

# Task shifting to enhanced physical therapy in musculoskeletal secondary care. An evidence-based narrative review

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**DOI:** 10.2427/13211

Accepted on October 17, 2019

## ABSTRACT

**Background:** The World Health Organization defines task shifting as the rational redistribution of tasks among the healthcare workforce teams. The transfer of tasks to physical therapy is well suited for musculoskeletal conditions, either where exercise and physical activity are an important part of the treatment, or to sort the flow of emergency patients.

**Methods:** What are the benefits, limits and implementation challenges associated to the employment of enhanced physical therapy in the redistribution of secondary healthcare workforce? The aim of this narrative review is to collect evidence from the most recent publications, in order to address clinical studies, policy making and further research.

**Results:** A clear correlation between healthcare system and type of service was not found, supporting that task shifting can be employed to meet different needs. In emergency departments, enhanced physical therapists are employed to improve the flow of musculoskeletal patients, reduce waiting time, length of stay and free up professionals in support of more complex conditions. Otherwise, enhanced physical therapists are employed to sort the flow of chronic musculoskeletal patients, triaging to orthopaedic surgery, and performing follow-up. Clinical outcomes were equal or better than those achieved by other professionals. Appropriate diagnoses and referrals were also demonstrated, despite two studies show enhanced physical therapy to be effective but dependent by medical support. Specific training is therefore fundamental.

**Conclusion:** Task shifting is a promising innovation which is worthy introducing in the management of chronic musculoskeletal conditions, when most of the treatments may be repeated under the supervision of medical consultants.

*Key words:* chronic patients management, enhanced physical therapy, musculoskeletal, task shifting, healthcare value

## INTRODUCTION

The World Health Organization (WHO) defines task shifting as the rational redistribution of tasks among the

healthcare workforce teams [1]. Task shifting means that work traditionally performed by one health professional is transferred to another, in order to maximize the benefits produced by the amount and qualification of resources

available [2], either humans, or machines [3]. For instance, task shifting is frequently used in low-income countries to make up for the shortage of healthcare professionals [4], as well as in high-income countries in support of healthcare quality, waiting times and sustainability [5-7].

Task shifting is traditionally practised from medical doctors to nurses [8,9], but physical therapy is gaining momentum [10]. The transfer of tasks to physical therapy is well suited for musculoskeletal (MSK) conditions, either where exercise and physical activity are an important part of the treatment, or to sort the flow of emergency patients affected by trauma or soft tissue injury. Physical therapists (PTs) have emerged as key providers in such roles, by supporting or replacing traditional medical skills such as performing triage, communicating a diagnosis, triaging potential surgical candidates, ordering diagnostic imaging or laboratory tests, performing injections and in some countries prescribing medications.

The challenge of enhanced physical therapy is to improve healthcare access, free up medical resources and reduce costs while achieving the same patient satisfaction and quality. This is especially true for those countries in which healthcare resources are shared or distributed under public regulation, which are accountable for the effectiveness and efficiency of their policies [11]. In the UK, around 21% of the 18.3 million people who attended Emergency Departments (ED) in a year presented with MSK-related injuries which generated an estimated £ 440 million costs. With the average cost of an ED visit costing the National Health Service (NHS) approximately £ 115, enhanced physical therapy is catching on in order to reduce direct costs with similar clinical outcomes [12,13].

The enormous potential disclosed by a profitable adoption of task shifting has pushed the European Commission to recognize its value [3]. However, such a serious consideration from international institutions (together with the high amount of experiences in which enhanced physiotherapy is informally employed worldwide) does not enjoy equal attention in literature. The majority of reports available are indeed descriptive studies which focus on single components of the practice, such as organizational benefits, clinical outcomes, diagnostic accuracy, patient satisfaction, or direct cost savings to the provider. Although each of these focuses are appropriate and necessary, several reviews complain about the lack of an overall sight on the multiple components included in the process [14-19]. As long as healthcare value is expressed by multiple benefits to multiple stakeholders [20,21], the more dimensions are included in a study, the more complete evaluation of task shifting.

