folkehelseinstituttet

Effects and experiences of part-time work in the healthcare and community care services: a protocol for two scoping reviews

Project number: RL 027 and RL 028

Protocol developed: January 2019

Short description/summary:

In Norway, there is a situation with a high proportion of part-time personnel in both the community care and healthcare services, where in 2017 only 40-43% of nurses worked full-time. It has been suggested that part-time work may have a negative impact on users' and patients' perceived quality of care, and maybe also on the personnel. In Norway, there is great regional variation in the proportion of part-time personnel in the care services, which may result in inequalities in the care provided. We do, however, know very little about the consequences of part-time work on patients, users and personnel. This protocol describes two scoping reviews that will map the published evidence regarding part-time work (including effects and experiences) in the healthcare and community care services. One will focus on patients/users and the other on personnel. These scoping reviews, which are commissioned by the Norwegian Directorate of Health, will be used in the *Kompetanseløft 2020* project, which is the government's plan for recruitment, competence and professional development in the community health care services.

Kort beskrivelse/ Norsk sammendrag:

I Norge er det en relativ høy andel deltidsarbeidende i både den kommunale omsorgstjenesten og i helseforetakene, i 2017 var det bare 40-43 % av sykepleiere som jobbet heltid. Det har vært antydet at deltidsarbeid kan ha en negativ innvirkning på pasientens/brukerens opplevde omsorgskvalitet, og også på personalet. I Norge er det store fylkesvise variasjoner i andelen deltidsansatte, noe som kan føre til geografiske ulikheter i den omsorgen som tilbys. Vi vet imidlertid svært lite om konsekvensene av deltidsarbeid på pasienter, brukere og personell. Denne protokollen beskriver plan for to oversikter som vil kartlegge publiserte studier om deltidsarbeid i helse- og omsorgstjenestene (både om effekter og erfaringer/opplevelser). Én vil fokusere på pasienter og brukere og den andre på personell. Kartleggingsoversiktene er bestilt av Helsedirektoratet, og vil bli brukt i *Kompetanseløft 2020-prosjektet*, som er regjeringens plan for rekruttering og kompetanse- og fagutvikling i den kommunale helse- og omsorgstjenesten.

Project category and commissioner
Product (program area): Systematic scoping review
Thematic area: Part-time work, patient safety, and quality of care
Commissioner(s): the Directorate of Health, Contact person: Caroline Hodt-Billington; Christin Marsh-Ormhaug
Project coordinator and working group
Project coordinator: Gerd M Flodgren
Internal working group: Gerd M Flodgren, senior researcher Julia Bidonde, researcher Ingvild Kirkehei, research librarian
External collaborators:
Contingency plan: Project supervisor rearrange the group or find other researchers to join the group

Mandate

The Norwegian Directorate of Health is responsible for implementing *Kompetanseløft* 2020 (https://helsedirektoratet.no/kompetanseloft-2020), which is the Government's plan for recruitment, competence and professional development in the community healthcare services. They therefore seek more knowledge about how part-time work affects the users (i.e. patients, families and caregivers), as well as personnel working in the healthcare and community care services, in order to fulfil their role of professional advisor in terms of needs, solutions and tools in the personnel field. The Division of Health Services at the Norwegian Institute of Public Health (NIPH) conduct systematic evidence summaries (e.g. systematic reviews, scoping reviews) of priority questions for the work on national guidelines. As these products have short time-frames we do not write comprehensive backgrounds, discussion or make comprehensive definition lists.

These two scoping reviews on the *Effects and experiences of part-time work in the healthcare and community care services* are conducted on this mandate from the Directorate of Health.

Objectives

The objective of these two scoping reviews is to explore and map studies of part-time work (including studies of effects and experiences) in the healthcare and community care services. The focus of the two scoping reviews is on two distinct groups: i) users and patients in one, and ii) healthcare and community care personnel working directly with patients, in the other.

