HEALTH CARE FINANCING ADMINISTRATION

ADDRESSEE:

Chris Jennings
Dan Mendelson
Mark Miller

PHONE: _____

FROM: Bonnie Washington

OFFICE OF THE ADMINISTRATOR
200 INDEPENDENCE AVE., S.W.
ROOM 314G
WASHINGTON, DC 20201

PHONE: 202-690-6726
FAX : 202-690-6262

TOTAL PAGES:	ADDRESSEE'S FAX MACHINE NUMBER:	DATE:
8		

REMARKS:

Draft OPD letter to Sen Rockefeller + others for your review. Please let me know today if you have comments.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Health Care Financing Administration

Deputy Administrator
Washington, D.C. 20201

The Honorable John D. Rockefeller
United States Senate
Washington, D.C. 20510

Dear Senator Rockefeller:

Thank you for your letter to the Administrator concerning the proposed Medicare hospital outpatient prospective payment system. I am responding on her behalf, and I regret the delay in this response.

I am aware of the many concerns raised about the potential impact that this proposed system would have on hospitals. The estimated 5.7 percent overall reduction in payments to hospitals that would result from implementation of this new system is sizable. You advise that this reduction is an unintended decrease in payments to hospitals which "represents a misinterpretation of Congressional intent" that you believe can be resolved administratively.

I want to assure you that the Health Care Financing Administration is committed to ensuring that our payment policies are based upon an accurate reading of the law. In view of your concerns and similar ones raised by others, I have asked the Office of General Counsel to closely review the Balanced Budget Act provisions pertaining to the hospital outpatient prospective payment system and to advise us of areas where we may have some flexibility. Please be assured that this task will be completed in time to give full consideration to any such flexibility before the promulgation of the final rule.

I appreciate your bringing this matter to my attention and your interest in assuring appropriate payments to hospitals for outpatient services delivered to Medicare beneficiaries. My staff and I look forward to working together on this issue with you and the other Congressional Members who co-signed your letter.

A similar letter is being sent the other Members who co-signed your letter.

Sincerely,

Michael M. Hash
Deputy Administrator

WASHINGTON, DC 20510 1999 JUN 23 AM 11: 23

June 18, 1999

Nancy-Ann Min DeParle
Administrator
Health Care Financing Administration
200 Independence Avenue, S.W.
Room 314G
Washington, D.C.

Dear Madame Administrator:

We are concerned about the Department's Notice of Proposed Rulemaking (NPRM) for the implementation of the outpatient prospective payment system (PPS) enacted in the 1997 Balanced Budget Agreement (BBA).

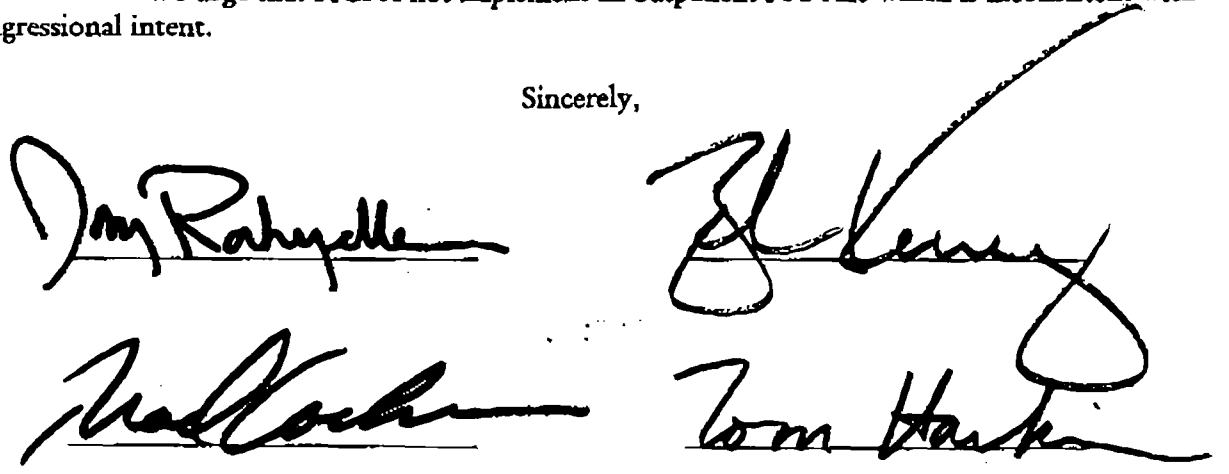
With the encouragement of Congress, HCFA, seniors' representatives and providers cooperatively developed the outpatient PPS policy. The new policy was designed to address a longstanding flaw in outpatient payment policy and to gradually rationalize Medicare's outpatient copayments, without imposing unmanageable outpatient payment cuts on hospitals. This policy change was accomplished in the Balanced Budget Act, which contained a $7.2 billion outpatient payment reduction. No additional payment reductions were contemplated, analyzed or scored.

We strongly support the outpatient PPS approach. However, HCFA's proposed rule contains an additional, unintended 5.7 percent "across the board" reduction in payments to hospital outpatient departments. This $850 million per year reduction represents a misinterpretation of Congressional intent and threatens the integrity of a broadly supported compromise. Total outpatient hospital payments were to be budget neutral to a clearly identified new baseline in the law. No additional reduction was contemplated.

Congress clearly intended that these changes to outpatient copayments be achieved on a budget-neutral basis – the identical language that originally passed the House and the Senate clearly precluded any payment reduction for this policy. While a minor technical drafting change in the Conference agreement resulted in confusion over the outpatient payment formula, we believe the Department has the flexibility under the statute to implement Congress' clear intent.

We urge that HCFA not implement an outpatient PPS rule which is inconsistent with Congressional intent.

Sincerely,



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United States Senate

WASHINGTON, DC 20510

June 18, 1999

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Administrator
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200 Independence Avenue, S.W.
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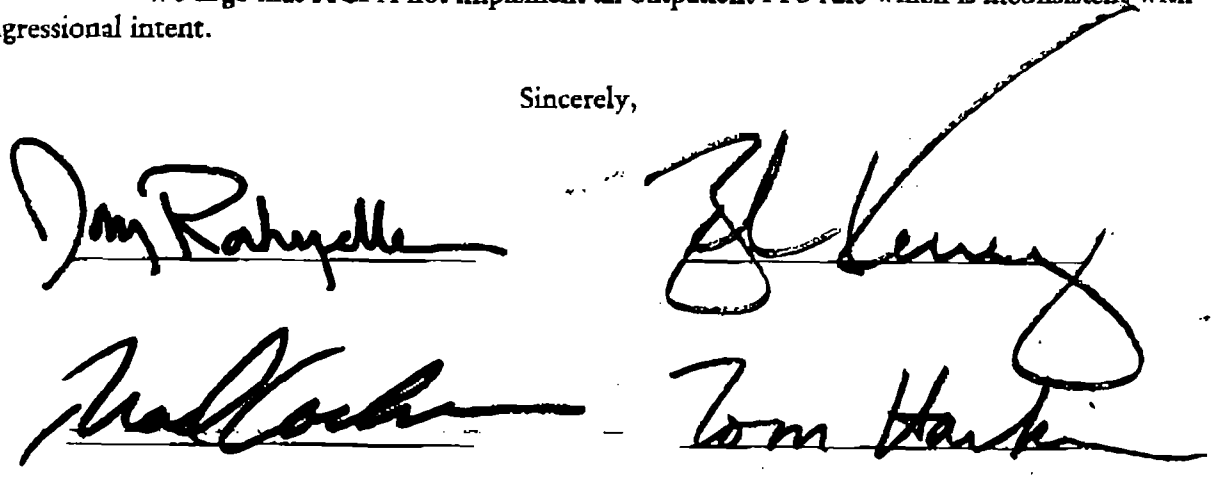

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HCFA Letter
June 18, 1999
Page 2

Jesse Helms [illegible]

Max Cleland [illegible]

Mike Crapo Rick Santorum

[illegible] Patty Murray

[illegible] Bond

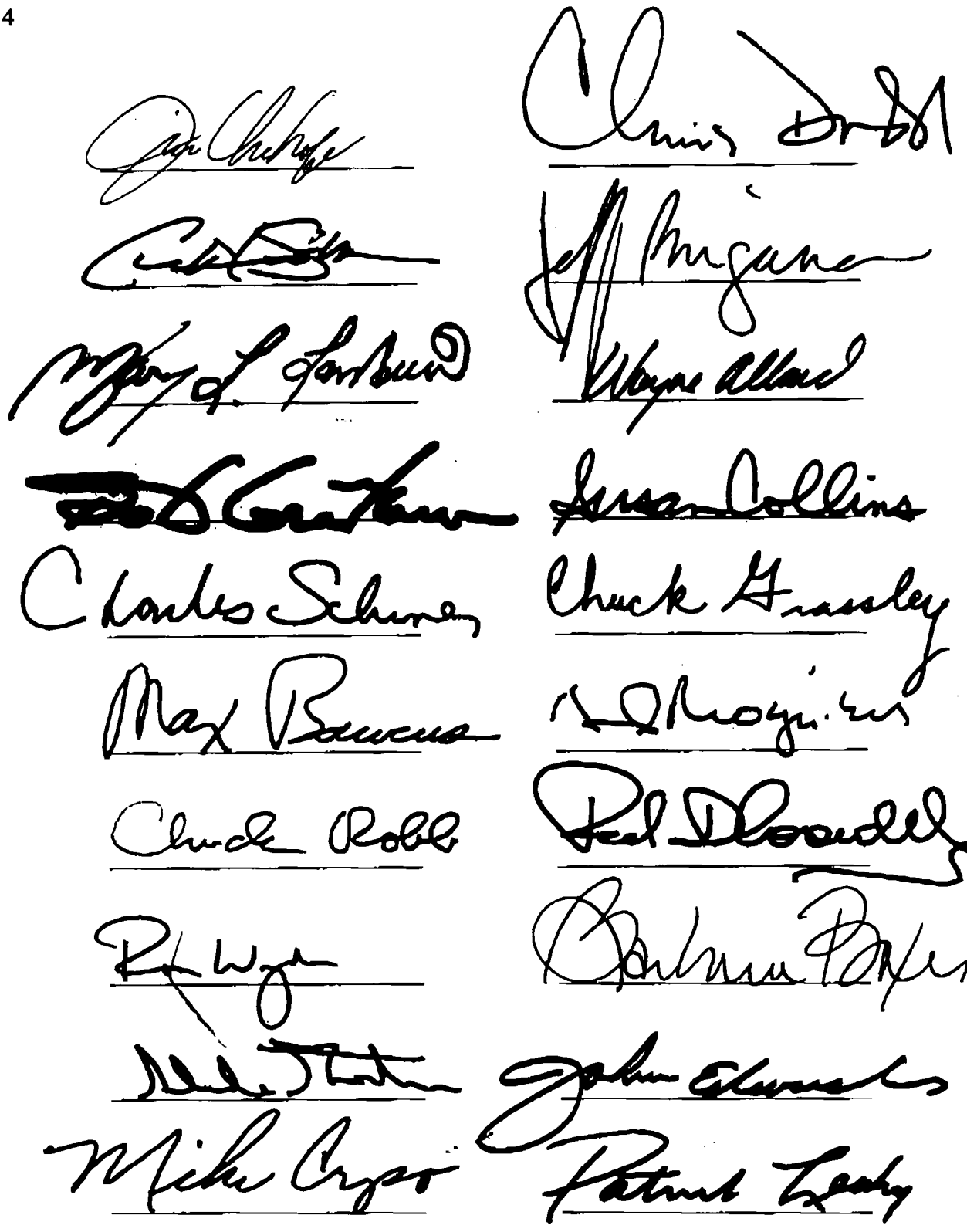
[illegible] Kay Bailey Hutchison

[illegible] John Warner

[illegible] Russ Feingold

[illegible] [illegible]

[illegible] McConnell [illegible]



DATE: 9-16

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES

ROOM 416G, HUMPHREY BUILDING
200 INDEPENDENCE AVENUE, SW
WASHINGTON, D.C. 20201

PHONE: (202) 690-7627 *FAX: (202) 690-7380*

OFFICE OF THE ASSISTANT SECRETARY FOR LEGISLATION
ROOM 416-G HUMPHREY BUILDING

TO: Chris Jennings

OFFICE: _____

ROOM: _____

PHONE: _____

FAX: 456-5567

TOTAL PAGES (INCLUDING COVER): 3

[✓] RICHARD J. TARPLIN

[ ] KEVIN BURKE

[ ] HAZEL FARMER

[ ] ROSE CLEMENT LUSI

[ ] ALICE ARTIS

[ ] FRANKIE MELTON

REMARKS: Edits on big problems only, please.

Thanks for the help,

Rich

Questions and Answers for Senate DPC Luncheon

Q. Senate Democrats are concerned that the Administration doesn't share our sense of urgency about the BBA provider give backs. Why aren't you doing more to help deal with this problem?

A. Let me assure you that the President and I, as well as John Podesta, Jack Lew and others, realize how important and urgent this issue is for you.

We have acknowledged publicly that there were unintended consequences from the BBA that need to be addressed, and the President's plan includes $7.5 billion over 10 years to help address problems with beneficiary access to quality care. We are also taking several administrative actions on our own to help hospitals, home health agencies, and other providers to adjust to the changes.

We have been working very hard over the summer with provider groups, GAO, CBO and others to collect data and monitor access to services. While we have better information in some areas than others, we have been able to identify provider services that need attention. For example, we know that we will need to address the $1500 caps on outpatient rehabilitation therapy and the nursing home payments for high acuity patients.

The bottom line is this. We will be prepared to engage in detailed work on specific legislative proposals in the context of discussions with Congress that will take place this fall.

Q. Would you support restoring more than $7.5 billion in Balanced Budget Act Medicare cuts?

A. We continue to review the latest information to determine the appropriate level of relief for health care providers. While we have yet to reach any conclusions that justify going beyond the $7.5 billion in the President's plan, we would seriously consider an increase if we were convinced that amount was insufficient to deal with problems affecting beneficiary access to quality services. However, such provisions must have specified and workable offsets and cannot undermine the integrity of the Medicare trust fund. We also have to keep in mind that additional funds for providers are funds that are not available for other important priorities that we share.

Q. Would you support BBA relief outside of the context of broader Medicare Reform?

A. The President has laid out a detailed plan that makes Medicare more efficient and competitive, extends the life of the trust fund, modernizes its benefits, and funds relief

from excessive BBA provider cuts. There is no question that we believe the Congress should pass legislation this year that reflects all of these priorities. We also believe that focusing on broad-based reforms rather than narrow pieces of policy reinforces the public's perception that Democrats are committed to guaranteeing Medicare's future.

If, however, there is no chance for passing broader reforms and it becomes clear that the BBA is undermining access to care for beneficiaries, we would consider the possibility of stand-alone legislation. However, this is not our preference - and we do not think that it should be the preference of Democrats. Medicare's challenges are bigger than the BBA and we have an historic opportunity to address them.

Q. If the Labor/HHS/Education allocation is so far short of the President's budget, how do you expect this to get resolved this fall?

A. We are very disappointed that the Republicans have dug such a deep hole for themselves, but we believe we can have a bill at the end that preserves the priorities that we share with you. Jack Lew can speak better to the details, but I do know that we have not even begun to explore many of the offsets included in the President's budget.

Many of these offsets are outside my purview. But one that I know a lot about is tobacco. We could raise significant funds through an excise tax or the kind of youth smoking penalty that Senator Harkin is working on. This would not only fund important priorities, but by raising the price of cigarettes it would be great public health policy too. We will continue to work closely with you to explore the full range of options for funding the Labor/HHS programs at an acceptable level.

COMMITTEE ON WAYS AND MEANS

U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

SUBCOMMITTEE ON HEALTH

April 29, 1999

Mr. Christopher Jennings
Domestic Policy Council
The White House
Washington, DC 20500

Dear Chris,

In a recent Senate Finance Committee hearing on the context and evolution of Medicare, several Senators – both Republican and Democrat – expressed interest in the testimony of Dr. Wennberg of Dartmouth University. As you know, Dr. Wennberg's work shows that health care demand is generated by supply, and that spending is determined by utilization in a given area. Dr. Wennberg asserts that by changing practice patterns, we can curb Medicare spending without jeopardizing health outcomes and quality.

For the past several months, I have been working on a comprehensive package of incremental changes for Medicare. Many of these ideas are based on Dr. Wennberg's findings in the 1998 Dartmouth Atlas. I am writing to ask that you consider incorporating some of my ideas into the President's Medicare reform proposal. Not only will these suggestions help establish bipartisan support for the President's bill, they may also enable us to achieve our goal of a modernized Medicare program without having to adopt more radical reforms. Incremental steps are a more feasible, and more desirable way to ensure the Medicare guarantee of accessible, high quality health care.

Democrats agree that Medicare needs to be improved. But overhauling the program is unnecessary when alternative solutions, such as these, are available. Granting Medicare more flexibility to negotiate prices and conduct demonstration projects will make the program more equitable, effective, and efficient. These changes may also result in substantial program savings.

Attached is a list of ideas to consider. I would appreciate hearing your thoughts. Please let me know if you need any additional information or clarification.

Sincerely,

Pete Stark
Member of Congress

MEDICARE MODERNIZATION PROVISIONS

Part of a plan to improve the equity, effectiveness, and efficiency of Medicare for all Americans

Traditional Medicare fee-for-service can and should be improved. Granting greater flexibility for purchasing and demonstration projects to Medicare will enable the program to change and improve over time. When combined with appropriate patient and provider incentives, these tools will not only improve the quality of health services, but will also result in significant savings for Medicare. The following ideas are drawn heavily from suggestions made by Dr. John Wennberg of Dartmouth University and the National Academy of Social Insurance:

Purchasing and Payment Initiatives

- Global payments (HR 1392: Centers of Excellence)
- Sustainable growth rate (SGR) and anti-gaming provisions to correct for program inflation
- Adjust physician RBRVS SGR by region, state, or MSA
- Selective contracting
- Competitive bidding
- A single payment system for post-acute care hospital services
- Outpatient payment reform to ensure services in most appropriate setting
- Reduced capital payments in areas of excess bed supply
- DSH "carve-out" and adjustments for VA/DOD beneficiaries
- Expanded inherent reasonableness authority
- Contractor reform

Health Outcomes and Quality Improvements

- Shared decision making between patients and providers (HR 1544: "Patient Empowerment Act")
- Case management, bundling, and post-acute care services (rural bill introduced 4/29)
- Normative practice guidelines and incentives
- Expanded preventive health services and patient reminder mechanisms
- Improved end-of-life care

DRAFT Stark Medicare Modernization Proposal

The following is a compilation of work begun in previous Congresses, and elaborations on recommendations by the National Academy of Social Insurance and Dr. John Wennberg of Dartmouth University. This comprehensive package is currently being drafted by Legislative Council. Several items have already been introduced, either as free-standing bills, or as sections in other legislation.

Title: Medicare Modernization

Chapter 1. Purchasing and Payment Initiatives (Give Medicare Preferred Provider Authority)

Subchapter A. Centers of Excellence
(Introduced 106th: HR 1392)

An administration proposal, passed by House in BBA, but failed in Conference. Expand on this proposal by giving the Secretary authority to waive Part A hospital deductible to patients who use a Center of Excellence. In other words, for certain expensive, complicated procedures and coordinated chronic care treatment, Medicare starts acting like a PPO.

Subchapter B. Authority to selectively contract (see NASI Recommendations).

Subchapter C. Normative Practice Information

By 1/1/05 the Secretary shall profile practice patterns of providers (both individuals, institutions, and

Medicare+Choice organizations) and shall provide information to the provider and the public on how their pattern of practice compares to others in the Nation, State, and locally. [This policy is an elaboration of unused authority currently in 1842(G)(3)(L)]

After 2010, the Secretary may adjust payments to providers to encourage movement away from deviations of under-service and over-service compared to generally accepted practices (e.g., if a hospital discharges more than one standard deviation earlier, or later, for a particular DRG, its payment rate shall be reduced).

Subchapter D. Treatment Notification
(Introduced 106th: HR 1544)

Demonstration project: In areas where there is wide variation of practice without variation in outcome, the Secretary shall furnish videotapes to providers outlining treatment options, including discussions of recent scientific opinions. The physician is expected to show the videotape to patients with designated diseases or injuries before the patient elects a course of treatment. Compensation will be provided to participating physicians. Such information shall be reviewed and approved by the AHCPR (This is the Dartmouth Atlas education proposal).

Chapter 2. Sustainable Growth Rate (SGR) and Anti-Gaming Authority

Subchapter A. Give the Secretary the authority to recommend to Congress, in the event of unexplained increases in intensity of services, utilization, unbundling, etc., which is causing an unusual growth in costs in a service (e.g., the recent GAO report describing the growth of expensive tests for ESRD patients outside the ESRD composite rate), a SGR system similar to that used in the RB-RVS doctor payment system for any Part A or B service. The SGR may be set nationally, by region, State or MSA. Implementation is contingent on Congressional enactment.

Subchapter B. The Secretary may adjust total payments to a hospital (or hospital chain) if she determines that on a case-severity adjusted basis, the hospital or chain is costing Medicare more than similar types of cases in public and not-for-profit hospitals (the Columbia/HCA loophole closing amendment).

Subchapter C. The Secretary may adjust Physician RBRVS SGR by region, State, or MSA (MedPAC recommendation).

Chapter 3. Expansion of Competitive Bidding

The Medicare+Choice and DME Competitive Bidding demonstration in the BBA sections 4011 and 4319 should be presumed to work and save money, made permanent and extended nationwide after 2004, and administered

through local intermediaries and carriers, and consortia of contractors (i.e., a combined A&B contractor may request bids for a bundled A&B service).

The Secretary shall have authority to enter into competitive bids for other medical services with extra weight given to providers for demonstrated quality. Examples of bidding expansion would include organ transplant centers (in the area whether there are more than one), lithotripsy services, diagnostic imaging, non-emergency ambulance services, etc.

Chapter 4. Case Managers, Bundling, and Post-Acute Care Services

Subchapter A. Provide a case manager for post-acute hospital care.
(Introduced 106th: HR 746)

The Secretary shall demonstrate (and if she finds cost savings, implement) methods of case management, bundling of services, chronic care, end-of-life care, and post-acute care case management. [Drafting note: Build on BBA sec. 4016, re: Medicare Coordinated Care Demonstration Project and HR 4591 - 105th].

