

Michelle Pannor Silver<sup>1\*</sup>, Angela D Hamilton<sup>2</sup>, Aviroop Biswas<sup>3</sup> and Sarah A Williams<sup>4</sup>

<sup>1</sup>University of Toronto Institute of Health Policy, Management and Evaluation, and the University of Toronto Scarborough Campus, Canada

<sup>2</sup>University of Toronto Scarborough Campus, Canada

<sup>3</sup>University of Toronto Institute of Health Policy, Management and Evaluation, Canada

<sup>4</sup>University of Toronto Department of Anthropology, Canada

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\*Corresponding author: Michelle Pannor Silver, 1265 Military Trail Toronto, Ontario Canada, M1C1A4, Tel: 416-287-5642; Fax: 416-287-7283; E-mail: michelle.silver@utoronto.ca

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## Research Article

# Life after Medicine: A Systematic Review of Studies of Physicians' Adjustment to Retirement

### Abstract

**Background:** A physician's decision to retire has personal and social consequences. While there has been growing interest in how individuals adjust to retirement, less is known about physicians' adjustment to retirement.

**Objectives:** To identify and examine: 1) factors that influence how well physicians adjust to retirement; 2) reasons physicians give for retiring; and 3) advice physicians give for a successful adjustment to retirement.

**Methods:** A systematic review of the literature was performed by searching Medline, Web of Science, Scopus, CINAHL, Ageline, Embase, Health star, ASSA, and PsycINFO databases for peer-reviewed studies published with quantitative and/or qualitative analyses of physicians' adjustment to, satisfaction with, and/or quality of life in retirement. Two independent reviewers performed data abstraction, a quality assessment and an additional reviewer resolved inconsistencies. Content analysis was used to identify and stratify information from selected studies into themes and subthemes.

**Results:** Based on analyses of 12 articles that met the eligibility criteria, it is evident that retirement from medicine was seen as a generally favorable phenomenon. Financial security, favorable health, engagement in activities, and psychosocial well-being were identified as key factors relevant to physician retirement adjustment. Findings suggest that physicians' retirement transitions could be eased by a greater focus on financial planning, implementation of strategies to encourage the development of outside interests, and institutional retirement planning that honors the physician and takes place mid-career or well in advance of retirement.

**Conclusions:** Advance planning to ensure that physicians have a strong financial situation, good health, engagement in activities outside of medicine, and positive psychosocial dynamics are likely to enhance adjustment to retirement for physicians. Future studies should account for multiple interrelating factors such as gender, changes over time, and spousal retirement to further enhance our understanding of physicians' adjustment to retirement.

## Introduction

Interest in the factors that promote adjustment to life after work has become an increasingly relevant and critical topic of study [1,2], particularly because transitioning to retirement can be associated with depression and other challenges [3-5]. An increase in the number of physicians facing critical retirement decisions has been projected as North American physicians enter traditional retirement age [6,7]. However, less is known about what constitutes successful adjustment to retirement for physicians and how a positive transition might be facilitated.

Health care has undergone rapid changes in the last several decades while models of training and practice have not kept up, resulting in great stressors for practicing physicians [8,9]. Concerns about the aging physician population have largely centered on early attrition [8], burnout [9], the high costs associated with replacing retired physicians [10], and fears about shortages in the supply of physicians relative to the demands of a growing aging population [11,12]. Other evidence suggests that physicians may be reluctant to retire due to fears of losing their personal identity and life purpose

[13-16]. Understanding the needs of physicians and factors that support their successful adjustment to late career transitions is a critical area for study.

For many older workers, retirement comes as a welcome respite at the end of a lifetime of toil, while for others it is a fearful time of unknowns where one's identity and standing in the world are called into question and eventually re-made into something new and not necessarily welcomed. As increasing life expectancies extend the amount of time people spend in retirement to as many as three or four decades, retirement itself becomes a life stage with considerable importance and opportunity for growth and personal development. Medicine is an all-consuming and demanding profession. Physicians enter into medicine after lengthy training and are required to treat individuals at their most vulnerable state. After decades of practice and dedication to patients, physicians may have spent little time thinking about or planning for retirement. Toward the later part of their life-course, physicians may also become vulnerable and knowledge about how to enhance their adjustment to retirement can be helpful for both encouraging the hesitant physician to retire and

for ensuring that the transition to retirement is made in a way that maximizes the chances of a smoother transition.