As our intention is to comprehensively examine and map the evidence on part time work in healthcare and community care services, we will, for both scoping reviews, try to find out more about what is known in the published literature about the effects, consequences and experiences of part time work in healthcare and community care services . More specifically:

a. What kind of publications are reporting effect and experiences of part-time work, and what are the main outcomes reported?

b. What kind of part time work (definitions included) and which occupational groups (cadre) have been studied, and in which locations and settings have the studies been conducted?

c. Have any limitations or challenges of part time work been reported in the published literature?

Definitions:

For the purpose of this scoping review, the term *healthcare personnel* refer to any type of staff who work directly with patients (e.g. any type of nurses, assisting personnel, physicians, physiotherapists, including personnel working in the community care services).

We have defined *healthcare services* as organisational entities that provides inpatient or outpatient testing or treatment of human disease or dysfunction; dispensing of drugs or medical devices for treating human disease or dysfunction". We have defined community care as "the provision of health (and social care) services outside of hospital to older people and people with learning disabilities or mental illness, to enable them to live as independently as possible in their own homes or elsewhere in the community".

Patients are people receiving primary or secondary healthcare, while *users* are people receiving community care, for example residents in long term care facilities. Both groups may include relatives and caregivers.

We have used the World Health Organisation's (WHO) definition of quality of care which is "the extent to which healthcare services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centred." [1].

We have also used WHO's definition of patient safety according to which: «Patient safety is the prevention of errors and adverse effects to patients associated with healthcare» [2].

BACKGROUND

There is a shortage of nurses in Norway as well as globally, and adding to this problem is the large number of healthcare personnel who work part-time [3, 4]. Little is known about the consequences

of having a high proportion of part-time personnel working directly with patients in the healthcare and community care services,

Description of the problem

There is no universal definition of part-time work. The Organisation for Economic Co-operation and Development (OECD) have, for the purpose of international comparisons, suggested a definition of part-time work based on a 30 usual hours threshold [5].

In Norway, there is a situation with a high proportion of personnel working part-time in the healthcare and the community care services. In 2017 only 40-43% of nurses in the community care services and the healthcare services worked full-time[6]. An additional problem, is that part-time personnel in the community care services often are less skilled or unskilled [7].

There is large variation in the proportion of part-time employees across different communities in Norway. In 2015 only 30% of healthcare personnel worked part-time in the Oslo area, which can be compared with almost 70% in East-Agder [7]. This may hypothetically have a negative effect on the continuity and quality of care, and result in differences in the quality of care that patients receive depending on where they live.

Not only are healthcare personnel who work part-time often less skilled than full-time personnel, but they may also according to a Spanish survey of nurses (N=2,094), experience lower levels of job involvement, and work engagement than full-time nurses [3]. A survey of US physicians (N=422) on the other hand, showed less burnout, higher satisfaction and greater work control among part-time physicians, than among those working full-time [8]. Results from a systematic review suggest that when providers work fewer hours this result in higher quality of patient care, but no difference in patient satisfaction [9].

We know very little about the consequences (effects and experiences) of having a high proportion of personnel working part-time in the healthcare or the community care services. In Norway there has been a focus on increasing the proportion of full-time positions in the healthcare services in recent years in order to provide better coverage of personnel. It has been suggested that a high proportion of part-time personnel may have a negative impact on the continuity of care provided, and therefore also on patients' or user's perceived quality of care, and the experiences of healthcare personnel. There is therefore a need to gain more knowledge about the existing evidence of the effects and experiences of part-time work on patients and users (e.g. quality of life, patient safety, satisfaction with care), as well as on the healthcare personnel themselves (e.g. job satisfaction, job engagement, burnout).

Why is it important to do these scoping reviews?

The Directorate of Health seek more knowledge about how part-time work affects the users/patients, as well as the personnel who works part-time, in order to fulfil their role of professional advisor in terms of needs, solutions and tools in the personnel field.. These two systematic scoping reviews will assist the Directorate of Health in their work on the 'Kompetanseløft 2020' project, by providing a systematic mapping of research on the effect and experiences of part-time work in the healthcare and community care services, both from the perspective of patients and healthcare personnel.

A Cochrane review published in 2011 [10] evaluated the effects of different nurse staffing models, but did not look specifically on effects or experiences of part-time work. We have conducted a preliminary search for existing scoping and other reviews on the topic, in the following databases: Cochrane library, Campbell library, Google Scholar, Swedish Agency for Health Technology Assessment and Assessment of Social services (SBU), and in Epistemonikos. No scoping review on the topic was found among the identified publications.