Subchapter B. If the Secretary estimates that treatment in a non-hospital or non-institutional setting can provide quality care and outcomes, she may waive requirements which discourage or prevent treatment in such setting (e.g., SNF 3-day hospitalization rule, co-pays,

deductibles, etc.).

Subchapter C. Development of a single payment system for post-acute care hospital services.

As soon as possible, but no later than 2010, the Secretary shall develop and implement a single, unified payment system for post-acute care hospital services. (Currently, we are developing 5 or 6 PPS systems all using somewhat different payment, risk adjuster, and other criteria. There is great fear that we are setting ourselves up for being gamed by providers who will bounce patients from setting to setting to maximize payments. A single system is essential--but the research of how to get there is weak. This would indicate our long-term goal.)

Subchapter D. Case Management in Rural Areas **(Introduced 106th: HR 1646)**

Since managed care plans are unlikely to ever develop or operate in rural and frontier areas, give the Secretary authority to pay an extra monthly amount to primary care providers who undertake 'case management' functions for rural Medicare residents (if the Secretary determines that such payments will produce savings and improve quality of care).

Subchapter E. Outpatient Payment reform
(Draft received: to be introduced)

The Secretary may pay the lower of hospital outpatient or ambulatory surgical center rates, if she determines it will save Medicare and beneficiaries money. She can apply this provision by region, state of MSA.

Subchapter F. Preventive Health Care Expansion
(Draft received: to be introduced)

Give the Secretary authority to provide a service when she determines that, based on evidence, and on consultation with the Office of the Chief Actuary and the Congressional Budget Office, that the provision of the service will save Medicare resources in the long-run by delaying the onset of a more expensive disease (e.g., dietetic services may in some cases delay the onset of kidney dialysis), detecting the disease at a more treatable and less expensive stage, or offering a service which will save the cost of treatment in a more costly setting [e.g., more adequate coverage of adult day care services (HR 4403 - 105th) may avoid more costly institutionalization].

Chapter 6. More Efficient Use of Capital

Reductions in Capital Payments in Cases of Excess Bed Supply (in some States, hospitals are half empty)

The Secretary may, for years after 2004, reduce PPS and TEFRA capital payments by up to 25% in a region, state, county, or MSA that she determines has a higher number of beds per 1000 than the national average, and the hospital occupancy is below national average.

She shall make exceptions in cases of capital needed to downsize, for a merger which reduces excess capacity, respond to closure of another facility or to meet needs of an under-served population.

Chapter 7. Improve payments to Medicare+Choice Plans and increase consumer protections
(Draft received: to be introduced)

- by counting Medicare costs of VA & DoD services (McDermott Amendment to VA Subvention bill and included in HR 491 - 106th)

- by 'carving out' DSH payments from M+C payments and pay directly to hospitals when a M+C plan uses a DSH hospital (HR 2701 - 105th/Rangel).

Chapter 8. Expanded Inherent Reasonableness/"Most-Favored-Nation" concept
(Draft received: to be introduced)

BBA's Inherent Reasonableness authority is expanded to allow any amount of adjustment that the Secretary finds is appropriate to eliminate overpayments (i.e., adjustment is not limited to 15% per year).

Similar to the authority used by CalPERS, the Secretary shall have the authority to request the Most-Favored-Rate (making appropriate adjustments for any extra costs associated with dealing with Medicare) in cases where Medicare is the volume buyer in the market and other efforts at achieving a market price are not available (i.e., a sole or dominant provider in an area does not respond to competitive bidding).

Title II: Medicare Administration

Chapter 1. New Provider Fees **(On Hold)**

HCFA shall set fees for granting a new provider number to anyone seeking to bill Medicare (Administration user fee proposals for FY 99) to finance provider background check.

Starting in 2003, HCFA shall impose an administrative fee on anyone still submitting paper claims (Administration user fee proposals for FY 99).

Chapter 2. Compliance plan

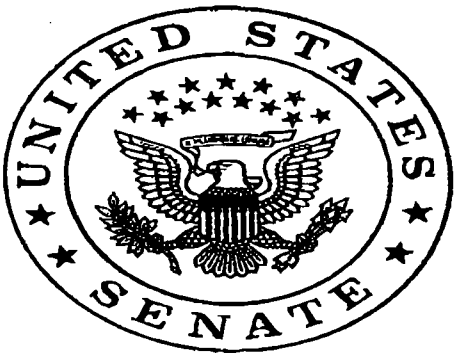
Providers must have a Compliance Plan in Operation [Anti-fraud provision: insert HR 2543], in exchange for which HCFA will offer paperwork reduction proposals [to be developed].

Chapter 3. Contractor Reform
(To be introduced w/in Early Access Bill)

The Administration proposal to give HCFA more authority and flexibility to contract with intermediaries and carriers. HR 4186.

Chapter 4. Medicare Secondary Payer
(Introduced w/in Fraud and Abuse Bill)

Ensure better data match between employers and Medicare [CBO: +$400 million/5 Insert HR 2632 section].



Bob Graham
Florida

FAX TRANSMITTAL SHEET

TO: Dewon Ackes	**PHONE:**
FROM: Matt Berry	**PHONE:**
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106TH CONGRESS
1ST SESSION

S. _____

IN THE SENATE OF THE UNITED STATES

Mr. GRAHAM introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To promote general and applied research for health promotion and disease prevention among the elderly, to amend title XVIII of the Social Security Act to add preventive benefits, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Healthy Seniors Promotion Act of 1999".

(b) TABLE OF CONTENTS.—The table of contents is as follows:

SEC. 2. FINDING.

Congress finds that 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 intervention.

SEC. 3. DEFINITIONS.

As used in this Act:

(1) MEDICARE BENEFICIARY.—The term "medicare beneficiary" means any individual who is entitled to benefits under part A or enrolled under part B of the medicare program, including any individual enrolled in a Medicare+Choice plan offered by a Medicare+Choice organization under part C of such program.

(2) MEDICARE PROGRAM.—The term "medicare program" means the health care program under title XVIII of the Social Security Act (42 U.S.C. 1395 et seq.).

(3) SECRETARY.—The term "Secretary" means the Secretary of Health and Human Services.

TITLE I—HEALTHY SENIORS PROMOTION PROGRAM

SEC. 101. HEALTHY SENIORS PROMOTION PROGRAM.

(a) DEFINITIONS.—As used in this section:

(1) ELIGIBLE ENTITY.—The term "eligible entity" means an entity that the Working Group determines has demonstrated expertise in research regarding health promotion and disease prevention among the elderly.

(2) WORKING GROUP.—The term "Working Group" means the Healthy Seniors Working Group established under subsection (d).

(b) PROGRAM AUTHORIZED.—The Secretary, subject to the general policies and criteria established by the Working Group and in accordance with the provisions of this Act, is authorized to make grants to eligible entities to pay for the costs of the activities described in subsection (c).

(c) USE OF FUNDS.—An eligible entity may use payments received under this section in any fiscal year to study—

(1) the effectiveness of using different types of providers of care who are not physicians and the use of alternative settings (including community based senior centers) for the implementation of a successful health promotion and disease prevention strategy, including implications regarding the payment of such providers;

(2) the most effective means of educating medicare beneficiaries and providers of services regarding the importance of health promotion and disease prevention among the elderly and identification of incentives that would increase the use of new and existing preventive services by medicare beneficiaries; and

(3) other topics designated by the Secretary.

(d) HEALTHY SENIORS WORKING GROUP.—

(1) ESTABLISHMENT.—There is established within the Department of Health and Human Services a Healthy Seniors Working Group.

(2) COMPOSITION.—Subject to paragraph (3), the Working Group established pursuant to subsection (b) shall be composed of 5 members as follows:

(A) The Administrator of the Health Care Financing Administration.

(B) The Director of the Centers for Disease Control and Prevention.

(C) The Administrator of the Agency for Health Care Policy and Research.

(D) The Assistant Secretary for Aging.

(E) The Director of the National Institute on Aging.

(3) ALTERNATIVE MEMBERSHIP.—

(A) APPOINTMENT.—The members of the Working Group described in paragraph (2) may appoint an individual who is an officer or employee of the Federal Government to serve as a member of the Working Group instead of the member described in such subparagraph.

(B) DEADLINE.—If a member described in subparagraph (A) elects to appoint an individ-

ual under such subparagraph, such individual shall be appointed not later than December 31, 1999.

(4) GENERAL POLICIES AND CRITERIA.—The Working Group shall establish general policies and criteria with respect to the functions of the Secretary under this section including—

(A) priorities for the approval of applications;

(B) procedures for developing, monitoring, and evaluating research efforts conducted under this section; and

(C) such other matters as are recommended by the Working Group and approved by the Secretary.

(5) CHAIRPERSON.—The Chairperson of the Working Group shall be the The Administrator of the Agency for Health Care Policy and Research.

(6) QUORUM.—A majority of the members of the Working Group shall constitute a quorum, but a lesser number of members may hold hearings.

(7) MEETINGS.—The Working Group shall meet at the call of the Chairperson, except that—

(A) it shall meet not less than 4 times each year; and

(B) it shall meet whenever a majority of the appointed members request a meeting in writing.

(8) COMPENSATION OF MEMBERS.—Each member of the Working Group shall be an officer or employee of the Federal Government and shall serve without compensation in addition to that received for their service as an officer or employee of the Federal Government.

(d) APPLICATION.—

(1) IN GENERAL.—Each eligible entity which desires to receive a grant under this section shall submit an application to the Secretary, at such time, in such manner, and accompanied by such additional information as the Secretary may reasonably require.

(2) CONTENTS.—Each application submitted pursuant to paragraph (1) shall—

(A) describe the activities for which assistance under this section is sought;

(B) describe how the research effort proposed to be conducted will reflect the medical, behavioral, and social aspects of care for the elderly, including cost-effectiveness and quality of life impacts stemming from any initiative;

(C) provide evidence that the eligible entity meets the general policies established by the Working Group pursuant to subsection (d)(4);

(D) provide assurances that the eligible entity will take such steps as may be available to it to continue the activities for which the eligible entity is making application after the period for which assistance is sought; and

(E) provide such additional assurances as the Secretary determines to be essential to ensure compliance with the requirements of this Act.

(3) JOINT APPLICATION.—A consortium of eligible entities may file a joint application under the provisions of paragraph (1) of this subsection.

(f) APPROVAL OF APPLICATION.—The Secretary shall approve applications in accordance with the general policies established by the Working Group under subsection (d).

(g) PAYMENTS.—The Secretary shall pay to each eligible entity having an application approved under subsection (f) the cost of the activities described in the application.

(g) EVALUATION AND REPORT.—

(1) EVALUATION.—The Secretary shall conduct an annual evaluation of grants made under this section to determine—

(A) the results of the overall applied research conducted under this Act;

(B) the extent to which research assisted under this section has improved or expanded the general research for health promotion and disease prevention among the elderly and identified practical interventions based upon such research;

(C) a list of specific recommendations based upon research conducted under this section which show promise as practical interventions for health promotion and disease prevention among the elderly;

(D) whether or not as a result of the applied research effort certain health promotion and disease prevention benefits or education efforts should be added to the medicare program, including discussions of quality of life and cost-effectiveness for each proposed addition;

(E) the utility of, potential for, and issues surrounding health risk appraisals sponsored

under the medicare program and targeted follow up; and

(F) 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 of services and medicare beneficiaries to improve utilization and other administrative means of increasing utilization.

(2) REPORT.—Not later than December 31, 2002, the Secretary shall submit a report to Congress based on the annual studies made under paragraph (1), which shall contain a detailed statement of the findings and conclusions of the Working Group together with its recommendations for such legislation and administrative actions as it considers appropriate.

(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $25,000,000 for fiscal years 1999, 2000, 2001, and 2002 to carry out the provisions of this section.

SEC. 102. SENSE OF CONGRESS REGARDING THE RESPONSE OF HCFA TO PREVENTIVE HEALTH ISSUES.

It is the sense of Congress that in administering the medicare program the Secretary should ensure that the Administrator of the Health Care Financing Administration encourages the inclusion of preventive measures as part of all treatments described in such program.

SEC. 103. SENSE OF CONGRESS REGARDING THE EFFORTS OF HCFA TO STUDY HEALTH PROMOTION AND DISEASE PREVENTION FOR MEDICARE BENEFICIARIES.

It is the sense of Congress that the Secretary should ensure that the Administrator of the Health Care Financing Administration expands the study of the most promising behavioral modification of risk factors associated with health promotion and disease prevention for all medicare beneficiaries.

SEC. 104. SENSE OF CONGRESS REGARDING THE ESTABLISHMENT OF A MEDICARE HEALTH PROMOTION AND DISEASE PREVENTION CLEARINGHOUSE.

It is the sense of Congress that the National Library of Medicine should collect information regarding innovative and successful health promotion and disease prevention interventions from both published and unpublished sources, establish a clearinghouse targeting all medicare

beneficiaries in a variety of settings for the consolidation and coordination of all such information, and make the clearinghouse available to the public and accessible through the Internet.

TITLE II—MEDICARE COVERAGE OF PREVENTIVE SERVICES

SEC. 201. MEDICARE COVERAGE OF COUNSELING FOR CESSATION OF TOBACCO USE.

(a) COVERAGE.—Section 1861(s)(2) of the Social Security Act (42 U.S.C. 1395x(s)(2)) is amended—

(1) in subparagraph (S), by striking "and" at the end;

(2) in subparagraph (T), by striking the period at the end and inserting "; and"; and

(3) by adding at the end the following:

"(U) counseling for cessation of tobacco use (as defined in subsection (uu)).".

(b) SERVICES DESCRIBED.—Section 1861 of such Act (42 U.S.C. 1395x) is amended by adding at the end the following:

"Counseling for Cessation of Tobacco Use

"(uu) The term 'counseling for cessation of tobacco use' means diagnostic, therapy, and counseling services for cessation of tobacco use which are furnished by or under the supervision of a physician or other health care profes-

sional who is legally authorized to furnish such services under State law (or the State regulatory mechanism provided by State law) of the State in which the services are furnished, as would otherwise be covered if furnished by a physician or as an incident to a physician's professional service.".

(c) PAYMENT.—Section 1833(a)(1) of such Act (42 U.S.C. 1395l(a)(1)) is amended—

(1) by striking "and (S)" and inserting "(S)"; and

(2) by striking the semicolon at the end and inserting the following: ", and (T) with respect to counseling for cessation of tobacco use (as defined in section 1861(uu)), the amount paid shall be 100 percent of the lesser of the actual charge for the services or the amount determined by a fee schedule established by the Secretary for the purposes of this subparagraph;".

(d) EFFECTIVE DATE.—The amendments made by this section shall apply to services furnished on or after December 31, 2001.

SEC. 202. MEDICARE COVERAGE OF SCREENING FOR HYPERTENSION.

(a) COVERAGE.—Section 1861(s)(2) of the Social Security Act (42 U.S.C. 1395x(s)(2)) (as amended by section 201(a)) is amended—

(1) in subparagraph (T), by striking "and" at the end;

(2) in subparagraph (U), by striking the period at the end and inserting "; and"; and

(3) by adding at the end the following:

"(V) screening for hypertension (as defined in subsection (vv)).".

(b) SERVICES DESCRIBED.—Section 1861 of such Act (42 U.S.C. 1395x) (as amended by section 201(b)) is amended by adding at the end the following:

"Screening for Hypertension

"(vv) The term 'screening for hypertension' means diagnostic services for hypertension which are furnished by or under the supervision of a physician or other health care professional who is legally authorized to furnish such services under State law (or the State regulatory mechanism provided by State law) of the State in which the services are furnished, as would otherwise be covered if furnished by a physician or as an incident to a physician's professional service.".

(c) PAYMENT.—Section 1833(a)(1) of such Act (42 U.S.C. 1395l(a)(1)) (as amended by section 201(c)) is amended—

(1) by striking "and (T)" and inserting "(T)"; and

(2) by striking the semicolon at the end and inserting the following: ", and (U) with respect to screening for hypertension (as defined in section 1861(vv)), the amount paid shall be 100 percent of the lesser of the actual charge for the services or the amount determined by a fee schedule established by the Secretary for the purposes of this subparagraph;".

(d) EFFECTIVE DATE.—The amendments made by this section shall apply to services furnished on or after December 31, 2001.

SEC. 203. MEDICARE COVERAGE OF COUNSELING FOR HORMONE REPLACEMENT THERAPY.

(a) COVERAGE.—Section 1861(s)(2) of the Social Security Act (42 U.S.C. 1395x(s)(2)) (as amended by section 202(a)) is amended—

(1) in subparagraph (U), by striking "and" at the end;

(2) in subparagraph (V), by striking the period at the end and inserting "; and"; and

(3) by adding at the end the following:

"(W) counseling for hormone replacement therapy (as defined in subsection (ww)).".

(b) SERVICES DESCRIBED.—Section 1861 of such Act (42 U.S.C. 1395x) (as amended by section 202(b)) is amended by adding at the end the following:

"Counseling for Hormone Replacement Therapy

"(ww) The term 'counseling for hormone replacement therapy' means diagnostic, therapy, and counseling services for hormone replacement which are furnished by or under the supervision of a physician or other health care professional who is legally authorized to furnish such services under State law (or the State regulatory mechanism provided by State law) of the State in which the services are furnished, as would otherwise be covered if furnished by a physician or as an incident to a physician's professional service.".

(c) PAYMENT.—Section 1833(a)(1) of such Act (42 U.S.C. 1395l(a)(1)) (as amended by section 201(c)) is amended—

(1) by striking "and (U)" and inserting "(U)"; and

(2) by striking the semicolon at the end and inserting the following: ", and (V) with respect to counseling for hormone replacement therapy (as de-

"Screening for Glaucoma

"(xx) The term 'screening for glaucoma' means diagnostic services for early detection of glaucoma which are furnished by or under the supervision of a physician or other health care professional who is legally authorized to furnish such services under State law (or the State regulatory mechanism provided by State law) of the State in which the services are furnished, as would otherwise be covered if furnished by a physician or as an incident to a physician's professional service.".

(c) PAYMENT.—Section 1833(a)(1) of such Act (42 U.S.C. 1395l(a)(1)) (as amended by section 201(c)) is amended—

(1) by striking "and (V)" and inserting "(V)"; and

(2) by striking the semicolon at the end and inserting the following: ", and (W) with respect to screening for glaucoma (as defined in section 1861(xx)), the amount paid shall be 100 percent of the lesser of the actual charge for the services or the amount determined by a fee schedule established by the Secretary for the purposes of this subparagraph;".

(d) EFFECTIVE DATE.—The amendments made by this section shall apply to services furnished on or after December 31, 2001.

SEC. 205. NATIONAL FALLS PREVENTION EDUCATION AND AWARENESS CAMPAIGN.

The Secretary, in consultation with the Director of the Centers for Disease Control and Prevention, shall conduct a national falls prevention and awareness campaign to reduce fall-related injuries among medicare beneficiaries.

SEC. 206. PROGRAM INTEGRITY.

The Secretary, in consultation with the Inspector General of the Department of Health and Human Services, shall integrate the benefits described in sections 201, 202, 203, and 204 with existing program integrity measures.

TITLE III—LIMITED PREVENTION-RELATED OUTPATIENT PRESCRIPTION DRUG BENEFIT

SEC. 301. MEDICARE COVERAGE OF OUTPATIENT PRESCRIPTION DRUGS.

(a) COVERAGE.—Section 1861(s)(2) of the Social Security Act (42 U.S.C. 1395x(s)(2)) (as amended by section 204(a)) is amended—

(1) in subparagraph (W), by striking "and" at the end;

(2) by striking the period at the end of subparagraph (X) and inserting "; and"; and

(3) by adding at the end the following:

"(Y) covered outpatient drugs (as defined in section 1849(h)(1)) pursuant to the procedures established under such section;".

(b) PAYMENT.—Section 1833(a)(1) of such Act (42 U.S.C. 1395l(a)(1)) (as amended by section 204(c)) is amended—

(1) by striking "and (W)" and inserting "(W)"; and

(2) by striking the semicolon at the end and inserting the following: ", and (X) with respect to covered outpatient drugs (as defined in section 1849(h)(1)), the amounts paid shall be the amounts established by the Secretary pursuant to such section;".

SEC. 302. SELECTION OF ENTITIES TO PROVIDE OUTPATIENT DRUG BENEFIT.

Part B of title XVIII of the Social Security Act (42 U.S.C. 1395j et seq.) is amended by adding at the end the following:

"SEC. 1849. SELECTION OF ENTITIES TO PROVIDE OUTPATIENT DRUG BENEFIT.

"(a) ESTABLISHMENT OF BIDDING PROCESS.—

"(1) IN GENERAL.—The Secretary shall establish procedures under which the Secretary accepts bids from eligible entities and awards contracts to such entities in order to provide covered outpatient drugs to eligible beneficiaries in an area. Such contracts may be awarded based on shared risk, capitation, or performance.

"(2) AREA.—

"(A) REGIONAL BASIS.—The contract entered into between the Secretary and an eligible entity shall require the eligible entity to provide covered outpatient drugs on a regional basis.

"(B) DETERMINATION.—In determining coverage areas under this section, the Secretary shall take into account the number of eligible beneficiaries in an area in order to encourage participation by eligible entities.

"(3) SUBMISSION OF BIDS.—Each eligible entity desiring to provide covered outpatient drugs under this section shall submit a bid to the Secretary at such time, in such manner, and accompanied by such information as the Secretary may reasonably require. Such bids shall include the

amount the eligible entity will charge eligible beneficiaries under subsection (e)(2) for covered outpatient drugs under the contract.

"(4) ACCESS.—The Secretary shall ensure that—

"(A) an eligible entity complies with the access requirements described in subsection (f)(4); and

"(B) an eligible entity makes available to each beneficiary covered under the contract the full scope of benefits required under paragraph (5).

"(5) SCOPE OF BENEFITS.—The Secretary shall ensure that all covered outpatient drugs that are reasonable and necessary to prevent or slow the deterioration of, and improve or maintain, the health of eligible beneficiaries are offered under a contract entered into under this section.

"(6) NUMBER OF CONTRACTS.—The Secretary shall, consistent with the requirements of this section and the goal of containing medicare program costs, award at least 2 contracts in an area, unless only 1 bidding entity meets the minimum standards specified under this section and by the Secretary.

"(7) DURATION OF CONTRACTS.—Each contract under this section shall be for a term of at least 2 years but not more than 5 years, as determined by the Secretary.