This systemic review examined the current state of what is known about physicians' adjustment to retirement and identifies potential gaps in this literature by addressing three research questions: 1) what factors influence how well physicians adjust to retirement?; 2) what reasons do physicians give for retiring?; and 3) what advice do physicians give for a successful adjustment to retirement?

## Method

### Search strategy

We followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines in the reporting and production of this systematic review [17]. The PRISMA checklist is included as [Additional File 1](#). Published articles were searched using Medline, Web of Science, Scopus, CINAHL, Ageline, Embase, Healthstar, ASSIA, and PsychINFO databases. Each author participated in the identification and final selection of studies.

### Inclusion criteria

Our inclusion criteria were published peer-reviewed studies with quantitative and/or qualitative analyses of physicians' adjustment to, satisfaction with, quality of life in, and/or opinions about retirement. Keywords in our search strategy included, 'physician' and 'retire' with appropriate synonyms. The full search strategy appears as [Additional File 2](#). After discussion, the search strategy was narrowed to English-language articles up to November 2015 with no limit set for the earliest possible date of publication. We also conducted hand searching of citation lists for eligible studies and relevant review articles. We excluded a substantial portion of articles that appeared in our initial search on the basis of their being duplicate records, editorials, commentaries, articles that were not based on original data collection, articles grouping physicians with other healthcare professionals, or studies that focused on retirement planning among non-retired physicians ([Figure 1](#)).

### Data extraction and quality assessment

We extracted the following information from qualifying articles: (i) geographic details, study design, data collection methodology, response rate, physician specialty; (ii) major factors and questions related to adjustment to retirement; (iii) descriptive statistics related to demographic characteristics of the sample, including retirement age related statistics; and (iv) findings related to reasons for retiring, enhanced quality of life in retirement, and recommendations related to adjustment. We assessed articles for methodological quality using the Center for Evidence-based Management Appraisal Questions for a Survey Tool [18], and the Critical Appraisal Skills Programme Qualitative Research Checklist [19]. Both tools have demonstrated reliability and validity when examining the views of healthcare professionals [20-22]. Two reviewers (AB and SW) independently assessed each article for methodological quality. Where rating inconsistencies could not be settled by consensus, they were resolved by the corresponding author (MPS). The results of the quality assessment are summarized in [Additional File 3](#).

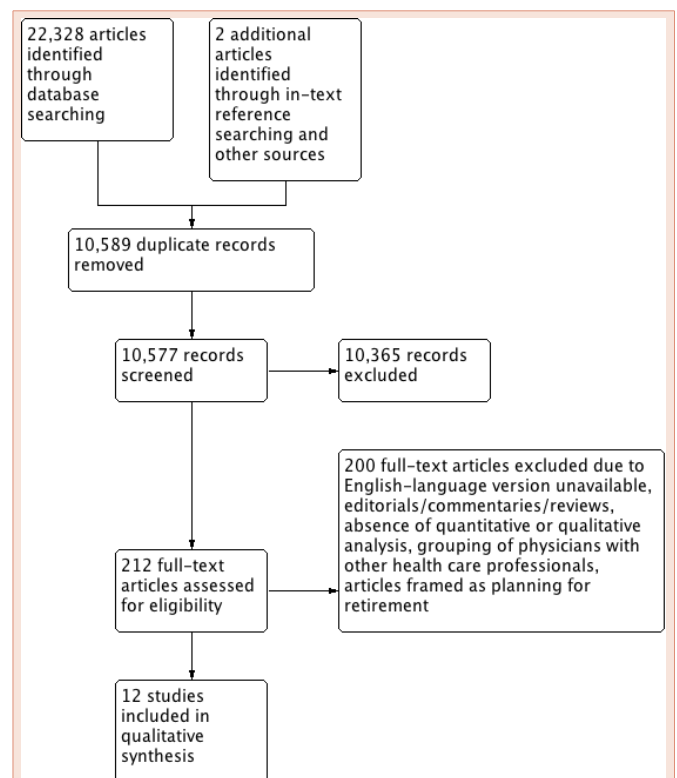
Information collected from the included studies was identified and stratified into themes and subthemes using content analysis [23]. This qualitative data analysis process follows an inductive and deductive procedure in which data is first prepared and then organized under higher order headings [24]. Categories were informed by the frequency of a theme's occurrence and used to formulate a conceptual understanding of response patterns within the data set. To enhance rigour and replicability of our protocols, we included an audit trail to record completed tasks and track key decisions made with regard to the selection of articles.

