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## A Systematic Review of Physician Retirement Planning

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### Abstract

**Background:** This systematic review identified empirical studies to elaborate on the understudied aspect of retirement timing related to physician's preparation and engagement with the retirement planning process. Four questions were addressed: 1) When do physicians retire? 2) Why do some physicians retire early? 3) Why do some physicians delay their retirement? 4) What are some strategies that facilitate physician retention and/or retirement planning?

**Methods and Findings:** English-language studies were searched in electronic databases through June 2015 to meet the following inclusion criteria: peer-reviewed primary journal articles, published with quantitative or qualitative analyses of planning and opinions about physician retirement. Three independent reviewers assessed each study for methodological quality and a third reviewer resolved inconsistencies. In total, 60 studies meet the inclusion criteria and were analyzed. Representative sampling was used in 75% of studies, however most did not control for confounding variables. The majority were methodologically strong. Physicians commonly reported retiring between 60 and 69 years. Excessive workload and burnout were frequently cited reasons for early retirement. Obstacles to continuing practice included: career dissatisfaction, workplace frustration, and workload pressure; whereas, ongoing financial obligations delayed retirement.

**Conclusions:** This is the first review of literature related to early, late, and on-time retirement of physicians. Health organizations aiming to either delay or encourage retirement should accommodate flexible working hours, provide resources and information about financial planning, and consider stipulations in practice plans that clarify timing and transitions from medicine.

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### Introduction

While Japan, parts of Europe and many low- and middle-income countries face concerns about physician shortages, [1-3] the physician workforce has been stable or increasing in other regions such as North America and the United Kingdom [4-7]. Among regions of growth and stability, the momentum of increasing physician supply has largely been driven by the sizable and growing number of physicians who have remained in or re-entered active practice beyond the traditional timing and retirement age of 65 [8,9]. Across OECD countries, nearly one-third of all practicing doctors were on average over 55 years of age (OECD, 2015). In Japan, the percentage of physicians 60 years and older are expected to increase from 20% in 2010 to 36% in 2035, suggesting that if remained unchanged current strategies may insufficiently address future demand for healthcare [10,11].

Along with these demographic shifts are rising concerns that an older physician workforce will be faced with increasing cognitive impairment and associated dementia, as well as, physician burnout and deterioration of physical health potentially producing increased medical errors which put patients and quality of care at risk [12]. Physician retirement can also have a potentially negative impact on patient care as discontinuities in patient care can have implications for patient safety [13] and be particularly difficult for older patients who may be experiencing multiple losses [14].

The abolition of mandatory retirement in the US has encouraged many physicians to extend their medical careers, while in Japan legislative exemptions to the physician profession have supported physicians in accumulating many decades of experience over the course of their working lives generating greater unpredictability of later career transitions [15,16]. Physician retirement planning

can create challenges when retirement or death inevitably occurs, because hospitals and medical institutions often find it difficult to replace experienced, older physicians and to facilitate knowledge transfer [17]. The career progression of a growing pool of younger physicians waiting in the wings for professional opportunities can also be impeded without individual physician and institutional hospital succession plans in place [18,19].

Prior research suggests that retirement can be a difficult transition particularly when individuals are unprepared or have a strong sense of wanting to delay their exit because of the value attached to their work [20]. On the other hand, early retirement may be forestalled and retirement transitions better planned in cases where hospital enterprises have developed continuing skills and faculty development programs for staff. Knowledge of when a physician plans to retire and how they can transition out of practice can aid successful succession planning and knowledge transfer. There is a general lack of consensus about the traditional age of retirement for physicians and indications that there is a variation by region, specialization and institution [21]. Research highlights a need to develop recommendations aimed specifically at how physicians can transition out of their practice and into retirement [22-27].

To our knowledge, no previous studies inform strategies for physician succession planning with a focus on the differences in early, on time and delayed retirement timing. This systematic review explored four key questions: 1) When do physicians retire? 2) Why do some physicians retire early? 3) Why do some physicians delay their retirement? 4) What are some strategies that facilitate physician retention and/or retirement planning?

## Methods

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed in the production and reporting of this systematic review [28]. Please see **Figure 1** for the PRISMA checklist. Published articles were comprehensively searched using Medline, Web of Science, Scopus, CINAHL, Ageline, Embase, Healthstar, ASSA, and Psycinfo databases up to and including June 2015. Each author participated in the identification and final selection of studies. Thematic analysis was used to identify and stratify concepts related to physician retirement into themes and subthemes [29]. Thematic analysis is an inductive qualitative data analysis process in which data are prepared, then organized using open coding to create categories and themes to build a conceptual understanding of a particular phenomenon and analyze the meaning of data within their particular context [30]. 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.

