent national survey, 12% of people older than age 60 were at high risk for depression.

The Healthy Endings Educational Outcomes Scale was developed specifically for this project to assess gains in health knowledge as a result of the health promotion educational program provided by the graduate nursing students. This tool is a competency-based measure that covers basic health knowledge and activities essential to the health functioning of all participants. These include:

- Participation in blood pressure monitoring and dietary control.
- Knowledge of medications, their side effects and potential interactions.

- Symptoms to report to the physician.
 - How to access emergency assistance.
 - Home safety concepts.
 - How to obtain psychosocial support.
- Competency in these areas was determined by verbal response and was assigned a "yes" or "no" rating. All of the clients had positive outcomes after the sessions.

VALUE OF NURSES IN A SENIOR CENTER

A nurse functioning proactively in a senior center on a consistent basis was viewed as valuable by both members and staff. Members relied on the nurse to provide them with an excellent source of health and illness information through group activities such as lectures, group discussions, or screenings. Members could approach the nurse with any health questions or concerns and knew they would receive guidance and assistance in resolving the health issues. The weekly participation by the nurse at the center also promoted a sense of continuity and allowed for follow up of a member's concern or problem. Through these weekly sessions, members also became more familiar with the nurse, thus promoting interaction. Members felt more at ease in approaching a nurse who knew them. Members had access to a health care provider in a familiar gathering place for service.

Staff also benefited from the weekly sessions at the center. Both the director and the activities coordinator developed positive working relationships with the nurse. The nurse's influence on the members' health was viewed as significant, with many important health issues addressed and resolved through nursing intervention. The staff also

indicated that health issues they could not address and normally would refer to other agencies were easily referred to the nurse on site for consideration and follow up. The staff also benefited personally as the graduate student provided CPR training for them as well as education on many health issues through the formal programs.

Another valuable aspect of the nurse's role in this setting was case finding, with early detection of risks or health problems and then referrals to appropriate health services or providers. Members in this setting have a history of delaying access to the health care system because of either denial or inability to attach significance to a symptom. The screenings and other health services provided by the nurse allowed early detection and promoted access to the health system for further evaluation and treatment. Case finding and referrals were viewed as positive outcomes of the nurse's intervention, and they were significantly affected by the relationship established with both members and staff.

GERONTOLOGICAL NURSING IMPLICATIONS

The objectives for older adults from *Healthy People 2000* (USDHHS, 1990) clearly define interventions that can have a positive affect on the health status of this growing population. This project addressed these interventions with the older adult population in a setting that was not a health institution. If nurses are to have an impact on health promotion for older adults, a site such as a senior center offers multiple opportunities for gerontological practice.

An indirect observation from this project was that health promotion for older adults is not consistently addressed in primary care

settings but can significantly affect health status and quality of life issues for older adults. Community agencies such as senior centers, meetings of the American Association of Retired Persons, and retirement communities where older adults gather provide excellent opportunities for health promotion. It is in such settings that gerontological nurses can take a proactive primary prevention focus. This model of care will allow older adults to live longer and healthier lives.

REFERENCES

- American Cancer Society. (1997). *Cancer facts and figures 1997*. Atlanta, GA: Author.
- Chester County Community Needs Task Force. (1995). *Survey of health indicators for Chester County*. Chester, PA: Government Services of Chester County.
- Frenn, M. (1996). Older adults' experience of health promotion: A theory for nursing practice. *Public Health Nursing*, 13(1), 65-71.
- Hoffman, C., & Rice, D.P. (1996). *Chronic care in America: A 21st century challenge*. San Francisco: Institute for Health and Aging at University of California, San Francisco for Robert Wood Johnson Foundation.
- National Safety Council. (1982). *National Safety Council home safety check list*. Washington, DC: U.S. Government Printing Office.
- Rosow, I., & Breslau, N. (1966). A Guttman health scale for the aged. *Journal of Gerontology*, 21, 556-559.
- Spool, M.M. (1996). *Chester County Office of Aging three-year plan (1993-1996)*. Chester, PA: Chester County Office of Aging Government Service Center.
- Stanhope, M., & Lancaster, J. (1992). *Community health nursing: Process and practice for promoting health*. St. Louis: Mosby.
- United States Department of Health and Human Services. (1990). *Healthy people 2000. The national report on health promotion and disease prevention objectives* (USDHHS Publication No. 91-50212). Washington, DC: U.S. Government Printing Office.
- Zung, W.K. (1965). A self-rating depression scale. *Archives of General Psychiatry*, 12, 63-70.

