Promoting the health of people with physical disabilities: a discussion of the financing and organization of public health services in Australia

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SUMMARY
People with physical disabilities have a high probability of suffering secondary disabilities and disability-related acute health problems. Critically, they experience difficulties in access to health-promoting services. Of importance in reducing barriers to such services is the role of funding systems. There has been little research or comment in the area of funding, and this paper attempts to redress this imbalance by providing an overview of two specific systemic barriers in the funding of health promotion for those with disabilities in Australia: the method of service reimbursement and the disparate nature of funding sources. It is clear that there needs to be a revision of health care funding systems to enable an increase in the promotion of health amongst people with physical disabilities. Two possible solutions are considered: case-management and the increased involvement of private industry. The potential benefits of this are illustrated by reference to reducing unnecessary rehospitalization. With changes occurring in the Australian health care system, e.g. the move to case-mix funding and case-management, there is the potential for people with disabilities to either lose their access to health promotion further or to capitalize on these changes to ensure improvements. Either way it is clear that those involved with health promotion need to urgently address the issues raised in this paper in a timely fashion, to ensure that beneficial changes are capitalized upon and the potential for negative impacts is minimized.

Key words: disability; economics; funding; health promotion

INTRODUCTION
In 1993 the Australian Bureau of Statistics estimated that 3.2 million Australians (18% of the total population) had some form of specific physical disability; defined according to whether a person had one or more specific pathology, e.g. loss of sight or hearing, for 6 or more months (Stuifbergen et al., 1990). Furthermore, the prevalence of such disabilities is increasing with: (i) advances in medical technology resulting in more patients surviving serious accidents and disease, but with permanent disabilities; and (ii) the population steadily ageing, thus living longer with disabilities associated with old age (Australian Bureau of Statistics, 1993). People with disabilities are, on average, more likely than those without disabilities to experience a broad range of health problems, including urinary and respiratory tract infections, and be more at risk of, e.g. cardiovascular disease and stroke (Young and Northup, 1979; DeJong et al., 1986; Batavia et al., 1989; Marge, 1993; DeJong and Batavia, 1998). Families also suffer problems related to the informal care of those with disabilities, including increased stress-related physical and emotional illness, reduced ability to care for children and undertake household tasks, reduced time and energy for work, reduced social interaction and stigmatization (Kinnear and...
Graycar, 1984; Green, 1985; Braithwaite, 1986; Braithwaite, 1990; Pearlin et al., 1990; Kemper, 1992; Max et al., 1995). Further, those with disabilities, and their families, are often low income earners, with ~62% having government benefits as their principal source of income, and 60% of income units containing a person with disability having no income earner whatsoever [compared with 23% of all income units] (Davies and George, 1993). Disabling conditions also simultaneously reduce the base of active workforce support for national social benefit systems, whilst increasing the expenditures of such systems (Commonwealth Department of Community Services, 1985).

People with disabilities therefore represent significant health needs and investment in health care resources, both in terms of the primary disability and secondary complications. Although the prevention of these conditions is important, of equal importance is to make living with them as healthy as possible, as many disabilities are life-long. Although health promotion may be significant in leading to lower levels of premature mortality, higher quality of life and lower health care costs for the general population, it has the potential to be even more significant for those already with a disability, whose quality of life and independence rely critically on their ability to maintain their narrow margin of health (DeJong and Hughes, 1982; Batavia et al., 1988; Stuifbergen et al., 1990; DeJong and Batavia, 1991). However, barriers [defined as perceptions regarding the unavailability, inconvenience or difficulty of a particular health-promoting option, arising from people’s internal cognitions, from significant others and from the environment (Stuifbergen et al., 1990). Barriers of particular importance may be convenience of facilities, transportation and lack of information (Stuifbergen et al., 1990; Gilderbloom and Rosentaub, 1990)] preventing access to health promotion services for the prevention of further disability, and the promotion of health in general, are important in determining the quality of life and health status of those with disabilities, although it is often not the disability that is the cause of these barriers, but the external environment. In particular, many of these barriers occur due to the various funding and organizational systems of services designed to provide support for people with disabilities and to finance health promotion and health care services.