## Inclusion Criteria

Our inclusion criteria included published primary peer-reviewed journal articles with quantitative and/or qualitative analyses of physicians' plans for, and opinions about retirement. Non-primary research studies (editorials and commentaries) and articles grouping physicians with other healthcare professionals

were excluded (Figure 1). After discussion, the authors chose to constrain the search strategy to English-language articles, with no limitations on publication date up to June 2015. Our search strategy included the keywords 'physician' and 'retire' with all appropriate synonyms. We supplemented our search by manually reviewing the reference lists of eligible studies and relevant review articles.

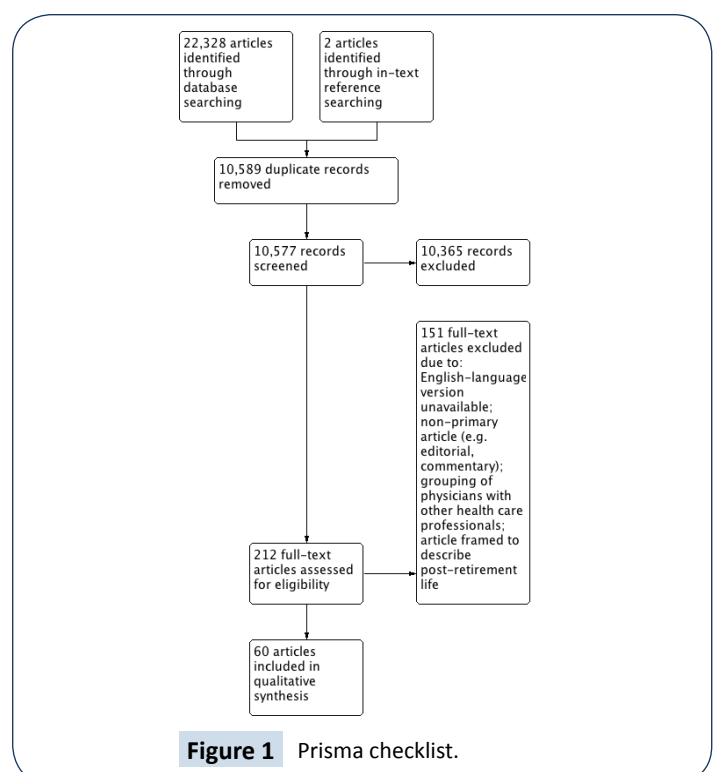
## Data Extraction and Quality Assessment

The following information was extracted from qualifying studies: (i) geographic information, study design, data collection methodology, response rate, physician specialty; (ii) expected and actual retirement age; (iii) descriptive statistics related to demographic characteristics of the sample; and (iv) findings related to reasons for retiring, reasons for delaying retirement and obstacles to continued practice. Three reviewers (ADH, AB, and NW) worked in pairwise rotation to independently review the articles for methodological quality. The corresponding author (MPS) resolved any disagreements that could not be settled by consensus. We used the seven-item, Newcastle-Ottawa Quality Assessment Scale to assess the risk of bias for 51 studies using quantitative survey methods according to three domains: sample selection, comparability and ascertainment of outcome [31]. The adapted Critical Appraisal of a Qualitative Study Tool from the Center for Evidence-Based Management was used to assess 9 studies that used qualitative methods [32]. Both tools have previously demonstrated reliability and validity when examining the views of healthcare professionals [33-35].