"(b) ENROLLMENT.—

"(1) IN GENERAL.—The Secretary shall establish a process through which an eligible beneficiary shall make an election to enroll with any eligible entity that has been awarded a contract under this section and serves the geographic area in which the beneficiary resides. In establishing such process, the Secretary shall use rules similar to the rules for enrollment and disenrollment with a Medicare+Choice plan under section 1851.

"(2) REQUIREMENT OF ENROLLMENT.—An eligible beneficiary not enrolled in a Medicare+Choice plan under part C must enroll with an eligible entity under this section in order to be eligible to receive covered outpatient drugs under this title.

"(3) ENROLLMENT IN ABSENCE OF ELECTION BY ELIGIBLE BENEFICIARY.—In the case of an eligible beneficiary that fails to make an election pursuant to paragraph (1), the Secretary shall provide, pursuant to procedures developed by the Secretary, for the enrollment of such beneficiary with an eligi-

Physical Activity Interventions Targeting Older Adults. A Critical Review and Recommendations

Abby C. King, PhD, W. Jack Rejeski, PhD, David M. Buchner, MD, MPH

Background: Although many of the chronic conditions plaguing older populations are preventable through appropriate lifestyle interventions such as regular physical activity, persons in this age group represent the most sedentary segment of the adult population. The purpose of the current paper was to provide a critical selected review of the scientific literature focusing on interventions to promote physical activity among older adults.

Methods: Comprehensive computerized searches of the recent English language literature aimed at physical activity intervention in adults aged 50 years and older, supplemented with visual scans of several journal on aging, were undertaken. Articles were considered to be relevant for the current review if they were community-based, employed a randomized design or a quasi-experimental design with an appropriate comparison group, and included information on intervention participation rates, pre- and post-intervention physical activity levels, and/or pre/post changes in relevant physical performance measures.

Results: Twenty-nine studies were identified that fit the stated criteria. Among the strengths of the studies reviewed were reasonable physical activity participation rates and relatively long study durations. Among the weaknesses of the literature reviewed were the relative lack of specific behavioral or program-based strategies aimed at promoting physical activity participation, as well as the dearth of studies aimed at replication, generalizability of interventions to important subgroups, implementation, and cost-effectiveness evaluation.

Conclusions: Recommendations for future scientific endeavors targeting older adults are discussed.

Medical Subject Headings (MeSH): review, physical fitness, exercise, adult aged+, intervention studies, leisure activities (recreation) (Am J Prev Med 1998;15(4):316–333)

People over age 65 constitute one of the fastest-growing population segments among industrialized nations.[1,2] They additionally carry by far the greatest proportion of chronic disease burden, disability, and health care utilization,[3–5] much of it preventable.[3,6] For example, approximately 88% of those over age 65 have at least one chronic health condition,[5] and large numbers of older adults suffer from impaired functioning and well-being.[7] Notably, loss of function can begin to become evident as early as the fifth decade of life,[8] arguing for preventive approaches begun in the middle years, as well as earlier, as a means of promoting health and limiting disability in the later years of life.[3]

Although regular physical activity has been demonstrated to be critical for the promotion of health and function as people age,[9] persons over 50 years of age represent the most sedentary segment of the adult population.[10] This is particularly the case for persons aged 75 and above.[10]

The vast majority of physical activity intervention studies undertaken to date have focused on younger adult populations.[11] The purpose of the current paper is to provide a critical review of the scientific literature focusing on interventions to promote physical activity among older adults. Consonant with the recent World Health Organization guidelines for promoting physical activity and fitness among older persons,[12] as well as recommendations made by other health organizations,[3] we have focused our efforts on summarizing the highest quality studies that have targeted persons aged 50 and older.

Division of Epidemiology, Department of Health Research and Policy and the Stanford Center for Research in Disease Prevention, Department of Medicine, Stanford University School of Medicine (King), Palo Alto, California 94304-1583; Department of Health and Sports Science, Wake Forest University (Rejeski) Winston-Salem, North Carolina 27109-7234; Departments of Health Services and Medicine, University of Washington (Buchner), Seattle, Washington 98103; and Northwest Health Services Research and Development Field Program, Seattle VA Medical Center (Buchner), Seattle, Washington 98103.

Address correspondence to: Dr. A.C. King, Stanford University School of Medicine, Stanford Center for Research in Disease Prevention, Suite B 730 Welch Road, Palo Alto, California 94304-1583.

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Methods

Comprehensive computerized searches of the recent English language literature aimed at physical activity intervention in the elderly were undertaken independently at two universities (Stanford and Wake Forest). A number of available databases were searched on appropriate key terms and MeSH terms for all previous years through the present, including MEDLINE, PSYC (psychological abstracts), BIOSIS (biological abstracts), ERIC (educational resources information center abstracts), and MAGS (magazine index) databases. In addition, the authors visually checked the previous six volumes of several journals on aging, including *The Gerontologist* and the *Journal of Gerontology*, for relevant articles. Articles were considered to be relevant for the current review if they were community-based (i.e., included reasonable numbers of community-dwelling older adults without diagnosed coronary heart disease, and employed interventions that could be realistically generalized, as opposed to intensive training studies undertaken in a laboratory, medical setting, or similar highly controlled setting); employed a randomized design or a quasi-experimental design with an appropriate comparison group; and included information on intervention participation rates, pre- and post-intervention physical activity levels, and/or pre/post changes in physical performance measures that could be reasonably expected to reflect changes in physical activity. Studies focusing on cardiac patients were excluded in light of their inclusion in another review in this series (see the review focusing on health care settings). Studies of older adults with other, noncardiovascular forms of chronic illness (e.g., arthritis, chronic obstructive pulmonary disease) that met the above criteria were included. Relevant recent work that had been published in abstract form was also included.

Twenty-six randomized trials and three quasi-experimental studies were identified that fit the above criteria. These studies are summarized in Table 1.

These studies were evaluated with respect to eight areas, described below.

Effectiveness

Across the studies evaluated, exercise participation rates were defined typically as the number of exercise sessions attended or reported, divided by the number of sessions prescribed. The exercise participation rates noted in the 19 studies that explicitly reported them ranged from 36%–98% (mean = approximately 75%; median = approximately 80%). In light of the observation that only about 50% of adults without heart disease who begin an exercise program will maintain participation in the program beyond 3 months,[13] this range is relatively high, suggesting the possibility of higher physical activity participation rates in older adult samples relative to the younger samples on whom the majority of the literature has been based, or, alternatively, a positive reporting/publication bias. The somewhat higher exercise participation rates reported also could be due to use of lower-intensity exercise prescriptions in many of the studies reviewed relative to studies focusing on younger individuals. In some studies no description was included regarding how exercise participation rates were specifically tracked or calculated. Although attendance rates are commonly reported, other aspects of the prescription (i.e., exercise intensity, duration) often are not. In addition, some investigators did not employ an intention-to-treat principle in reporting exercise participation rates (i.e., poor compliers or drop-outs were not included in calculating exercise patterns). This can lead to an inflation of the adherence results.

Only 13 (45%) of the studies reviewed explicitly described or mentioned the use of specific behavioral, educational, social, cognitive, or program-based (e.g., exercise type, intensity, format) strategies aimed at promoting physical activity participation. Six studies explicitly manipulated one or more of these strategies as part of the study design with the aim of influencing participation rates.[14–19] The most frequently included methods to promote participation were behavioral strategies based on social learning theory and its derivatives[20] (10 studies), and strategies focused on exercise type (e.g., less vigorous forms of exercise) or format (e.g., self-paced, class- or home-based) (10 studies). Effective interventions included those that employed behavioral or cognitive-behavioral strategies as opposed to health education or instruction alone.[18,21,22] The majority of these studies utilized a combination of behavioral and/or cognitive tools (e.g., goal-setting self-monitoring, feedback, support, relapse-prevention training). From the study descriptions available, however, there is likely a large amount of variance among studies with respect to the specific protocols employed in implementing these strategies. One randomized, controlled trial demonstrated the utility of systematic training in social-cognitive strategies, enhanced through group dynamics, in increasing physical activity frequency 3 months following the formal end of the program.[19] Only two studies were found that systematically tested the effects of specific cognitive or behavioral strategies in influencing exercise participation. One study with chronic obstructive pulmonary disease (COPD) patients found cognitive-behavioral modification approaches to produce greater 3-month physical activity adherence and better adherence during the 3-month maintenance period than either cognitive modification or behavior modification alone.[14] A second study tested the effects of efficacy-based adherence instruction and found it to increase exercise frequency, duration, and distance more effectively than health

Table 1. Physical activity intervention studies in older adults using experimental (n = 26) or quasi-experimental (n = 3) designs

Study	Sample	Design	Setting	Physical activity target	Dependent variable	Intervention	Post-test	Follow-up
Atkins et al. (1984)[34a]	76 COPD pts., mean age = 64.8 ± 7.9 yrs; 63% women	Randomized factorial; no apparent test for gender effect	Home-based	Walking	Walking adher. (logs); exercise tolerance (graded treadmill test); self-reported function; efficacy expectations	I-1: Behav. modification I-2: Cognitive mod. I-3: Cog.-behav. mod. C-1: Attention-control C-2: Assessment only All I Ss received 5 1-hr. instructional sessions in their homes.	3 mos; (5 dropouts were replaced) Three I programs had increased exercise levels compared to controls; cog.-behav. mod. produced greater walking adherence than other I arms.	6 mos. from baseline; cog.-behav. mod. program continued to report superior walking adherence relative to other arms (based on 2/3 of original sample).
Blumenthal et al. (1989)	101 nondisabled community-dwelling adults (60–83 yrs; mean = 67.0 yrs); well-educated; 50% women; no reported eligibility criteria based on inactivity	Randomized factorial; tested for gender effects	Community, group-based	Aerobic exercise	Cardiorespiratory fitness (peak VO_2)	I: Aerobic exercise (3 supervised sessions/wk) C-1: Yoga + flexibility C-2: Wait-list	4 mos; 96% study retention rate; I significantly improved in peak VO_2 (11.6%) relative to C.	(Emery et al., 1992) 10 more mos. of supervised aerobic exercise; eval. of self-reported activity 1 yr. later; 94% of Ss located reported some form of continued exercise (66% reported regular walking)
Buchner et al. (1997)[33]	105 adults with at least mild deficits in strength and balance (68–85 yrs; mean = 75 yrs); 51% women; well educated	Randomized factorial; Ss selected from a random sample of HMO enrollees; no apparent test for gender effects	Community, group-based	Aerobic exercise; strength training	Gait and balance tests, physical health status measures, aerobic capacity, self-reported falls, inpatient/outpatient use and costs	I-1: Aerobic exercise (3 supervised sessions/wk for 35 min each using stationary cycles) for 26 wks; I-2: two sets of resistive exerc. on weight machines (3 supervised sessions/wk) for 26 wks; I-3: 20 min of aerobic exer. and 1 set of resistive exerc. for 26 wks; C: Wait-listed 26-wk program followed by self-supervised exercise in all I conditions.	6 mos; 92% study retention rate; I Ss who did not drop out attended 95% of scheduled exerc. session; Sig. increases in isokinetic strength in I-2; within-group increases in aerobic capacity for I-3. No effects on gait, balance, or physical health status; sig. beneficial effect of exerc. on time to first fall and total falls. No sig. group diffs. in ancillary outpatient costs; greater days in hospital for C rel. to I. Minimal injury rates in all I conditions.	9 mos from baseline; adherence to unsupervised exercise reported at 58% exercised 3 or more times/wk, 24% twice/wk, and 5% did not exercise.
Chow et al. (1987)	58 healthy postmenopausal white women (50–62 yrs); no reported eligibility criteria based on inactivity	Randomized factorial	Community, group-based (hospital gymnasium)	Aerobic exercise (higher intensity), strength training (low intensity)	Exercise adherence, calculated VO_2max	I-1: 30 min of group aerobic activities 3×/wk; I-2: same aerobic activities as above + 10 min/session of strength training using wrist and ankle weights. C: Assessment only	1 yr; 83% study retention rate; overall average exercise class attendance for the yr. was 70%; Both I groups had higher fitness levels and greater bone mass than C; no diffs. between I groups.	No follow-up reported
Cunningham et al. (1987)	224 men retirees (55–65 yrs; mean = 62.7 yrs), no reported eligibility criteria based on inactivity	Randomized controlled; stratified on blue- or white-collar job but no apparent test of this subgroup effect	Community, group-based	Aerobic exercise (walking or jogging)	Self-reported activity (Minnesota Leisure Time Activity questionnaire); VO_2max	I: Leader-led group exercise on an outdoor track, 3x/wk (30 min of aerobic ex.) C: Assessment only	1 yr; 96% study retention rate; I successful in increasing high intensity activity and VO_2max relative to C.	No follow-up reported

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Table 1. Physical activity intervention studies in older adults using experimental (n = 26) or quasi-experimental (n = 3) designs

Study	Sample	Design	Setting	Physical activity target	Dependent variable	Intervention	Post-test	Follow-up
Emery and Gatz (1990)	48 sedentary older adults (61–86 yrs; mean = 72 yrs) recruited from an inner-city community; ethnically diverse (56% minority); low education levels	Randomized factorial	Community group-based	Brisk walking and rhythmic muscle strengthening exercises	Field tests of physical fitness; psychological and cognitive functioning; group attendance	I: 20–25 min of aerobic ex. (with additional stretching and cool-down), 3x/wk. C-1: Attention-control (social activities) C-2: Wait-listed control	12 wks; 81% study retention rate; group exercise attendance range = 61%–94%; poor attendance in the social control group. Minimal between-group diffs. detected on fitness, psychological, or cognitive measures.	No follow-up reported
Ettinger et al. (1997)[a]	439 community-dwelling adults with knee osteoarthritis; 60+ yrs (mean = 69 yrs); 70% women; range of education; 26% African American	Randomized factorial; post hoc secondary analyses to examine outcomes by race, gender, age, and BMI.	Community, group- and home-based	Aerobic exercise; resistance exercise	Self-reported activity (participation rates), physical function performance measures	I-1: 3-mo. facility-based walking + 15-month home-based walking; 3×/wk, 40 min/session; I-2: Facility–home resistance training as above; home programs for both I conditions included home visits [4] and telephone calls [19] C: Health education	18 mos; 83% study retention rate. Participation rates in both I arms 69%; Both I arms improved on 6-min walk and other perform. tasks relative to C. Improve. generally seen in all subgroups tested.	No follow-up reported
Gillett et al. (1996)[15a]	182 healthy obese, sedentary, nonsmoking women (60–70 yrs; mean = 64.4 yrs)	Randomized factorial	Community, group-based	Low-impact aerobic exercise	Fitness (submax bike test), body composition (skinfolds), self-report physical activity records, attendance roster	I-1: Health + fitness ed. 1×/wk. I-2: Health + fitness ed. + aerobic exercise, 1×/wk of education and 3×/wk for 50 mins/session of supervised low-impact dance exercise; both I groups led by nurses and included behavioral strategies. C: Assessment only	16 wks; 90% study retention rate; both I groups attended approx. 86% of class sessions. Sig. increase in fitness in I-2 rel. to I-1 and C; both I-1 and I-2 reported exercising from 3–4 days/wk; longer ex. duration reported by I-1. No injuries reported.	No follow-up reported
Hamdorf et al. (1992)	80 healthy, sedentary community-dwelling women (60–70 yrs; mean = 64 yrs)	Randomized controlled	Community, group-based	Habitual physical activity patterns; fitness	Self-reported activity (Human Activity Profile; Normative Impairment Index); Fitness (cycle ergometer)	I: 2×/wk of supervised, progressive walking in a group with an enthusiastic and experienced instructor; 45 mins/session C: Wait-listed	26 wks; 82.5% study retention rate; exercise adherence rate of I Ss completing program was 90.6%; Increased habitual activity patterns and fitness relative to C; low injury rate (5%)	(Hamdorf et al. 1993) 12 mos. from baseline (I given community ex. group list at 6 mos); 77.8% of training group reported continued walking participation; increases in reported activity patterns and fitness maintained in I relative to C
Hopkins et al. (1990)	65 sedentary community-dwelling medically cleared women (57–77 yrs; mean = 65.5 yrs);	Randomized controlled	Community classes	Low-impact aerobic dance	6 functional fitness tests (AAHPERD)	I: 20 min. of low-impact progressive aerobic dance, 2×/wk. C: Wait-listed	12 weeks; 81.5% study retention rate; Sig. improvements over C in cardiorespiratory endurance, strength, balance, flexibility, agility, and body fat.	No follow-up reported

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Table 1. Physical activity intervention studies in older adults using experimental (n = 26) or quasi-experimental (n = 3) designs

Study	Sample	Design	Setting	Physical activity target	Dependent variable	Intervention	Post-test	Follow-up
Jette et al. (1996)[26]	102 nondisabled community-dwelling adults (66–87 yrs; mean = 72 yrs); 63% women; well educated; no reported eligibility criteria based on inactivity	Randomized controlled; tested for gender effect	Home-based, mediated (videotape)	Muscle strength using resistive elastic bands	Peak torque in lower and upper extremities	I: One 50-min. training session with PT; 30-min. home videotape, 3× per wk, 12–15 wks. C: Assessment only	12–15 wks; Ss ≤ 72y had sig. increase in knee extension torque rel. to C; no sex effect	No follow-up reported
King et al. (1991)[8]	357 nondisabled, sedentary community-dwelling adults (50–65 yrs; mean = 57 yrs); well educated; 45% women	Randomized factorial; population-based recruitment strategies; test for gender effect	Community group-based, home-based (telephone-supervised)	Leisure aerobic exercise of moderate or higher intensity	Self-reported activity (participation rates), fitness (treadmill performance)	I-1: Higher-intensity, class-based (3×/wk). I-2: Higher-intensity, home-based (3×/wk). I-3: Moderate-intensity, home-based (5×/wk). Cog.-behav. strategies employed for all I. C: Assessment only	1 yr; Exercise participation data available on all Ss; fitness data available on 84% of sample; Participation in 2 home-based arms sig. better than class arm (76% vs. 53%); Treadmill performance sig. improved in all I arms compared to C.	(King et al., 1995)[25] 24 mo from baseline; 1-yr fitness gains maintained for all I arms; Participation highest in higher-intensity home-based arm
King et al. (1997)[a] (abstract)	103 nondisabled, sedentary community-dwelling adults (65–82 yrs; mean = 70.2 yrs); well educated; 65% women	Randomized to 1 of 2 interventions; population-based recruitment strategies; test for gender effect	Community, group + home (telephone-supervised)	Moderate intensity endurance, strength, and flexibility	Participation rates, self-reported activity (PASE, CHAMPS), treadmill exercise testing, performance-based and self-report measures of physical function	I-1: 2 class + 2 home sessions/wk of low-impact aerobics, walking and strengthening (resistive bands) exercise. I-2: class + 2 home sessions/wk of stretching and flexibility exercise. For both I, duration = 40–45 min/session and cognitive-behavioral strategies employed	1 yr; Exercise participation data available on all Ss; Similar exer. participation rates for both I (82% session completion rate); adherence sig. better to home exercise in both programs; I-1 sig. better than I-2 on reported daily energy expenditure, submax HR, upper-body strength, walking impairment; I-2 sig. better than I-1 on rated daily pain	No follow-up reported
Kriska et al. (1986)[a]	229 postmenopausal community-dwelling women who could physically walk (50–65 yrs); no reported eligibility criteria based on inactivity	Randomized controlled	Community, group + home	Walking	Self-reported activity (Paffenbarger survey); LSI activity monitor	I: 2 group sessions/wk + once/wk on own for 8 wks; then group optional. Behavioral strategies employed, including phone calls, logging, newsletters, social events, incentives C: Assessment-only	2 yrs; Mean blocks walked and LSI day activity counts/hr increased sig. relative to control	10-yr. results in preparation
Lord et al. (1995)[17a]	197 healthy, sedentary community dwelling Australian women (60–85 yrs; mean = 71.6 yrs)	Randomized controlled; population-based recruitment methods (74% of those eligible took part)	Community classes	Aerobic/balance/ strengthening exercises	Class attendance; perceived and measured physical and psychological function	I: 35-min conditioning period, 2×/wk; emphasis on social interaction and enjoyment; classes were easily accessible C: Assessment only	12 mos; 75% of I completed posttesting and attended 26 or more classes; class attendance rate for those completing study was 73%; I improved in strength and related measures rel. to C	(Williams and Lord, 1995) 18 mos from baseline; 53% of I continued attending exercise classes; continuation associated with better scores on strength, body sway and depression at 12 mos.

