

Health Human Resource Planning in Home Care: How to Approach It – That Is the Question



COMMENTARY

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ABSTRACT

In her paper, MacAdam refers to future challenges in health human resources for the home-care sector. This paper builds on her comments and discusses conceptual and practical approaches to future planning of health human resources. Necessary national data requirements are identified for this type of planning. The authors point out the limitations of traditional supply-side modelling and describe a new framework linking population health needs to outcomes that builds upon earlier conceptual work in needs-based, utilization-based and effective demand-based models.

HEALTH HUMAN RESOURCES PLAY A CRITICAL ROLE IN THE ACHIEVEMENT OF HEALTH in all countries throughout the world. Changes in the epidemiological profiles of populations over time, together with changes in the configuration of the health services and settings associated with the needs of populations, have created new challenges for health human resource planning (HHRP). The World Health Organization (WHO) has been instrumental in modifying the principles of HHRP by emphasizing the integration and coordination of services and human resources and the provision of education according to a primary health care model (WHO 1978). The provision of health care involves putting together a considerable number of resource inputs to deliver an extraordinary array of different service outputs (WHO 2000). Health system inputs must consider the appropriate balance between human and physical capital. Human capital decisions include the appropriate quantity, mix and distribution of health services. Finding this balance requires continuous monitoring, careful choices given competing realities and the use of research evidence to ensure that population health needs are addressed effectively and efficiently (O'Brien-Pallas et al. 2000).

MacAdam (1999, and in this volume) has identified that recruitment and reten-

tion of home-care providers in Canada is influenced by several factors: the context of home-care employment, demographic trends in the Canadian workforce, educational needs, working conditions and workplace characteristics, skill mix and standards of care and wages and benefits. Underlying these health system management issues is the need to determine how many and what type of human capital is required in the future. If "home and community care are to be essential parts of the continuum of health care services" (First Ministers 2000), then health human resource (HHR) issues create a formidable challenge to making this policy direction a reality. Human resource planning in the home-care sector must consider two cadres of human capital: regulated professionals such as physicians, nurses, physiotherapists, occupational therapists, social workers, and dietitians and also unregulated workers such as homemakers, personal support workers and personal attendants (MacAdam 1999). Given the demographic shifts in the population, the capacity of informal health providers who have traditionally given much of the care in the home needs also to be assessed. If informal health providers, due to increasing age and potential disability, can no longer provide this service, then the impact on workload of formal health providers will need to be

considered. Given the anticipated growth of home-care services, understanding human resource needs in this sector is critical. However, to date the planning mechanisms to ensure adequate supply of healthcare workers in all sectors of the health system remain underdeveloped in Canada and internationally. This paper will first identify theoretical and practical considerations for integrated human resource planning in the home-care sector and then identify the information requirements for planning.

Theoretical Considerations and Practical Applications

Government planners have used various approaches to forecast HHR supply and demand (O'Brien-Pallas et al. 1998; Hall and Mejia 1998). Through this process, traditional approaches have been further developed, and many disciplines have added unique design and analytical methods to the array of tools available to researchers. Regrettably, the wide choice of methodologies, lack of comprehensive databases and inaccurate projections of population growth have not clearly improved the accuracy of forecasting (O'Brien-Pallas et al. 1998; Pong 1997). HHRP in most countries has been poorly conceptualized, intermittent, varying in quality, profession-specific in nature and without adequate vision or data upon which to base sound decisions (O'Brien-Pallas et al. 1999; O'Brien-Pallas et al. 1998; Pong 1997; Hacon 1973). The assumptions that underpin HHR modeling activities need to be evaluated for relevance and accuracy on an ongoing basis. HHRP has been only weakly linked to national health policies (Simmonds 1989), population health needs (Fagin

1990) and outcomes.

Integrated HHRP should involve estimating the future requirements for HHR by provider type and identifying efficient ways of providing for those requirements. There is no unambiguous “right” number and mix of health professionals (WHO 2000; Buchan and O'May 1999). Instead, health provider requirements will be determined by broader societal decisions about the level of commitment of resources to healthcare, organization of the delivery and funding of healthcare programs, and level and mix of healthcare services. However, these judgments are best made when there is sufficient understanding of the outcomes of the care process to allow informed decision-making.