## Results

### Study Characteristics

**Table 1** summarizes the characteristics of the 60 studies included



**Figure 1** Prisma checklist.

**Table 1** Characteristics of included studies.

Study	Location	Study Method (Source, if not self-administered)	Sample size (Response rate)	Participants (Average Age and/or Age Range)
Anderson [45]	United States	Survey (administered by the American Medical Colleges and the American College of Obstetricians and Gynaecologists)	< Age 50, 2000 (40.3%) > Age 50, 2100 (57.3%)	Obstetrician-Gynaecologists (average age <50 was 44 years, average age >50 was 65 years)
Astrom [23]	United States	Survey (modified version of American Association of Orthopaedic Surgeons survey)	1834 (43%)	Multidisciplinary physicians and spouses (average age 75 years)
Baker [46]	United States	Survey	500 (46%)	Psychiatric physicians (age 50 to 69 years)
Baker [65]	United States	Survey	125 (53%)	Black Psychiatrists (age 31 to 74 years)
Baker, Hishinuma [23]	United States	Survey	AMA: 187 (58%); NMA: 85 (65%)	Multidisciplinary physicians. AMA members (age 50 years or older), NMA members (age 30 years or older)
Batchelor [47]	United States	Survey/Interviews	20 (80%)	Senior women physicians (age 59 to 95 years)
Bieliauskas [48]	United States	Computerized cognitive test/Survey	359 (82%)	Surgeons (age 45 or older, average age 61.4 years)
Brett [38]	Australia	Survey	281 (59%)	Multidisciplinary physicians (age 45 to 65, average age 52.4 years)
Burke [52]	United Kingdom	Administrative data, Department of Health and Insurance industry (The Dentists' Provident Society)	393(N/A)	Retired Dentists (N/A)
Chambers [73]	United Kingdom	Survey	348 (72%)	Multidisciplinary physicians (average age 55 years)
Davidson (45)	United Kingdom	Survey	2398 (78%)	Multidisciplinary physicians (average age mid-40s)
Davidson (76)	United Kingdom	Survey	1460 (85%)	Multidisciplinary physicians (average age 48 years)
Deitch [56]	United States	Survey (ACR Committee on Manpower)	2804 (69%)	Radiologists, Radio oncologists, and Nuclear Medicine Specialists (average age in years <35 (11%), 35 and 44 (37%), 45 and 54 (32%) and 55 or older (20%).
De Santo	Algeria, Australia, Brazil, Egypt, France, Germany, Greece, Italy, Malta, Libya, Poland, Romania, Slovak Republic, Slovenia, Switzerland, The Netherlands, Tunisia, Turkey, UK and USA	Survey	113 (89.1%)	Active professors and emeritus/retired professors from 99 departments of medicine/universities worldwide (NA)
Dodds [50]	United States	Survey	96/116 (82%)	Academic Chairs of Ophthalmology departments (age range <50 to > 70, average age 58 years)
Donner	United States	Review of data based on Survey (ACR Commission on Human Resources, 2012 and 2013)	N/A	Radiologists

<b>Draper [24]</b>	Australia and New Zealand	Survey	281 (60%)	Psychiatrists (age 55-87 and average age 65.5 years)
<b>Draper [24]</b>	Australia, New Zealand	Survey (Respondents were Fellows of the Royal Australian and New Zealand College of Psychiatrists resident in Australia or New Zealand)	57.90%	Psychiatrists (age 40 years and older)
<b>Eagles [74]</b>	United Kingdom	Survey	180(50%)	Consultant Psychologists (N/A)
<b>Farley [43]</b>	United States	Survey (American Academy of Orthopaedic Surgeons in cooperation with the Association of American Medical Colleges Center for Workforce Studies)	3001 (33.5%)	Orthopaedic Surgeons (age 50 years and older)
<b>Fletcher, Schofield [59]</b>	Australia	Data from the Australian Institute of Health and Welfare (AIHW) Medical Labour Force Survey from 1995 to 2003	N/A	Psychiatrists (age 50 years and over)
<b>Florence</b>	United States	Survey	785(22%)	Transplant Surgeons (average age 48.7 years)
<b>French [62]</b>	United Kingdom	Survey	2923(61%)	Consultants and specialists (average age 47 years)
<b>French [62]</b>	United Kingdom	Survey/interviews/focus groups	924 (50%)	Multidisciplinary physicians (average age 43 years)
<b>Gee</b>	United States	Telephone interview (Gallup Poll)	451 (89%)	Urologists (age in years <36 (9%), 37 to 45 (29%), 46 to 54 (30%), 55 to 64 (25%), <65 (7%).
<b>Goldberg [51]</b>	United States	Survey of American College of Emergency Physicians members (two separate mailings in the fall of 2006 and winter of 2007)	1000 (80%)	American College of Emergency Physicians members over the age of 55 years (average age 57 years)
<b>Grauer, Campbell [63]</b>	Canada	Survey	58 (53.7%)	Multidisciplinary physicians (average age 71.2 years)
<b>Greenfield, Proctor</b>	United States	Survey	659 (75%)	Surgeons (age in years <50 (7%), 50-60 (29%), 60-70 (35%), >70 (28%)
<b>Gregory, Menser</b>	United States	Longitudinal (three wave) online survey	97, 91, 56 (65.5%, 54.9%, 58.4%)	Primary/Ambulatory care physicians (N/A)
<b>Grondin</b>	Canada	Survey	97 (71%)	Thoracic Surgeons (average age 47.7 years)
<b>Hall [15]</b>	United States and Canada	Survey	1444 APS members (35%); 148 Pediatric Department Chairs (40%)	Senior Pediatricians and Pediatric department Chairs (age 39 to 94, average age 65 years)
<b>Heponiemi [36]</b>	Finland	Survey (Finnish Health Care Professional Study)	1393 (27.9%)	Multidisciplinary physicians (age 45 to 65 years)
<b>Hill [52]</b>	United Kingdom	Semi-structured interviews/Survey	23 (N/A)	Dentists (NA)
<b>Jacobson, Eran [39]</b>	Israel	Interview	317 (89.5%)	Multidisciplinary physicians (age 50 years or older)
<b>Jonasson, Kwakwa [44]</b>	United States	Survey	373 (84%)	General Surgeons (NA)
<b>Kendell, Pearce</b>	United Kingdom	Survey	173(82%)	Consultant psychiatrists (NA)
<b>Landon [57]</b>	United States	Data for this study are from the first 2 rounds of the Community Tracking Study (CTS) Physician Survey	39185(63%)	Primary care and specialist physicians initially spending at least 20 hours per week in direct patient care activities were studied (average age 47.5 years for practicing and 63.0 years for retired physicians)
<b>Lee</b>	United States	Telephone Interview/Survey	33 (75%)	Multidisciplinary rural physicians (age 60 years or older)