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Table 1. Physical activity intervention studies in older adults using experimental (n = 26) or quasi-experimental (n = 3) designs

Study	Sample	Design	Setting	Physical activity target	Dependent variable	Intervention	Post-test	Follow-up
MacKeen et al. (1985)[34]	171 healthy male Penn State employees (40–59 yrs at entry); excluded extremely physically active men, but no other eligibility criteria based on inactivity	Randomized controlled	Community, group-based	Jogging	Physical work capacity; adherence	I: Supervised endurance exercise (primarily jogging); goal of 3×/week, lasting 35–75 min C: Assessment only	By 6 mo, exercise adherence dropped to 50% and then stabilized through 18 mos. (Taylor et al. 1979). At 18 mos, enhancement of physical work capacity compared to C	18 yrs from baseline (aged 53–72 yrs); 28% of I reported some continued jogging; E and C not significantly different with regard to physical activity habits measured via Minnesota Leisure Time Physical Activity interview
McAuley et al. (1994)[18a]	114 healthy, sedentary community-dwelling adults (45–64 yrs; mean = 54.5 yrs); 51% women	Randomized controlled; tests for gender and age effects	Community, group-based	Walking	Exercise behavior (program attendance, daily logs, self-reported exerc. duration and distance covered); self-efficacy for exercise	I: Exercise + adherence intervention (efficacy-based information begun in 3rd week, delivered via six 15-min biweekly meetings prior to exercise). C: exercise + attention-control (health ed.). Both groups received a leader-led walking program 3×/wk for 40 min/session.	20 wks; Study retention rate unclear; I more effective in increasing exercise freq. duration, and distance relative to C; I attended 67% of exercise sessions compared with 55% for C; 62% of I vs. 38% of C attended at least 2 exer. sessions/wk; treatment effects appeared to be most pronounced in last 3 mos of program.	No follow-up reported
McMurdo and Johnstone (1995)[51]	86 adults with limited mobility and dependence in at least 1 ADL (75–96 yrs; mean = 82 yrs); 89% women	Randomized factorial; no apparent test for gender effect	Home-based	Mobility exercise, strength training	Functional performance tasks	I-1: mobility training (stretching, range-of-motion). I-2: strength training (above + resistive elastic bands) Daily 15 min/session for both I arms. C: health education All Ss received 30-min visits by physiotherapist every 3–4 wks.	6 mos; 80% study retention rate; No statistical diffs. between arms; suspected poor compliance, but no info. available. Sample size (power) issues raised.	No follow-up reported
Minor et al. (1989)[52]	120 adults with rheumatoid arthritis (RA) or osteoarthritis (OA) (21–83 yrs; mean = 61 yrs); 82% women	Randomized factorial; stratified by diagnosis and tested for diagnosis effect; no apparent test for diagnosis or gender effects	Community, group-based	Aerobic walking, aerobic aquatics	Exercise tolerance, daily activity level (3-day diary), self-reported health status (AIMS)	I-1: 3×/wk of aerobic walking, 30 min/session (of a 1-hr class); I-2: 3×/wk of aerobic aquatics, 30 min/session (of a 1-hr class); C: 3×/wk of range of motion, 1 hr/session.	12 wks; 80% study retention rate; 78% of I-1, 85% of I-2, and 87% of C completed the class; mean attendance of class completers = 85%; Two I groups had sig. improvement in aerobic capacity, exercise test duration, AIMS scores on physical activity, anxiety, and depression, and 50-ft. walk rel. to C; RA somewhat better net improve. than OA.	6, 12, and 18 mos. from baseline; 69% study retention rate at 6 and 12 mos.; 6 mos.: Changes reasonably maintained over baseline in both I groups; I-1 showed greater improve. in aerobic capacity than I-2 or C. 12 mos.: Changes reasonably maintained over baseline in both I groups; no between-group diffs.; Sig. increase in aerobic capacity in C; 57% of all Ss reported at least 60 mins. of exer/wk. 21 mos: (Minor and Brown, 1993)[53]: 81% study retention rate; mean self-reported exer. = 110 min/wk

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Table 1. Physical activity intervention studies in older adults using experimental (n = 26) or quasi-experimental (n = 3) designs

Study	Sample	Design	Setting	Physical activity target	Dependent variable	Intervention	Post-test	Follow-up
Pollock et al. (1991)[37]	57 healthy, sedentary, community-dwelling adults (70–79 yrs; mean = 72 yrs); 56% women	Randomized factorial	Community, group-based	Walk/jog, resistance training	Participation rates, VO_2max and strength testing; injury rates	I-1: Supervised walk/jog 40 mins/session, 3×/wk. I-2: Supervised 10 variable resistance exercises 40 mins/session, 3×/wk. C: Assessment only	26 wks; 86% study retention rate; 98% attendance rates in I groups; Sig. improvements in VO_2max (I-1) and strength (I-2) rel. to C, but high injury rates with jogging and 1-RM testing.	No follow-up reported
Rejeski and Brawley (1997) (abstract)[19a]	60 healthy, sedentary, community-dwelling adults (65–78 yrs; man = 69 yrs); 63% women; 46% of sample had a high school education or less	Randomized factorial; no tests for gender or age effects	Community, center- and home-based	Moderate intensity aerobic exercise, especially walking	Self-reported acivity (Stanford 7-day recall), VO_2peak, health-related quality of life	I-1: 12 wks, began with 2 center- and 1 home-based sessions/wk; moved to 1 center- and 4 home-based sessions/wk; home-based exer. monitored via logs, telephone contact. I-2: Focus on maintenance following a structured program in addition to above; use of social-cognitive adher. strategies (buddy system, group activities, self-regulatory strategies). C: Wait-listed	6 mos.; 90% study retention rate; At 6 mos., I-1 and I-2 had sig. higher peak MET capacities and enhanced quality of life rel. to C; no diffs. in these outcomes among two I groups; no diffs. between I groups on mean freq., duration, or vol. of physical activity	9 mos. from baseline; I-2 sig. higher than I-1 in mean freq. of weekly physical activity.
Rikli and Edwards (1991)[10]	31 healthy community-dwelling women who were 1st-time enrollees in exercise classes taught at a local retirement complex and 17 controls enrolled in nonexercise hobby classes (59–81 yrs; mean = 70 yrs)	Quasi-experimental	Classes offered at a local retirement complex	Moderate-intensity low-impact aerobics and walking, general calisthenics	Class attendance records; step-test performance; motor function and cognitive processing speed	I: Instructor-led classes, 20–25 min of aerobic exercise/session, 3×/wk. C: Attention-control (enrolled in nonexercise hobby classes at the same locale)	3 yrs; 71% study retention rate; Approx. 80% average exercise class attendance rates; I sig. improved in step-test perform. in Year 1 rel. to baseline with leveling off (maintenance) in yrs 2 and 3; Sig. improve. in balance, flexibility	No follow-up reported
Rooks et al. (1997)[a]	131 healthy, community-dwelling adults (65–95 yrs; mean = 74 yrs) who participated at least twice a week in community activities at baseline; 66% women	Randomized factorial; tested for gender effect	Community center	Resistance training, walking	Neuromotor performance, participation rates	I-1: Self-paced, class-based resistance training without expensive equipment (stair-climbing with weight belt; hand weights, etc.), 3×/wk, 1 hr/session. I-2: Self-paced, group-based walking, 3×/wk, up to 45 min/session. C: Wait-listed control	10 mos; 81% study retention rate; mean participation rates = 85% in I-1 and 82% in I-2; no injuries occurred; I-1 sig. better than others on muscle strength, reaction time (diff. from C); I-1 and I-2 better than C on stair climbing speed, balance.	No follow-up reported

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Table 1. Physical activity intervention studies in older adults using experimental (n = 26) or quasi-experimental (n = 3) designs

Study	Sample	Design	Setting	Physical activity target	Dependent variable	Intervention	Post-test	Follow-up
Sharpe et al. (1997)[50a]	139 adults from five congregate meal centers in South Carolina; 87% Black, 86% women (60–91 yrs; mean = 75 yrs)	Quasi-experimental (two I sites and 3 comparison sites); no apparent test for gender effect	Classes held at congregate meal centers	Low-intensity exercise, including chair movement, standing dance movement, optional use of hand-weights	Performance-based and self-report measures of physical function	I: Low-intensity exercise 2×/wk; behavioral strategies (goal-setting, feedback, incentives). C: Wait-list	1 yr; 79% study retention rate; mean I participation score = 36%; 72% of I reported doing home exercise; I improved in 10-ft walk rel. to C	No follow-up reported
Stewart et al. (1997)[24a]	91 adults from two HUD-supported senior congregate housing facilities (62–91 yrs; mean =77 yrs); 82% women, mean educ. yrs = 14; Ss with health probs. included	Quasi-experimental (1 I and 1 comparison site); no test for gender effect; pop.-based recruitment methods	Community classes and programs already being offered for seniors	Low- to moderate-intensity endurance and conditioning exercise programs	Participation rates at community classes; reported energy expenditure (CHAMPS); self-report measures of function	I: 1 Face-to-face counseling session with telephone follow-up; behavioral strategies employed to increase participation in exercise classes and programs. C: Wait-list	6 mos; 91% study retention rate; I had sig. greater community program partic. rates than C (54% vs. 34%); Ex. adopters had sig. increases in weekly caloric expenditure and improve. in psychol. outcomes rel. to those who did not.	No follow-up reported
Stewart et al (1997) (abstract)[24b]	173 sedentary adults from 2 Medicare HMOs (65–90 yrs; mean = 74 yrs); 66% women, mean educ. yrs = 15.2; Ss with health probs. included	Randomized controlled; population-based recruit. methods (35% of those eligible enrolled); tests for age and gender effects	Community classes and home	Moderate-intensity endurance and conditioning exercise	Energy expenditure (CHAMPS quest.); participation rates; functional performance tasks	I: 1 Face-to-face counseling session with telephone follow-up and monthly informational classes; goal of 5 sessions/wk; behavioral strategies employed to increase exercise participation. C: Wait-list	12 mos; 95% study retention rate; I had sig. net improvement in reported energy expenditure (405 cal/wk increase) and exercise frequency (3 times/wk) relative to C.	24 mos follow-up planned
Toshima et al. (1990)[22]	129 COPD patients (mean = 62.6 yrs); 27% women	Randomized controlled	Community rehabilitation	Walking (treadmill and free-walking at home)	Exercise endurance (peak, symptom-limited treadmill test); measures of well-being, efficacy	I: Comprehensive rehab. program, with 12, 4-hr sessions; each included 2 ed. group sessions + supervised exercise training (individualized exercise Rx, support). C: Education control (8 hr total). For both I and C, Ss required to make up any sessions missed.	8 wks; 91% study retention rate; Exercise endurance increased relative to C; self-efficacy increased in I rel. to C	6 mos. from baseline; 89% study retention rate; exercise endurance increases in I remained rel. to C; self-efficacy increases in I reasonably maintained rel. to C
Wallace et al. (1998)[48]	100 community-dwelling, ambulatory adults (mean = 72 yrs); 73% women; well-educated	Randomized, controlled; recruited via a senior center; S demographics compared with population-based survey respondents	Community senior center classes	Walking/aerobic activity + strength training + flexibility; offered within the context of a multi-factor program for disability prevention	Health-related quality of life (SF-36); class attendance	I: 3 classes/wk, 60 mins. of exercise/class; received risk factor info. in other health areas (diet, smoking, alcohol, etc.); C: Wait-listed	6 mos.; 90% study retention rate; >90% attendance at thrice weekly exercise classes; significant net improve. in nearly all SF-36 subscales in I rel. to C (which declined on this measure).	No follow-up reported

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Table 1. Physical activity intervention studies in older adults using experimental (n = 26) or quasi-experimental (n = 3) designs

Study	Sample	Design	Setting	Physical activity target	Dependent variable	Intervention	Post-test	Follow-up
Wolf et al. (1996)[72]	200 community-dwelling, ambulatory adults (70 yrs and older; mean = 76 yrs); 81% women	Randomized factorial; no apparent test for gender effect	Community	Tai Chi, balance training	Strength, flexibility, cardiovascular endurance (12-min walk), adherence, falls	E1: 2×/wk for 45 min/session of group Tai Chi; encouraged to practice daily; E2: 1×/wk for 45 min/session of computerized balance training; C: 1×/wk for 60 min/session of health education	15 wks; 84% study retention rate; E2 and C increased walking distance on 12-min. test relative to E1; 93% of Ss in all groups missed fewer than 2 consecutive sessions and/or were able to make up those missed.	8 mos from baseline; 80% study retention rate; E1 had reduced risk of multiple falls rel. to other groups.

*Explicit inclusion of or testing of behavioral interventions to promote physical activity.

education information.[18] Finally, few studies are available that have compared the addition of behavioral and/or cognitive interventions to more standard approaches in which participants are simply instructed to exercise either through formal center-based programs or various educational mediums. This approach would allow for better determination of the additive effects of such cognitive-behavioral strategies beyond the effects derived from typical exercise program instruction.

In addition to using cognitive-behavioral strategies, programs that also used either a supervised home-based format,[16] or a combination of group- and home-based formats[17,19,21–24] typically reported comparable or better physical activity adherence relative to programs that used a class or group format only. Ongoing telephone supervision of the physical activity program (used in 7 studies) was shown to be an effective alternative to face-to-face on-site instruction, resulting in adherence rates over extended periods of time (i.e., up to 2 years) that were as good as or better than face-to-face instruction.[25] In addition, the few studies that have used fully mediated approaches such as home videotaped physical activity instruction[26] or instruction via telephone-linked computer systems,[27–29] have shown some encouraging, albeit short-term, results.

Maintenance

Although short-term studies (i.e., 6 months or less) have typically comprised the majority of intervention work in the physical activity field as a whole,[30,31] it is notable that a substantial percentage of the studies included in this review (12, or 41%) had intervention durations of 10 months or longer. Eleven of the cited studies have published some form of follow-up information following the end of the major portion of the trial, and at least two others have unpublished follow-up data.[23,32] The published follow-up periods ranged from 3 months[14,19,33] to eleven and a half years.[34] The majority of these studies, with some exceptions,[34] reported physical activity or fitness levels that were greater than baseline levels and, when comparison groups were still available, better than those reported by controls. However, the quality of the measurement employed at the follow-up point was often less rigorous (e.g., global self-reports) than that utilized during the major trial.

In the one published report directly comparing long-term telephone-supervised home-based exercise instruction with class-supervised instruction, the telephone-supervised programs generally showed better physical activity participation rates at the follow-up period occurring 24 months from baseline relative to the class program.[25] During the second year of the intervention, formal telephone support and related intervention strategies had been substantially reduced,

although not eliminated entirely. In this study, the higher-intensity (walk/jog) three-sessions-per-week home-based program evidenced significantly better adherence at 24 months than did the lower-intensity (brisk walk) five-sessions-per-week home-based program, although adherence at the end of the initial 12-month period had been identical for the two programs.[25] This finding suggests that the added inconvenience of attempting to exercise more frequently during the week may override any benefits to adherence accrued from exercising at a less-intensive level—an exercise-related parameter that has typically been reported to be extremely appealing to middle- and older-aged adults.[35] However, the majority of participants in this study (67% of women and 87% of men) worked outside of the household, which could have resulted in greater time constraints relative to retired populations of older adults.[36] The higher- and lower-intensity programs used in this study resulted in reasonably similar (and low) injury rates across the 2-year period, although forms of physical activity that are more strenuous than those tested in that study have been associated with higher injury rates among older populations.[37,38] Similarly, at least one study of older arthritic patients reported that persons engaged in moderate-intensity forms of exercise but for longer durations (e.g., in this study, a mean of 37.5 minutes per session) lost the benefits of physical activity with respect to reductions in knee pain and disability relative to participants exercising for shorter durations.[39]

Potential Public Health Impact of Current Intervention Approaches

A number of the studies reviewed illustrated that structured class- or group-based physical activity formats can result in reasonably high short-term (i.e., 6 months or less) physical activity participation rates. In addition, several studies reported satisfactory longer-term class or group participation rates, extending up to 3 years in at least one case,[40] among some groups of older adults. The data presented by Rejeski and Brawley,[19] who developed a behavioral intervention that explicitly took advantage of the group structure to enhance physical activity levels following termination of the formal group, are particularly encouraging. In that study, the center-based contacts were limited in number and intentionally spaced at greater intervals over time to encourage the development of self-sustaining strategies to promote long-term maintenance.

These innovations notwithstanding, in light of the large percentage of older adults who are underactive, and the data indicating that a substantial proportion of older adults prefer to engage in physical activity outside of a formal class or group,[41–43] additional alternatives to traditional class approaches will be necessary in order to have a major public health impact. Among the mediated approaches that have been tested thus far with older populations, telephone-based strategies for encouraging ongoing physical activity participation, either alone or in combination with group-based formats, have received the largest amount of empirical support. In light of the fact that approximately 94% of U.S. households have a telephone (Pacific Bell, personal communication, 3/97), the public health impact of such approaches is potentially great.

A reasonably large percentage of the studies reviewed (16, or 55%) described physical activity regimens that appeared to meet or exceed the recently updated U.S. public health recommendations for physical activity among the general adult population.[44] However, few studies focusing on more moderate-intensity forms of endurance exercise (e.g., walking) strove to encourage participants to reach the five or more days per week of physical activity that is currently considered to be optimal for achieving significant health-related benefits.[44] The vast majority of these studies were finished or had begun prior to the publication of the current national recommendations. In addition, 12 of the studies focused on forms of nonendurance physical activity (e.g., strength training, flexibility exercises, balance training) that have been increasingly identified as important components of the comprehensive physical activity regimen likely needed to preserve physical function and health with advancing age.[45,46] Few of the reviewed studies, however, attempted to combine two or more of these physical activity components in a systematic way.[17,33,47,48] Given that it currently remains unclear what the optimal physical activity regimen is for preserving health and function with advancing age,[9] efforts to continue to refine the best regimens for older populations need to proceed in parallel with intervention efforts aimed at promoting long-term physical activity participation.

Effects on Subgroups

Of the eight studies that explicitly tested for gender effects, few significant differences in physical activity participation or physical performance outcomes were found between men and women. Notably absent in this literature are well-controlled studies that systematically examine the effects of ethnicity, lower economic status, or age (e.g., "young-old" versus "old-old") on physical activity participation rates. Only three studies in this review either specifically targeted one or more of these important subgroups or systematically tested for their effects.[21,49,50] In addition, the one study reviewed that focused primarily on adults in the older age range (mean age = 82 years), who had limited mobility at baseline, reported the poorest adherence rates at 6-month post-test.[51]

Although persons with significant chronic conditions or disabilities represent the majority of the community-dwelling adult population aged 45 years and up,[5] relatively few rigorous studies were found that focused specifically on such subgroups (excluding cardiac populations, who were not included in this review). The two well-designed trials focused on arthritis sufferers demonstrated that relevant intervention programs can be fashioned to promote long-term physical activity participation sufficient to reduce disability among this prevalent segment of the older adult population.[21,52,53] One of these studies, however, noted that exercise adherence had declined to 50% by 18 months.[21] In addition, some promising, albeit short-term, results have been reported for older COPD patients.[14,22] Among persons with multiple chronic conditions, dropout and nonparticipation may be particularly problematic, as suggested in an uncontrolled investigation of older VA outpatients participating in a 4-month exercise program.[54] Of note, however, 36 (47%) of the original participants were able to complete 2 years of the supervised, multicomponent physical activity program and achieve significant pre-post improvements in cardiovascular function and flexibility.[55] Programs that are fashioned specifically to the needs of such subgroups and that can demonstrate a significant impact on promoting long-term behavior change continue to be indicated.[24,32]

Population-based recruitment methods were noted in six of the articles reviewed. Given, however, the individual level of commitment required to participate in all of the studies evaluated, it is likely that the vast majority of the individuals studied were already in the contemplation, preparation, or early action phases of motivational readiness to make physical activity changes.[56] Few data are currently available on fashioning appropriate interventions for the noncontemplator segment of the older adult population, for whom targeted interventions are particularly warranted. Similarly, little is known about the physical activity preferences and needs of the most sedentary segment of the older adult population, who may have the most to gain in areas of health and functioning from physical activity increases. At least one study in the literature has found that different determinants delineated the subgroup of sedentary, versus intermittently active, older adults who agreed to participate in a randomized trial focusing on physical activity promotion.[57] These two subgroups also responded differentially to the two different forms of recruitment (random-digit-dial telephone survey; community-wide promotion) implemented in the study. Finally, the sedentary subgroup had significantly lower one-year physical activity adherence rates across all three physical activity programs evaluated (i.e., higher-intensity group-based, higher-intensity home-based, lower-intensity home-based) relative to the underactive subgroup.[57]

Replication

With few exceptions, systematic replication of promising intervention strategies has been minimal. Among the few strategies reviewed that have received such replication are the telephone-supervised home-based, or home-plus group-based, physical activity programs. To date there have been at least twelve randomized controlled investigations that have systematically applied such approaches in order to promote physical activity participation in a range of population groups, including middle-aged adults,[58–60] overweight men and women,[61,62] men and women aged 50–65 years,[16,25] middle- and older-aged cardiac patients,[63] community samples of men and women aged 65 and older,[17,24,32] and older adult informal caregivers of relatives with Alzheimer's disease or related dementias.[42] The telephone-supervised approach appears to be effective in older as well as younger age groups, and has been used successfully among older adults to promote physical activity of various intensities,[16] types (e.g., endurance, strength, flexibility, general conditioning[17,24,29]), and formats (e.g., home-based, class-based, home plus class or group combinations[16,17,19,21,24,29]). Adequate physical activity participation has been achieved and maintained via this method for periods of up to 2 years.[25] There is also some evidence from at least one of the studies available that less-educated older adults (i.e., a high school education or less), particularly those with relatively low initial fitness levels, might benefit especially from telephone-supervised home-based approaches through 2 years.[64] Because a number, although not all,[62] of these studies were undertaken in northern California, the generalizability of the supervised home-based approach to other regions of the United States remains to be verified. Currently ongoing multi-site physical activity trials such as the NHLBI-funded Activity Counseling Trial (ACT) will add useful information in this regard.

The use of cognitive-behavioral strategies to increase both initial and longer-term physical activity participation, whether delivered via telephone or in a face-to-face format, also has been found to be a useful intervention tool in a number of the studies reviewed.

Generalizability

As noted earlier, the vast majority of the physical activity intervention studies undertaken with older adults have not included important subgroups, such as lower income individuals, persons of nonwhite ethnicity, and the oldest old. The generalizability of current interventions to these segments of the population is thus

currently unknown, and constitutes an important target for future research in this area.

The above issues notwithstanding, the types of promising intervention approaches that have been reviewed (e.g., use of cognitive-behavioral strategies; implementation of telephone-supervised programs) are potentially generalizable to a broad segment of the older adult population. Most of the telephone-supervised programs utilized a 20- to 40-minute initial face-to-face instructional session in combination with 12 to 15 brief (approximately 10 minutes) staff-initiated telephone contacts during a year's period. There is some evidence suggesting that the frequency of telephone contact could be reduced once the exercise program has been established.[61,65] Possible channels for delivering such programs are currently in place in most communities throughout the United States through the auspices of a variety of community organizations and agencies, including local parks and recreation departments, seniors' centers,[48] community colleges, local health departments, medical clinics, nonprofit health organizations (e.g., the American Heart Association), and organizations focusing on seniors (e.g., the American Association of Retired Persons). However, a mechanism for the training and subsequent oversight of potentially appropriate community groups who could deliver such interventions effectively is currently lacking. An important part of all such interventions in this area is the appropriate ongoing tailoring of a physical activity regimen (e.g., physical activity content, intensity, format) to the needs and preferences of the individual, regardless of the types of behavioral or program-based strategies that are employed to increase subsequent physical activity participation.

Cost-Effectiveness

Attempts to evaluate the cost-effectiveness of intervention approaches in older adults, either relative to no treatment, usual care, or other active interventions, have been minimal. The few published studies that have systematically collected cost data have focused on medical utilization and cost savings related to health outcomes of interest (e.g., costs of inpatient and outpatient services),[33] rather than cost-effectiveness analyses related to the interventions themselves. Such analyses should occur in concert with intervention development and evaluation efforts. At least one recently completed study has such cost-effectiveness analyses currently underway.[24]

Implementation

Few systematic attempts have been made to date by the scientific community to disseminate successful programs to the public. Although there are a plethora of popular books and manuals available focusing on physical activity promotion in older adults, few are based on specific, rigorously controlled research. In addition, relatively few physical activity printed materials and programs aimed at older adults that exist in many communities throughout the United States explicitly include the types of behavioral, cognitive, social, and program-based strategies that have been shown to be effective in promoting physical activity participation rates in older as well as younger adults. A recent example of efforts to do so include dissemination, in book form and through training seminars and similar formats, of the rigorously undertaken research on strength training in older adults conducted by Tufts researchers.[66] The telephone-based approach to promoting ongoing physical activity participation awaits systematic dissemination efforts, although efforts to explore methods of doing so are currently underway in California, through the auspices of the state health department.