The objectives, inclusion criteria and methods for this scoping review are specified in advance and documented in this protocol.

METHODS

We will address our research objectives by conducting two scoping reviews. These two scoping reviews will be guided by the methodology manual published by the Joanna Briggs Institute for scoping reviews [11]. If too few studies (i.e. less than five eligible studies for each review) are found on the topic to make two separate reviews worthwhile, we will report results for patients/users and care personnel in the same scoping review.

There is no international accepted definition or purpose for a scoping review, but one of its core characteristics is that it provides an overview of a broad topic [12]

Protocol

The protocol for the two scoping reviews were drafted and discussed with our commissioner. We have followed the recently published PRISMA- ScR reporting checklist when developing the protocol [13]. This protocol will be published on the NIPH website: https://www.fhi.no/en/. It will also be published at the Open Science Framework (https://osf.io/).

Eligibility criteria

The PICCOS (Population, Intervention, Comparator, Context, Outcome, Study design) eligibility criteria for our two scoping reviews are as follows:

Population

Scoping review 1: We will consider any patients, or users, with any health condition(s), receiving care in a healthcare setting, in the community (e.g. residents in care homes/long term care facilities), or in their own homes. We will also consider the relatives or care-givers of patients/users.

Scoping review 2: We will consider any type of care personnel (e.g. nurses, physicians, assisting personnel, physiotherapists etc.), working in any care setting (as per above). Only personnel who work directly with patients or users will be considered.

Intervention/Concept (part-time work)

We will consider any study that provide relevant information regarding part-time work (including effect and experiences) in the healthcare services or in the community care services from the perspective of care personnel, and/or patient/users. Evaluation studies will be included independently of duration of intervention and follow up.

Comparator

We will consider any comparator (e.g. settings with higher/lower proportion of part-time personnel, number of work hours per week), but also studies without a comparator.

Context

We will consider any healthcare or community care setting in any high income country.

Outcomes

We will consider the following sets of outcomes for the two scoping reviews:

Scoping review 1: Any objective patient/user outcome related to patient safety and quality of care (e.g. infections, pressure ulcers, falls), as well as outcomes related to the experiences of patients/users (e.g. satisfaction with care, quality of life).

Scoping review 2: Any objective outcome related to the quality of care delivered by the healthcare personnel (e.g. information failure, medication errors, malpractice), as well as outcomes related to the experiences of healthcare personnel (e.g. job satisfaction, work engagement, motivation, burnout).

Study designs

We will consider studies of any study design (i.e. systematic reviews, randomised studies, non-randomised studies, observational studies, qualitative studies etc.) for inclusion. Due to our short time-line (5 months), we will exclude conference abstracts, protocols, textbook chapters, editorials, and opinion papers.

Exclusion criteria

We will exclude publications from low and middle income countries, as these are considered less relevant for the current Norwegian conditions. We will exclude studies focusing on administration, scheduling, recruitment, retention, feasibility, pension schemes and policy implementation.

Note:

It should be noted that the community care services, where the proportion of part-time personnel is the highest, is our main area of interest. If we find a sufficient number of quantitative studies conducted in the community care services (e.g. care homes/ long term care facilities), we will only include these, and exclude studies conducted in other care settings (e.g. primary care), and list these separately. If we on the other hand, identify only a few eligible quantitative studies conducted in community care (less than three), we will include studies conducted in any settings.

Information sources and search strategy

An information specialist (Ingvild Kirkehei) will develop a comprehensive search strategy based on our eligibility criteria (see PICCOS above), and run all the electronic searches. The search strategy will be peer reviewed by another research librarian. She will search the following databases for relevant publications published 2000 and up to present: Cochrane Central Register of Controlled Trials (CENTRAL); Cochrane Database of Systematic Reviews; MEDLINE (Ovid) ; Embase (Ovid); PsychInfo (Ovid); SveMed+ ; HTA database (via CRD); Cumulative Index of Nursing and Allied Health Literature (CINAHL, via Ebsco); Epistemonikos; ISI Web of Science; Sociological Abstracts (ProQuest), Social Services Abstracts (ProQuest) and International Clinical Trials Registry Platform /ICTRP)

In addition, we will search the following sources of grey literature: the *Norwegian Institute of Public Health database* (https://www.fhi.no/en/), the Swedish *Agency for Health Technology Assessment and Assessment of Social Services database* (https://www.sbu.se/sv/publikationer/),

the Danish *Nationale Forskning og Analysecenter for Velferd* (https://vive.dk/). We will also search the reference lists of included studies.