What are the benefits, limits and implementation challenges associated to the employment of enhanced physical therapy in the redistribution of secondary healthcare workforce? The aim of this narrative review is to collect evidence from the most recent publications, in order to address clinical studies, policy making and further research.

## METHODS

Items are generated from a review of the literature. Web searches on and PubMed database have been conducted between July and September 2019, by one researcher, and subsequently approved by a supervisor, according to inclusion criteria. Grey literature is employed to address background and support discussion. Scientific papers are entirely screened and summarized in the synthesis.

The search terms used are the following: task shifting, review, physiotherapy, musculoskeletal, orthopaedics, joint replacement, fast-track, diagnostics, community medicine, barriers, human replacement, robotics, wearable. The purpose of the research is described more in detail by the following bullet points, in which inclusion criteria are also made explicit.

- Enhanced physical therapy can be declined in different tasks according to local regulation, provider organization, care-givers qualifications and healthcare systems characteristics. In this manuscript, enhanced physical therapy includes those roles and specific functions typically adopted in the UK (such as Advanced Practitioner, Extended Scope Practitioner, Emergency Physiotherapy Practitioner, Consultant Physiotherapist) [9]. Sometimes well distinct, sometimes overlapping [22], these roles and functions are also highly representative of similar employment in other countries [9,11,14,23-26].
- The focus is limited to secondary care practice, be it inpatient or outpatient, be emergency or not. Therefore, studies about enhanced physical therapy in primary care are excluded from the synthesis.
- The target of the present research is to evaluate the benefits of enhanced physical therapy as a task shifting modality from other traditional practice (i.e. physical therapy instead of medical); not to evaluate 1. the benefits of physical therapy as an alternative (or an integration) to other treatments; 2. the benefits of task shifting from other professions to physical therapy (i.e. nurses instead of PTs [27] or assistant PTs instead of qualified PTs [28]). Therefore, similar studies were excluded from the synthesis.
- The UK was the first country to authorize limited drug prescription from PTs. Being this authorization exclusive to the UK and few other countries, the studies based primarily of this function (i.e. low back pain drug prescribing) [29] are excluded from the synthesis.

The focus is limited to the most recent innovations which were largely excluded by previous reviews. Therefore, studies published before 2015 and editorials were also excluded. In order to facilitate reading and provide easier access to evidence according to the interest of the reader (be him/

her a provider, a funder, a care-giver, an administrator, a researcher, a healthcare consultant or a policy maker), the results were divided in the following sections:

- Reference and country: specifying the country can help the reader understand if the same interventions can be applied in his/her institution.
- Study design and goals: specifying goals can help the reader to intercept similar needs and opportunities to those of his/her institution.
- Outcomes: specifying outcomes can help the reader to understand if he/she had the possibility to perform the same evaluations, or activate to introduce the relative parameters.
- Protocol or function: specifying the skills of the enhanced physical therapist (that is, the contents of task shifting) can help the reader find similar experiences to those implemented in his/her institution, introduce them, or propose them for education, professional qualification or funding.
- Clinical outcomes: specifying clinical outcomes is fundamental to ensure healthcare quality and safety, which is the main interest of the patient and hopefully of the entire healthcare stakeholders. This is why overlapping outcomes such as the appropriateness of referrals (which is both clinical and administrative) had been included in this column.
- Cost savings or cost-effectiveness: economic outcomes and efficiencies are fundamental to evaluate the success of task shifting (which is probably the main interest of the funder), if not its primary goals given (at least) equal clinical outcomes and/or patient satisfaction. When possible, the former are therefore evaluated in association to the latter.
- Logistical, organizational and system-related benefits: reduced waiting lists, improved accessibility to services, improved patient flow and better distribution of work are also fundamental to evaluate the success of task shifting, if not, again, its primary goals.
- Patient satisfaction: patient satisfaction parameters (i.e. Patient Related Outcome Measures: PROMS) are increasingly adopted in the assessment of healthcare policies and technologies, and represent a fundamental dimension of healthcare value: "outcomes that matter to people at lowest possible costs"[30]. Indeed, a systematic review on the adoption of PROMS in the evaluation of enhanced physical therapy practice found 72 different parameters to be employed commonly (i.e. Patient Satisfaction, Quality of Life, Functional Status, Pain, Global Status, Psychological Well-being, Work ability, Healthcare Consumption and Costs) [31].
- Care-givers and stakeholders' perceptions: qualitative research is fundamental to understand

the degree of commitment of the workforce involved in task-shifting, be them those who replace functions (in this case, enhanced physical therapists) or those who are replaced (in most of the case medical doctors or surgeons).