Additional Issues

Physical Activity Assessment among Older Adults

Progress in the intervention area continues to be constrained by the dearth of physical activity assessment instruments that are sensitive to the more moderate forms of physical activity typically undertaken and preferred by older adults. Although in recent years several promising physical activity assessment instruments have been developed specifically for older populations,[32,67–70] efforts to evaluate their sensitivity to change with appropriate physical activity intervention have been scarce. Three recently completed studies have indicated that the CHAMPS physical activity questionnaire for older adults developed by Stewart and colleagues[32] is sensitive to change in response to 6-to-12-month physical activity interventions focused on light to moderate-intensity endurance activity.[17,24,32] In one of these investigations, which focused on a 1-year program of moderate-intensity endurance activity in healthy, community-dwelling seniors,[17] estimated energy expenditure as measured via the CHAMPS questionnaire was found to be sensitive to change in the endurance activity program relative to a stretching and flexibility program. In contrast, the Physical Activity Scale for the Elderly (PASE)[68] was not found to be sensitive to change in the same sample.

Defining the Appropriate Physical Activity Stimulus to Target in Interventions for Older Adults

As noted earlier, the optimal physical activity stimulus for gaining appropriate health and functioning benefits among older populations has yet to be adequately defined or agreed upon via scientific consensus. Such a

regimen will likely require a combination of endurance, strength, and flexibility/balance activities.[45,46] The systematic evaluation of physical activity programs that may improve balance, in particular, is an area that has received relatively little systematic attention, although two of the FICSIT (Frailty and Injuries: Cooperative Studies of Intervention Techniques) investigations suggest that physical activities such as tai chi chuan and walking may improve balance and/or reduce risk of falling better than other forms of activity (e.g., use of a cycle ergometer).[71,72] A significant challenge facing this field is the development of intervention strategies to promote ongoing participation in all of these physical activity domains.[48] Although there are likely strategies that will be effective across all such domains (e.g., cognitive-behavioral strategies), the potential for additional intervention approaches that may be specific to each of these physical activity types remains unexplored.

An appropriate physical activity stimulus for older adults must be considered both from subjective and objective points of view. That is, in addition to the operational aspects of the regimen (e.g., exercise type, intensity, frequency) deemed desirable by the scientific community, the individual's perceptions of the program and how it "fits" with personal needs, values, and circumstances require attention.[73]

Applications of Determinants Research in this Area

Relatively few studies undertaken to date to clarify the types of determinants associated with physical activity participation have focused specifically on older populations.[11] Such determinants research may help to identify important contributors as well as barriers to physical activity participation among older adults, thereby potentially leading to more effective interventions. Although the current determinants literature identifies some variables (e.g., educational level, smoking status, overweight, social support, exercise-related self-efficacy, motives to improve physical fitness and appearance) that are associated with physical activity participation among younger and older adult populations alike,[31,39,74–79] other variables appear to be especially influential for older adults. These include transportation problems[75,80,81]; medical concerns, including fear of injury[75,78,79,81]; physician advice to exercise[81,82]; attitudinal barriers, including perceived lack of ability and erroneous beliefs about exercise and physical activity[78,83,84]; and illness and injury.[78,81] In addition, at least one study that employed population-based recruitment strategies to survey 327 women aged 70 to 98 years living in Vancouver, British Columbia, found that self-efficacy for performing fitness-oriented exercise later in life was significantly associated with recollections of childhood physical activity competencies and movement capabilities occurring decades earlier.[74] Such findings underscore physical activity participation in older age as a lifelong process influenced by preceding life experiences and stages of development.

Several studies evaluating the determinants of physical activity adherence among older adults noted that factors influencing physical activity participation may be phase-specific (i.e., dependent on what stage of the program is being evaluated, e.g., initial adoption phase, longer-term maintenance phase).[39,53,85] Results from a study of older arthritic patients also indicate that the determinants of a physical activity regimen may differ, at least for some older adult samples, for various exercise participation parameters (i.e., physical activity attendance as opposed to the actual amount of time spent exercising).[39]

Similar to the older adult intervention literature, few determinants studies have evaluated the importance of different variables in specific subgroups of the older adult population. In one epidemiologic study of 3,223 residents from two communities in South Carolina, reported receipt of physician advice was significantly associated with involvement in leisure-time physical activity among both white and African-American men and women.[82] Among the perceived benefits and barriers to exercise discussed in a recent study of older African-American women[86] were the importance of enjoyment, mental health improvement, and physical enhancement as top benefits of physical activity, and inconvenient locations, safety, social embarrassment, and perceived unpleasantness of physical exertion as the major reported barriers to physical activity. Similar to determinants studies of healthy older adult populations, determinants of exercise maintenance in older arthritic patients have been reported to include initial fitness level, mood disturbance (e.g., anxiety, depressive symptoms), social support, and previous exercise behavior, in addition to changes in pain.[39,53] In one of these studies, ethnicity, gender, and body mass index were not found to be predictive of either exercise frequency or duration over an 18-month period.[39] Specific determinants of potential importance for other major subgroups of older adults (e.g., the oldest-old, the disadvantaged, those with other specific disabilities) remain largely unexplored. Recent applications of signal detection methods to the physical activity field[64] may provide a useful means for identifying clinically meaningful subgroups of older adults, based on initial demographic, behavioral, psychosocial, and physiological variables, for which to better tailor interventions.

Finally, at least one intervention study reviewed noted an increase in physical activity participation, resulting in significant improvement in aerobic power, following the end of the formal study intervention

period among participants randomized originally to an attention-control (range of motion) condition.[52] The authors hypothesized that the exercise content may be less important than a positive exercise experience in motivating at least some subgroups of older adults to maintain exercise or seek out other types of exercise programs.[52] This issue deserves further exploration.

Summary and Recommendations for Future Research and Practice in the Field

The present review underscores a number of gaps in the current physical activity intervention literature for this important population segment that are in critical need of further attention and systematic investigation. These gaps are subsumed in four major recommendations that provide a framework that may guide future efforts in this area. These recommendations have scientific, practice, and policy implications for the field.

Recommendation 1: *Continue to adapt and refine the current national physical activity recommendations to address the specific issues raised when the target is older adults.*

The current national recommendations proposed by the U.S. Centers for Disease Control and Prevention (CDC), the American College of Sports Medicine (ACSM), the American Heart Association, and other national organizations lay the groundwork for an expanded set of physical activity regimens (e.g., those that include more moderate forms of endurance-based physical activity), with enormous applicability to older populations. Yet, additional scientific consensus is needed in other areas related to physical activity prescription for older adults, including an increased focus on additional parameters of the physical activity regimen (e.g., strengthening, flexibility, and balance) as well as expanded physical activity–related outcomes (e.g., health-related quality of life, functional status, depression), which are of particular importance to the day-to-day health and functioning of the older adult. Furthermore, the most effective means for defining what constitutes moderate as opposed to more vigorous intensities of activity in older adults (i.e., using absolute versus relative criteria), as well as the optimal physical activity prescriptions for specific subgroups of older adults (e.g., those with chronic conditions, the frail elderly, those at increased risk of falls) remain unclear. This recommendation might be most readily achieved through convening a panel of scientific experts similar to that convened in developing the current CDC/ACSM recommendations for the American adult population as a whole.

Research Implications: These consensus-building activities would help to define more clearly those areas of physical activity prescription for older adults for which adequate scientific evidence is currently lacking, thereby helping to clarify the most critical research agenda in this area. It will also provide a firm basis on which interventions aimed at promoting a more comprehensive physical activity program (i.e., combining endurance, strengthening, flexibility, and balance-oriented activities) among older adults can continue to be built.

Practice and Policy Implications: Clarification and consolidation of current scientific consensus in this area will help to reduce confusion and enhance efficacy related to physical activity prescription and intervention among health care service providers and exercise specialists working with older adult populations. It will also allow for a more consistent and specific physical activity message to be delivered to the older adult population as a whole.

Recommendation 2: *Systematically evaluate the generalizability of currently supported interventions in more diverse subgroups of older adults. Important subgroups include the frail elderly; those with various chronic conditions and disabilities in areas of physical, psychological, and cognitive function; ethnic minorities; lower socioeconomic status groups; the rural elderly; the oldest-old (aged 85 years and above); and socially isolated and depressed older adults.*

Research Implications: The implementation of pilot work in this area to clarify how current behavioral interventions, such as those utilizing cognitive-behavioral strategies or telephone-based delivery channels, should be adapted to optimize their effectiveness in targeted subgroups is critical. As part of this endeavor, the development of specific intervention strategies that aid effective coping with the chronic illness and injury that often derail attempts among older adults to maintain long-term physical activity participation is strongly indicated. In addition, the field as a whole would benefit from an exploration of the types of demographic, physical, psychosocial, and environmental dimensions and domains that would be most useful for segmenting the older population into meaningful subgroups for intervention.

Practice and Policy Implications: Implementation of the above recommendation will help to clarify how much tailoring will be required to successfully enact physical activity interventions across these different subgroups. This will allow for the delivery of more powerful interventions to those subgroups who may have the most to gain, from a health and quality-of-life perspective, in becoming more regularly active.

Recommendation 3: *Develop evidence-based protocols to aid health care providers and physical activity specialists in appropriately and efficiently assessing older adults in order to triage them to the most appropriate physical activity intervention programs.*

Research, Practice, and Policy Implications: Research focused on developing and testing such empirically-derived protocols is an important step in the develop-

ment of an orchestrated public health approach aimed at tailored intervention delivery and dissemination throughout the older adult population.

Recommendation 4: *Encourage the systematic study of environmental and policy-level approaches to the promotion of physical activity among older adults.*

As noted earlier, it has become increasingly apparent that increases in routine and lifestyle forms of physical activity that can be incorporated naturally throughout a person's day may provide the most effective means for increasing physical activity levels in the population at large. Yet, little information is currently available concerning the types of environmental and lifestyle interventions that could be most potent in facilitating such natural forms of physical activity, particularly among seniors.

Research Implications: The field could benefit greatly from qualitative and determinants research that would allow a better understanding of how and where older adults spend their day and time, as a means of beginning to define relevant situations for which appropriate interventions could be targeted. In addition, research evaluating interventions aimed at different aspects of the physical and social environment, including mass media, as well as policy-level interventions is critically needed.

Practice and Policy Implications: Research in the above areas could help to provide health professionals and physical activity specialists with specific information concerning how such environmental interventions could be combined with educational and behavioral programs to bolster intervention success. In addition, such information could form the basis for promoting advocacy activities aimed at policies conducive to physical activity increases among the elderly. An important goal of environmental and policy-level approaches is to find appropriate ways to make environments more physically challenging for older adults, as a means of facilitating energy expenditure and related processes throughout the day.

Based on the currently available intervention literature, additional recommendations for enhancing the quality and impact of the scientific evidence in this field include:

- comparative studies that rigorously evaluate the efficacy and cost-effectiveness of interventions relative to each other, rather than simply to a control condition. Given that the current national recommendations underscore the utility of increases in physical activity for virtually everyone in a community, comparative studies become particularly important as an aid to tailoring programs to different older adult subgroups. Cost-effectiveness analyses should be included as part of such comparative investigations whenever possible.
- further systematic exploration of fully mediated approaches to physical activity promotion among the older population. Such approaches are essential if current public health goals are to be reached with the older population.
- systematic efforts to disseminate those intervention strategies (e.g., telephone-based intervention) that have shown effectiveness and replicability.
- exploration of the potential utility of intergenerational physical activity programs that facilitate participation among family members (e.g., grandparents and grandchildren) as well as among community subgroups of varying ages (e.g., seniors and preschool or school-aged children).
- applications of a lifespan, developmental perspective to the understanding of physical activity participation in later life, as a means of better understanding how physical activity experience and participation early in life sets the stage for physical activity participation and motivational readiness as one ages.
- continued efforts to systematically apply conceptual or theoretical models to this area as a means of broadening and potentially strengthening intervention development.

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PREVENTING DISEASE AND PROMOTING HEALTH IN OLDER AMERICANS

Funding New Research

Allocating $25 million for applied research on health promotion and disease prevention. This proposal would provide $25 million for the Department of Health and Human Services to research the effectiveness of alternative providers and settings when implementing a successful health promotion and disease prevention strategy and conduct studies to identify the most effective means of educating and encouraging beneficiaries. Any new research effort will reflect the medical behavioral, and social aspects of care for the elderly, including the impact on expenditures and quality of life. In addition, these new research efforts will be developed, monitored, and evaluated by an interagency work group. The Secretary is required to report to Congress in 2002 with the results of the overall applied research efforts and recommendations for the modification of the Medicare program if so indicated.

Advancing original research on health promotion and disease prevention. This proposal would provide the National Institute on Aging with $100 million over five years to conduct research on ways to improve quality of life for the elderly, ways to prevent or delay the onset of chronic illness and disability, and the development of new means to assess the long term cost effectiveness of health promotion and disease prevention efforts for the elderly.

Adding New Benefits

Elimination of copayments for preventive health services. In order to promote utilization of preventive services, cost sharing for these services will be eliminated.

Reimbursement of smoking cessation counseling. Smoking cessation has major and immediate health benefits for men and women of all ages. Benefits apply to persons with and without smoking-related disease. Smoking cessation decreases the risk of lung cancer, other cancers, heart attack, stroke, and chronic lung disease. This proposal would provide smoking cessation counseling in accordance with the NIH clinical practice guidelines for individuals who, in consultation with their primary care provider, seek to enter treatment. pay for? How?

Reimbursement for screening for hypertension. Screening for hypertension is recommended for all children and adults. Hypertension is a leading risk factor for coronary heart disease, congestive heart failure, stroke, and renal disease. These complications of hypertension are among the most common and serious diseases in the U.S., and successful efforts to lower blood pressure could thus have substantial impact on population morbidity and mortality. This proposal would reimburse providers for screening patients for hypertension and educating them about ways to lower their blood pressure to a healthy level. ? how

Reimbursement for counseling for hormone replacement therapy. Estrogen therapy after menopause produces clinically important improvements in bone density and blood lipids, is associated with significant reductions in the risk of heart disease and fractures, and can substantially reduce morbidity and mortality from coronary disease and osteoporosis in older

women. This proposal would reimburse providers for counseling their patients about the benefits of estrogen replacement therapy. Counseling would be conducted along NIH guidelines and include asking about presence and severity of menopausal symptoms (hot flashes, urogenital symptoms), as well as assessing risk factors for heart disease, osteoporosis, and breast cancer.

Reimbursement for screening for early detection of glaucoma. Glaucoma is the second leading cause of irreversible blindness in the U.S., and the leading cause among African Americans. The prevalence of glaucoma is four to six times higher in blacks than whites, and it increases steadily with age. Other risk factors for glaucoma diabetes mellitus, myopia, a family history of glaucoma, and a diagnosis of ocular hypertension. This proposal would reimburse providers for screening of high risk individuals.

New authority to cover preventive benefits. This proposal would provide the Secretary of Health and Human Services with the authority to provide a service to Medicare beneficiaries when she, in consultation with the Office of the Chief Actuary and the Congressional Budget Office, determines that the provision of the service will save Medicare resources in the long-run by delaying the onset of a more expensive disease, detect the disease at a more treatable and less expensive stage, or save the cost of treatment in a more costly setting.

Educating Beneficiaries

Development of an education and awareness campaign to prevent falls in the elderly. *(see problem statement earlier in paper).* The Department of Health and Human Services, together with private sector partners, would launch a nationwide media campaign to educate older Americans about the best way to modify their environment in order to avoid potentially harmful and debilitating falls. The campaign would utilize radio, television, and print media, and would emphasize the following messages: use anchor rugs; minimize clutter on floors; use nonskid mats; install handrails in bathrooms, halls, and along stairways; light hallways, stairwells, and entrances; and wear sturdy shoes.

National outreach effort to educate beneficiaries about available preventive benefits. The Department of Health and Human Services, together with private sector partners, will launch a nationwide media campaign to educate beneficiaries about the benefit and availability of preventive benefits. Currently, HCFA has developed several brochures and advertisements to educate beneficiaries about the availability of preventive benefits, but they are not widely disseminated to beneficiaries. This campaign will allow HHS to partner with private organizations to distribute existing materials through provider offices, senior centers, the Meals on Wheels program, religious organizations, and state health insurance assistance programs. It will also include prevention messages on materials routinely sent to beneficiaries, such as Medicare Part B benefits statements and Medicare summary notices.

Educating Providers

National outreach effort to educate physicians about the importance of preventive benefits. Although sound clinical reasons exist for emphasizing prevention in medicine, studies

have shown that clinicians often fail to provide recommended clinical preventive services. This is due to a variety of factors, including uncertainty among clinicians as to which services should be offered and skepticism about their effectiveness. The Department of Health and Human Services, together with advocates for the aging and provider organizations, would launch a national provider education campaign to emphasize the importance of preventive care for older Americans, disseminate information about the efficacy of critical preventive benefits, educate providers about nationally accepted treatment guidelines, and provide tools, such as "cue cards" with a list of the preventive services recommended for older Americans, to encourage the provision of preventive benefits. How? Detail

White House Conference on Improving the Health of the Elderly. This Conference will include advocates for the aging, representatives of provider organizations, researchers with an interest in elderly issues, and other appropriate parties. The goal of the conference is to develop a consensus on a program to empower the elderly to protect and improve their own health; to assure that the elderly are provided the highest standard of care, with emphasis on assuring that standard practice is also best practice; to more effectively meet the needs of the elderly through the Medicare program, and to outline a research and demonstration agenda to further these objectives.

Funding Demonstration Programs

Part of Dual-Eligible Package

Funding new programs to provide high quality, cost effective services to individuals with serious and chronic illnesses. This proposal would fund demonstration programs to provide case management and disease management services. It would also fund interventions designed to prevent hospitalization of nursing home patients. The Secretary can waive provisions necessary to carry the demonstrations out and may contract with centers of excellence or other entities or individuals with special expertise in providing quality services, utilize incentive payments for favorable cost and quality outcomes, capitate payment for selected services, and provide services not usually covered under Medicare. These programs must not abridge freedom of choice of provider, except to the degree that beneficiaries choose to join a program limiting choice of provider for some or all services, and they must not prevent providers not participating in a program from receiving payment for caring for other Medicare beneficiaries.

Funding community based health promotion teams. Studies indicate that older adults view health promotion activities as beneficial to their health, engage in numerous health behaviors more frequently than do younger adults, and participate in and report benefits from health promotion programs. This proposal would fund demonstration programs providing health promotion services, such as group or individual counseling; education about important lifestyle behavior modifications, such as exercising or diet modification, with monitoring to ensure that the beneficiary is making the recommended change; and at home visits to help make necessary environmental modifications.

? Detail
Is this Medicare?

Health promotion and older people: a qualitative study of general practitioners' views

Ngaire M Kerse, Michael J Murphy, Leon Flicker and Doris Young

Abstract

Objectives: To explore general practitioners' (GPs') beliefs about health promotion for older people and attitudes towards educational strategies likely to improve practice in this area.

Design and setting: Four discussion groups, each lasting one and a half hours, completed in Melbourne, Australia in August and September 1995. Interviews were transcribed verbatim and analysed for major themes.

Participants: A convenience sample of 20 GPs took part; 11 university affiliates, four participant contacts and five GPs from telephone book listings.

Results: GPs' perceptions of their health promotion practice varied from "integrated into all medical care", to "something separate from usual practice". Positive views of older people contrasted with ageist views, with a few GPs expressing a nihilistic approach to medical care of older people. Regardless of the GPs' attitudes, lack of time and reimbursement disincentives were perceived to limit preventive practice and the potential impact of health promotion interventions. GPs felt overwhelmed with their workloads, and initial reactions to the idea of any "new" program were negative. Reactions to educational strategies varied, with choice and relevance to ease of practice being important for GP participation.

Conclusions: GPs differ in their views of health promotion and in their approaches to its delivery for older people. Educational programs are often viewed negatively, but if they offer the opportunity to save time, increased participation may be more likely.

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Health promotion and disease prevention are neglected areas in the health care of older people. Despite research indicating their benefits, preventive activities and behaviours, such as influenza vaccination and exercise, are infrequent in older populations.[1]

General practitioners (GPs) are well placed to emphasise health promotion for this group, as older people make up one in four of GP consultations, and 70% of older people consulting a GP have follow-up visits planned within the next three months.[2] Yet Australian GPs are reluctant to introduce lifestyle counselling into consultations unless prompted by the patient,[3] and detection rates of risk behaviours can be improved.[4,5] GPs may see health promotion for older people as an activity for which the individual patient is responsible,[6] and it is not known how GPs' attitudes towards ageing[7] influence their preventive practices with older patients.

Exploratory research about Australian GPs' attitudes and beliefs about health promotion specifically for older people is scarce.[8]

We report the results of a qualitative study exploring GPs' attitudes towards and beliefs about:

- Health promotion for older patients, including current practices and perceived barriers.
- Ideas for educational strategies aimed at improving their practice in this area.

Methods

We planned four focus group discussions to explore GPs' views about health promotion.[9] A convenience sample of GPs was selected from the University of Melbourne list of practices accepting fifth-year medical students, contacts of those interested in participating, and GPs from the telephone book medical listing for two suburbs in the Melbourne metropolitan area. The GPs were telephoned and sent a letter about the discussion groups. Continuing medical education (CME) points were available for participation in the study.

Group discussions lasted about one and a half hours and were audiotaped. Discussion included the attitudes and beliefs held by GPs about health promotion for older patients and reactions to ideas for educational tactics for intervention strategies. To avoid facilitator bias, MM and NK ran two groups each, using a set discussion guide, and altered the order of discussion of educational strategies (Box 1). NK was present for all groups and transcribed the tapes verbatim.

To identify the major themes emerging from the discussions (Box 2), we analysed the transcripts with no a-priori themes posed.[10] NK read the transcripts and identified the themes, and the transcripts were then colour-coded and cut and pasted into thematic groupings. NK and MM read and summarised the theme groups. GPs' reactions to the educational interventions were grouped together by subject, and their overall reactions summarised (Box 3).