Health Promotion Practices of the Old-Old



Barbara Resnick PhD, CRNP
Assistant Professor
University of Maryland School of Nursing
Baltimore, Maryland

The purpose of this study was to describe the health promotion activities of older adults in a life care community. A total of 195 older adults participated in a health promotion survey. The old and old-old age groups demonstrated a decrease in cancer screening behaviors, aerobic exercise, and compliance with a low cholesterol diet. Moreover, these individuals indicated that they had lived a sufficient period of time, and were no longer interested in disease prevention and prolongation of life. Older adults may benefit from an individualized approach to health promotion that focuses on quality rather than quantity of life.

In developed countries, because of both medical care and research, the average life expectancy is now approximately 80 years (*Aging America: Trends and Projections*, 1985; Lohman, Sankaranarayanan, & Ashby, 1992). The purpose of health promotion and disease prevention is to reduce the potential years of life lost (in premature mortality) and to ensure better quality of remaining life. With Americans living longer, it is suggested that health promotion activities are all the more important because these individuals will have more years to benefit from preventive services (Omenn, 1990). Moreover, there is evidence to suggest that seniors benefit just as much from preventive programs as do those who are middle-aged (Costanza, 1992; Goldberg & Chavin, 1997; Mettlin, Jones, & Averette, 1993). Specifically, there is evidence to suggest that cancer screening with mammography, a screening Pap test, digital examination for monitoring prostate size, and yearly evaluation of stool specimens for occult blood can help reduce mortality and morbidity among older adults (Gudas, 1996; Sherman, Abel, & Tavakoli, 1996). Other preventive health behaviors, such as exercise and reducing cholesterol levels, impact overall health status and physical fitness, including aerobic power, strength, balance, and flexi-

bility, and acute medical problems such as fractures, myocardial infarctions, and cerebral vascular accidents (Ettinger, 1996; Goldberg & Chavin, 1997; LaCroix, Leveille, Hecht, Grothaus, & Wagner, 1996; Okumiya et al., 1996).

Despite the positive outcomes of health promotion activities, only a small percentage of older adults actively engage in these activities. This is particularly true of the old-old age group (age 85 and older). For example, in a large study (Burns et al., 1996) of 3,347,410 older women, only 4% of those 85 and older had mammograms routinely. Likewise, regardless of socioeconomic status or race, older women were less likely to get Pap tests than were their younger counterparts (Sherman et al., 1996). A number of variables have been reported to impact the older adult's participation in health-promoting activities, including: (a) socioeconomic factors (Miller & Champion, 1996); (b) beliefs and attitudes (Champion, 1992); (c) encouragement by a health care provider (Rimer, Ross, Cristinzio, & King, 1992); and (d) specific motivation based on efficacy beliefs (Grembowski et al., 1992). However, this research has focused on all adults age 65 and older. It is likely that there may be alternative explanations for noncompliance with suggested preventive health behaviors for those in the 90 years of age and older group.

The purposes of this study were to: (a) describe the health promotion activities of a group of older adults living in a life-care community; (b) compare the health

Address correspondence to Barbara Resnick, PhD, CRNP, 5435 Watercress Place, Columbia, MD 21045.

ICE

class
first
-FREE
lomer

TABLE 1.
CRITERIA FOR HEALTH BEHAVIORS

Behavior	Health Risk
Exercise	Physical (aerobic) activity at least 3 times per week, 20 minutes per session
Diet	Monitors cholesterol in diet
Smoking	Currently smoking
Alcohol use	> 4 drinks/setting or > 2 drinks at least 3 times per week, or at least 1 drink per day

promotion activities between the young-old (age 65–80), the old (81–90), and the old-old (91–104); (c) consider predictors of health promotion activities; and (d) explore the reasons for lack of compliance with commonly suggested health behaviors.

METHODS

SUBJECTS

All of the 195 older adults living independently in a life-care community participated in the health promotion survey. All of these individuals had at least a high school education, had Medicare plus supplemental insurance, and were seen at least yearly by a primary health care provider. For those participants who had a history of cognitive impairment (scores of less than 20 on a Mini-Mental State Examination) (Folstein, Folstein, & McHugh, 1975), the primary caregiver was asked to serve as a proxy.