- Room for improvement: identifying structural limits, implementation challenges, patients worries or care-givers perplexities provides evidence-based information to improve or abandon the implementation of the program, providing in turn fundamental support to effective early technology assessment.

Just like rarely a study includes all the information under consideration, rarely a study focuses on a single one. Missing data are represented by empty cells. Rather than a limit of the present study, the authors believe this strategy to address more brightly the evidence to rely on, as well as the challenges to address.

## RESULTS

15 studies are included in the synthesis.

## DISCUSSION

Task shifting to secondary care enhanced physical therapy is a widespread empirical practice which is attracting increasing interest in literature. Where these shifts have been evaluated, they often, but not always, are associated with outcomes that are as good or even better than with the status quo. However, the results are often context dependent, and it cannot be assumed that what works in one situation will apply equally to another.

In order to provide a clearer discussion of these paper findings, considerations are reported in bullet points.

- Task shifting is employed in 5 different countries (Australia, Ireland, Netherlands, Norway, United States), among which 9 services are employed in ED and 6 are not. A clear correlation between healthcare system and type of service was not found, supporting that task shifting can be employed to meet different needs.
- In ED, enhanced PTs are mostly employed to improve the flow of MSK patients, reduce waiting time and length of stay (i.e. guarantee assistance before 4h) and free up other professionals in support of more complex medical conditions. Otherwise, enhanced PTs are employed to sort the flow of chronic MSK patients, triaging to orthopaedic surgery, and performing follow-up visits after discharge.
- Clinical outcomes achieved by enhanced physical therapists were equal or better than those