<b>Lee</b>	United States	Survey	995 (N/A)	Surgeons (age in years <35 (13.37%), 35–44 (12.96%), 45–54 (18.69%), 55–65 (31.06%), >65 (23.92%))
<b>Luce</b>	United Kingdom	Survey	518 (72.5%)	Multidisciplinary physicians (age 45 years or older)
<b>Moriarty</b>	United States	Survey sent to all members of the American College of Radiology (ACR), the Association of University Radiologists (AUR), and the Society of Chairs of Academic Radiology Departments (SCARD)	~37900 (11%)	Practicing radiologists (NA)
<b>McGuirt, McGuirt (2002)</b>	United States	Survey	438 (31.5%)	Otolaryngologists (age 40 to 80, average age 63.2 years)
<b>Mears [40]</b>	United Kingdom	Survey	835 (59%)	Consultant psychologists (age 50 years or older)
<b>Meghea, Sunshine [64]</b>	United States	Survey (American College of Radiology's 2003 Survey of Radiologists)	1676 (63%)	Radiologists (age 35 to 75 years)
<b>Newton [37]</b>	United Kingdom	Semi-structured interviews	21 (N/A)	Multidisciplinary physicians (age 44 years or older)
<b>Onyura [60]</b>	Canada	Secondary analysis of data from a larger study on issues of late-career planning among academic physicians and semi-structured interviews	21	Academic physicians at a Canadian medical school (n=21, average age= 63 years, age range: 46-72 years)
<b>Orkin [58]</b>	United States	Survey	8670 (37.2%)	Anaesthesiologists (age 50-79 years, average age 60.1 years)
<b>Peisah [25]</b>	Australia, Canada, United States	Semi-structured interviews	25 (N/A)	Multidisciplinary physicians (aged 60 or older, average age 67.5 years, age range: 60-88 years)
<b>Pit, Hansen [41]</b>	Australia	Survey	92(56%)	Multidisciplinary physicians (average age 51 years)
<b>Quandango [26]</b>	United States	Semi-structured interviews	40 (N/A)	Multidisciplinary physicians (age 55 to 72)
<b>Rayburn [16]</b>	United States	Data is from the American Medical Association (AMA) Physician Master file	N/A	Obstetrician-gynaecologists
<b>Reuben, Silliman [53]</b>	United States	Survey	282 (70%)	Multidisciplinary physicians (age 65 or older, average age 71 years)
<b>Rittenhouse</b>	United States	Survey	967 (N/A)	Multidisciplinary physicians (< 55 years, 62.8 %, 55–64 years, 27.3%, >65 years, 9.9%)
<b>Rowe [66]</b>	United States	Survey	169 (84%)	Physicians (52-96 years)
<b>Shanafelt [55]</b>	United States	Survey conducted by The American Society of Clinical Oncology	2998 (49.7%)	US oncologists
<b>Sibbald</b>	United Kingdom	Survey	1949 (N/A)	Multidisciplinary physicians (average age 55 years)
<b>Silver [19]</b>	Canada	Focus Groups	16	Academic physicians over 50 years old within the Department of Medicine at the University of Toronto
<b>Smith</b>	Canada	National survey was administered to all Canadian otolaryngologists	65 (65%)	Otolaryngologists who were identified to have a clinical practice composed of >50% rhinology (average age: 46 years)
<b>Sutinen [27]</b>	Finland	Survey	819 (55%)	Multidisciplinary physicians (age 26 to 63 years)
<b>Wakeford [61]</b>	United Kingdom	Interview	250 (79%)	Multidisciplinary physicians (average age: 61.4 years)

Table 2 Studies with quantitative and qualitative assessment.