Following consideration of the context of disability and health promotion, this paper considers two important systemic barriers to promoting health for those with disabilities in Australia: the method of reimbursement and the disparate nature of funding sources. Two possible solutions to these problems are then considered: the broadening of the case-management approach and capitalizing on private industry initiatives.

CONCEPTUALIZING DISABILITY AND HEALTH PROMOTION

Although disability is commonly referred to in a pathological sense, focusing on specific conditions, it is more appropriately viewed as a process. The World Health Organization (WHO), e.g. view people as moving from pathology (characteristics of the physical body) to impairment (operations that the person is unable to perform because of those characteristics) to disability (activities that the person is unable to do, given the level of assistance provided in the society they live in, because of that inability) to handicap (the disadvantages they suffer as a consequence) (World Health Organization, 1980). Impairment is seen to be a permanent or transitory psychological, physiological or anatomical loss of body structure or function. Disability by contrast is any restriction on performing an activity within the range considered normal for a human being; it may be temporary or permanent, progressive or regressive. However, handicap, which is commonly what is thought of as ‘disabled’ by lay definition, is a ‘social’ disadvantage for an individual resulting from an impairment or a disability that limits or prevents the fulfilment of a role that is considered ‘normal for that individual’. Thus, one can be impaired without being disabled, and disabled without being handicapped.

Importantly for considering this issue in the context of health promotion is the distinction between intrinsic disability (without personal or equipment assistance) and actual handicap (even with such assistance). ‘Disability’ is therefore not considered to be a personal characteristic, but is instead a gap between personal capability and environmental demand (thus, e.g. being dependent on some assistance to do daily tasks may be considered to be a disability, but being without that assistance would lead to handicap). According to this definition, policy should therefore focus not only on impairment and disability in the medical sense, but crucially on the ‘prevention of handicap’, in the sense of the removal
of the gap between personal capability and environmental demand (Verbrugge and Jette, 1994). This definition therefore concentrates on the physical environment as much as on the individual with the impairment.

Health promotion, in this paper, is thus viewed in a public health context, whereby the intention is to maintain and enhance existing levels of health through the implementation of effective programs, services and policies (World Health Organization, 1986; Goodstadt et al., 1987). In particular, it is seen as a key facet in the development of policy which supports individuals in this maintenance and enhancement of their health (Green, 1991). This will include protecting people against disease/injury, inducing health behaviour modification (e.g., exercise), informing and modifying social and professional values and attitudes (by education), and lobbying for changes in the social and political environment in which people live (e.g., by legal means to make buildings more wheelchair friendly) (Tolley, 1993). The health promotion perspective should therefore be viewed as encompassing a wide variety of overlapping and interlinking initiatives [including health protection, preventive medicine, health education, public policy, and community and individual empowerment (Tannahill, 1985; Holman, 1992)] in order to maintain and enhance existing levels of health and well-being for people with disabilities (World Health Organization Regional Office for Europe, 1985; World Health Organization, 1986; Goodstadt et al., 1987; World Health Organization Regional Office for Europe, 1987).

Important in this wider perspective is the recognition of the health-promoting role and responsibility of all health professionals (Kaplan, 1992). This is important to the delivery of health promotion for people with disabilities as: (i) the health services that such people receive may be delivered with a health promoting focus; (ii) health promotion initiatives targeted at the general population may include components specifically aimed at people with disabilities; and (iii) specific health-promoting projects for people with disabilities may be devised.

However, the development and extension of programs for the prevention of further disability, and the promotion of general health for people with disabilities, are hindered by the lack of understanding of the socioeconomic implications of disability within society and mechanisms to address this. These issues are of considerable importance, as it is the funding arrangements which largely determine the scope and amount of health promotion received by people with disabilities, how this is distributed and to whom it is distributed.