Birch et al. (1994) identify three main conceptual approaches for HHRP: utilization-based, needs-based and effective demand-based approaches. While the unit of analysis (e.g., nursing hours, physician consultations or physiotherapy visits) remains unchanged from one analysis to the other, the underlying “driver” of this measure differs among the approaches, reflecting the different ways societies think about the delivery of healthcare, the provision of services, the population's needs and the commitment of society's scarce resources.

Although this might be seen as enriching the applicability of the approaches to epidemiological, economic and political realities and, hence, enhancing the policy relevance of the analyses, this will depend on the philosophical basis of the specific healthcare system being studied. This has particular relevance in discussing home-care human resources in Canada. For example, in

societies where healthcare services are delivered through private markets and access to services is determined by willingness and ability to pay for services at the individual level, there would be little value in basing future nurse or other health provider requirements on the estimated needs for care of the population, or the estimated future commitment of government resources to healthcare, since neither of these factors will be important in determining the future deployment of available health providers. In this way, the future plans for funding, delivery and configuration of services determines the appropriate approach to be followed (O'Brien-Pallas et al. 2000).

The need to focus beyond any one approach and to place planning in the context of outcomes is critical if we are to provide an effective and efficient home health service. O'Brien-Pallas, Baumann, Donner et al. (1998) have built a dynamic system-based framework that considers: (1) population characteristics related to health levels and risks (needs-based factors); (2) service utilization patterns, nurse deployment patterns and others who provide similar or the same services (utilization-based); (3) economic, social, contextual and political factors that can influence health spending (effective demand-based); and (4) outcomes of population health status, provider and system that result from the different types of nurse and other health provider utilization. This model incorporates each of the three methodological approaches outlined earlier, but places these approaches in the context of assessment of needs and outcomes of service provision. In this approach, simulations of the health system are used to provide needs-based

estimates that are aimed at optimizing outcomes. A review of the literature identifies a dearth of papers that highlight macro-level HHRP in the home-care sector in Canada. Many completed studies are not specific to home care and rely on simple supply projections to estimate future human resource requirements. The O'Brien-Pallas, Baumann, Donner et al. (1998) model allows us to move beyond simple models and the related limitations to embrace the complexity of the health system.

What Information Do We Need for Planning and Modeling Integrated HHR in Home Care?

Currently, there are variations at local, regional, provincial and national levels in not only the types of data collected, but also with respect to basic definitions such as what constitutes a home-care visit. While regional autonomy and concerns about data collection overload exist, unless data on needs, utilization, demands and outcomes are routinely and consistently documented we will not be able to evaluate and improve the effectiveness of HHRP in home care.

Needs-Based Factors

There is growing evidence for a relationship between health needs and socio-economic indicators (e.g., age, sex, level of education, employment, income). The relationship of population health needs, selected socio-economic indicators, and utilization of home-care services is not well understood. Determining the best way to measure population health needs for HHRP is the subject of ongoing research. In Canada, the National Population Health Survey (NPHS)

collects both longitudinal and cross-sectional data from adults and children living in households and from residents of health institutions. Administered every two years, the NPHS includes a wide range of generic health status scales, and the results have served as the basis for decision-making and many subsequent public health and epidemiological studies (Tomblin Murphy et al. 2000).

Utilization-Based Factors

Historical and current trends in supply data for all service providers are necessary to understand changes in workforce supply. Current nursing supply data provide, for example, place of employment, employment status, age, educational preparation, in-province and out-of-province employment and whether nurses are seeking employment. Professional supply data are available at the national level for only some disciplines, and inconsistency in the design of reporting elements leads to difficulties in national comparisons. Supply data for unregulated workers do not exist because there is no regulatory body responsible for maintaining membership lists. Even if unregulated worker supply data were to be collected, there would be difficulties in reconciling the many role titles and definitions (MacAdam, this volume; McGillis Hall 1998). These challenges must be addressed because these types of data are necessary for determining future HHR requirements.