We will provide the full search strategies in an appendix in the final review.

The search will have no language restrictions. However, given our 5 months' timeline, and to ensure the timeliness of our scoping reviews, we will list possibly relevant publications in other languages than English, Spanish, Norwegian, Swedish, Danish and Icelandic, in a separate table. We will only consider these studies if our review team have the time and capacity to deal with them in a timely manner.

Selection of sources of evidence

We will download all titles and abstracts retrieved by the electronic searches into the reference management program EndNote and remove duplicates. Two reviewers (GF and JB) will independently, using the screening tool Rayyan [14], assess the eligibility of all the remaining titles and abstracts for inclusion. We will obtain full text copies of potentially relevant references, and assess these against the inclusion criteria (see above). We will resolve disagreements by discussion among review authors, or if needed by the use of an arbitrator. We will document references read in full text, and subsequently excluded, in a table along with the reasons for exclusion.

Data items and data abstraction process

One reviewer (GMF) will abstract data from each included study into a piloted data extraction form, and the second reviewer (JB) will verify the correctness of the data extraction. We will resolve disagreements through discussion among review authors, and if needed by the use of an arbitrator.

We will extract the following data from the included studies:

- Author(s);
- Year of publication
- Origin/country of origin (where the study was conducted)
- Study design (e.g. randomised, non-randomised, qualitative),
- Study aims
- Study population and sample size (if applicable)
- Characteristics of personnel (e.g. time employed part-time, occupation, education, skilled/unskilled);
- Definition of 'part-time'
- Proportion part-time employees, number of working hours (if applicable)
- Setting i.e. type of healthcare setting, or community care setting;
- Methodology/methods (e.g. tools used to assess outcomes, methods used to analyse qualitative data)
- Intervention type, comparator and any relevant details (if applicable)
- Duration of intervention (if applicable)
- Outcomes, and details of these e.g. how they were measured (if applicable)
- Key findings that relate to the scoping review question
- Theory background (if applicable)

Critical appraisal of individual sources of evidence

We will not assess the risk of bias of included studies, nor will we grade the certainty of the evidence from these studies. This approach is in accordance with a paper on the conduct of scoping reviews [15].

Synthesis of results

We will explore what type of evidence (quantitative and/or qualitative) that is available on the topic of part-time work in the healthcare and community care services. We will present this evidence by mapping and charting the data. We will provide a description of the type of part-time work in the included studies, and describe the definitions of part-time work provided. In scoping review 1 we will describe evidence of part-time work on patient outcomes, and the patients' experiences of part-time work. In scoping review 2 we will describe the evidence of part-time work on outcomes related to the healthcare personnel, along with their experiences of working part-time. We will further, for each scoping review, summarise the literature according to the types of participants, interventions, comparators, outcomes and settings identified.

Because this is a scoping review, there is no principal summary measure. We will however, if possible, conduct quantitative analyses using descriptive statistics, (e.g. frequencies, percentages, and measures of dispersion).

Our qualitative analysis will aim to identify dimensions of the experiences of healthcare personnel of working part-time in the healthcare services, as well as the experience of patients/users of receiving care from part-time personnel in the included studies. Our method will resemble that of comparative analysis, i.e. we will be looking at recurrent themes, variations, contradictions, and connections between the results of different studies.

If the data retrieved allow it, we will use computer-assisted clustering techniques to present the information in graphical form (e.g. bubble plot, word cloud).

DISCUSSION

Implications

Findings from the two scoping reviews will be used by the Norwegian Directorate of Health in their work on the *Kompetanseløft 2020* project (https://helsedirektoratet.no/kompetanseloft-2020), which is the Government's plan for recruitment, competence and professional development in the community healthcare services.