Thus, health promotion, in its broader public health role, is a vital component in maintaining and improving the health of people with disabilities. Although the discussion in this paper has wider implications for other population groups, people with disabilities are clearly an already disadvantaged group, with the current system of financing and provision of health promotion and health care inadequately addressing their needs.

**SYSTEMIC BARRIERS TO FUNDING HEALTH PROMOTION FOR PEOPLE WITH DISABILITIES**

**Method of service reimbursement**

Predominantly, current methods of reimbursement for services within the Australian health care sector do not allow for the additional time required to undertake a service with a person with a physical disability. In the hospital sector, the use of prospective payment systems, e.g., case-mix funding, provides a financial ‘penalty’ for hospitals that treat patients with disabilities who require more attention than the ‘average’ patient. Such systems, in place in most Australian states, reimburse hospitals a fixed amount per patient treated, according to the condition treated. This figure is calculated, and set, on an ‘average’ cost basis, providing the incentive to treat at lower than this ‘average’ cost, and thus secure a surplus. However, this rate is set with no consideration of the extra resources required for people with specific additional needs. Thus, the cost of care becomes a barrier to people with disabilities receiving even the ‘normal’ level of care that most Australians would expect (Evans et al., 1990).

There are similar disincentives within general practice in Australia. The GP may incorporate some element of health promotion, e.g., dietary advice, within the traditional ‘6-min’ consultation. However, if such advice was likely to take longer than this, the incentive would be to not provide such advice, as consultation reimbursement is fixed. Although certain procedures, e.g., various forms of screening, do carry a separate financial incentive for the GP to undertake, many
health-promoting interventions do not. This is particularly so in the case of routine care and treatment that may be delivered in a health-promoting way to people with disabilities. Furthermore, primary care consultations, and any other form of care, can take longer for people with disabilities than for people without, but again the fee set to reimburse general practitioners does not allow for this additional cost. Thus, the disparity between reimbursement and actual cost provides a disincentive for health promotion to be delivered, and possibly even sought, for people with a physical disability.

In addition to direct service financing, of significant concern is adequate funding for educational programs, particularly for service providers, to engender a move from health promotion focused on disability ‘prevention’ toward health promotion focused on disability ‘management’ (DeJong and Batavia, 1988; Yordi, 1988; Davies, 1992). Whilst there is clearly a need for ‘expert’ knowledge and skills, there is also a need for ‘general’ education of health professionals to view people with disabilities in a sympathetic and empathetic light, the lack of which has been found to be a significant barrier to people with disabilities receiving adequate care. This is critical in order to ensure that health professionals have a full understanding of the needs of people with disabilities, and are therefore able to respond with the provision of appropriate advice and services (Capitman, 1986; Yordi, 1988; Kane et al., 1991; Davies, 1992). The impact of such improved education could potentially result in further illness prevention, hospitalization avoidance and minimized length of any hospital stay, and improved quality of life for people with disabilities and their families (Davies, 1992).

**Disparate funding sources**

Funding sources for services, e.g. health care, social services and education, are distinct and separate, especially within Australia with its federal system of government (similar to that in the USA) providing significant self-governing responsibilities to individual states. Even within health care there is financial separation of primary and secondary care, and state and federal responsibilities, with over 60 distinct and separate funding streams (Paterson, 1996). With such diversity of budgets, and a financial climate of cost control, there is little incentive for active cooperation, and much incentive for cost shifting. This creates an extraordinary complexity in the funding and provision of health promotion and health care for people with disabilities, with both funding and provision coming from a variety of disparate and separate sources. For instance, one carer has been quoted as using 26 phone numbers regularly to co-ordinate care for her child (Australian Institute of Health and Welfare, 1994).