Studies with Quantitative Methodology								
	Selection				Comparability	Outcome		Quality score
	R Representativeness of sample	Sample size	Non-respondents	Ascertainment of exposure		Assessment of outcome	Statistical test	
Anderson [45]	A	A	B	C	A	C	A	6
Austrom [22]	B	A	A	B	-	C	A	6
Baker [46]	A	A	A	C	-	C	B	4
Baker [65]	A	A	A	B	-	C	B	5
Baker, Hishinuma [23]	B	A	B	B	A/B	C	A	7
Biellauskas	B	B	C	A	A/B	C	A	6
Brett [38]	B	B	B	B	-	A	A	5
Burke [49]	C	A	C	B	-	C	B	3
Chambers [73]	A	A	A	A	-	C	B	6
Davidson [76]	A	A	A	C	-	C	A	5
Davidson [42]	A	A	C	B	A	C	A	6
Deitch [56]	A	A	A	B	A/B	C	A	8
De Santo	A	A	B	B	-	C	B	4
Dodds [50]	A	A	A	A	A/B	C	A	9
Donner	D	C	C	C	-	D	B	0
Draper [24]	A	A	A	B	A	C	A	7
Draper [24]	A	A	B	A	A/B	C	A	8
Eagles [74]	A	A	B	B	A	C	B	5
Farley [43]	A	A	B	A	-	C	B	4
Fletcher, Schofield [59]	A	A	C	A	A/B	C	A	8
Florence	A	A	B	B	-	C	B	4
French	A	A	A	A	A	C	A	8
Gee	A	A	B	B	-	C	A	5
Goldberg [51]	A	A	B	A	-	C	A	6
Grauer, Campbell [63]	D	B	C	B	-	C	B	2
Greenfield, Proctor	A	A	B	B	A	C	B	5
Gregory, Menser	B	A	B	A	A	C	A	7
Grondin	A	A	B	A	-	C	A	6
Hall [15]	A	A	B	B	-	C	B	4
Heponiemi [36]	A	A	B	A	A/B	C	A	8
Jonasson, Kwakwa [44]	A	A	B	B	A	C	B	5
Kendell, Pearce	A	A	B	C	-	C	B	3
Landon [57]	B	A	A	B	A/B	C	A	8
Lee	A	A	A	B	-	C	B	5
Lee	B	A	B	B	-	C	A	5
Luce [54]	A	A	B	A	-	C	A	6
Moriarty	A	B	B	B	A/B	C	B	5
McGuirt	B	A	B	B	-	C	B	4
Mears [40]	A	A	B	B	A	C	A	6
Meghea, Sunshine [64]	A	A	A	B	A/B	C	A	8
Onyura [60]	B	A	C	B	-	C	B	4
Orkin [58]	A	A	B	B	A/B	C	A	7
Pit, Hansen [41]	B	A	B	A	A/B	C	A	8
Rayburn [16]	A	A	B	B	-	B	B	5
Reuben, Silliman [53]	A	A	A	B	A/B	C	A	8

<b>Ritterhouse</b>		A		A	A	B	A/B	B	A	9
<b>Rowe [66]</b>		A		A	B	C	-	C	B	3
<b>Shanafelt</b>		A		A	A	A	A/B	C	A	9
<b>Sibbald</b>		A		A	A	A	A/B	A	A	9
<b>Smith</b>		A		A	C	A	-	C	B	5
<b>Sutinen [27]</b>		A		A	A	A	A/B	C	A	8
<b>Studies with qualitative methodology</b>										
	Batchelor [47]	French	Hill [15]	Jacobson, Eran [39]	Newton	Peisah, Gautam, Goldstein [25]	Quandango	Silver, Pang, Williams [19]	Wakeford, Roden, Rothman [61]	
1. Does the study address a clearly focused question/issue?	Y	Y	Y	Y	Y	Y	Y	Y	Y	
2. Is the research method (study design) appropriate for answering the research question?	Y	Y	Y	Y	Y	Y	Y	Y	Y	
3. Was the context clearly described?	Y	Y	Y	Y	Y	Y	Y	Y	Y	
4. How was the fieldwork undertaken? Was it described in detail? Are the methods for collecting data clearly described?	Y	Y	Y	Y	Y	N	Y	Y	N	
5. Could the evidence (fieldwork notes, interview transcripts, recordings, documentary analysis, etc.) be inspected independently by others?	N	Y	Y	N	Y	Y	Y	Y	N	
6. Are the procedures for data analysis reliable and theoretically justified? Are quality control measures used?	N	Y	Y	N	Y	N	Y	Y	N	
7. Was the analysis repeated by more than one researcher to ensure reliability?	N	Y	Y	Y	Y	N	N	Y	N	

8. Are the results credible, and if so, are they relevant for practice?	Y	Y	Y	Y	Y	N	Y	Y	Y
9. Are the conclusions drawn justified by the results?	Y	Y	Y	Y	Y	Y	Y	Y	Y
10. Are the findings of the study transferable to other settings?	Y	N	Y	Y	Y	N	Y	N	N