## Results

### Study characteristics

The characteristics of the 12 articles included in our review are featured in [Table 1](#). Study publication dates ranged from 1985 to 2009. The majority of studies were conducted exclusively in the United States ( $n = 9$ ) with the exception of three studies based in Australia, Canada, New Zealand, and Turkey. The majority of the sampled physicians retired between 60 and 70 years old. The following theoretical frameworks were incorporated into the analyses of two studies: role theory [25] and continuity theory [26].

With regard to quality assessment, the majority of studies scored highly for sample representativeness, use of appropriate methodology, and development of existing knowledge on the topic. However, studies generally scored poorly in response rate, validity, and reliability of measurement methods. Overall, many of the factors



**Figure 1:** Summary of evidence search and selection.

identified as motivating or facilitating retirement were corroborated across multiple studies, as were factors associated with a difficult retirement. This suggests a strong degree of similarity of experience across medical specialties, generations, and countries. Factors motivating physician retirement and specific advice for retiring are summarized in [Table 2](#).

## Synthesis of the findings

**Financial well being:** Financial insecurity or costs relevant to practice were commonly cited as reasons for retiring [27-30]. A higher income prior to retirement corresponded with greater post-retirement satisfaction than a lower income [28,29,31]. Three studies examined income sources in retirement and found that the majority of retirement incomes were from savings, pensions, and social security [26,31,32]. Retirement incomes from these sources were generally considered satisfactory to comfortable/excellent, but a minority of studies reported that physicians had encountered challenges in achieving the accumulation and maintenance of sufficient finances post-retirement [26,31,32]. Overall, retirement was reported as a period of relative financial stability and security. However, it should be acknowledged that physicians without sufficient savings and investments to ensure financial stability during retirement were more likely to remain working and would thus not have met the inclusion criteria for many of the studies [29,31,32].

## Health

Good health was viewed as an essential privilege and enabler of favorable adjustment to retirement [33]. Austrom [25], reported that 79% of respondents had rated their health in retirement as good or better as compared to their pre-retirement health. In the two studies that examined mental health, the retired physicians who reported having emotional difficulties while in the workforce found that these difficulties tended to improve when in retirement [28,33] ([Table 3](#)).

**Activities:** Respondents in several studies acknowledged their continued participation in professional activities despite self-identifying as fully retired [26-28,34]. Medical activities in retirement included lecturing and writing, attending grand rounds and conferences, and performing medico-legal work [34]. Engaging in physical activities, leisure activities, non-sporting hobbies, and spending time with family were also found to be key factors that promoted and enhanced adaptation to retirement.

## Psychosocial dynamics

Five studies indicated that respondents retired for personal or family reasons [25-27,29,35]. Physicians experienced improvements in the quality of their familial relationships and an increased freedom to spend time with family and relatives post-retirement [25,33,35]. Spousal relationships also impacted retiree life satisfaction and happiness. A significant number of respondents found relationships with their spouse and children improved after retirement [33,35] and concluded that this improvement was likely to contribute to increased life satisfaction [35]. Lees et al. [30], found that poor spousal health correlated with retiree depression and circumscribed social and physical activities pre- and post-retirement.