Yet few important outcomes can be achieved by the health service working in isolation. For example, in order to minimize the handicap imposed by paraplegia, it is necessary to prevent medical complications and progressive deformity, maintain physical fitness, and be trained in the use of appropriate technical aids. But it is also necessary to live in a house which is accessible and useable by someone in a wheelchair, in a location where there are dropped kerbs, buildings with public access and transport facilities to allow the person autonomy in the fulfilment of their personal potential. Promotion of such a person’s health would not have been successfully achieved if they were to become marooned in an inaccessible flat, however good their self-care and wheelchair skills may be. Thus, for appropriate outcomes to be achieved, it will often be necessary to combine services of health, social and local authorities, including education, housing, transport and employment.

**POSSIBLE SOLUTIONS**

**Case-management and co-ordinated funding**

One possible means for reorganizing the financing of services, to account for problems of financial disincentives and disparate sources of funding, is case-management. This has been adopted in a variety of settings, e.g. the Social Health Maintenance Organizations in the USA and private sector initiatives (Yordi, 1988; Henderson et al., 1988; Davies, 1992). Under this system one individual (or a multidisciplinary team), designated the ‘case manager’, would have the responsibility for organizing, co-ordinating and (if a budget holder) purchasing all the various, multi-sectoral, services which the individual may require. A variety of models of case-management may be considered, from simple negotiation for care, to being a partial or total budget holder, to individuals with disabilities becoming their own case-managers. Within Australia such an approach of providing services
in a co-ordinated and collaborative fashion (including private sector institutions and employers as well as the public sector) has been advocated for a number of years (National Health Strategy, 1993; Australian Institute of Health and Welfare, 1994), and is currently being trialed with the Council of Australian Governments (COAG) ‘Co-ordinated Care Trials’ (COAG, 1995; Duckett et al., 1995; Duckett, 1996).

However, one should note that the appropriateness and efficiency of case-management has not been established unambiguously. Evidence suggests that although case-management may be an effective and efficient organizational mechanism for some clients [principal those with complex needs (Capitman, 1986; Kemper, 1988; Weisert and Matthews-Cready, 1989; Kemper, 1990; Kane et al., 1991; Davies, 1992; Davies, 1994)], many clients with low to moderate levels of disability can gain considerable benefits from community services provided without case-management (Davies et al., 1990; Davies, 1992; Davies et al., 1993; Davies, 1994). Furthermore, a range of alternative approaches has been suggested, many based on aspects of contracting and other features of ‘managed competition’, which may or may not include aspects of explicit case-management (Davies et al., 1990; Davies, 1992; Davies et al., 1993; Davies, 1994). These potential means of reform are clearly complex, and will require further research with respect to the population of people with disabilities, but offer the potential for significant gains over the current process of service organization.

Health promotion, disability and private industry

Much health-promoting activity is, and could potentially be, carried out within private industry. There is growing interest in the use of health promotion in the workplace, with many large corporations (e.g. Xerox, AT&T and the Victorian Railway Company) having their own medical departments or programs established to conduct a range of occupational health initiatives (Galvin, 1986; Tate, 1987). The philosophy behind this is to promote the employees' health, thus increasing productivity and reducing the company’s health care costs by controlling the disability period during which the employee is absent (Morrow, 1985; Rieth et al., 1995).

Employer-based health promotion and disability management emphasize the early identification of risk factors, planned management of physical and disability-related symptoms, a willingness to modify jobs, and the establishment of personnel policies that facilitate work return and job retention rather than ‘defacto and premature retirement for … disabled workers’ [(Galvin, 1986), p. 218]. Such work-based programs tend to encompass both disability management and health promotion activities, where ‘disability management’ refers to the active process of minimizing the impact that a disability has on the person’s ability to function in their work-based role, and health promotion refers to the prevention of ‘further’ disability and promotion of good health habits (Tate, 1987). There will, of course, be considerable overlap between these concepts.