PROCEDURE

The health promotion survey was an open-ended interview, and was conducted during the 3-week period in which flu shots were given. All of the participants were told that the purpose of the interview was to learn more about health promotion activities of older adults. Residents were asked whether or not they had: (a) a recent mammogram (within the past 2 years); (b) a recent Pap test (within the past 3 years); (c) an annual prostate examination; (d) a yearly flu shot; (e) a pneumonia vaccine; (f) a current tetanus vaccine (within the past 10 years); (g) recent testing of stools for occult blood (within the past year); and (h) a recent skin evaluation (within the past year). Residents were also asked about exercise behavior, smoking, alcohol use, and adherence to a low-cholesterol diet. Criteria for specific health behaviors are shown in Table 1. If the resident did not participate in a given activity, he or she was asked to state the reason why this activity was not done. The interviews were all done pri-

vately by a geriatric nurse practitioner or a geriatric nurse practitioner student.

DATA ANALYSIS

Descriptive statistics were used to consider health promotion practices of all the residents. Reasons for not participating in specific activities were coded and categorized, and frequencies were calculated. Chi-square tests were used to consider the differences in health practices by age group. A stepwise multiple regression analysis was done to test the predictors of health-promoting behavior, with health-promoting behavior being the sum total of preventive activities the older adult participated in. Predictors included age, gender, marital status, number of chronic illnesses, and a history of cognitive impairment.

RESULTS

Demographic characteristics of the participants by age group are presented in Table 2. There were no statistically significant differences between the groups based on race, cognitive impairment, gender, or number of chronic illnesses. The majority of the participants were female, white, and cognitively intact. There was a difference between the groups with regard to marital status, with a greater percentage of those in the younger group married, and a larger percentage of those in the old-old age group widowed ($X^2 = 20.4, p < .05$).

HEALTH PROMOTION BEHAVIORS

Table 3 describes the health promotion behaviors of the residents overall and by age group. Ninety-five percent (185) of the residents had a yearly flu vaccine, 86% (168) a pneumonia vaccine, and 61% (119) a current tetanus booster. There were no differences in immunization behavior based on age.

Thirty-two percent (62) of all the residents monitored the cholesterol in their diet. There was a statistically significant difference between the groups ($X^2 = 17, p < .05$), and greater than half (53%) of the young-old residents tried to watch cholesterol and/or fat intake, while only 11% of those in the old or old-old age group reported trying to control daily intake of cholesterol and/or fat. Fifty-nine percent (115) of residents had yearly skin screening and 62% (121) had yearly stool evaluations for occult blood. There was no difference between the age groups with regard to participation in a yearly screening of skin ($X^2 = 1.9, p > .05$) or stool ($X^2 = 2.8, p > .05$).

Half (81) of the female residents had recent mammograms, 37% (60) a Pap test, and 65% (22) of the male residents had a yearly prostate examination. There

TABLE 2.
DESCRIPTIVE CHARACTERISTICS OF THE SAMPLE BY AGE GROUP

Variable	Group 1 (n = 40)	Group 2 (n = 117)	Group 3 (n = 38)	X ² /F
Gender				
Male	5 (12%)	23 (13%)	6 (16%)	1.19
Female	35 (88%)	94 (80%)	32 (84%)	
Marital status				
Married	12 (30%)	21 (18%)	3 (7%)	15.0*
Widowed	18 (45%)	76 (65%)	33 (87%)	
Single	10 (25%)	20 (17%)	2 (5%)	
Cognitive impairment				
Yes	5 (12%)	9 (8%)	3 (7%)	.92
No	35 (88%)	108 (91%)	35 (93%)	
Race				
White	39 (97%)	116 (99%)	38 (100%)	.52
Black	1 (3%)	1 (1%)		
Number of chronic illnesses	2.46	3.17	3.18	3.10*
Number of preventive health behaviors	6.37	5.7	4.9	5.7*

* $p < .05$.

was a difference between the groups with regard to mammography ($X^2 = 6.9$, $p < .05$) and Pap testing ($X^2 = 8.4$, $p < .05$). While 66% (23) of those in the young-old group had recent mammography, only 35% (11) of those in the old-old group were tested. Similarly, 57% (20) of the young-old women had a recent Pap test, while only 25% (8) of those in the old-old group had a recent Pap test. While there was no statistically significant difference between age groups with regard to screening for prostate cancer via a rectal examination ($X^2 = 3.3$, $p < .05$), 80% of those in the young-old group had yearly screening examinations, while only 33% of those in the old-old group were tested.