## Advice for physicians contemplating retirement

Financial advice was frequently given in response to the broad solicitation of general retirement advice [25,26,28,29,31,32,35]. Having leisure activities, hobbies, and interests outside of medicine were reported as important ways to enhance life satisfaction during retirement [25,27,29,31,34,35]. In contrast, physicians who were reluctant to retire and let go of their professional role had more difficulty adjusting to retirement [25].

## Discussion

Despite their fears, most physician respondents in the studies included in this review had a generally positive adjustment to

**Table 1:** Characteristics of studies included in review.

| Author (Year)              | Location                          | Retirement Status                                   | N, Response Rate, % (Female Respondents, %) | Average Age (Range) at Time of Survey, Years | Average Age (Range) at Time of Retirement, Years |
|----------------------------|-----------------------------------|---|---|--|--|
| Austrom et al. (2003)      | United States                     | 86.3% retired, 13.7% semi-retired                   | N=795, 43% (5%)                             | 75 (61-100)                                  | 68 (38-91)                                       |
| Batchelor (1990)           | United States                     | 71.4% retired, 28.6% not retired                    | N=21, 80% (100%)                            | Not reported (59-95)                         | Not reported, (51-88)                            |
| Draper et al. (1997)       | Australia & New Zealand           | 79% still working 21% retired                       | N=281, 60% (17.8%)                          | 65.5 (55-87)                                 | 64.9 (not reported)                              |
| Gokce-Kutsal et al. (2004) | Turkey                            | 60.8% carrying on in their profession 39.2% retired | N=391, 57.5% (7.9%)                         | 72.5 (65-91)                                 | Not reported                                     |
| Jackson et al. (1985)      | United States                     | 100% retired  | N=748, 54.1% (Not reported)                 | 72.9 (42-98)                                 | Not reported, (60-69)                            |
| Lees et al. (2001)         | United States                     | 100% retired  | N=323, 47% (8.7%)                           | 72.7 (38-94)                                 | 64.83 (35-89)                                    |
| McGuirt & McGuirt (2002)   | United States                     | 100% retired  | N=138, 31.5% (8.7%)                         | Not reported                                 | 63.2 years (40-80)                               |
| Peisah et al. (2009)       | Australia, Canada & United States | 12% retired, 8% semi-retired 80% still working      | (28%)                                       | 67.5 (60-88)                                 | Not reported                                     |
| Ritter et al. (1999)       | United States                     | 9% semi-retired 91% retired                         | N=708, 55% (0.3%)                           | 72.9 (56-94)                                 | 66.1 (50-85)                                     |
| Rowe (1989)                | United States                     | 100% retired  | N=169, 84% (Not reported)                   | 75 (52-96)                                   | 68 (not reported)                                |
| Seim & Mitchell (1995)     | United States                     | 100% retired  | N=577, 65.7% (3.5%)                         | Not reported                                 | 73% retired in their 60's, 22% retired at 65     |
| Virshup & Coombs (1993)    | United States                     | 100% retired  | N=99, 41.6% (9%)                            | 71.5 (not reported)                          | Not reported                                     |