**Table 3** Expected and actual physician retirement age\*.

	50-59 years	60-69 years	>70 years	“Never”
<b>Expected Retirement Age</b>	Burke [49] Eagles [74] Luce [54] Fletcher [59] Mears [40] Goldberg [51]	Anderson [45] Dietch Dodds [50] Farley [43] Florence Grondin Mears [40] French French Gee Pit [41] Rayburn [16] Shanafelt Smith Wakeford [61]	Batchelor [47]	Draper [24]
<b>Actual Retirement Age</b>	Baker [65] Eagles [74]	Anderson [45] Austrom [22] Batchelor [47] Farley [43] Fletcher [59] French Jonasson [44] Meghea [64] Luce [52] Orkin [58] Rayburn [16] Rowe [66] Wakeford [61]	Rayburn [16]	-

\*Note: Average or highest reported ages retirement ages are reported.

Studies where the majority of physicians met retirement age expectations are underlined

in the review. Publication dates ranged from 1978 to 2015 [31]. Studies were based in the United States, with others from Australia, Canada, Finland, Israel, New Zealand, the United Kingdom and one with an international perspective across 20 countries of high, medium and low-income economies. A variety of practicing and retired physicians were sampled with specializations ranging from general and multidisciplinary physicians to anesthesiologists, dentists, general and specialist surgeons, obstetrician-gynecologists, otolaryngologists, ophthalmologists, pediatricians, psychologists, radiologists, and urologists.

**Table 2** summarizes the quality assessment of the reviewed

studies. There were considerable variations in the methodological quality of the 51 studies using a quantitative methodology. The majority of studies scored highly on sample representativeness (75% of studies), justified and satisfactory sample size (90% of studies), appropriate statistical tests (59% of studies), while they primarily collected data by self-reported survey methods (90% of studies). The majority of studies rated poorly on the ascertainment of exposure as they used non-validated measurement tools (55% of studies), and on comparability, as they did not control for any potential confounders (49% of studies). The majority of qualitative studies reviewed were found to be methodological strong, with credible results that were adjudged to be relevant to practice.



## Physician Retirement Age

Several studies examined the age that physicians expected to retire, and/or the age they actually retired (**Table 3**). The most commonly reported average age for actual and expected retirement was between 60 and 69 years, respectively. The majority of physicians' reported actual retirement age was found to be consistent with their expected retirement in all studies where the actual and expected retirement ages were jointly reported.

## Reasons for Retiring Early

Commonly cited reasons for physicians retiring early included low job satisfaction, medicolegal issues, health concerns, and financial troubles. Low job satisfaction involved perceptions of low job control and dissatisfaction with the internal justice system of medicine as a self-regulated profession [27,36,37]. This disillusionment was expressed by a sense of frustration with colleagues [38,39] feeling undervalued, lacking prestige [40,41] and a loss of interest in their work [42,44]. Medicolegal issues often arose from a lack of satisfaction with the regulation of medicine for reasons of unwelcome change, bureaucracy, oppressive management [40,42,43] and issues with physician partners [25,37]. Experiencing poor health, cognitive decline, difficulty sleeping and psychological distress were also factors leading to a physician's retirement [22,38,41,45-52]. The decision to retire early was also linked to preserving one's health so they may lead a healthy retirement [38,42]. Financial issues contributing to a physician's early retirement included: increasing costs of retaining a practice, malpractice costs and other economic pressures, [15,39,43,45,53] insufficient financial remuneration and, pension security [42,50,54,55]. Several studies noted that physicians working in institutions or in countries where the policy landscape changed considerably were more inclined to retire because of perceptions around doctoring regulations and poor work satisfaction as a result of circumstances arising from the delivery of care [19].

## Reasons for Delaying Retirement

Reasons that physicians gave for delaying retirement included satisfaction with their career [41,43,45,53,56-58], institutional flexibility, [38] a feeling of responsibility for their patients, [38,45,53,59-61] health and a desire to keep active, [36,50,58,61] financial reasons, [43,50,53,54,55,58,62-64] and a lack of interests outside of medicine.<sup>61</sup> Institutional flexibility was a positive driver of a physician's work satisfaction and their desire to remain in practice as they were provided reasonable access to sabbaticals, flexible working hours and control over their job and career development [38,43,54,76]. Continuing to practice medicine is deeply rooted in a desire to keep active and focus on the social and intellectual elements of continuing to practice [46,50,53]. Several studies also pointed to a link between physicians' restrictive availability of free time and development of external hobbies, or interests. Still, other studies suggested that continuing in medicine was a better alternative to life in retirement [46,65,42].