Overall 50% (98) of the residents regularly drank alcohol, and 11% (22) smoked. Neither alcohol nor nicotine use varied by group ($X^2 = 2.15$ and $.74$, respectively; $p < .05$). In each age group approximately half of the residents drank alcohol regularly, with regular consumption being at least one drink per day. Nicotine use was limited across all age groups, with only 8% (3) of the residents in the young-old group, 12% (14) in the old group, and 13% (5) in the old-old age group smoking.

Thirty-six percent (70) of all residents participated in a regular aerobic exercise program such as walking or swimming for at least 20 minutes three times per week. There was a statistically significant difference in exercise behavior based on age group ($X^2 = 6.7$, $p < .05$). Thirty-five percent (14) of the residents in the young-old group participated in regular exercise, compared to 42% (49) in the old and 18% (7) of those in the old-old age group.

RATIONALE FOR REPORTED BEHAVIOR

Of the 133 residents who did not adhere to a low-cholesterol diet, 77% (102) reported that they were never told to by their primary health care provider, and believed their cholesterol levels were normal. Twenty percent (31) of these residents did not monitor their diets because they felt that, "At my age, what difference does it make?" This response was more prevalent in the old (70%) and old-old (22%) groups than in the young-old (9%) group.

Of the 125 non-exercising residents, 41% (51) reported that they did not exercise because of pain and/or functional changes that limited their ability. Almost as frequent was the response that exercise was not done because of laziness (34%, 43). Other reasons for not exercising included fatigue (11%, 14), insufficient time (5%, 6), and beliefs such as being too old to benefit from exercise or that exercise in addition to regular activity was not needed (9%, 11).

There were 80 residents who had not had recent mammograms, and 101 residents who had not currently had a Pap test. Fifty-seven percent (46) of those who did not have a mammogram and 41% (41) of those who did not have a Pap test reported that they did not have these tests because they would not pursue further treatment if testing were abnormal. Other frequently reported reasons for not having either a mammogram or a Pap test included: (a) not being told to do so by the primary care provider (26% and 30%); (b) having had bilateral mastectomies, or a hysterectomy (8% and 16%); and (c) a belief that they were unlikely to get breast or uterine cancer (6% and 5%).

TABLE 3.
DIFFERENCES IN HEALTH BEHAVIOR BY AGE GROUP

Variable	Group 1 (n = 40)	Group 2 (n = 117)	Group 3 (n = 38)	χ^2	Total (n = 195)
Fatty diet					
Yes	21 (53%)	37 (31%)	4 (11%)	17.0*	62 (32%)
No	19 (47%)	80 (69%)	34 (89%)		133 (68%)
Alcohol use					
Yes	16 (40%)	61 (52%)	22 (55%)	2.15	98 (50%)
No	24 (60%)	56 (48%)	16 (48%)		97 (50%)
Exercise					
Yes	14 (35%)	49 (42%)	7 (18%)	6.7*	70 (36%)
No	26 (65%)	68 (58%)	31 (82%)		125 (64%)
Flu vaccine					
Yes	38 (95%)	113 (97%)	34 (89%)	3.0	185 (95%)
No	2 (5%)	4 (3%)	4 (10%)		10 (5%)
Pneumonia vaccine					
Yes	37 (93%)	100 (84%)	31 (82%)	2.1	168 (86%)
No	3 (7%)	17 (12%)	7 (18%)		27 (14%)
Tetanus vaccine					
Yes	29 (73%)	69 (59%)	21 (55%)	2.6	119 (61%)
No	11 (27%)	48 (41%)	17 (45%)		76 (39%)
Skin screening					
Yes	27 (68%)	76 (64%)	20 (53%)	1.9	115 (59%)
No	13 (32%)	41 (36%)	18 (47%)		80 (41%)
Stool screening					
Yes	27 (68%)	76 (64%)	18 (47%)	2.8	121 (62%)
No	13 (32%)	41 (36%)	20 (53%)		74 (38%)
Nicotine use					
Yes	3 (8%)	14 (12%)	5 (13%)	.74	22 (11%)
No	37 (92%)	103 (88%)	33 (87%)		173 (89%)
Mammogram	n = 35	n = 94	n = 32		
Yes	23 (66%)	47 (50%)	11 (35%)	6.9*	81 (50%)
No	12 (34%)	47 (50%)	21 (65%)		80 (50%)
Pap test	n = 35	n = 94	n = 32		
Yes	20 (57%)	32 (34%)	8 (25%)	8.4*	60 (37%)
No	15 (43%)	62 (66%)	24 (75%)		101 (63%)
Prostate examination	n = 5	n = 23	n = 6		
Yes	4 (80%)	16 (70%)	2 (33%)	3.3	22 (65%)
No	1 (20%)	7 (30%)	4 (67%)		12 (35%)