**Table 2:** Reasons Physicians Retire.

| Author (Year)              | Reasons for Retirement  |
|----------------------------|---|
| Austrom et al. (2003)      | 44% personal or family reasons, 36% professional reasons, 22% health reasons  |
| Batchelor (1990)           | 29% not retired, 19% illness, 47% to pursue other interests, 5% bureaucracy   |
| Draper et al. (1997)       | 62% age, 28% finance, 38% health, 21% family/personal, 12% career change, 16% other.  |
| Gokce-Kutsal et al. (2004) | 67.2% retirement, 21.8% health, 10.9% other.  |
| Jackson et al. (1985)      | 34.7% poor health, 42.1% planned retirement.  |
| Lees et al. (2001)         | Mean scores highest for "it was time to retire", "work no longer necessary to achieve economic security", "not enough time to enjoy things". "Loss of autonomy and control in medical practice"   |
| McGuirt & McGuirt (2002)   | 40% preplanned/personal, 22% frustration, 20% health, 5% economic, 5% mandatory, 4% interest in second career, 1% health of family member, 1% medical liability, 1% wanted to enjoy life, 1% bankrupt, 1% "all of the above"                |
| Peisah et al. (2009)       | When to retire determined through self-monitoring, using peers as a guide, asking for feedback  |
| Ritter et al. (1999)       | 37% personal or family reasons, 27% professional reasons, 26% health concerns, 74% more than one, 44% additional reasons including, 10% stress, 7% mandatory age, 7% bureaucracy, 5% threat of malpractice, 5% time to enjoy other pursuits |
| Rowe (1989)                | Most common age related mandatory retirement rules and denial of operating room privileges, next most common was financial, some also reported being physically unable to work  |
| Seim & Mitchell (1995)     | 34% aggravated with third-party medicine, 33% desire to undertake other activities, 25% high rates of malpractice insurance, 24% mandatory retirement age, 24% diminished satisfaction with work  |
| Virshup & Coombs (1993)    | 26.2% primarily health, 14% health as secondary reason  |

**Table 3:** Advice for Physicians about Retirement.

| Author (Year)            | Retirement Advice   |
|--------------------------|---|
| Austrom et al. (2003)    | 22% plan, 18% finances, 16% "just do it". Plans include developing activities, hobbies and friends.   |
| Batchelor (1990)         | Tapering off practice and easing into retirement  |
| Draper et al. (1997)     | 36% develop interests outside of work, 20% seek financial advice, 16% gradually reduce workload, 14% prepare to minimize "trauma of loss of professional role"  |
| Lees et al. (2001)       | Most common advice: "save money, avoid debt, be frugal" and "save all money possible"   |
| McGuirt & McGuirt (2002) | 61% financial, 12% start planning early, 9% develop hobbies, 4% learn and explore PT work, 3% seek professional help.   |
| Peisah et al. (2009)     | Working with partner, financial security and planning, get a leisure and social life early in life, and slowly transition to semi-retirement.   |
| Ritter et al. (1999)     | 26% have sufficient financial resources, 21% have a plan, 21% have hobbies and interests, 8% keep active and challenged, 4% relax and enjoy, 19% "do it"  |
| Rowe (1989)              | Retire at the earliest age possible, hold off retirement as long as possible, taper off workload, or seek part-time work, uphold medical activities, do not uphold medical activities, start financial planning early, cultivate hobbies and other potential postretirement activities, sports. |

retirement. Consistent with research among non-physician populations [36], physician's successful adjustment to retirement was linked with engaging in leisure activities, psychosocial well-being, and good health. However in contrast to studies of non-physician populations, findings demonstrated that physicians were often strongly reluctant to give up all engagement with medicine and found outlets to remain involved with the medical enterprise. Findings highlight the importance of planning for a successful adjustment to retirement and suggest that mature physicians may have their own mentoring needs as retirement nears that should be addressed. Our findings suggest that a physician's transition into retirement could be eased and encouraged by a greater focus on financial planning, the development of outside interests, and ultimately, institutional retirement planning that recognizes contributions through honorific titles and privileges. In addition to developing later career mentorship programs to help with transitions such as retirement, it is also evident that medical institutions ought to consider how retired physicians can continue to serve as valuable assets [37,38]. Similarly, institutions can engage retiring physicians within the medical enterprise [39,40], as educators or by encouraging a re-entry into the workforce [41].

A notable finding from this review was that while most studies inquired about physical health, only two considered the relationship

between physician mental health issues and the likelihood of making a successful transition to retirement [28,34]. This omission follows trends within physician-related research where discussions of mental health concerns have often been lacking despite evidence that these are important determinants of physician well-being [43]. Also, in contrast to many studies on retirement among non-physician populations which have focused on spousal retirement or couples' adjustment to retirement [44-46], only one study focused on the impact of a physician's spouse on retirement adjustment [25]. This focus on physicians as though they are independent of social or familial networks oversimplifies the complex nature of well-being and positive adjustment to retirement.