## Strategies to Facilitate Physician Retention and Retirement Planning

Physicians expressed concerns over their decision to retire due to fears that they may lose their role, identity or purpose, [22,51,60,63] or were uncomfortable with the methods used to enforce their retirement [22]. Retirement concerns also stemmed from personal issues such as a fear of potential changes in the relationship with their spouse following retirement [22], a fear of excessive leisure time and lack of hobbies [63] and inadequate financial preparation for retired life [51,58]. Obstacles to ongoing practice contributed to reasons why participants disliked working, and when they felt strongly enough, these reasons were sufficient to warrant retirement (**Table 4**). **Table 5** summarizes schemes described by studies to enhance physician retention and entice continued practice.

## Discussion

The timing of physician retirement is particularly salient for patient care continuity and transitions of care in hospital enterprises where mentors of the younger hospitalist workforce may be scarce [17]. As for the age at which most physicians retired, we found that the majority retired later than the traditional retirement age of [65]. The graceful and timely exit of the well-established physician can be facilitated by health care organizations. Physician perceptions of ageism and being "pushed out" [37] by other partners are unlikely to promote successful retirement transitions and may have undesirable consequences such as litigation. On the opposite end of the spectrum, resisting the incorporation of retirement schedules and procedures into practice plans has also posed a barrier to retirement and succession planning [61]. Given that an important component of successful retirement planning concerns the creation of meaningful activity after retirement, [16] health care organizations should consider developing retirement resource toolkits, education sessions, and guidance around financial planning for physicians throughout their careers and creating post-retirement opportunities.

A principle question of this research aimed to characterize the literature examining factors underlying physicians early retirement. For instance, while early retirement among some physicians' has been prompted by concerns over competency amid technological advancement [44,66] and the introduction of electronic medical records [55], these are one type of work barrier that can be addressed by organizations through the provision of enhanced training. This study found that a physician's decision to retire early is often strongly influenced by negative dimensions of work satisfaction. Furthermore, most of the studies suggested that a supportive and highly satisfying work environment facilitated physician retention. To explain these responses, work satisfaction theory proposes an association between work satisfaction and career opportunities, resource adequacy, intrinsic (value or reward), convenience, financial incentives, and relations with co-workers as reasons why work-related frustrations can lead to early retirement [67].

While much of the prior research has focused on addressing the potential impact of early retirement on workforce planning, a subset was concerned with the problems that can arise when

**Table 4** Obstacles to Practice.

Subtheme	Study
<b>Workplace frustration:</b> bureaucracy, accreditation, health care reform, alienation by changes to working life, low job control, low organizational justice, poor teamwork and workforce shortages	Brett [38]; Heponiemi [36]; Hill [52]; Kendell & Pearce; Lee; McGuirt; Mears [40]; Newton [37]; Sutinen [27]; Fletcher, Schofield [59]
<b>Workload pressures:</b> patient demands, long hours, demanding on call schedules and sacrifice of family/free time, work-life balance	Brett [38]; Chambers [73]; French; Mears [40]; Meghea, Sunshine [64]; Newton [37]; Goldberg [51], Sibbald; Draper [24]; Onyura [60]; Shanafelt
<b>Career dissatisfaction:</b> lost interest in work	Brett [38]; Chambers [73]; Hill [52]; Luce [54]; Orkin [58]; Ritterhouse; Sibbald; Landon [57]
<b>Health:</b> Excessive stress, health and mental health concerns (thoughts of suicide, emotional exhaustion), and spousal health	Dodds [50]; Hall [15] ; Hill [52]; Luce [54]; Newton [37]; Pit, Hansen [41]; Goldberg [51]; Draper [24]
<b>Finances:</b> Pension, economic concerns, costs of continuing to practice, retirement not being written into partner agreements, general guidance	French; Grondin; Hall [15]; Lee; Orkin [58]; Wakeford [61]
<b>Skills and competencies:</b> Worry over competencies amidst technological advancements and new modalities of diagnosis or treatment	Grauer, Campbell [63]; Hall [15]; Goldberg [51]; Draper [24]
Not addressed	Not applicable in 22 studies