**TABLE 1. Results**

Reference and country	Type of study and goal	Outcomes	Protocol or function	Results					Room for improvement
				Clinical	Costs savings or cost-effectiveness	Logistical, organizational or system-related benefits	Patient-reported outcomes	Care-givers and stakeholders' perception	
[32] (Norway)	Randomized Controlled Trial To compare outcomes of spondyloarthritis treatment between two outpatient services, one led by PTs (PTS), one by rheumatologists (RS).	Patient satisfaction (Life Satisfaction Questionnaire); Physical function (Bath Ankylosing Spondylitis Functional Index: BASFI) test; Pathological activity (Ankylosing Spondylitis Disease Activity: ASDAS) score.	Each patient is admitted to both services with a spondyloarthritis diagnosis. PTS treatment consists of three PT visits in one year. RS consists of three visits in one year, the first and the last by a rheumatologist, and the second by a nurse. All visits last half an hour and have similar goals: objective examination, anamnesis, recommendation and update of physical activity, self-care education.	ASDAS score did not present significant variation between the groups. BASFI test showed that function has deteriorated equally, from the first to the last visit, within the two groups, while mobility improved when treated by PTS.	PTS had equivalent patient satisfaction, clinical outcomes, and better mobility with respect to RS. If rheumatologists had higher salary than physical therapists (this information is not explicitly mentioned in the paper), PTS was more cost-effective than RS.	Given equivalent patient satisfaction, clinical outcomes, and better mobility, PTS contributes to free up medical resources to patients affected by more complex morbidities.	Patient satisfaction was the same between physical therapy and rheumatological examination. Patient satisfaction was superior (but statistically non-significant) in case of nurse rather than physical therapy examination. Patients appreciated more empathy and ability to give informations from nurses. Globally, patients were satisfied in both groups		
[33] (Ireland)	Retrospective study To establish the appropriateness of referrals by Advanced Practice Physiotherapists (APPs) in paediatric orthopaedic patients.	Agreement rates between diagnosis made by APPs and orthopaedic consultants. Surgical Conversion Rate (SCR): ratio between new surgical visits and patients undergoing operation	The APP triage clinic for elective patients was established in response to excessive waiting times. Two specialist PTs manage the service, each of whom had over 8 years' paediatric MSK experience when initially recruited to the post. Ongoing training and development continues in-house, both during clinic and in formal team-based training.	Good to excellent agreement was demonstrated in almost all categories based on the kappa coefficient. 87% referrals from APPs were deemed to be appropriate by orthopaedic consultants. SCR was 23%.					
[34] (Australia)	Prospective observational study. To evaluate the outcomes of a state-wide implementation of post-arthroplasty review clinic (PARC) for patients following total hip and knee arthroplasty, led by advanced MSK PTs eventually supported by orthopaedic clinicians.	Victorian Innovation and Reform Impact Assessment Framework was used to assess <ul style="list-style-type: none"> <li>Efficiency, Effectiveness (access to care, safety and quality, workforce capacity, utilisation of skill sets, patient and workforce satisfaction)</li> <li>Sustainability (stakeholder engagement, succession planning and availability of ongoing funding).</li> </ul>	PARC clinic was co-located with orthopaedic clinic, in order to achieve easier consultation if required. Each PARC appointed one to three PTs. Recommended selection criteria were <ul style="list-style-type: none"> <li>Currently enrolled</li> <li>Completed relevant postgraduate qualification such as Master in MSK Physiotherapy</li> <li>Minimum 7 years of MSK clinical practice</li> <li>Specific training and assessment programme.</li> </ul>	No adverse events occurred.	Average cost clinic savings across 10 sites was 44%. Average annual predicted total value of increased surgeon capacity was \$11,950 per clinic. Eight sites secured ongoing funding.	2362 planned occasions of service were provided for 2057 patients. Reduced patient waiting times from referral to appointment were recorded. PARC did not interfere negatively with orthopaedic clinic practice.	The Australian Orthopaedic Association review guidelines were met in 8/10 sites and patient-reported outcome measures were introduced as routine clinical care. High patient satisfaction was expressed.	High workforce satisfaction was expressed	

TABLE 1 (CONTINUED). Results

Reference and country	Type of study and goal	Outcomes	Protocol or function	Results					Room for improvement
				Clinical	Costs savings or cost-effectiveness	Logistical, organizational or system-related benefits	Patient-reported outcomes	Care-givers and stakeholders' perception	
[35] (Australia)	Qualitative study To identify implementation barriers and enablers of 12 enhanced physical therapy services from the perspective of PTs themselves.	Themes and considerations emerged from questionnaires	PTs were employed in 12 different services and healthcare networks over a 12 months period (metropolitan, regional, rural). Those services were dealing with orthopaedic postoperative joint replacement review (10), general orthopaedic (1), emergency (1), neurosurgery (1).					<p>Implementation success depended on nine major themes:</p> <ul style="list-style-type: none"> <li>• Ratio between demand and capacity.</li> <li>• Model of care.</li> <li>• Organization.</li> <li>• Stakeholders involved.</li> <li>• Degree of communication between care-givers.</li> <li>• Planning and processing.</li> <li>• Evaluation.</li> <li>• Workforce composition and commitment.</li> <li>• Learning and assessment framework.</li> </ul>	<p>Important enablers included engagement and by-in from key stakeholders, medical staff and well-established learning framework for training.</p> <p>Barriers included competitive funding environment and problems with communications.</p> <p>Knowledge, skills, availability, motivation and experience of PTs had a large impact on the implementation.</p>
[36] (Ireland)	Online survey (Google questionnaire distributed to all APPs employed in the country). To profile national APP services by investigating the experience of PTs involved.	The focus was on service organization, clinical and patient outcomes, care-givers experience, and waiting time.	25 APP services were detected. Variance existed in the organizational design and operating of APP services. Since 2011, APPs have triaged the care of patients awaiting orthopaedic and rheumatologist consultant/specialist doctor in Ireland. Although 83% of the PTs had postgraduate qualifications, APP also availed informal specific training.		Cooperation between APPs and consultants in 11 sites facilitated joint medical-APP processes. Between-site differences in autonomy to screen referral letters, arrange investigations, injections, and surgery were detected.		Further formal evaluation, capturing patient outcomes, is proposed.	<p>APPs appreciated learning opportunities from/ and clinical support to consultants, but experiences were consultant-dependent. Although highly experienced and qualified, APPs welcomed additional formal training and support.</p>	<p>APPs reported reductions in waiting times but issues such as dysfunction and disability were simply captured by further evaluations made by consultants. Further service development and formal training is required</p> <ul style="list-style-type: none"> <li>• To manage workloads.</li> <li>• To support more complex and medical nature of the new role</li> </ul>
[37] (Australia)	Dual centre observational study To compare ED waiting time and length of stay between patients seen by an Advanced MSK Practitioner (AMP) and other ED staff.	Waiting time and length of stay in ED				Patients aged $\leq 65$ with MSK complaints brought in by ambulance to the ED and triaged to Australasian Triage Scale 4 (semi-urgent) are likely to wait less time to be seen and are discharged home more quickly when managed by AMP. AMPs improve patient flow in the ED, freeing up time for other ED staff to see higher-acuity, more complex patients.			