Disability management, in identifying and providing suitable interventions is thus an essential part in: (i) developing the individual's own resources through a variety of health promotion initiatives; and (ii) the removal of barriers imposed by the work environment. Health promotion is a critical part of this disability management, as it is designed to prevent ‘further’ illness and disability, e.g. by reducing risk of injury (Tate, 1987). Such disability management programs often use a 'case manager' to co-ordinate the multiple needs of the employee with a disability, but also to assess their progress, their work and home environments and care, and generally act as that person's advocate (Rieth et al., 1995).

Such interest by the private sector could be capitalized upon by health promotion policy. For instance, public funds could be used to encourage individuals to demand, and employers to provide, health promotion. Second, they could be used to finance or subsidize particular activities to make them more accessible (Australian Institute of Health and Welfare, 1994). Third, private sector use of case-management could provide a useful model for the use of case-management in promoting health for people with disabilities by the public sector.

CONCLUSION

This paper has highlighted two specific systemic areas where research and policy might be focused to restructure funding to reduce barriers in access to appropriate health promotion and health care for people with disabilities. The potential benefits may be significant, e.g. in
improving health and reducing costs associated with unnecessary rehospitalization. Such rehospitalizations may account for 60% of all hospital costs (Zook et al., 1980), with individuals with physical disabilities experiencing significantly higher rates of rehospitalization than the general population (Turoff, 1975; Meyers et al., 1985; Braithwaite, 1986; Pearlin et al., 1990). However, although the majority of causes of such readmission, e.g., urinary-tract infection, decubitus ulcers and pressure sores are entirely preventable (Braithwaite, 1986; Teague et al., 1990; Sullivan, 1992; Corrigan and Martin, 1992; American Congress of Rehabilitation Medicine, 1993), there needs to be an incentive for the various agencies involved to engage in preventive measures and closer co-operation. Rehabilitation services, e.g., have a wide remit in the promotion of health for people with disabilities, including prevention of such secondary admissions, and funding arrangements need to recognize this role (McLellan, 1992). The hospital sector also requires an incentive to review admissions to identify potential preventable admissions, and work directly with the community to address the problem (Australian Institute of Health and Welfare, 1994). Further, education of health professionals, and patients, in self-care and health-promoting behaviour could reduce such readmission. Private industry also has a role to play in the provision of health-promoting services. By strategic use of services offered by employers, delivery of health promotion in a timely and targeted way should reduce the use of health services by people with disabilities, as well as increase their health and well-being. Of course, many of these issues go well beyond the needs of people with physical disabilities, with such initiatives also applying to many populations other than those with physical disabilities.

There is a need to find models of the finance and delivery of care, as well as specific interventions, that will avert such unnecessary rehospitalization, as well as respond to the health needs of those with specific disabilities (particularly as they get older). Ultimately this requires incentives for providers of care to consider the longer-term needs of the disabled. One of the more promising ways to proceed in the restructuring of health promotion and care for people with disabilities is the move toward case-management.

Although restructuring the funding arrangements of any aspect of health promotion and health care is not a task to be undertaken quickly, changes and reforms are already taking place. Within these changes there is both the potential for people with disabilities to lose or to gain. The danger is that, in applying health care reform, health promotion, particularly for those who already have some form of disability, may seem a ‘soft target’ for funding cuts, or be disadvantaged as an unseen side effect. However, there is also the potential to use the current willingness, even eagerness, to change the structure of funding to promote the health of people with disabilities. For instance, the move toward budget-holding and case-management could be of great benefit. Whatever the potential, it is vital that research is undertaken in a timely fashion to capitalize on the changes taking place to ensure both that the potential harm to those with disabilities is minimized, but also that the changes which will be beneficial are promoted and capitalized upon.

ACKNOWLEDGEMENTS

The author would like to express his appreciation to Roy Batterham, Rob Carter and David Dunt of the Program Evaluation Unit of Melbourne University for informative discussions and comments, and to two anonymous referees. The research described in this paper was supported by the Victorian Health Promotion Foundation, and was carried out whilst the author was employed at the Health Economics Unit of Monash University.

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REFERENCES