* $p < .05$.

Of the 34 males in the study, only 12 (35%) did not get regular prostate examinations. The rationale for not having screening was similar to that given by the women and included: (a) 42% (14) who reported that they already had their prostate removed; (b) 25% (8) who were not told by a primary health care provider to have a prostate examination; and (c) 35% (12) who reported that they would not have any surgery or treatment done if the prostate was enlarged.

Eighty residents did not have yearly skin evaluations, and 74 did not have yearly screening of their stool for occult blood. Fifty-nine percent (47) of these residents were not told by a health provider to monitor their skin, and 66% (49) were not told to have their stools checked for occult blood. Thirty-one percent (25) of the residents who did not have yearly skin evaluations and 12% (9) of those who did not have yearly stool evaluations

reported that they did not believe they were likely to acquire either skin or bowel cancer. Smaller percentages of residents—8% (6) of those not getting a skin evaluation and 10% (7) of those not having stools checked—reported that they would not pursue any further treatment if abnormalities were found. Eleven percent (8) of the residents reported that they did not have screening for bowel cancer because they wanted to contract the disease to facilitate death. Of these 8 residents, 5 were in the old group and 3 were in the old-old group.

There were 10 residents who refused a flu vaccine and 27 who refused a pneumonia vaccine. Of those who refused a flu vaccine, 45% (5) reported that they believed they were at low risk for getting the flu. Twenty-two percent (2) of these residents reported that they wanted to get the flu to facilitate death, and 33% (3) were allergic and/or had side effects such that they

refused further inoculations. Forty percent (11) of the residents who refused the pneumonia vaccine did so because they wanted to contract the disease and allow for a natural death. Of these 11 residents, 7 were in the old age group and 4 were in the old-old group. Other reasons for refusal included: (a) a belief that he or she would not get pneumonia ($n = 8$ [30%]); (b) not being told to do so by a primary health care provider ($n = 4$ [15%]); and (c) concerns about allergic reactions ($n = 4$ [15%]). Sixty-six residents did not have a current tetanus vaccine; the majority ($n = 49$ [65%]) of these individuals did not have this done because they were not aware that they needed to. Other reasons for not getting a tetanus booster included a belief that this was not needed ($n = 18$ [25%]) or that they were "too old to bother" ($n = 9$ [11%]).

A stepwise multiple regression analysis was done using age, gender, marital status, number of chronic illnesses, and cognitive status as predictors of number of preventive health behaviors. Age was the only statistically significant predictor of preventive health behaviors, and accounted for 7% of the variance (Table 4). With increased age, the resident participated in fewer preventive health behaviors.

DISCUSSION

Overall, the disease prevention behaviors of this sample were better than those commonly reported with regard to older adults. For example, 86% to 95% of the current sample had flu and/or pneumonia vaccines, exceeding the goal in *Healthy People 2000* to inoculate 60% of those over 65 years of age. Similarly, 50% of older adults in this study had a current mammogram and 37% a current Pap test, while prior reports indicated that only 12% of those 65 and older report having a mammogram within the past 3 years (Burns et al., 1996) and only 25% of those over 65 report regular Pap tests (Mandelblatt & Phillips, 1996). It is likely that these differences were due to sample selectivity as these residents: (a) were well educated; (b) were predominately white; (c) had both Medicare and additional insurance coverage; and (d) had a regular primary care provider as well as easy access to medical and nursing care within the life-care community.

Despite the relatively high compliance with health-promoting activities, there was a downward trend in the percentage of residents in the old and old-old age groups who participated in health promotion activities related to diet and exercise, and screening for bowel, breast, prostate, and uterine cancer. Moreover, age was the only statistically significant predictor of disease prevention activities. Many of the residents in the old and

TABLE 4.