**TABLE 1 (CONTINUED). Results**

Reference and country	Type of study and goal	Outcomes	Protocol or function	Results					Room for improvement
				Clinical	Costs savings or cost-effectiveness	Logistical, organizational or system-related benefits	Patient-reported outcomes	Care-givers and stakeholders' perception	
[38] (Australia)	Retrospective comparative audit To compare ED key performance indicators for patients presenting with low back pain and seen by and AMP with those seen by other ED staff.	ED length of stay: time between patient's arrival and departure from ED, in minutes. ED waiting time: time between patient's arrival and the first visit by an AMP, a doctor, or a nurse practitioner, in minutes. Treatment time: time between first visit and discharge, in minutes. Admission rate: proportion of patients admitted to hospital from the ED, including admissions to the emergency short-stay unit and other wards, in percentage.				1089 patients were seen during AMP service hours (360 by AMPs vs 729 by doctors or nurse practitioners). Patients seen by the AMP had a significantly shorter ED waiting time (median 13 vs 32 min) and ED length of stay (median 141 vs 175 min). Significantly fewer patients seen by the AMP were admitted to short-stay units or other wards; this difference remained after accounting for the difference in triage code.			
[39] (United States)	Comparative study To assess ED physician's impressions of ED physical therapy 1. 2 years after practice was initiated (2004); 2. 7 years later (2004-2011).	A 16-items internal survey was utilized.						The majority of physicians reported favourable impressions in both time ranges. PTs were valued for educating patients about safety and injury prevention, providing appropriate gait training, assisting with disposition planning, and providing interventions as alternatives to pain medication. Many physicians supported standing PT orders for certain MSK conditions.	The most common concern was the additional time that patients spend in the ED for a PT consult.
[40] (Australia)	Prospective observational (comparative) study To compare the management of patients presenting to ED with lower limb soft tissue injuries or acute low back pain between AMPs and other ED professionals.	Functional outcomes (Lower Extremity Functional Scale, Roland Morris Disability Questionnaire). Pain (Numerical Pain Rating Score). Patient Satisfaction (Patient Satisfaction Questionnaire). Imaging requirements. Medication use.		AMPS ordered less imaging in comparison to other professionals, and Administered less opioids for lower limb soft tissue injury treatment. There were no significant differences between groups on functional or pain-related outcomes.				Patients treated by AMPs described equal or more satisfaction in comparison to other professionals.	