**Table 5** Retention Schemes.

Subtheme	Study
<b>Flexible work hours:</b> part-time employment options, gradual reduction, flexible hours or sabbatical, decreased on-call, relief of workload pressure	Anderson [45]; Brett [38]; Davidson [42]; Eagles [74]; French; French; Hall [15]; Jacobsen, Eran; Newton [37]; Goldberg [51]
<b>Minimal work barriers:</b> less bureaucracy, increased staff, improved working conditions, support to maintain/update competencies, more time with patients	Brett [38]; Davidson [42]; Eagles [74]; Kendell, Pearce
<b>Work satisfaction:</b> professional/clinical freedom, attend conferences and rounds, office space, chances to develop or change content of their work (i.e. teaching opportunities)	Brett [38]; Chambers [73]; Eagles [74]; Farley [43]; Hall [15]; Landon [57]
<b>Health:</b> Continuing good or better than expected health at expected retirement age, strategies to reduce work-related stress	Brett [38]; Davidson [42]; Draper [24]; Luce [54]; Pit & Hansen [41]
<b>Finances:</b> Protected pensions, being highly paid, financial necessity	Brett [38]; Davidson [42]; Eagles [74]; French; Hall [15];
Not addressed	Not applicable in 41 studies

physicians remain in practice longer than is safe or reasonable for the proper functioning of the medical organization. The aspects of Work Satisfaction Theory most pertinent to delayed retirement of physicians are the intrinsic characteristics associated with the work itself, the convenience, referring to manageable levels of work demands, and a separate dimension—resource adequacy, which evaluates whether resources are available for physicians to do their job. Through this body of literature we identified factors associated with physicians who delayed timing of their retirement. For instance, health organizations that offered flexibility and a gradual reduction in work hours for supported physicians approaching retirement to remain in practice. Longer employment and more flexible options for retirement are two approaches currently used in Japan to address labour shortages [68].

Another aim of this research was to identify and synthesize the literature on strategies used by health care organizations

interested in facilitating physician retention and successful retirement planning. Findings from this study point to a number of factors that support physician retention such as the incorporation of flexible work hours, improving work satisfaction and reducing work barriers. Successful retirement planning was found to be related to being prepared for the financial demands, physical changes, and psychosocial dynamics associated with aging and leaving the workforce [69-71]. This can result in the dual effect of better staff retention and improved work satisfaction.<sup>45</sup> Likewise, a reduction of hours and a shift toward preferred duties such as teaching and mentorship may help to facilitate knowledge transfer to younger professionals. Health organizations may be able address work barriers through modifying workflow by adding more staff, and offering training or support.

The theory of purposeful work behaviour [72] posits that when job characteristics act in concert with an individual’s motivational

striving, that psychological meaningfulness may be gleaned from their work. Thus, if physicians are given opportunities to pursue preferred work tasks such as teaching over clinical rounds [73,74] then their experiences of greater meaningfulness in their work will trigger task-specific motivation [72]. This can result in a willingness to continue working in hospital settings while also benefiting the enterprise as a whole.

Health was also shown to be an important factor determining whether physicians chose to remain in the workforce. As such, health care organizations may consider strategies that improve physician health by addressing the personal physical fitness and risk-related habits of physicians. Some potential interventions might include encouraging a culture of taking sick days [75] along with proper mechanisms that allow physicians not to overburden one another when taking sick days. Developing interventions to reduce physician and staff stress would also help enhance physician well-being [41,54].

Preparation for retirement that is tailored to specific life and career stages can make these transitions normative and avoid the complications that arise when physicians stay in their role beyond what is safe from a patient perspective or beyond what is in the best interests of the medical practice plan. Health care organizations can also support successful transitions to retirement [58] through the creation of volunteer roles<sup>66</sup> and new connections to the institution or organization such as teaching, mentoring, or peer support [73].

Research on the factors that influence physician retirement timing and planning for retirement is still in its early stages and future exploration is needed to further delineate our preliminary findings. To simplify our analyses, we focused on English-language studies, which may create publication bias by inadvertently excluding the perspectives of physicians from non-English speaking regions while disproportionately weighing studies from North America and the United Kingdom. Furthermore, our analysis is based on a heterogeneous sample of physicians spanning across diverse specializations, with jurisdictional differences in regulations, mandatory retirement legislation,

pension systems, and differences in remuneration across health care systems. To improve the generalizability of future studies, future studies should inspect physician perspectives based on specialization, include more information about the health care context in which the physicians practice, and consider following physicians over time to better understand factors that facilitate planning for a transition from practice.

Excessive workload, poor health, low job satisfaction and disillusionment were found to be major reasons a physician may choose to retire. Hospitals and health care organizations ought to consider the impact of a physician's flexible work hours, gradual reduction in responsibilities, and resources for financial planning when developing strategies that facilitate physician retirement planning. Such strategies should be designed in a way that is both effective and respectful to individuals at later stages in their careers.

## Conclusion

By the above study we conclude the systematic review Systematic Review of Physician Retirement Planning through different characteristics like physician retention and retirement planning, physical retirement age, workload, job satisfaction and quality assessment of the reviewed studies. This study says that a physician's decision for early retirement due to different causes like work force and tension and mental stage of the mind based on the work. To keep health in a state of good condition is by keeping the workload in control and the management of time to overcome the pressure.

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## Declaration of Interest

The authors have declared that no competing interests exist.

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