The range of views expressed during these focus group discussions is reported. As it is not appropriate to generalise the results from small non-representative groups to larger populations, percentages of participants with each

General Practice Unit, Department of Public Health and Community Medicine, University of Melbourne, Melbourne, VIC.
Ngaire M Kerse, MB ChB, Research Scholar; and Research Scholar at National Ageing Research Institute, Melbourne, VIC.
Doris Young, MB BS, FRACGP, Head.
Market Access Consulting and Research, Melbourne, VIC.
Michael J Murphy, BA, DipAppSci(Nat), Director of Research.
National Ageing Research Institute, Melbourne, VIC.
Leon Flicker, PhD, FRACP, Senior Lecturer in Geriatric Medicine.
Reprints: Dr N M Kerse, GP Unit, Department of Public Health and Community Medicine, University of Melbourne, 200 Berkeley Street, Carlton, VIC 3053.
E-mail: n.kerse@phcm.unimelb.edu.au

thematic view are not reported; this is the accepted practice with qualitative data derived from groups.[11,12]

Results and synthesis

Four focus groups were held, with four to seven participants each, during August and September 1995. A total of 20 GPs (seven women and 13 men) participated; 11 were affiliated with the University of Melbourne, 5 were recruited from the telephone book listing and 4 were contacts of other participants. Most (60%) had graduated from medical school during the 1980s, with seven (40%) graduating before that decade. Fourteen had 10–20 years' experience in general practice, with four having more than 20 years. All GPs were vocationally registered, and 11 listed postgraduate qualifications. The University of Melbourne Human Ethics Committee approved the project. Informed consent was obtained from participating GPs.

GPs' views of health promotion

Three main concepts of health promotion emerged, spreading across a spectrum; we categorised them as: abstract, broad, and concrete (Box 2). GPs with the abstract concept saw health promotion as giving encouragement and promoting positive thinking, and considering the patient's social context.

> *"I provide the facility for people to treat themselves. . . You provide the opportunity for them to ask or talk about it . . . and then you develop it from there."*

GPs with these views integrated health promotion into all practice, seeing it as good general practice, whether the focus was acute, curative care, maintenance of patients with chronic illness or preventive management.

> *"I've got my finger on it all the time and I do see my patients at regular intervals."*

The intermediate view, that "health promotion is a broad concept", covering such activities as medication review, home visits and exercise advice, was held by most GPs, whose preventive practice was opportunistic, separated from "usual care". These GPs reported "fitting it in" if a patient had a brief request, or alternatively asking the patient to return at a less busy time to discuss health promotion.

Some GPs had a concrete concept of health promotion — that it consisted of traditional preventive activities, such as pap smears, mammograms, and cholesterol measurement.

> *"Most of the elderly I see, I see on a curative basis."*

These GPs practised prevention separately, tending to discuss issues only when directly asked by the patient.

> *"I mean, it's really hard when someone comes in with an illness, to sort of give that framework for talking about other preventable things. . ."*

In two of the groups, GPs were discouraged and felt that preventive suggestions were not welcome, and when offered, mostly had little effect.

> *"How many patients do you have that you know, you go through all this about weight loss. . . and how many of them are really successful? . . . I've had very few patients who seem to lose much weight, despite all the talking about all this."*

GPs' views of older people

Some GPs felt that age of the patient had little to do with their preventive practice; some formed categories of older patients according to their needs, while others felt that health promotion was not important for older age groups.

A positive attitude to older people in all groups was expressed by some GPs, who felt that the patient's individual characteristics were more important than age. Chronological age alone was seen as a poor indicator of health status, with the presence and chronicity of illness and functional status being more important. These GPs saw that they could be treating older people for a further 20–25 years; therefore emphasis on health promotion was as important as in younger groups.

Neutral views were held by some of the GPs who grouped older people by their needs, varying their approach to health promotion accordingly. Patients who had poor understanding of medical issues and lacked basic biological knowledge were contrasted to those who knew more than the GP about their health.

> *"Certainly, those who are members of the local bowling club get all the information . . . and they know everything, but there are people at home who probably don't read papers, or watch television, or certainly don't read women's magazines which carry all the health information . . . it's a lot harder to reach them."*

Other GPs had negative attitudes to older people — expressed in the statement:

> *"More and more of my practice seems to be looking after people in hostels and nursing homes — people who nobody else wants . . ."*

GPs outlined difficulties with caring for older people, such as memory problems, lack of comprehension, and poor compliance with medication regimens. Some of these GPs felt that older people "sat around all day and got bored". The negative views affected the health promotion advice offered to older people.

> *"It's pretty hard to tell a 90-year-old to stop smoking. I wouldn't bother with that."*

The extreme of these views was therapeutic nihilism. Some GPs spoke of futility in pursuing medical management, let alone health promotion, for older people.

> *"I'm struck by the idea that they are all going to die. Patients are all a bit unrealistic when they think I can treat their heart and keep them well for ever and all that. . ."*

> *"I think I'm a bit more pessimistic than [another participant], actually. I like to make them feel better, so I don't know how much curing medicine does do actually."*

Barriers to practice of health promotion

Time

Lack of time was the main barrier to health promotion practice noted by nearly all of the GPs, regardless of their concept of health promotion or attitude towards older people.

> *"It all just takes too long."*

Time pressure was felt with patients with limited mobility, as well as with practice pressures from the full waiting room. GPs felt overwhelmed with their workload and its effect on their home life.

Government regulation

Linked to the time barrier was a concern that Medicare reimbursement was related to a "valid medical indication"

1: Discussion guide for GP focus groups

Health promotion and older people

- When you think of health promotion for older people, what do you think of?
- What does health promotion/disease prevention for older people mean to you?
- How do you feel about health promotion for older people? How important is it to you?
- What do you do in your practice in the area of health promotion, and what considerations do you think are most important in this area?

Can GPs improve? How?

- Would you like to do more in this area? Why, and what?
- What would help, assist in this area? What resources?
- What stops you from doing more health promotion in your practice?
- What, if anything, would help you improve in this area?

Perceived value of specific educational strategies

- What reactions are there to audit, written materials, academic detailing, prompt/reminder systems, and patient education materials as interventions to improve health promotion for older people? What else would be useful?

for consultation. Preventive activities and health promotion were not felt to fit this description.

> *"You have 10–15 minutes to do all that sort of preventive stuff ... and it's a huge amount of work, and personally I don't know whether I should be doing it."*

> *"But it's silly that something that seems so reasonable should still be, from a government point of view so suspicious, so dubious ..."*

Some GPs believed that too many long consultations for prevention would bring them to the notice of the Health Insurance Commission.

Ageism

Some GPs perceived that older patients had negative attitudes about health promotion.

> *"... my concern is that I don't think that they value it (health promotion) very highly."*

These GPs felt that older people would be unnecessarily bothered by vigorous health promotional practice, seeing it as an intrusion. Some believed that older people had a poor self image, seeing themselves as being "old" and having had enough of preventive procedures.

> *"...problem is with all this prevention, the patient is going to wonder where on earth we are all coming from."*

A perception that society devalued older people emerged, with one of the GPs using the phrase *"negative societal construct of the aged"*. This perception brought with it expectations of doctors' behaviour (e.g., that GPs should spend more time with younger, rather than older age groups) that GPs felt were difficult to challenge.

Structural limitations

Some GPs believed that they were not seen as "good health promoters" for older patients, and the role of Divisions of General Practice, other health professionals, government bodies and the media in facilitating delivery of health promotion to older people was repeatedly outlined. Limitations in the availability of such services as physiotherapy, occupational therapy and transport were seen as barriers to health promotion, with poorer patients being most disadvantaged by these constraints.

Practice organisation

Keeping adequate records and using summary sheets, medication lists and prevention check-lists were reported to assist in health promotion. The main difficulties with these methods were lack of time and the need for self discipline.

> *"There's always so many pressures on us all the time; so and so rings up wanting to know about this and that, and there's people to see and it's always your records that take second place."*

GPs' responses to health promotion — interventional and educational strategies (Box 3)

For many GPs the initial response to new resources shown during these discussion groups was that they would add to their workload rather than be helpful. Previous programs presented to the GPs as aids for health promotion were thought to be designed and distributed with the needs of the patient and health promotion agency in mind, rather than the needs of the GP.

> *"I think it'd be useful, it depends what was in it and whether I felt it was ... applicable to me and my situation and to the old people that come in. In other words, is it something we are going to use?"*

Some GPs believed they would be much more likely to adopt a strategy if it was designed to meet their needs and also saved them time.

> *"I think I'd need an incentive to do it ... like when they send a survey in the mail ... if it was to help someone out, I'd probably do it, but if it was for my own benefit, I'd say: 'Yes, I will do that.'"*

> *"You've got to put a carrot in there to get me to do it, see. So we'll give you a resource kit ... a list of all the facilities that have anything to do with geriatrics in your area ... then I'm thinking, now there is something I can use, that's good ... so it becomes carrots and rewards."*

These attitudes were partly a result of

2: GPs' concepts of health promotion

Themes emerging from focus groups discussions by general practitioners (GPs) about health promotion for older people. The GPs' perceived practice of health promotion paralleled the concepts they held.

View of health promotion	Practice of health promotion
Abstract concept	Integrated approach
All good medical care is health promotion	*All consultations*
Broad concept	Opportunistic approach
A broad range of activities	*When I have time*
Concrete concept	Separated approach
Specific preventive activities, e.g., Pap smear	*Difficult in everyday practice*

3: GPs' reactions to educational strategies

Favourable responses (most comments in favour)

- A prompt or reminder card designed to be attached to the record of older patients' files before the consultation was shown to the group and generated a positive response.
- Audit of patient records or consecutive consultations was felt to be a powerful learning tool, with feedback seen as essential to its effectiveness.
- Resource directories of activities and services for older people were seen to be useful, and an incentive for participation.
- Seminars were felt to be an acceptable learning format for this topic.

Intermediate responses (divergent opinions expressed)

- Reading material (booklets) was shown to the groups. Many liked the format and content but felt it was difficult to find the time for such activities. All GPs expressed difficulty in keeping up with the desired amount of reading, feeling inundated and overwhelmed.
  "When do you find the time to stop and read all this?"

Unfavourable responses (most comments not in favour)

- Academic detailing, or educational visiting, sparked vigorous debate in all groups. Many GPs felt imposed upon by detailer's visiting. Others would prefer a professional, preferably a GP, to visit rather than a health promotion expert or a nurse.
- Patient pamphlets were not popular. While some GPs believed them to be a good source of information, others felt that the content was sometimes inaccurate. Updating was a constant problem, and the different paper sizes made them both difficult to store and untidy.

GPs being inundated with materials and resources. Many commented that they usually did not have the opportunity to assess all the materials, and acknowledged that they probably missed out on some information that would be helpful.

A small number of the GPs were not receptive to any strategy offered. They would not read educational material or participate in audit programs and felt that health promotion was not important for older people — "nothing would help". For the remainder, having a range of techniques was important, allowing them to select the methods best suited to them and their practice.

Discussion

In general, the GPs participating in our study felt that health promotion for older patients was an important part of their practice, and reported a comprehensive range of activities. In this convenience sample, more doctors who graduated during the 1980s[13] and more university-affiliated GPs are represented than would be expected in a random sample, although the sex distribution is similar to that of all Victorian GPs. While a larger study with a more representative group of GPs is needed to establish the extent of these views, a broad range of themes was identified. Indeed, focus groups provide valuable information necessary to explore issues in depth, and can provide the content for surveys to be used with larger representative samples.[14]

GPs' views of health promotion

Our thematic analysis showed views of health promotion ranging across a spectrum from an abstract concept — widely integrated into practice — similar to the findings of Saltman and Therin,[6] to more concrete concepts, separating health promotion from usual practice.

GPs' attitudes to older people

Some ageist attitudes were expressed during the focus group discussions. We were unable to find other published reports of ageist attitudes in Australian GPs, but older United States doctors from all specialties had more negative attitudes towards older people than did younger doctors.[7] The group with negative attitudes needs to be considered when GP interventions for older patients are planned.

Emphasising positive experiences with older people during medical training may affect future doctors' attitudes.

Perceived barriers to practice of health promotion

Although GPs believe it is their responsibility to practise health promotion,[15-17] they doubt their success in altering patient behaviours,[18] and are reluctant to raise the subject[3] even though patients may want them to.[19,20] Our study partly agrees with one of these surveys,[16] in that we found that health promotion is important to GPs, but we also found that concepts of health promotion and attitudes towards its practice vary. Regardless of their concept of health promotion, GPs in our study voiced common barriers to its practice, the main ones being time and reimbursement issues — identical to the barriers identified in Bonevski's review.[21]

In the most recent edition of the *Guidelines for preventive activities in general practice*,[22] the Royal Australian College of General Practitioners has reiterated the acceptability of preventive practice for Medicare reimbursement. This advice does not seem to have changed the views of these GPs about the appropriateness of prevention. As guidelines are considered to have a low impact on everyday practice,[23] other strategies are needed to increase health promotion.

GPs' responses to health promotion interventions/educational strategies

In reviews of 50 trials of continuing medical education (CME) interventions, combinations of educational strategies were most successful in altering doctors' behaviour.[24,25] Academic detailing was found to be an effective intervention in Australian general practice[26,27] but was not popular with the participants of our study. They favoured audit (a process which has been shown to improve recording of risk factors and management of asthma[28]) and reminder

or prompt cards, similar to the health summary cards favoured for preventive care by Queensland GPs, in focus groups.[29] Some strategies that drew favourable responses in our study, such as seminar format CME (Box 3), are not regarded as effective.[25] While the views of GPs need to be taken into account, the effectiveness of strategies, as well as their acceptability, should be considered when intervention programs are designed.

When our study participants were presented with a range of possible strategies, their receptivity towards the idea of a "new program" varied. Many felt that there were too many programs being offered and that they were approaching "burnout" with clinical workloads and demands for change in practice structure. This is a concern, as the potential for improved practice and its impact on population health can be realised only by high rates of GP participation in preventive programs. Success in GP recruitment for intervention studies designed specifically for general practice varies. For example, 68% of GPs approached for a project in rural Australia[30] chose to participate, while only 29% of GPs in a metropolitan area[31] enrolled in another project. The importance of response bias in research is well documented[32] and can be avoided only if participation rates are adequate. Appropriate choice and range of resource methods and relevance to each individual GP's ease of practice, as well as to patient well-being, may promote GP participation in proposed programs.

Conclusions

The GPs who participated in this study expressed a range of attitudes toward older people and differed in their concepts of health promotion, how they practised it, how relevant they believed it to be for older people, and which educational strategies they favoured. Regardless of their beliefs, common barriers to the provision of preventive care were identified, suggesting that while impediments to increasing health promotion may be lessened by modifying GPs' beliefs and attitudes, focusing on specific barriers, such as time and reimbursement, may be a more pragmatic approach.

Understanding the way resource materials will be received by GPs, and presenting them so they are perceived as saving time and helping in the GPs' practice should increase participation in and the success of future projects.

Planners of programs aimed at increasing health promotion delivery to older people can expect to encounter some GPs with ageist attitudes and a negative approach to educational interventions. Further research could examine a larger and more representative sample of GPs to more accurately gauge their attitudes towards health promotion, as well as the relationship between these attitudes and the actual delivery of health promotion to older people. In the meantime, the results of our study have been used to develop an educational intervention for GPs about health promotion and older people.

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SPECIAL SERIES

MODELS OF GERIATRICS PRACTICE

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The CARE Program: A Nurse-Managed Collaborative Outpatient Program to Improve Function of Frail Older People

Lois K. Evans, DNSc, RN, FAAN, Johanna Yurkow, RN, MSN, and Eugenia L. Siegler, MD, FACP

BACKGROUND AND OBJECTIVES: Frail older adults are especially vulnerable in a health system that is fragmented and fails to focus on preservation or restoration of function. The School of Nursing at the University of Pennsylvania, together with the School of Medicine and the Hospital of the University of Pennsylvania, established the Collaborative Assessment and Rehabilitation for Elders (CARE) Program to meet the needs of this population. We used the British Day Hospital as a model because it provides a comprehensive approach to care and a bridge between acute, home-based, and institutional long-term care. We have designed our program to provide innovative, interdisciplinary care as well as to be reimbursable under current and future payment structures. This nurse-managed, collaborative practice seeks to maximize independent functioning, promote health, and enhance quality of life for chronically ill, frail older adults living in the community whose needs are left unmet by existing services. The program was certified as a Comprehensive Outpatient Rehabilitation Facility (CORF) in December 1993 to maximize reimbursement of services through Medicare and other third party payers. With a Gerontological Nurse Practitioner as care manager, clients receive an intensive, individualized, time-limited program of nursing, rehabilitation, mental health, social, and medical services in one setting several days each week. Additional geriatric services, such as primary care, are available in the same location when needed.

SETTING: The program is housed in renovated space devoted to the care of older people. The academic and clinical offices of the University of Pennsylvania's nursing and medical gerontologic and geriatric faculty are in the same building.

PARTICIPANTS: We have targeted those persons older than age 65 who have complex health problems and are living at home. Individuals must need multiple services, including at least one rehabilitation therapy, and they must be unsuitable for inpatient rehabilitation.

DESCRIPTION OF THE POPULATION: In its first 8 months of operation, the program received 97 referrals and admitted 53 clients. Clients were, on average, 78 years of age. Over three-fourths (77%) were women and 58% were black. The average stay in the program was 6 weeks. FIM scores, which improved a mean of 2.4 points, were found to lack sensitivity to the functional improvements achieved by clients.

CONCLUSION: Under existing Medicare and third party reimbursement policies, it is feasible to establish a nurse-managed comprehensive outpatient rehabilitation program designed to meet the needs of frail older persons. Preliminary data support the beneficial effects of the program as well as the economic feasibility of this approach. J Am Geriatr Soc 43:1155–1160, 1995.

Maintaining the health of frail community-dwelling older people is a complex task and involves meeting any of a combination of nursing, medical, rehabilitative, mental health, social, or other needs. A series of falls, the flu, or even a brief hospital stay can severely reduce functioning and cascade into rapidly declining health status. Attention to the rehabilitative needs of this population is essential if they are to be maintained in the community. Further, coordination of social, health, and rehabilitative services is imperative if further fragmentation of care is to be avoided. Although outpatient and home rehabilitative services are available to individuals with functional impairments, an exclusive focus on rehabilitation may leave other problems unaddressed or poorly integrated. Moreover, those who live in underserved, urban areas often lack access to even the most basic rehabilitative services in the home.

The British healthcare system has recognized the need for broad-based interdisciplinary health care for older adults. The day hospital, an outpatient facility that provides intermittent comprehensive care to community-dwelling older people, plays a pivotal role in providing continuity between ambulatory/home care, acute, and long-term care services. The British day hospital serves as a model for one component

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Address correspondence to Lois K. Evans, DNSc, RN, FAAN, The CARE Program, Ralston-Penn Center, 3615 Chestnut St., Philadelphia, PA 19104-2676.

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of a comprehensive care system that would benefit frail older persons in the United States.

Although the literature is equivocal in its support for day hospitals,[1-8] only some of these studies have examined day hospitals that have a strong rehabilitation component.[2-6] It has been suggested that for certain subpopulations, the day hospital would be a cost-effective approach to care delivery.[1] To this end, we sought to create a program that would provide care to a group of underserved older people in West Philadelphia. In addition, we sought to explore the feasibility of developing and maintaining a large-scale, interdisciplinary, clinical program to be managed by nurse practitioners, thereby demonstrating the kind of self-supporting clinical service that a school of nursing could implement as part of its academic practice in collaboration with other components of a medical center. The CARE program (Collaborative Assessment and Rehabilitation for Elders) has been operational since October 1993.

PROGRAM DESCRIPTION

Program Structure

The CARE Program is sponsored by the University of Pennsylvania School of Nursing (SON) in collaboration with the School of Medicine (SOM) and the Hospital of the University of Pennsylvania (HUP). The Executive Director is a standing faculty member of the SON. Overall clinical services and operations are managed by a masters-prepared gerontologic nurse practitioner (GNP). Clinical staff and faculty from the relevant rehabilitation departments in the hospital, three departments in the SOM, and the SON form an interdisciplinary team, directed by the GNP, that provides care on a day-to-day basis. For each client, a GNP also serves as care manager, coordinating, monitoring, and providing care in close collaboration with team members as well as with the medical director and the client's own primary care provider. Thus, collaboration occurs at three levels: institution (schools and departments), interdisciplinary team, and GNP/physician.

As an outpatient interdisciplinary service designed for community-dwelling, chronically ill older adults, The CARE Program is designed for those who need more than simple outpatient rehabilitative services and who are not appropriate candidates for inpatient rehabilitation. It is part of the Ralston-Penn Center (RPC), which is housed in the Ralston House, an historic, Victorian, former residential home for older women that has since been converted to office and clinical space devoted largely to the needs of older people. The University of Pennsylvania's Institute on Aging and academic offices of the Division of Geriatric Medicine, the Program in Geriatric Psychiatry, and the Gerontological Nursing Practices, in addition to some offices in the Department of Rehabilitation Medicine, are housed at Ralston House. Other clinical programs of RPC include the comprehensive geriatric assessment clinic, mood and memory disorders clinic, geriatric primary care clinic, the gerontological nursing consultation service, and the nurse-managed continence program.

The CARE Program's clinical space consists of one room and is located in the same corridor as the geriatric clinic. The room is partitioned into office space, which can be used for physical examinations and treatment, private interviews, family meetings, and speech therapy and counselling, as well as a reception area, a rest area, occupational therapy (OT) space, and physical therapy (PT) space (See Figure 1). Toilets accessible to the disabled are adjacent to the room, and the administrative offices are located elsewhere in the building. A comfortable, homey environment is achieved through liberal use of living plants, colorful curtains and screens, recliner chairs, large windows, and antique design features.

The program's physical proximity to the geriatric clinic allows the Care Program to use preexisting technical services such as phlebotomy and ECG, to consult physicians on an emergency basis as necessary, and to schedule CARE program services on the same day as primary care services when appropriate. Although each clinical program in the RPC operates independently, consultations and referrals between programs occur on both formal and informal bases. Patients are often enrolled simultaneously in more than one program. Coordination of services and communication are enhanced by physical proximity as well as through interdisciplinary committees and a weekly patient care conference attended by interdisciplinary staff from all programs. The services that the CARE Program offers are listed in Table 1. The program readily accommodates an active caseload of 22 to 25 clients, with 6 to 8 attending any half-day session.