TABLE 1 (CONTINUED). Results

Reference and country	Type of study and goal	Outcomes	Protocol or function	Results					Room for improvement
				Clinical	Costs savings or cost-effectiveness	Logistical, organizational or system-related benefits	Patient-reported outcomes	Care-givers and stakeholders' perception	
[41] (Australia)	Observational study To evaluate whether primary contact PTs reduce waiting time, treatment time, and facilitate faster discharge from EDs in comparison with other clinicians.	Waiting time, treatment time and time to discharge from ED were compared 1. Between different periods (before, after and progressively during implementation) 2. Between cohorts.				Average treatment time was 40 minutes less than before implementation. 18% patients more were discharged from ED within 4h. Patients treated by primary contact PTs waited on average 31 minutes less than those treated by others.			
[42] (Australia)	Prospective observational study To assess the impact of APP in a large hospital ED by measuring national service and triage category indicators, patient and staff satisfaction.	Waiting time and length of stay in ED. Number of patients treated per month. Staff and patient satisfaction (semi-structured interviews).				APP service treated on average 72 patients per month in 10 shifts per fortnight, consulting patients aged 1-88. Patients largely presented with MSK problems in triage categories 4 and 5 (semi-urgent and non-urgent/chronic). There were shorter length of wait and length of stay when the service was on shift. Overall compliance with national performance targets was similar with or without this service.	Patient satisfaction was high	Staff satisfaction was high.	
[43] (Australia)	Prospective observational (cohort) study To compare the safety and management of patients admitted to ED for minor trauma (i.e. closed peripheral fractures) between PTs and medical staff.	Amount of patients managed by primary contact PTs experiencing adverse events. Length of stay comparison between patients managed by PTs and medical staff Comparison of diagnostic imaging (including plain radiographs, computerised tomographic scans, and ultrasound imaging studies).		No misdiagnosis or adverse events were identified for patients managed by PTs.		Patients managed by PTs had a significantly reduced length of stay (mean difference 83minutes, 95% CI 75 to 91) and significantly fewer requests for each type of imaging than patients managed by medical staff.			

achieved by other professionals in 3 studies, which in one case were also associated with less imaging prescriptions. Appropriate diagnoses and referrals were also demonstrated. No studies reported worse clinical outcomes, despite medical support was sometimes considered determinant. On this regard, it is fundamental to guarantee medical supervision and full collaboration at least in the early phase of implementation. Task shifting may therefore require more investments in the short term, but guarantee cost-effectiveness in the long-term. At this purpose, longitudinal studies and early health technology assessments are highly recommended.

- 2 studies show enhanced physical therapy to be effective but still dependent by medical support, questioning the overall value of its introduction. If reduced waiting times were only due to bypassing an initial doctor's assessment which is only delayed later, the benefits of task shifting would be only superficial.
- At this purpose, specific enhanced training is fundamental. Enhanced physical therapist appreciate to learn from doctors, consultants or specialist, and to support their activity; in turn, the latter appreciate the support of the former, provided compatibility with local regulation and maintenance



**TABLE 1 (CONTINUED). Results**

Reference and country	Type of study and goal	Outcomes	Protocol or function	Results					Room for improvement
				Clinical	Costs savings or cost-effectiveness	Logistical, organizational or system-related benefits	Patient-reported outcomes	Care-givers and stakeholders' perception	
[44] (Netherlands)	Observational study A Stepped Care Strategy to treat Osteoarthritis (BART: Beating OsteoARthritis) had been developed by Dutch authors in 2011[44]. The aim of the study is to verify Which professionals are best suited to perform each role Whether guidelines are compatible with current empirical practice in the Netherlands.	Number and type of performances provided according to <ul style="list-style-type: none"> <li>National diagnosis codes for allied healthcare professionals</li> <li>Public data from PT services and general practice (GP) adhering to SCS.</li> </ul>	BART strategy is based on a gradual assessment and treatment of osteoarthritis which consists of 3 phases: <ol style="list-style-type: none"> <li>Primary care: self-care education and paracetamol prescription from GPs.</li> <li>Integrated outpatient care (i.e. GP, physical therapist, nutritionist, Allied Health Care Providers): prescription of Non-steroidal Anti-Inflammatory Drugs (NSAIDs), eventually opioids (tramadol), recommendation of physical therapy and diet in case of overweight</li> <li>Secondary care (orthopaedic surgeon): performance of Transcutaneous Electrical Nerve Stimulation, and eventually Intra-articular Injection of Corticosteroids.</li> </ol> Having the Netherlands introduced self-referral to physiotherapy in 2006, people tend to access directly to phase 2. When people start from phase 1, GPs tend to prescribe directly to phase 3. 2/3 of the patients who access phase 2 are referred by GP			Content of care performed by GPs mostly concerned consultations, followed by NSAID prescriptions and referrals to secondary care. Both prescriptions of acetaminophen and referrals to physical therapy respectively dietary therapy were rarely mentioned. However, still 65% of the patients who joined physical therapy were referred by their GP. Compared to GP-referred patients, self-referred patients more often presented recurrent complaints and were treated less often by activity-related exercise therapy. Education was rarely registered as singular intervention, neither in GP-referred nor in self-referred patients.	Patients who access phase 2 by GP referral present better satisfaction and less complaints in comparison to those who access that phase by self-referral.		Gradual treatment of osteoarthritis (guidelines) implementation can be hindered by patient auto-referral to physiotherapy and patients' bias due to an association between self-referral and worse treatment