REGRESSION TABLE FOR PREVENTIVE HEALTH BEHAVIORS

Source Step	Cum R ²	R ² Change	F	Final Beta
1. Age	.07	.07	13.7*	-.26
2. Gender	.07			-.03
3. Marital status	.07			-.09
4. Cognitive impairment	.07			.10
5. Number of chronic illnesses	.07			-.13

* $p < .05$.

old-old age groups reported that they refused testing because they felt that they were too old for preventive health care and because they would not pursue further treatment given an abnormal finding. A smaller number reported that they hoped they would get these diseases to facilitate death.

The literature continues to support the effectiveness of primary prevention in older adults (Burns et al., 1996; Marwill, Freund, & Barry, 1996; Sitzes, 1995; Verschuren et al., 1995), and current recommendations suggest that yearly testing should include a fecal occult blood test and a prostate examination and that all older adults should receive influenza, pneumonia, and tetanus/diphtheria prophylaxis (Goldberg & Chavin, 1997). Mammography continues to be recommended for women until the age of 85 (Costanza, 1992; Goldberg & Chavin, 1997). After that time, the risks and discomforts of mammography may outweigh the benefits (Mandelblatt, Wheat, & Monane, 1992). Likewise, aggressive attempts to control cholesterol in asymptomatic adults over the age of 75 may not be appropriate (Scandinavian Simvastatin Survival Study Group, 1994).

Based on the reasons the older adults in this study gave for refusing to participate in preventive health behavior and cancer screening, the question must be raised as to whether or not there is a need or a desire to prolong life by prevention and early disease recognition. Moreover, preventive health care may result in the older adult's dying from a disease that has a greater impact on function and quality of life (Hulley & Newman, 1996; Kane, 1996; Silliman, Balducci, Goodwin, Holmes, & Leventhal, 1993).

It is not uncommon when working with old-old patients to have them report a feeling of satisfaction with a long life lived, yet a desire for this life to quietly end (Kane, 1996). Health care providers need to listen to these older adults and carefully consider disease prevention and cancer screening activities in this age group. Older adults need to be educated about the benefits of screening tests and the risks of not participating in these tests. Moreover, an important guiding

question for all older adults prior to testing should be whether or not they would pursue further treatment if abnormal findings were noted.

With age there was a decrease in exercise activity, with less than half of those in the old-old age group performing regular aerobic activities. The most common reasons for not exercising included pain and/or a decline in ability and laziness. Exercise has been demonstrated to prevent disease and decrease cardiovascular risk factors (Ettinger et al., 1994), improve muscle strength (Bravo et al., 1996; Jette et al., 1996; Larson & Brucc, 1996) and function (Przybylski et al., 1996), and, most importantly, increase quality of life (Okuniya et al., 1996). Although the old and old-old residents in this study indicated that they did not want to prolong life, participation in an exercise program should be strongly encouraged in these older adults, as exercise can help to maintain functional well-being and thereby improve quality rather than life quantity. Exploring pain and using interventions to increase motivation to participate in exercise (Resnick, 1998) can help to encourage exercise activities, and can help these individuals remain at their highest functional level.

The use of alcohol in this sample was consistent with what has been reported to be the rate of use in older adults living in the community, and particularly those who live in retirement or life-care facilities (Adams, 1996). Responses from residents supported the prior belief that alcohol use within a life-care community was an important social activity (Adams, 1996). Residents expressed concern that if they did not have a drink, they would no longer be invited to parties or pre-dinner gatherings. These social activities had an important impact on quality of life.

Moderate alcohol use has been reported to have a protective effect on heart disease and to increase high-density lipoprotein (HDL) cholesterol (Gaziano et al., 1993; Klatsky, Armstrong, & Friedman, 1992). This cardiovascular risk reduction was especially true for adults above the age of 50. Generally, health care providers encourage the older adult to abstain from alcohol use due to the risk of drug-drug interactions and the increased risk of falls and fractures. While these risks need to be taken into consideration, the positive effects of moderate alcohol use for the older adult also must be recognized.