There have been considerable shifts in physician demographics over the past 60 years [47,48]. While previous generations of North American physicians have largely been white and male, the diversification of the profession over the past 60 years is now becoming evident in retiring cohorts [47,49]. Studies have demonstrated the ways in which women and minority physicians may experience the trajectories of their medical careers differently than past generations [50-53], and research on retirement experiences outside of medicine indicates that later-life transitions also differ by gender, ethnicity, and socio-economic class [54]. None of the articles reviewed for this study

reported the race or ethnicity of participants nor included the impact of race or ethnicity in their analyses. While it is possible that such an omission is due to the systemic and institutional barriers to medical practice for people of color in the mid-1900s, resulting in a limited number of minority physicians of retirement age today, ignoring the considerable effects of race on physicians' career trajectories misses a crucial factor in successful retirement transitions. Studies of the medical career course for physicians of color have found that minority physicians were more likely to report lower rates of career satisfaction and experience limited promotion opportunities ascribed to institutional bias and racism [55]. Minority physicians have also been identified as having more medical school debt than their white colleagues and this has been connected to circumscribed choice regarding specialty and type of medical practice [56]. The effects of race and ethnicity on physicians' medical careers and eventual retirement warrant attention in studies of physician retirement and should be examined further.

Additionally, though the past forty years has seen a considerable rise in our understanding of how gender deeply affects the experience of post-working life, this was seldom incorporated or addressed in the studies we encountered. While the gender distributions within the studies may roughly reflect the proportion of women who entered medicine in the 1930s-1960s and have since retired, such figures are extremely low to be considered representative of the current population of working and soon to be retired female physicians. As more female physicians enter the later years of their careers, retirement research on physicians will need to expand its focus to better understand the gendered experiences of retirement and be able to offer a nuanced, diverse analysis of the retirement needs of younger generations of physicians which, as McGuire, Bergen, and Polan [42], noted, are comprised of increasing numbers of women physicians whose retirement needs may differ from those of male physicians. A methodological barrier to examining women physicians' retirement adjustment may have occurred because many of the reviewed articles used professional organizations' registries and membership lists as a means of identifying retired physicians. Prior studies have found that female physicians are less likely than their male colleagues to join professional organizations or maintain affiliations throughout the career course, and thus the membership lists used to identify study participants do not reflect the gender diversity of physicians [47,57]. That said, institutions seeking to develop or improve retirement protocols, policies, and support require research that takes into account the diversity of contemporary medicine and the differing needs of physicians with varying life trajectories, family structures, and goals.

As no study tracked changes in individuals throughout their retirement processes, the studies were unable to detect shifts or developments in the characteristics of subjects at the group or individual level [58]. However, as retirement is a process that may span decades, surveys that only query retirees at a single point in time lack the ability to fully contribute to our understanding of physicians' adjustment to retirement. Furthermore, despite the appropriateness of qualitative methods for illuminating the potential complexities of physicians' perspectives on their retirement preparedness [59,60], we found limited use of these methods within the available literature.

## Strengths and limitations

To our knowledge, this is the first systematic review of studies about physician adjustment to retirement. Our findings should, however, be considered in light of the limitations of this review. One key limitation is that we only examined studies published in English. In addition, because all of the studies examined in this review used a cross sectional design and used limited analyses, we were unable to perform a meta-analysis of the included studies. The cross-sectional study designs in conjunction with the low response rates may suggest that those who responded were in more favourable and/or financially stable situations.

## Conclusion

This systematic review found that physician adjustment to retirement is generally favourable. Key determinants of successful adjustment were identified as maintaining a strong financial situation, good health, engaging in activities, and sustaining positive psychosocial dynamics. Future research on physician adjustment to retirement may benefit from a greater focus on incorporating a theoretical perspective into study designs and accounting for multiple interrelating factors such as gender, changes over time, and spousal retirement.

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