Effective Demand Factors

Understanding the effects of political, societal and financial factors allows HHR estimates to reflect the influence of various policy options on resource require-

ments and outcomes of service provision. Under the effective demand-based approach, economic considerations are introduced to complement the epidemiological principles of the needs-based approach. The starting point is to estimate the future size of the economy from which home-care services are to be funded. This is then used for estimating the proportion of total resources that might be allocated to healthcare and for home care specifically. These funds will be devoted to regulated and unregulated service providers in the home-care sector. Epidemiological information on the level and distribution of needs in the population, the roles that nursing or other human resources can play in meeting those needs, and the interdependencies of planning exercises for different health resource allocations need to be considered (O'Brien-Pallas et al. 2000). In reviewing the layoffs and casualization of the nursing workforce over the last six years and now the shortage of nurses prepared to work full-time, effective demand considerations may have provided a more balanced approach to this process. In order to apply the effective demand approach, knowledge of past expenditures and estimates of future budget allocation for health are necessary. In addition, planners will need to make explicit the trade-offs that may be considered if societal priorities related to healthcare over other spending initiatives shift political agendas.

Outcomes

MacAdam calls for the development of minimum quality standards as an important component of a new home-care system in Canada. This benchmarking of population health, provider and system

outcomes is necessary to keep HHRP goal directed and policy relevant. First, population-specific health status outcomes will offer a context for determining if the mix and number of providers and services provided are effective in meeting the health needs of the home-care population. Second, understanding the impact of human resource decisions on factors such as provider satisfaction, health and commitment provides a window for planning an efficient workforce. Third, system outcomes, including the number and costs of services provided, will allow us to consider different human resource responses (e.g., substitution of home-care personnel, definition of programs and alternative strategies for providing care).

In order to examine the impact of outcomes, several types of data will need to be routinely collected. Population health outcomes can be monitored by routine application of health status measures such as the Short Form Medical Outcomes survey at discharge from the home-care service or at regular intervals for long-term or chronic patients. Irvine, O'Brien-Pallas, Murray et al. (2000) have demonstrated the sensitivity of this measure to the home-care environment. National surveys of a representative sample of different types of home-care providers would allow for an understanding of the impact of home-care work, the work environment and human resource arrangements on the satisfaction and well-being of the provider workforce. If HHRP occurs without an examination of outcomes, the effectiveness and efficiency of human resource decisions and service provision cannot be evaluated.

Data Requirements

The next step toward ensuring viable HHRP in home care is the creation of a permanent national database that compiles population health needs data, supply and service utilization data from all healthcare provider agencies and outcomes data that are derived from standardized assessment tools with demonstrated reliability and validity. Population health needs data allow for specific estimates of population health need for those who actually use home-care services and can be linked to utilization data to provide estimates of population-adjusted resource utilization. The confounding influence of variations in supply on variations in populations' use of services must be factored into this type of analysis to prevent errors, but difficulty in accessing data has tended to deter researchers from incorporating these factors in the utilization-based approach (O'Brien-Pallas et al. 2000). Understanding health needs allows for informed comparisons across health regions for both HHRP and for the prevention of disability and disease. Routine collection of utilization, costs and outcome data on a per client basis is necessary to examine the impact of human resource decisions on overall system performance.

Conclusion

Human resource issues create a significant challenge in all sectors of the health system, particularly in the home-care environment where limited resource planning has been conducted. This paper has identified theoretical and practical approaches to planning for human resources in the home-care environment.

We have also identified specific data requirements necessary to conduct the complex modelling activities that determine future human resource needs and to evaluate human resource decisions in a complex health system. In many cases, information needs currently exceed information availability. However, if we wish to provide home-care services that are relevant, future human resource modelling should consider not only how many and what type of human resources are required to meet population health needs, but also how to best manage human and physical capital to ensure a stable workforce in the future.

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