of the existing hierarchies. Task shifting flourishes in a collaborative and flexible working environment, where roles are clear but reciprocally supporting, in order to achieve multiple benefits while also maintaining safety. Task shifting is confirmed a bidirectional process of cooperation [3].

- Some argue that enhanced physical practice has been better suited to the political need to improve patient waiting times rather than patient outcomes [10]. However, patients with

MSK problems presenting at ED were just as (if not more satisfied) to see a physiotherapist as a first point of contact. Patient outcomes when dealing with enhanced physical therapist are high in 2 studies, equal or better than those of doctors or other staff in 2 studies, but lower than nurse practitioners in 1.

- Explanation differs according to studies. According to a previous pioneer study, ED enhanced physical therapy is more appreciated



by patients in comparison to medical doctors or enhanced nurses [47]. This finding is challenged in this review. While the case of nurses supports the idea that greater patient satisfaction is associated to better empathy and communicative skills (rather than clinical outcomes in themselves), according to others greater patient satisfaction is simply determined by the reduction in waiting times, regardless to which professional takes charge of the need [23]. If so, benefits are a natural consequence of extra staff working, with consequent need of major funding or unpaid work.

- In order to clarify this issue, further studies should investigate 1. the correlation between empathy, communication skills and patient satisfaction in ED settings, 2. whether a correlation between these skills and different professionals do exist. Moreover, in exceptional settings such as the Netherlands, in which patients are able to self-referral to physical therapy, other bias may play an important role (i.e. a clinician is more motivated in performing his visit when referral is made by another professional).

## CONCLUSIONS

The evidence reviewed demonstrated that many tasks traditionally been performed by one type of health worker, can be performed as well as (or even better) by others. However, task shifting cannot be considered a panacea of all the challenges faced by health systems. In this regard, it is worthy distinguishing between the setting in which enhanced physical therapy is employed.

With respect to ED MSK conditions, the authors agree that task shifting may probably be only a quick-fix to a problem that requires governmental, educational and societal input to be addressed seriously [16]. The increase in patients flow to ED is not only due to the increase in elderly, fragile patients which represent a demographic challenge long from being solved; it is a cultural and organizational challenge which comes as a consequence of poor collaboration between hospital and community, poor communication between primary and secondary care, poor education in support of self-care and consequently poor prevention from patients themselves. Redistributing skills between professionals can improve efficiency, but major benefits are likely to come from addressing the problem at the source (i.e. secondary fracture service prevention) [48].

Task shifting is instead a promising innovation which is worthy introducing in the management of chronic MSK conditions, when most of the treatments may be repeated under the supervision of medical consultants. Authorizing trained PTs to perform injections and prescribe a range

of drugs which is consistent with the disease they are responsible to manage can indeed be a cost-effective solution to the evolution of the healthcare demand: first of all by meeting the needs of the elderly increasingly affected by chronic diseases; and secondly by freeing up medical resources to treat more patients affected by multiple and complex comorbidities.

At this purpose, more studies on task shifting in support of elective treatments and chronic patients management are likely to add significant value to healthcare innovation.

The authors declare there is no conflict of interest regarding the publication of the article.

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