ELDAC

End of Life Directions for Aged Care

# Understanding our Home Care Search Filter

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QUT Flinders University UTS PalliativeCare Australia ACCPA Aged & Community Care Providers Association ahha australian healthcare & hospitals association the voice of public healthcare CATHOLIC HEALTH Australia


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## Introduction

Australians are living longer than ever before and, as each year passes, older people make up a larger proportion of the total population. Many older Australians want to remain in their own homes as they age. Many Australians prefer to 'age in place' rather than change residence when care needs change. Home Care Packages (HCP) are one of the ways that older Australians can access affordable care services to get some help at home. They are designed for those with more complex care needs that go beyond what the Commonwealth Home Support Programme can provide.

Home care services differ significantly between countries, even within countries, and there is no universal definition of home care. In Australia the term can relate to a specific service focusing on keeping the elderly in the home setting. In most countries home care services will also include hospital in the home services, specialist palliative care services, disability care and community care provided in the home which would otherwise be accessed at a general practice facility through a primary care network. In the United States the Home Health Care program is not specifically for the aged population and the availability and delivery of the service varies from county to county. Home care in the United Kingdom is also termed domiciliary care, social care, or in-home care, and the range of services can vary from area to area, and not limited to the aged population. In Europe home care can vary from a safety net for those with no relatives to care for them, to being a right that all citizens can access. Some countries do have a program specifically for the aged, for example, Ireland has a home help service, and Canada has home care services designed to keep the elderly in their home for as long as possible.

This can make the retrieval of published literature that could inform practice and policy around home care aged care services difficult and time-consuming. This is further complicated by the fact that individual countries use different systems and terminologies when providing home care. Our interest is in being able to identify the literature that describes care being provided in the home by aged care services, that is, the equivalent of home care package provision. For the purposes of this project, we will use the following definition of home care: a coordinated package of care and services to help the aged person with complex needs live independently in their own homes for as long as possible.

## Why a Search Filter Project

Search filters are experimentally designed, and tested search strings created by expert searchers which can considerably reduce the time taken to retrieve the most up to date research papers in bibliographic databases. The performance of a search filter is determined and reported according to metrics such as the filter's recall or precision which denotes how many papers will be relevant amongst those retrieved, allowing the user to assess the filter's suitability for their needs. Integral to the development of a search filter is the formation of an Expert Advisory Group (EAG) from researchers or clinicians working in the field. The group will provide guidance on the scope and definition of the topic and to ensure that the finished product is relevant to potential users of the filter.

The aim of our project is to create a validated search filter which will aid in the retrieval of research papers on the topic of home care. The search filter will be developed in Ovid Medline, then translated and validated in PubMed, a freely available online bibliometric database. This will enable us to deploy the search as a hyperlink within ELDAC and create a "one-click" search for home care articles.

## A new methodology

Traditionally to build a search filter we would develop candidate terms from a frequency analysis of MeSH and text words in a set of articles known to be dealing with home care. Lack of consistent terminology for home care and the complex policy, funding and service delivery mechanisms associated with different international models reduced the effectiveness of term frequency analysis for identifying candidate search terms. Terms describing home care as a setting were crowded out of the frequency occurrence list by terms describing population, problem, and interventions. We, therefore, trialled a more labour-intensive and subjective approach to term identification based on content analysis.

Titles, abstracts, and MeSH terms associated with each citation in the set of home care articles were examined for (1) common concepts that might individually or collectively describe 'home care for older people' and (2) the terms used to convey these concepts across citations. This approach created a list of candidate search terms with strong face validity for two distinct concepts:

- home care service and
- older people.

Two columns were created in a spreadsheet, one for each concept, and the terms associated with each were listed by their decreasing frequency in the TIS. Frequency is here defined as the number of citations in which a term appears at least once. Textwords and MeSH terms were interfiled. We then put together a search to retrieve literature on home care services by combining these home care concept terms according to their frequency and their relative contribution to a cumulative retrieval. We also monitored their proxy precision.

The final home care concept search (HCCS) was determined to be: **Home care services/ or home care.ti,ab. or Home health aides/ or homecare.ti,ab. or home help.ti,ab. Or Community aged care.ti,ab.**

We then refined the performance by combining the homecare services search string with the ranked candidate terms relating to the older people concept one at a time. Where the older person term improved the recall it was retained in the proposed search filter. Again, proxy precision was calculated for terms that improved recall. Those citations unable to be retrieved by the proposed search were analysed to find a reason for their non-retrieval. No additional search terms were included as none were seen to provide retrieval and relevance value.

The final search filter structure is:

**(Home care services/ or home care.ti,ab. or Home health aides/ or homecare.ti,ab. or home help.ti,ab. Or Community aged care.ti,ab.) AND** (Aged/ OR "Aged, 80 and over"/ OR Older.ti,ab. OR Elder*.ti,ab. OR aged 65*.ti,ab.)

## PubMed translation

The home care search filter has now been translated for PubMed and tested for equivalence in this database. The PubMed version is:

("Home care services"[Mesh:NoExp] OR "home care"[tiab] OR "Home health aides"[Mesh:NoExp] OR homecare[tiab] OR "home help"[tiab] OR "Community aged

care"[tiab]) AND (Aged[Mesh:NoExp] OR "Aged, 80 and over"[Mesh:NoExp] OR Older[tiab] OR Elder*[tiab] OR "aged 65*"[tiab])

## One Click Searching in ELDAC

PubMed (US National Institutes of Health) is a free resource supporting the search and retrieval of biomedical and life sciences literature with the aim of improving health. It has over 35 million items and is open access. It also allows an interface to their database that enables direct uploading of a compliant search via an API. APIs are a standard set of protocols that act as the gateway which allow applications to 'talk' to each other and share information. From the point of the user, they simply click on a hyperlink. This causes the pre-written search to be uploaded to PubMed and a set of relevant articles is returned.

The pure Home Care Search Filter has been added to the ELDAC website along with the search filter combined with a range of topics proposed by the Expert Advisory Group. These topics represent different population needs, health conditions and care issues, and workforce groups.

This searching resource can be accessed free of charge in the ELDAC website in the Technology and Innovation Stream.