Table 2 lists the types of personnel and current FTE. The main source of reimbursement is through Medicare and other third party payers. The CARE Program is certified as a CORF (Comprehensive Outpatient Rehabilitation Facility)[9] and can charge for rehabilitative, mental health, social work, and rehabilitative nursing services. Physician, podiatric, and dietitian services (e.g., clinical encounters) occur outside the CORF structure and are billed through the Clinical Practices of the University of Pennsylvania or HUP, as appropriate.

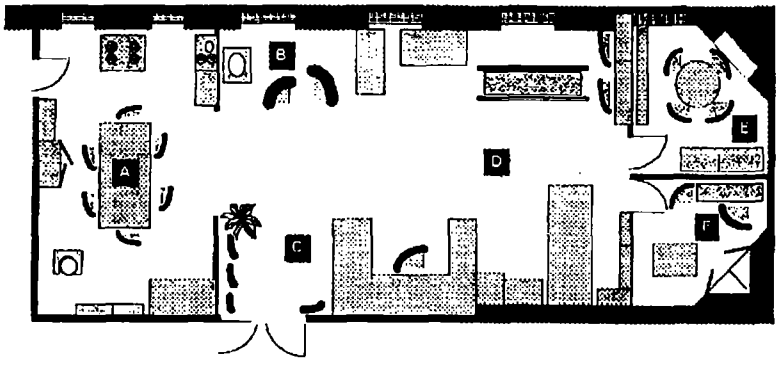

Figure 1. Layout of the CARE Program clinical area. A: Occupational Therapy; B: Rest Area; C: Reception Area; D: Physical Therapy; E: Conference Room; F: Nursing.

Table 1. Assessments and Services Available

Nursing
Care management
Mental health and family therapy
Physical therapy
Occupational therapy
Social work
Speech-language pathology
Primary care*
Medical consultation
Nutritional counselling
Blood and urine laboratory tests*
Physiatric consultation
Orthotics/Prosthetics
Podiatry*
Continence

* Provided in the adjoining Ralston-Penn geriatric clinic.

Table 2. Personnel

Provider	FTE
Executive Director (Nursing Faculty)	0.4
Director of Clinical Services (GNP)	0.5
Care manager/Gerontologic Nurse Practitioner	1.5
Medical Director (Geriatrician)	0.2
Mental Health Clinical Nurse Specialist	0.4
Physical Therapist	1.0
Physical Therapy Aide	1.0
Occupational Therapist	1.0
Speech-Language Pathologist	0.1
Social Worker	0.5
Consultant physiatrist	0.1
Business manager	1.0
Program assistant	1.0
Administrative support	2.0
TOTAL FTE	**10.7**

Process of Care Delivery

We sought to reach a group of frail older people who are not already served by existing inpatient and outpatient rehabilitation programs and who would benefit from a more intensive program than could be provided in the home. Admission criteria include the following: (1) Age greater than 65 (exceptions can be made on a case-by-case basis); (2) Having need for at least one rehabilitation therapy (e.g., physical, occupational, or speech) and one other service (e.g., nursing, mental health); (3) Neither suitable for inpatient rehabilitation, nor easily managed in ordinary outpatient rehabilitation clinics; and (4) Living at home, either alone or with a caregiver.

Clients are referred by a physician who usually is, but need not be, the primary care provider. A GNP does the initial screening histories and modified physical examinations, assesses health and self-care status, and serves as care manager for each client from admission through discharge. The medical director, a collaborating physician, meets weekly with the GNPs to discuss routine medical care issues and is available by beeper to consult on urgent medical issues. In addition, the medical director signs all treatment plans and, with the director of clinical services, approves each client's admission to the program. The physiatrist is consulted as needed.

All clients see the GNP, physical therapist, and occupational therapist as part of their initial assessments. Table 3 lists the assessment tools used in the evaluations of clients. In addition to general clinical assessments to determine needs for service, these instruments were selected to provide more objective baseline measures of status in areas commonly expected to respond to intervention in a program such as ours. Further, the instruments depict initial status in functional areas known to affect client response to rehabilitative care (e.g., depression) and help identify areas for further evaluation. The instruments include measures of affect, cognitive function, ADL/IADL function, physical and mental health, and sensory and nutritional status. Initial assessment is ordinarily completed in one to two half-day sessions. Based on the referral, the initial findings, and the client's own goals, the team at its weekly meeting recommends appropriate services and creates a plan of care that the medical director, care manager, and client sign. The scope of any client's personal treatment program, then, is based on outcome of comprehensive assessment and determination of reasonable goals.

Clients ordinarily come to the program 2 or 3 half days a week for a period of 2 to 9 weeks, depending on the identified needs, goals, and the plan of care. Each client's program is individualized according to need acuity and degree of frailty; the weekly schedule is determined by the intensity of PT and OT regimens. Typically, a client arrives at either 9 AM or 1 PM and is scheduled to see three different clinicians in each half-day session, e.g., PT, OT, and GNP. Clinician sessions range from 30 to 60 minutes each, depending on the client's tolerance. Brief rest periods are available between clinician visits. In addition to receiving these services, clients and/or families may participate in weekly transition group sessions to help them prepare practically and emotionally for discharge. These sessions are co-led by the mental health clinical nurse specialist (CNS) and the social worker.

Collaboration among members of the interdisciplinary team is enhanced by the open design of the environment for service provision as well as formal weekly team treatment conferences. Team members can readily see a client's response to another therapist's interventions, and these observations can assist in assessment validation and treatment planning.

Table 3. Database

Functional Independence Measure[10]
Geriatric Depression Scale[11]
Hearing Handicap Inventory for the Elderly[12]
History and physical (brief)
Mini-mental State Exam[13]
Medical Outcomes Survey Short Form 36 (MOS-36)[14]
Nutrition Screening Initiative[15]

The GNP provides skilled nursing services and also serves as care manager, coordinating services that are part of the client's treatment plan and planning for services after discharge. The GNP typically sees the patient one to two times per week and is available to monitor health status changes or attend to urgent problems on a daily basis. Having a seasoned advanced practice nurse in this combined role is essential for this frail population, where early detection and intervention can make the critical difference between maintaining functional independence and hospitalization.

Coordination with all existing services is essential for client success in the program and to assure appropriate follow-up. Since the referring physician and the primary care physician are not always the same person, the primary care physician receives a copy of the initial plan of care as well as 60-day updates (when appropriate) and a discharge summary at the end of the treatment period. This information is also sent to the referring physician, based on his/her level of involvement in the client's care. When medical issues arise, the GNP phones the primary care physician either to convey information or to ask the physician's preference, for example, regarding medication management. The medical director's involvement in direct client care is limited to health status changes of sudden onset, for example chest pain, or to treat short-term acute episodes of illness such as upper respiratory infections. The medical director remains available to the GNP to provide guidance in managing more complicated medical situations.

Contact with social service agencies occurs in a similar manner. Many patients have existing care management services through community agencies or are receiving services through a home health agency. These services are identified early in the program by the GNP and contact is made to promote coordination, prevent service duplication, and determine gaps in service provision.

If a client needs access to primary geriatric or psychiatric care, an appointment may be arranged with a provider though the adjoining clinic at the client's discretion. Other professionals (e.g., podiatrist, orthotist, dietitian) come to the site as needed.

Costs of the Program

During the start-up phase, the PT and OT worked only part time, there was no program assistant, and only one GNP was on staff. After the first year of operation, the FTE of the medical director was decreased slightly (from 0.3 to 0.2 FTE) and the FTE of the speech-language pathologist was decreased from 0.25 to 0.1 (see Table 2 for current staffing levels).

Startup costs included (1) salary support; (2) a feasibility study; (3) consultants to design the business plan, assist with cost reporting, and help with the writing of policies necessary for meeting certification criteria as a Comprehensive Outpatient Rehabilitation Facility (CORF); (4) purchase of equipment and supplies; (5) installation of an OT kitchen; (6) partitioning and furnishing of offices and work areas, and (7) rent.

The CARE Program received considerable assistance in its start-up phase. The Robert Wood Johnson Foundation funded a feasibility study, and the William Penn Foundation partially supported the planning and initial start-up. In addition, the Hospital of the University of Pennsylvania donated some old rehabilitation equipment, and the Ralston House paid for renovations. Additional support has been obtained from the Pew Charitable Trust, the Killough Trust, the Esther Gowan Hood Foundation, and the Scholler Foundation.

Participants

In the first 8 months of operation, 97 clients were referred, 66 were evaluated, and 53 were admitted. Of those admitted, 77% were women, 58% were black, and the average age was 78 (range 59–91). Seventy-one percent were widowed, divorced, or never married, and 67% were living with a relative, mostly daughters. The average length of stay for the spring quarter of FY '94 was 6 weeks (range 2–9 weeks). Inasmuch as this quarter is most representative of program functioning after initial start-up, some descriptive data for the 21 clients discharged during this 3-month period will be described.

Seventy-one percent of these clients had an admitting rehabilitation diagnosis of osteoarthritis, and 19%, stroke. All had Medicare as primary insurance. More than 90% were referred by the RPC geriatric clinic and, after rehabilitation, returned to these health care providers for primary health care services. Transportation arrangements were provided by ambulance or van for 38% of the clients, with the remainder providing their own transportation.

Initial screening determined that 57% of clients were at high nutritional risk.[15] These clients received counseling either by nurse practitioners or registered dietitians, depending on their needs. Eight of the 21 scored 11 or higher on the Geriatric Depression Scale (GDS)[11] and, following assessment by the mental health CNS, received psychiatric referral and/or counseling by the CNS.

Preliminary Functional Data

On admission, clients scored in the modified dependence range on the Functional Independence Measure (FIM)[10] (average per item score 5.5, range 2–6.9). Of the 21 clients discharged in the spring '94 quarter, scores for six (28.6) remained the same, and 15 (71.4%) showed improvement; the average overall improvement in score was 2.4 points. Nineteen clients had pre-post general measures of ambulation; six (32%) improved significantly in the amount of distance travelled, and 13 (68%) maintained independent states with or without assistive devices.

In addition to these descriptive data, we have made some general observations. Although clients clearly benefit from the program in terms of increased safety, diminished pain, and improved ambulation distances, the FIM[10] is not sensitive enough to pick up these data; in addition, when older people are given assistive devices, some of the components of their FIM score may decrease. Because of the lack of sensitivity of the FIM for frail outpatient populations, we are exploring the utility of Granger's General Assessment of Functional Ability scale (available from the author) in our population. Alternatively, we are developing and testing an extension to the FIM to measure safety awareness, pain, and endurance.

DISCUSSION

Problems and Limitations

The CARE Program faces and has faced a number of obstacles. The first was the establishment of a nurse-managed practice with the cooperation of the Medical Center. This required 3 years of negotiation and considerable re-education

about nursing of medical center personnel. The establishment of the program served as a lesson in overcoming institutional barriers to collaboration. This process is described in detail elsewhere.[16]

The second major obstacle is financial. Breaking even requires a minimum of 250 billable units (15-minute intervals) a week, a considerable volume for the space, personnel, and type of client population served. Although being certified as a CORF makes the CARE Program eligible for Medicare and other third party reimbursement, the amount of time and attention required by frail older people makes care far less efficient than that in work-hardening programs (those that rehabilitate individuals from an occupational injury) or day hospitals that concentrate on one type of problem (e.g., psychiatric). Limitations on reimbursement for social work, care management, and mental health services, essential components of care for this population, present further challenges. We are still accruing the necessary experience to determine the best case mix for the maximum efficiency and effectiveness.

As a CORF, the CARE Program's services are reimbursed on a reasonable cost basis. Overhead expenses for administration, capital equipment, and so on are reimbursable aspects of the overall cost of operating the program and may be substantially recovered at the end of each fiscal year. Nursing, mental health, social work, and care management services, ordinarily not well reimbursed on a fee-for-service basis, are allowable costs in a CORF, and in this respect, the structure lends itself more easily to meeting comprehensively the multiple needs of the frail older adult.

The appropriateness, effectiveness, and efficiency of advanced practice nurses (i.e., masters degree-prepared nurse practitioners or clinical nurse specialists) in assessment, care management, and provision of rehabilitation and mental health services is well established.[17,18] Services for frail older people can be designed and managed appropriately by a team of interdisciplinary providers using a geriatrician as medical consultant.

Another challenge has been establishment of a steady referral stream. Early in the program, an abundance of referrals from our colleagues in the geriatric assessment and primary care clinics lulled us into postponing the development and nurturing of additional client sources. This ultimately resulted in a reduction in referrals and lower than desired census (average 18). We have since developed a strategy for systematizing and diversifying our referral stream, which includes working closely with hospital units that discharge large numbers of older adults, and increasing social work FTE to accommodate a heavier commitment to such a liaison. This has resulted in a higher patient acuity level, with resultant implications for case mix and volumes.

Other limitations include:

- *The need to avoid competing with pre-existing programs in the health system.* We have taken great pains to admit only those clients who would not be better served by standard outpatient PT and OT or by inpatient rehabilitation programs;
- *Transportation.* Our program is too small to justify the expense of its own van. Public paratransit systems are rarely able to ensure that clients will arrive or be picked up at prescribed times. Thus, we are dependent on family and ambulance transport. A private ambulance service that provides the bulk of our services also provides limited van service to less impaired clients;
- *Limited focus of size and services covered under CORF regulations.* Providing a more comprehensive range of services to approximate those in the British Day Hospital, including more intensive observational assessment, close surveillance during titration of medical treatment, and outpatient preparation for diagnostic procedures, will require further development, perhaps outside the CORF structure;
- *Space.* Expansion of the program is limited by lack of additional space in the current building;
- *Lack of adequate community-based services and programs for clients who have completed the CARE program.* Clients clearly benefit from socializing during their rehabilitation; we have found it difficult to find adequate senior center facilities that cater to the needs of physically frail but cognitively intact older adults.

Education and Research

As a component of the School of Nursing's academic practice, the CARE Program serves as a laboratory for education and research. The interdisciplinary, collaborative nature of the practice is ideal as a clinical site for students from many health professions. To date, students from gerontologic nurse practitioner, geropsychiatric clinical nurse specialist, nursing administration, and senior level BSN programs, as well as students in social work, OT, speech, and business, fellows in geriatric medicine and geriatric psychiatry, and physiatry residents have been involved. The richness of the client population and clinical dataset will be instrumental in evolving clinical and health services research. A pilot evaluation of outcomes is underway, and eligible and interested clients are being enrolled in a study regarding depressive symptoms in medically ill older persons. An electronic integrated management information system and health care record, in the planning stage, will facilitate exploration of nursing and health care questions in the care of older adults.

Generalizability

We believe that the nurse-managed aspect is generalizable to other systems, such as continence clinics, wellness centers, and other primary care services. The CORF structure, while potentially unwieldy for a broader range of services, has utility under the current reimbursement system and is one of the few mechanisms that recognizes nursing, an essential component of any service for frail older adults, as a covered charge. Clearly, the types of clients seen in our program are readily managed by advanced practice nurses with special expertise in gerontologic and mental health nursing. The concept of the day hospital for frail older adults is a natural fit for schools of nursing, especially those that are part of health science centers with divisions of geriatrics.

Directions for Further Innovations

Given the frailty of our client population, we are exploring the possibility of instituting a brief readmission, perhaps on an every 3 months basis, to determine whether participants experience a "booster effect" that might further stave off functional decline resulting in nursing home placement. We are seeking funding to explore expansion of services to respond to the limitation in CORF coverage described earlier. Finally, we see the CARE Program as one component of a

true continuum of care for older adults. Thus, we are exploring potential partnerships with existing and to-be-developed services that could round out the continuum in as seamless a model as possible. To this end, consideration of a PACE-type model (Program of All-Inclusive Care for the Elderly, based on the On-Lok model[19]) is underway.

CONCLUSIONS

We have created a nurse-managed day hospital that seeks to meet the needs of a subpopulation of community-dwelling older adults who have often "fallen through the cracks" because of gaps in services. To do so, we have utilized the special knowledge and skills of advanced practice gerontologic nurses who collaborate with a range of other disciplines to provide high quality team care for frail older adults. The program has afforded us the opportunity to begin examining the effectiveness and efficiency of nurse-managed models of health care, especially for vulnerable and underserved populations, and determining the means of achieving financial viability of such programs.

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Promoting autonomy and independence for older people within nursing practice: a literature review

Sue Davies Bsc Msc RGN RHV
Lecturer in Nursing, Department of Gerontological and Continuing Care Nursing

Sara Laker BA RGN
Research Assistant, School of Nursing and Midwifery

and Lorraine Ellis BA MSc RGN RNT
Research Associate, School of Nursing and Midwifery, University of Sheffield, Sheffield, England

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Promoting autonomy and independence for older people within nursing practice: a literature review

The principles of promoting autonomy and independence underpin many approaches to improving the quality of nursing care for older people in whatever setting, and are in line with wider developments in health care such as the Patient's Charter. However, these concepts require careful definition if nursing practices which might promote autonomy and independence are to be identified. Although the generalizability of the research-based literature in this field is limited by a focus upon older people in continuing-care settings, a review of the literature found a number of indicators associated with attempts to promote patient autonomy and independence. These were grouped into the following categories: systems of care delivery which promote comprehensive individualized assessment and multidisciplinary care planning; attempts to encourage patients/clients to participate in decisions about their care; patterns of communication which avoid exerting power and control over patients/clients and attempts to modify the environment to promote independence and minimize risk. It is suggested that the review identifies a number of principles for nursing practice which can be applied in a range of care settings in order to promote the autonomy and independence of older people.

Keywords: older people, autonomy, independence, nursing care

INTRODUCTION

The abstract nature of many of the concepts central to nursing practice presents nursing with major challenges in any attempts to develop a scientific knowledge base. Many of these abstractions defy adequate definition in spite of their familiarity within everyday language. Autonomy and independence are two such concepts and are currently the focus of a research project funded by the English National Board for Nursing, Midwifery and Health Visiting. The 2-year study aims to evaluate programmes of

Correspondence: Sue Davies, Samuel Fox House, Northern General Hospital, Herries Road, Sheffield S5 7AU, England.

nurse education in relation to the extent to which they enable nurses to promote the autonomy and independence of older people in their care.

The motivation for this paper arose from a need to define and operationalize these concepts and to consider, through a review of the literature, ways in which the nurse might promote autonomy and independence for the older person.

This review will outline some of the characteristics of autonomy and independence before considering why these concepts are of such significance to the nursing care of older people. Factors which appear to be associated with the promotion of patient/client autonomy and independence within nursing practice are then explored. The review concludes with some general principles for caregiving, appropriate to a range of settings, which may enable nurses to promote the autonomy and, where appropriate, the independence of older people in their care.

CHARACTERISTICS OF AUTONOMY, INDEPENDENCE AND DEPENDENCE

Autonomy

Any study of autonomy in old age requires a conceptual definition that is broadly applicable yet amenable to empirical validation (Horowitz *et al.* 1991). Unfortunately, definitional precision is rarely encountered within the literature and autonomy remains a widely used but loosely defined concept (Beauchamp & Childress 1989). One definition which appears to have value within the context of the nurse–patient/client relationship is formulated by Horowitz *et al.* (1991), who suggest that autonomy is:

> the exercise of self-determined, goal-oriented behaviour that is or can be potentially threatened or inhibited by a variety of circumstances, real or symbolic, intrinsic or external to the person.
>
> (Horowitz *et al.* 1991 p. 23)

Atkinson (1991) and Macmillan (1986) agree that autonomy is concerned with self-determination and the ability to make choices. Hertz (1993) suggests three defining attributes: voluntariness, individuality and self-direction. From these definitions it becomes apparent that the notion of autonomy is both multidimensional and context-dependent (Collopy 1988). Sciegaj & Capitman, for example (Sciegaj & Capitman 1994), propose that all individual autonomy is embedded in particular relationships and circumstances.

Collopy *et al.* (1991) make the important distinction between decisional autonomy (decision making) and executional autonomy (implementing decisions). The risk for nursing practice is that decisional autonomy can easily be denied when executional autonomy is diminished or lost. A second important distinction is between short- and long-term autonomy (Brown 1995, Collopy *et al.* 1991, Lindley 1988). For example, it may be considered ethical to compromise an individual's autonomy in the short term in order to promote their long-term autonomy. An example would be the administration of medication without a patient's consent if it were thought that the medication would restore the capacity for self-determination in the future.

A number of authors suggest that, in order to make an autonomous decision, an individual must be capable of rational thought and self-governance (see for example Hogstel 1991). Again there is a challenge here for nursing practice to recognize when an individual is capable of making autonomous decisions. Moreover, the need to balance the promotion of autonomy and independence with the need to minimize risk constitutes an important dilemma. Beauchamp & Childress (1989) go some way towards resolution in suggesting that although decisions are rarely *fully* informed or autonomous, none the less they can be *adequately* informed and autonomous.

Independence

Independence is frequently used as a synonym for autonomy. However, it is perhaps more appropriately viewed as one dimension or a contributing factor to personal autonomy. Independence is most frequently associated with an individual's level of physical functioning and ability to perform the activities of daily living unaided. Indeed, many older people equate their own level of health or wellness with their level of functional ability (McLymont *et al.* 1991). It would therefore seem appropriate for nurses to aim their interventions at maintaining or recovering the older person's optimal level of physical functioning.

It is of course possible, however, that the need to promote autonomy may conflict with the need to promote independence: people requiring care may *choose* to become more dependent. Autonomy and independence should therefore be viewed as separate but potentially overlapping goals of care.

Dependence

Our understanding of the concept of independence can perhaps be advanced by considering the notion of dependency, which has been described both as a continuum (Hockey & James 1993) and a relationship (Phillips 1984). The relationship usually implies a degree of inequality between the dependant and the depended upon (Bond & Bond 1987) and is characterized by loss of control on the one part and loss of personal freedom on the other. Walker (1982) identifies four dimensions: life-cycle dependency, physical and psychological dependency, political dependency and economic dependency. Older people requiring nursing care are frequently dependent in some or all these dimensions. However, this does not imply that they cannot make autonomous decisions in these areas.

AUTONOMY AND INDEPENDENCE: WHY ARE THESE IMPORTANT CONCEPTS FOR NURSING?

Within the context of the 'new nursing' (Salvage 1992, Pearson *et al.* 1988), enabling a patient or client to be as autonomous and independent as possible is seen as an integral part of nursing's therapeutic function. Clay (1986), for example, suggests that a caring environment is one offering individuals the opportunity to develop their own potential and the freedom to choose their own course of action.