The prevalence of smoking in this sample of older adults was less than is commonly reported in the general population (Gilles & Greene, 1996). Interestingly, the old-old group had the largest percentage of smokers. These older adults, who have survived into their 90s smoking, may not see the advantage to smoking cessation, which would most likely only offer them increased longevity. Counseling to reduce nicotine use

to a minimum may be more appropriate than working toward complete cessation of smoking in this group of individuals.

CONCLUSION

The older adults in this study demonstrated a relatively high compliance with preventive health behaviors. Consistent with previous reports of older adults living in life-care communities, 50% regularly used alcohol and a small percentage (11%) used nicotine. It is likely that the overall positive health behavior of this group of older adults was due to their education, socioeconomic status, and easy access to health care within their own living environment.

Despite this overall compliance with health promotion activities, there was a decline in these behaviors in the old and old-old age groups. The old and old-old individuals indicated that they had lived a sufficient period of time and were no longer interested in disease prevention and prolongation of life. Consequently, for this group, it may be more appropriate to focus health teaching and health promotion on exercise activities and moderate use of alcohol and nicotine, rather than aggressively restricting fat and cholesterol intake, and encouraging routine cancer screening. Health care providers should consider an individualized approach to health promotion for old and old-old adults, with a strong focus on quality rather than quantity of life.

References

- Adams, W. (1996). Alcohol use in retirement communities. *Journal of the American Geriatrics Society*, 44(9), 1082-1085.
- Aging America: Trends and projections, 1985-1996* (Publication 1986-498-1116-814/42395). (1985). Washington, DC: U.S. Government Printing Office.
- Bravo, G., Gauthier, P., Roy, P., Payette, H., Gaulin, P., Harvey, M., Pélouquin, L., & Dubois, M. (1996). Impact of a 12-month exercise program on the physical and psychological health of osteopenic women. *Journal of the American Geriatrics Society*, 44, 756-762.
- Burns, R., McCarthy, E., Freund, K., Marwill, S., Schwartz, M., Ash, A., & Moskowitz, M. (1996). Variability in mammography use among older women. *Journal of the American Geriatrics Society*, 44, 992-996.
- Champion, V. (1992). The relationship of selected variables to breast cancer detection behaviors in women 35 and older. *Oncology Nursing Forum*, 18, 733-739.
- Costanza, M. (1992). Breast cancer screening in older women: Synopsis of a forum. *Cancer*, 69, 1925-1931.
- Ettinger, H., Fried, L., Harris, T., Shemanski, L., Schulz, R., & Robbins, J. (1994). Reported causes of physical disability in older people: Cardiovascular health study. *Journal of the American Geriatrics Society*, 42(10), 1035-1044.
- Ettinger, W. (1996). Physical activity and older people: A walk a day keeps the doctor away. *Journal of the American Geriatrics Society*, 44, 207-208.
- Folstein, M. R., Folstein, S. E., & McHugh, P. R. (1975). Mini-mental state: A practical method for grading the cognitive state of patients