Dissemination

The scoping review will be sent to the Norwegian Directorate of Health, and published on the NIPH website. The commissioner, and possibly also other stakeholders, will be invited to a meeting where the results of the scoping reviews will be presented and their implications discussed. We will also, if the opportunity arises, consider presenting our results at an international and/or a national conference and publish the results in an international peer-reviewed journal. Publication in the form of a popular science article, or similar, to relevant professions may also be considered.

Peer review

- This protocol, as well as the two scoping reviews, will be reviewed by one of NIPH's Department Directors, and the Specialist Director, of Reviews and Health Technology Assessment.

Risk analysis

RISK	PROBABILITY	CONSEQUENCE	RISK FACTOR
Long term sick-leave	Low risk	Delayed report	Low
Measures to limit the probability of risk and consequences:	**Assign new project manager/staff**		

References

1. WHO. *What is quality of care and why is it important?* 2018 [cited December 2018 at https://www.who.int/maternal_child_adolescent/topics/quality-of-care/definition/en/.
2. WHO. *Patient safety*. 2018 [cited December 2018 at http://www.euro.who.int/en/health-topics/Health-systems/patient-safety.
3. Burke, J., Ronald, L, Dolan, L, Fiksenbaum, S L, *Part-time versus full-time work: an empirical evidence-based case of nurses in Spain*. Evidence-based HRM: a Global Forum for Empirical Scholarship, 2014. **2**(2): p. 176-91.
4. International Council of Nurses. *The Global nursing Shortage::Priority Areas for Intervantion*. 2019 [cited January 2019 at https://www.who.int/workforcealliance/knowledge/resources/icn_nursesretention/en/.
5. van Bastelaer, A., Lemaître, G, Marianna, P *The Definition of Part-Time Work for the Purpose of International Comparisons*, in *OECD Labour Market and Social Policy Occasional Papers*. 1997.
6. Sykepleierforbund, N. *Statistikk: Gjennomsnittslønn, lønnsvekst, og antall årsverk*. 2018 [cited 2019 accessed February 8th at https://www.nsf.no/statistikk/artikkelliste/539297].
7. SSB. *Arbeidsskraftundersøkelsen*. 2015 [cited December 2018 at https://www.ssb.no/arbeid-og-lonn/statistikker/aku/kvartal/2016-02-03.
8. Mechaber, H.F., et al., *Part-time physicians...prevalent, connected, and satisfied*. Journal of general internal medicine, 2008. **23**(3): p. 300-303.
9. Kapinos KA, F.P., Greer N, Rutks I, Wilt TJ *The Effect of Working Conditions on Patient Care: A Systematic Review*. . 2012, VA-ESP Project #09-009.
10. Butler M, C.R., Drennan J, Halligan P, O'Mathúna DP, Schultz TJ, et al,, *Hospital nurse staffingmodels and patient and staff-related outcomes*. Cochrane Database of Systematic Reviews, 2011(7).
11. Peters M, G.C., McInerney P, Soares C, Hanan K, Parker D *The Joanna Briggs Institute Reviewers' Manual 2015: Methodology for JBI Scoping Reviews*. 2015, Joanna Briggs Institute.
12. Peterson, J., et al., *Understanding scoping reviews: Definition, purpose, and process*. Journal of the American Association of Nurse Practitioners, 2017. **29**(1): p. 12-16.
13. Tricco, A., Lillie, E, Zarin, W, O'Brien, KK, Colquhoun, H, Levac, D, et al. , *PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation*. Ann Intern Med, 2018. **169**(7): p. 467-73.
14. Ouzzan, M., Hammady, H, Fedorowicz, Z, Elmagarmid, A *Rayyan — a web and mobile app for systematic reviews*. Systematic Reviews, 2016. **5**: p. 210.
15. Tricco, A.L., E, Zarin, W, O'Brien, K, Colquhoun, H, Kastner, M et al, *A scoping review on the conduct and reporting of scoping reviews*. BMC medical research methodology, 2016. **16**: p. 15-15.