As nursing moves away from a medical model of care towards a more biopyschosocial model of nursing, the patient's role is being redefined. Patients are now expected to take an active part in their care and to divulge essentially private information to enable the nurse to create an individual care plan which recognizes all the patient's needs. As a further consequence, patients are now held to be more responsible for their own health (May 1995, Tmobranski 1994, Salvage 1992). However, a number of commentators have questioned whether patients actually welcome this 'new role' and the 'new nursing' it involves (May 1995, Waterworth & Luker 1990).

Nonetheless, the emphasis within nursing practice upon developing individualized, patient-centred care is in line with wider developments within health care. The advent of consumerism within the British National Health Service (NHS) has introduced the notion of choice in health care, at least in theory (DoH 1991, 1993). Within the context of the Patient's Charter, for example (DoH 1992), older people in receipt of health services are afforded the right to certain standards of care.

Of particular relevance to the current discussion are the following standards:

- the right to be given a clear explanation of any treatment proposed, including any risks and any alternatives;
- respect for privacy, dignity and religious and cultural beliefs;
- arrangements to ensure everyone, including people with special needs, can use services;
- information to relatives and friends. (DoH 1992)

Patient's charter

Although the empirical basis of the Patient's Charter (DoH 1992) has not been clearly identified, there is some evidence to suggest that many of the principles embodied within it are of particular importance to older people. For example, there is evidence to support the notion that, for older people, a sense of being competent, autonomous and appreciated is basic to the experience of a good life (Nystrom & Segesten 1994, Oleson *et al.* 1994, Higgs *et al.* 1992). A study of nursing home residents' views of what constituted a healthy life identified three main conditions: acceptable function in daily life, positive self-esteem (related to a present experience of independence and autonomy) and experience of peace of mind (Nystrom & Andersson-Segesten 1990).

A further study in a similar setting (Oleson *et al.* 1994) used a phenomenological approach to compare nurses' and residents' perceptions of factors contributing to a good quality of life for older people. Analysis of semi-structured interviews with nine nurses and ten residents from three nursing homes in south-west England identified a number of themes which were common to both respondent groups. These were: individuality (concerned with the unique characteristics of residents), connectedness (referring to creating and maintaining relationships), professionalism and physical functioning. However, there were different emphases in nurses' and residents' responses: in particular, residents described their quality of life in terms of how successfully they were able to create meaning in their lives by effectively coping with and adapting to the age-related changes of increased dependence — a factor which was not described by the nurses. The authors conclude that the difference in perceptions between residents and staff may result in residents' needs not being met.

Higgs *et al.* (1992) investigated the effects of institutionalization for elderly patients on long-stay wards ($n=291$). Structured interviews focused upon the degree of choice which patients felt they had in relation to daily activities. Eighty per cent of those interviewed expressed satisfaction with their own level of personal autonomy. However, elderly patients may be more likely to express satisfaction than younger people for reasons of social desirability and fear of reprisals (Breemhaar *et al.* 1990), and this should be taken into account. Perhaps a more significant finding of the Higgs *et al.* study was that 46% of those interviewed considered that loss of independence was the worst thing about being admitted to a long-term care facility.

Personality type

McWilliam *et al.* (1994) highlight the contribution of personal characteristics to the achievement of personal autonomy. In a study of patients and carers ($n=21$ and $n=139$ respectively), it was found that those with a positive 'mindset' did not have threatened autonomy even when cared for in a paternalistic manner. This suggests the need to make an assessment of an individual's personality type in considering how best to promote his or her autonomy and independence.

Despite the assertion by many older people themselves that autonomy and independence are important to a good quality of life, nurses working in institutional settings frequently observe passivity and dependence among older people in their care (Barder *et al.* 1994). One theory used

to explain this apparent dissonance is the learned helplessness theory (Seligman 1975), which proposes that a condition of helplessness develops when individuals experience uncontrollable life events.

There is a growing body of evidence to suggest that nurses themselves can contribute to dependent behaviours in older people (Waters 1994, Miller 1985, Baltes *et al.* 1983, Avorn & Langer 1982). Avorn & Langer (1982), for example, present evidence to suggest that nurses inadvertently cause dependence in elderly people by performing helping activity beyond their physical requirements. The message conveyed to the patients is that they are themselves incapable of performing the task.

There is some evidence to suggest that the desire for control over health care decisions is lower among elderly people when compared with younger adults (Le Sage *et al.* 1989). However, Rodin (1986) asserts that the needs of older people for self-determination may be fulfilled by allowing them to choose *not* to exercise control. Kenny (1990) highlights the significance of the social exchange theory of ageing in relation to patient autonomy and participation which may explain why older people are more reluctant to collaborate in decisions about their care (Dowd 1975). This suggests a possible educational role for nurses in encouraging older people to recognize the contribution which they make both within relationships and within societal groups.

HOW CAN NURSES PROMOTE PATIENT/CLIENT AUTONOMY AND INDEPENDENCE?

The most appropriate nursing actions to enable an older patient or client to be as autonomous and independent as possible will to some extent be context-dependent (Collopy 1988): what is appropriate in an acute hospital ward may differ from what is appropriate in a continuing-care setting. Moreover, the vagueness of concepts such as autonomy and independence within the literature hampers attempts at operationalization.

Even where broad concepts such as autonomy have been broken down into more precise dimensions, for example maintaining individuality and respecting dignity (Willcocks *et al.* 1987, Booth 1985), these dimensions remain at the abstract level and require the identification of more objective practice indicators in order to be meaningful (Cilloran *et al.* 1994). For example, one indicator of attempts to promote patient autonomy might be seen in the degree of choice offered to patients in relation to various aspects of care, such as having a bath, eating meals and going to the toilet. The provision of information to patients before and throughout an activity might be seen as another objective indicator of attempts to promote self-determination.

Upon reviewing empirical studies which have attempted to measure the quality of nursing care for older people in a range of care settings, a number of these more objective indicators were found to recur repeatedly. These included:

- implementation of systems of care delivery which promote comprehensive individualized assessment and multidisciplinary care planning;
- attempts to encourage patients/clients to participate in decisions about their care;
- patterns of communication which avoid exerting power and control over patients/clients;
- attempts to modify the environment to promote autonomy and independence and minimize risk.

The remainder of this paper will be devoted to a more detailed consideration of these dimensions. The review is by no means comprehensive, but aims to provide some indicators for nursing practice which might enable nurses to promote autonomy and independence appropriately in their work with older people.

Systems of care delivery which promote comprehensive individualized assessment

There is a growing body of evidence to suggest that the way in which nurses organize their care can affect patient outcomes relating to autonomy and independence (Faucett *et al.* 1990, Naqvi & Wilson 1988). In particular, an individualized approach to the delivery of nursing care has been associated with the maintenance of independence for older patients in hospital for more than 1 month (Miller 1985). In an observational study of nurse–patient interaction on wards practising primary, team and functional nursing, Thomas (1994) found that regardless of staff grade nursing staff in wards practising primary nursing gave patients more choice, offered more explanations about their care and spent more time seeking feedback from patients.

Wade (1983) identifies four different models of long-term care based upon interviews with older people and care staff in private nursing homes and hospital geriatric units. These models, termed supportive, protective, controlled and restrained, were derived from a consideration of two dimensions of care: person versus task-centred and open versus closed (see Figure 1). The author advocates the supportive model of care for older people in continuing care settings, characterized by consultation and involvement of elderly people in the care regime, involvement of visitors including relatives, volunteers and children, and a breaking down of barriers between the institution and the wider community.

A number of authors have described how use of a nursing model has helped them to work more collaboratively with patients and their families. Bowles *et al.* (1995) adapted aspects of Neuman's model and Orem's model to develop the assessment documentation within a rehabilitation unit for older people, highlighting improved

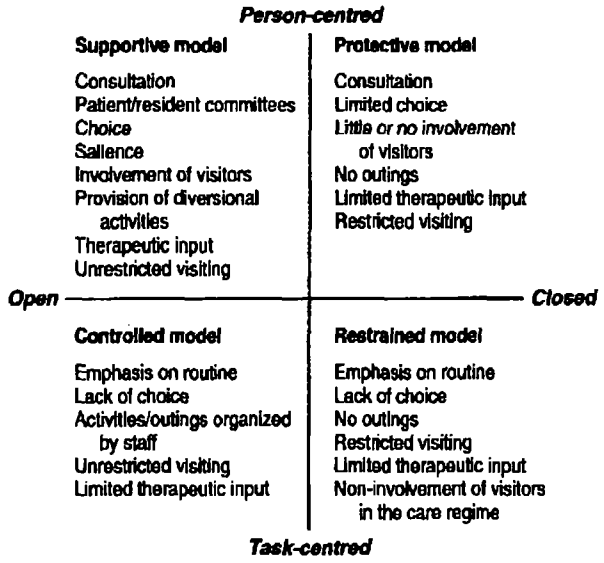

Figure 1 Typology of models of care delivery (Wade 1983).

communication with families as a result. Kenny (1990) proposes the use of Imogene King's model of nursing which advocates greater patient participation through mutual goal-setting, keener awareness of the patient's perceptions and the establishment of an equal, reciprocal and collaborative relationship between nurse and client. However, these findings are based largely upon subjective opinion and personal experience and should perhaps be interpreted with caution. Certainly, any relationship between the use of a particular nursing model and the promotion of patient autonomy and independence has yet to be established empirically.

Mention should be made of the potential for effective teamwork on the part of the multidisciplinary team to contribute to patient autonomy and independence. Nurse-led team care, where a named nurse coordinates the care of individual patients, has been evaluated in a range of settings providing care for older people (Griffiths & Evans 1995, Davies 1994, Pearson *et al.* 1988). Taken collectively, findings suggest that individual patients' needs are more likely to be taken into account within this particular model of care delivery. Contrarily, there is some evidence to suggest that where there are conflicting professional perspectives on an individual patient's needs and appropriate interventions, this may act as a barrier to patient autonomy by limiting patient participation and reducing continuity of care (Reed 1994, Evers 1981, Webb & Hobdell 1980).

Attempts to encourage patients/clients to participate in decisions about their care

During the past decade, there has been an increasing emphasis on patient involvement in care (Trnobranski 1994). This accords with the current political emphasis on patients as consumers of health care (DoH 1992), but also finds a rationale in a growing body of research evidence to suggest that active patient participation leads to improved patient outcomes and better patient adjustment (Horsley 1983, Wilson-Barnett & Fordham 1983).

Like autonomy, the notion of patient participation involves a number of dimensions including collaboration, partnership and involvement (Brearley 1990). Brownlea (1987) provides the following definition:

> participation means getting involved or being allowed to become involved in a decision-making process or the delivery of a service or the evaluation of a service or even simply to become one of a number of people consulted on an issue or matter.
>
> (Brownlea 1987 p. 605)

Brearley (1990) highlights the important contribution of informed consent, patient teaching and the provision of relevant information. However, the relationship between patient participation and patient autonomy is not clear cut. In particular, the issue of choice in relation to participation requires further study as the limited empirical work in this area is largely exploratory and inconclusive.

Waterworth & Luker (1990) report a qualitative study to identify how patients perceived being involved in decisions about their care. Informal interviews were carried out with a convenience sample of 12 patients on three medical wards within one hospital. Unfortunately, the age range of the patients interviewed is not stated. One major theme emerged from the data: that of 'toeing the line'. The data suggested that some patients are more concerned about 'doing what is right' and about pleasing the nurse than about participating in decisions concerning care. The authors contend that, by adopting practices which encourage patient involvement, nurses may unwittingly be coercing patients to comply.

The need to ensure that attempts to involve patients in decision-making are based upon an individualized assessment of need are self-apparent. On the whole, research into the area of patient participation has failed to take into account factors such as educational background, character, gender, age and diagnosis — factors which may have an effect on whether a patient wishes to be involved.

It has been suggested that involvement in decision-making assumes rationality and capability (Macmillan 1994). Biley (1992) explored the relationship between capability and autonomy in interviews with eight surgical patients ranging in age from 21 to 75. Thematic analysis identified three types of situation that affect patient choice and participation in decision making about their nursing care. These were: 'If I'm well enough', 'If I know enough' and 'If I can'. Patients were more concerned with less technical information such as medication and activities of daily living when very ill and there was some evidence that when patients were acutely ill they were willing to

relinquish control to the nurse. Although this study involved a small sample and categories did not reach saturation, the report does provide some indication that patients' desire to participate in decision about their care will be affected by a number of factors, not all of which are within the nurse's control. Biley's study also suggests that patients can benefit from being in control of what might amount to only a small aspect of their care in an environment where they essentially lack control.

An action research project reported by Sheppard (1994) also lends weight to the importance of involving patients in their care and identifies specific strategies through which patients might be encouraged to participate. Interviews with older people following discharge identified three key areas where changes were needed: the provision of information to patients, continuity of care and empowerment of patients to allow them to be critical. Subsequent interventions included the establishment of a patient forum, adoption of a non-uniform policy and the development of an information video to be shown to patients and new staff.

Patterns of communication which avoid exerting power and control over patients/clients

A wealth of research has suggested that interactions between nurses and older patients are frequently short, initiated by the nurse and largely task-orientated (Armstrong-Esther *et al.* 1994, Seers 1986, Wells 1980). Moreover, in a wide-ranging review, Lanceley (1985) highlights the potential for nurses to use controlling language in the rehabilitation of older people and argues that relations between nurses and older patients are characterized by opposition between those who have power and those who are subordinate to that power. Use of the patient's Christian name, pluralization of the patient as 'we', use of 'must' and 'ought' and reference to the patient as a passive object are highlighted as examples of controlling language. In support of this position, Kenny (1990) suggests that verbal interaction is:

> a major avenue for social control on a large scale and inter-personal dominance on a small scale.
>
> (Kenny 1990 p. 571)

However, the use of language may also be a mechanism for attempting to protect an older person's human rights (Block & Simnott 1979), for example by ensuring that language used in care delivery is acceptable to the older person and respectful of their cultural beliefs and practices (Phillips *et al.* 1990).

Based upon an observational study, Thomas (1994) identified categories of talk in an attempt to measure the quality of interaction between nurses and elderly patients. Thomas suggests that categories such as giving patients choice, offering explanations and encouraging feedback are indicative of a view of a patient as an individual with inter-related needs, and that these strategies can be facilitated by a one-to-one relationship between nurse and patient.

Davies (1992) also perceived a relationship between the use of verbal strategies such as offering choice, explanation of actions and eliciting feedback and the success (or otherwise) of a verbal exchange for elderly patients in a continuing-care unit. This study used an exploratory observational technique with a small sample (twelve nurses and eight patients) in one setting. The findings are therefore tentative but, it is suggested, would merit further investigation.

Marck (1990) identifies the concept 'therapeutic reciprocity' as one approach to considering the nature of nurse–patient interaction. It is argued that therapeutic reciprocity is based upon a genuine exchange of feelings, thoughts and experiences which lead to the creation of shared meaning and understanding. In practice, this could involve a nurse sharing information about her or his life outside work, or letting the patient know that she or he (the nurse) gains from the relationship with the patient.

Nolan & Grant (1993), however, highlight the difficulties of establishing therapeutic reciprocity with continuing-care patients who may have limited abilities to share thoughts and feelings, and suggest that these difficulties contribute to the tendency to develop custodial relationships in such settings. Lack of reciprocity is also highlighted as a factor contributing to feelings of inferiority among nursing home residents (Nystrom & Segesten 1994). Davies (1992) identified 'giving of self' as one category of interaction that appeared to be associated with successful exchanges between nurses and older patients in receipt of continuing care. The potential for nurse education to enable nurses to establish relationships with older people that incorporate a degree of reciprocity has yet to be established.

Attempts to modify the environment to promote autonomy and independence and minimize risk

Characteristics of the total institution first identified by Goffman (1961) have since been reported in a range of studies investigating the quality of nursing care for older people (Reed 1994, Waters 1994, Evers 1981, Baker 1978, Miller & Gwynne 1972). These characteristics strip patients of their identity and limit their sense of control. Any attempts to 'deinstitutionalize' the environment through efforts to recognize and meet individual needs could be seen as promoting personal autonomy. It has been suggested, for example, that the provision of individual clothing is an important contributor, not only to the older person's self-respect and dignity but also to the attitudes of those providing care, by encouraging them to view the person as an individual (Burgess *et al.* 1988, Meredith 1987).

Wade (1983) highlighted a number of organizational barriers to individualized care and personal autonomy in nursing homes: for example, difficulties in offering patients choice about what time they got out of bed in the morning were related to the fixed time at which breakfast was served, a point also noted by Barnes (1988). The removal of such constraints may require negotiation at a number of levels within an organization.

Safety is another important environmental feature when considering measures to promote autonomy and independence for older people. Nurses working with older people are frequently called upon to weigh up the rights of an individual against possible risks, leading potentially to a decision that may limit autonomy and independence if the risks appear too great (Nystrom & Segesten 1994). Certainly, there is little empirical evidence to demonstrate how nurses balance the need to promote patient autonomy and independence with the need to minimize risk.

Norman (1980) argues that, in excessive cases, the need to minimize risk can limit the therapeutic value of an institution. Indeed, there is some empirical evidence to support this notion. Bowling & Grant (1992) report a randomized controlled trial to compare patient outcomes for patients admitted to health-authority-funded nursing homes and long-stay care of the elderly wards in one inner London authority. The findings suggest that although accident rates were higher in the nursing homes, quality of life was better. In discussing the implications of this study, the authors question whether much of what is described as 'risk' does in fact pose a serious risk to health or whether it relates more to the feelings or inconvenience of the carer. Again the importance of an individualized approach is emphasized rather than systematic adherence to a rigid policy.

Bowling & Grant (1988) propose that if the outcome of greater freedom and flexibility in nursing homes is an increased degree of risk, then managers and staff of these institutions have a responsibility to ensure that all possible preventive measures have been taken. Askham *et al.* (1990) reviewed the literature relating to the prevention of falls and identified a number of preventive measures in relation to the environment. These include: identifying and observing high-risk individuals, ensuring a barrier-free environment, providing beds with adjustable heights and chairs with correct backs and arm rests, ensuring nonslippery floors, and provision of hand-rails. Given the ethical dilemmas posed by the need to balance maximum patient autonomy with the minimum risk, the importance of ensuring that all possible preventive measures have been implemented is clear.

At its extreme, the denial of patient autonomy is perhaps epitomized by the use of physical restraint. McHutchion & Morse (1986) suggest that while nurses empathize with the restrained patient they often see no alternative. Several authors identify that many institutions emphasize the reduction of risk in order to avoid litigation, posing a dilemma for health care professionals (Archea *et al.* 1993, Conely & Campbell 1991, Yorker 1988, McHutchion & Morse 1986). Resolution of the potential threat to autonomy and independence posed by the notion of 'risk' appears to require an attitude shift on the part of these organizations as much as behaviour change on the part of individual nurses.

There is a need for nurses to have the opportunity to discuss their views on patient restraint and to consider possible alternatives. Stilwell (1991), for example, found that 63% of a sample of 500 nurses had received no instruction on the use of physical restraint on geriatric wards. A recent joint publication of the Royal College of Nursing and the British Medical Association provides useful guidance on issues relating to consent and restraint when caring for older people (BMA 1995). However, there is a need for empirical work to investigate nurses' decision-making processes in relation to the balance between promoting patient/client autonomy and maintaining patient/client safety.

DISCUSSION

As a result of the varied dimensions of the topic, a wide range of research approaches have been used to investigate both the process and outcome of nursing interventions aimed at promoting autonomy and independence for the older client/patient. Given these varied approaches, and the range of settings in which research has been conducted, it is difficult to compare and contrast individual studies in order to generate clear indicators for nursing practice. In effect, the body of research literature indicates rather more of 'what nurses could try' rather than 'what nurses should do' (Hunt 1981).

In particular, there is little information to inform decisions related to the balance between minimizing risk and promoting patient/client autonomy. However, this is essentially a moral debate which can perhaps only be informed to a limited extent by empirical work. In justifying and defending standards of care that meet basic humanitarian principles (Ebrahim *et al.* 1994), nurses frequently need to rely upon sources of knowledge other than the purely empirical (Carper 1978).

Most research related to the topic has been carried out in long-term care settings and it may not always be appropriate to extrapolate from one care setting to another. Empirical evidence to identify factors associated with the quality of care for patients in acute, rehabilitation and community settings (other than nursing homes) is limited. Moreover, research which has sought the views of older people themselves has focused upon those without a significant degree of cognitive impairment. There is an obvious need for further research, particularly in relation to identifying the views of service users themselves.

Pointers for nursing practice

In spite of these methodological limitations, the body of literature does provide some pointers for nursing practice. A consistent theme is the need to ensure that nursing care is tailored to individual needs if patients and clients are to achieve optimal levels of autonomy and independence. Individualized assessment and care planning underpins many of the strategies associated with the promotion of autonomy, independence and high-quality care within the literature. Systems for care delivery which support patient-centred practice such as primary nursing and nurse-led team care have also been associated with higher levels of self-determination and patient satisfaction, although the evidence to date has emerged from a series of small-scale studies.

The evidence supporting the use of communication strategies which encourage patient choice and participation in decision making is more persuasive. In particular, it appears that even the ability to make quite small decisions about their day-to-day activities can make a significant impact on older people's sense of control. A wealth of research conducted in a wide range of care settings has demonstrated the importance of adequate information in promoting patient recovery and this should form a fundamental principle of care delivery. The consequences of eliciting feedback from a patient in relation to care given is less well documented but there is some evidence to suggest that identifying the patient/client's perspective should form a basic principle of care. In particular, there is evidence to suggest that there is often a disparity between nurses' perceptions and the perceptions of older people themselves in relation to priorities for caregiving.

Other strategies which recognize the patient as a person with individual needs include identifying the extent to which a patient or client wishes to be involved in care planning and delivery, demonstrating reciprocity within the nurse–patient relationship and attempting to promote patients' privacy and dignity wherever possible. However, nurses should also be alert to the socializing effects of institutions and organizations which may influence patients' expectations of their relationships with healthcare professionals. Organizational barriers to change, such as fixed meal-times within an institution, lack of aids to mobility and the need to coordinate with other services for patients receiving care in the community, may also act as a constraint upon promoting patient choice and autonomy. Perhaps one of the most effective actions that nurses could take to promote greater autonomy and independence for patients and clients would be to campaign for greater flexibility in these areas.

CONCLUSION

This review suggests a need for further research to establish patient and client outcomes in relation to specific nursing interventions aimed at promoting autonomy and independence.

However, in the absence of firm predictive evidence, there is sufficient descriptive research to suggest that the principles identified within this paper should provide a basis for nurse education and practice at the present time.

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