- for the clinician. *Journal of Psychiatric Research*, 12, 189-198.
- Gaziano, J., Buring, J., Breslow, J., Goldhaber, S., Rosner, B., VanDenburgh, M., Willet, W., & Hennekens, C. (1993). Moderate alcohol intake increased levels of high-density lipoprotein and its subfractions and decreased risk of myocardial infarction. *New England Journal of Medicine*, 329(25), 1829-1834.
- Gilles, M., & Greene, H. (1996). Cigarette smoking. In H. Greene (Ed.), *Clinical medicine* (pp. 253-256). St. Louis: Mosby.
- Goldberg, T., & Chavin, S. (1997). Preventive medicine and screening in older adults. *Journal of the American Geriatrics Society*, 45, 341-354.
- Grembowski, D., Patrick, D., Diehr, P., Durham, M., Beresford, S., Kay, E., & Hecht, J. (1993). Self-efficacy and health behavior among older adults. *Journal of Health and Social Behavior*, 34, 89-104.
- Gudas, S. (1996). Implications of oncology in the aged. In C. Lewis (Ed.), *Aging: The health care challenge* (pp. 227-260). Philadelphia: F. A. Davis.
- Healthy people 2000: National health promotion and disease prevention objectives*. Washington, DC: U.S. Department of Health and Human Services, Public Health Service.
- Hulley, S., & Newman, T. (1996). Cholesterol in the elderly: Is it important? *Journal of the American Medical Association*, 272(17), 1372-1372.
- Jette, A., Harris, B., Leeper, L., Lachman, M., Heislein, D., Giorgetti, M., & Levenson, C. (1996). A home-based exercise program for nondisabled older adults. *Journal of the American Geriatrics Society*, 44, 644-649.
- Kane, R. (1996). The defeat of aging versus the importance of death. *Journal of the American Geriatrics Society*, 44, 321-325.
- Klatsky, A., Armstrong, M., & Friedman, G. (1992). Alcohol and mortality. *Annals of Internal Medicine*, 117, 646-654.
- LaCroix, A., Leveille, S., Hecht, J., Grothaus, L., & Wagner, E. (1996). Does walking decrease the risk of cardiovascular disease hospitalizations and death in older adults? *Journal of the American Geriatrics Society*, 44, 113-120.
- Larson, E., & Bruce, R. (1996). Exercise. In C. Cassell, H. Cohen, E. Larson, D. Heier, N. Resnick, L. Rubenstein, & L. Sorensen (Eds.), *Geriatric medicine*. New York: Springer.
- Lohman, P. H., Sankaranarayanan, K., & Ashby, J. (1992). Choosing the limits to life. *Nature*, 357, 185-186.
- Mandelblatt, J., & Phillips, R. (1996). Cervical cancer: How often and why to screen older women. *Geriatrics*, 51(6), 45-48.
- Mandelblatt, J., Wheat, M., & Monane, M. (1992). Breast cancer screening for elderly women with and without comorbid conditions: A decision analysis model. *Annals of Internal Medicine*, 116, 722-730.
- Marwill, S., Freund, K., & Barry, P. (1996). Patient factors associated with breast cancer screening among older women. *Journal of the American Geriatrics Society*, 44(10), 1210-1214.
- Mettlin, C., Jones, G., & Averette, H. (1993). Defining and updating the American Cancer Society guidelines for the cancer-related checkup: Prostate and abdomen cancers. *Cancer*, 43, 42-46.
- Miller, A., & Champion, V. (1996). Mammography in older women: One-time and three-year adherence to guidelines. *Nursing Research*, 45(4), 239-245.
- Okumiyu, K., Matsubayashi, K., Wada, T., Kimura, S., Doi, Y., & Ozawa, T. (1996). Effects of exercise on neurobehavioral function in community-dwelling older people more than 75 years of age. *Journal of the American Geriatrics Society*, 44, 569-572.
- Omenn, G. (1990). Prevention and the elderly: Appropriate policies. *Health Affairs*, 9, 80-93.
- Przybylski, B., Dumont, D., Watkins, M., Warren, S., Beaulne, P., & Lier, D. (1996). Outcomes of enhanced physical and occupational therapy service in a nursing home setting. *Archives of Physical Medicine and Rehabilitation*, 77, 554-561.
- Resnick, B. (1998). Self-efficacy in geriatric rehabilitation. *Journal of Gerontological Nursing*. In press.
- Rimer, B., Ross, E., Cristinzo, C., & King, E. (1992). Older women's participation in breast screening. *Journal of Gerontology*, 47, 85-91.
- Scandinavian Simvastatin Survival Study Group. (1994). Randomized trial of cholesterol lowering in 4444 patients with coronary heart disease: The Scandinavian Simvastatin Survival Study. *Lancet*, 344, 1383-1389.
- Sherman, J., Abel, E., & Tavakoli, A. (1996). Demographic predictors of clinical breast examination, mammography, and Pap test screening among older women. *Journal of the American Academy of Nurse Practitioners*, 8(5), 231-236.
- Sillman, R., Balducci, L., Goodwin, J., Holmes, F., & Leventhal, E. (1993). Breast cancer care in old age: What we know, don't know, and do. *Journal of the National Cancer Institute*, 85(3), 191-198.
- Sitzes, C. (1995). A community-based breast cancer education and screening program for elderly women. *Geriatric Nursing*, 16(4), 151-154.
- Verschuren, W., Jacobs, D., Bloomberg, B., Kromhout, D., Menotti, A., Aravanis, C., Blackburn, H., Buzina, R., Dontas, A., Fidanza, F., Karvonen, M., Nedeljkovic, S., Nissinen, A., & Toshima, H. (1990). Serum total cholesterol and long-term coronary heart disease mortality in different cultures. *Journal of the American Medical Association*, 274(2), 131-136.