



Clinical Inertia in Physiotherapy: What is it, and How Can it be Addressed?

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Abstract

Health professionals are expected to exercise due diligence in patient care and to practise based on evidence and document services and discharge care comprehensively and concisely. This paper elucidated the phenomenon of clinical inertia; it sought to generate interest and awareness on the phenomenon, as well to facilitate reflections on patient management practices. PubMed was searched using the terms 'clinical inertia', 'clinical auditing' and 'physiotherapy'. The abstracts of the search endeavour, containing 159 articles, were all reviewed for content relevance. Twenty-two articles were finally selected but only ten were published within the last five years. These were analysed and synthesised and made obtainable. The review identified true clinical inertia and differentiated it from apparent inertia which may reflect good judgement in clinical practice. Provider-, patient- and system-related factors were highlighted as contributors to clinical inertia. Provider-related factors identified included overestimation of the care offered by providers, use of 'soft' reason to avoid providing therapy and lack of training, education or organisation to achieve therapeutic goals. Patient-related factors identified were related to patients' health, belief model, health literacy, self-efficacy and adherence to instructions, while system-related factors included availability of resources. Clinical inertia in physiotherapy was exemplified and the possible risk, rampancy or pervasive nature of therapeutic inertia among practitioners of physiotherapy in Nigeria was highlighted. This explorative review also offered insights into how clinical inertia could be addressed among physiotherapy clinicians in Nigeria.

Keywords: *Clinical inertia; Clinical decision; Evidence-based practice; Clinical guidelines; Clinical auditing*

Introduction

Health professionals are expected to exercise due diligence while discharging care to patients, and in today's world, they are expected to practise based on evidence and document all their clinical services in a comprehensive and concise manner. It is generally believed that the outcome of clinical care may not be maximised if it is not rendered in a timely fashion using appropriate procedures. Precisely, if interventions are not correctly prescribed or administered, clinical practice guidelines are not followed and patient's instructions are not provided with clear explanations using visual aids or

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prompts, compliance might be compromised. Clinicians must be able to recognise inertia when they occur in order to ensure best practice (Fine & Cutler, 2006).

The term clinical inertia (CI) was coined by Phillips *et al.* (2001) and was defined as a failure to initiate or intensify therapy when indicated; it can also be a failure to act despite recognition of a problem (Fine & Cutler, 2006). CI is a major factor contributing to inadequate management of chronic conditions such as diabetes, hypertension and lipid disorders (O'Connor, Sperl-Hillen, Johnson, Rush & Biltz, 2005) and inertia related to the management of these disorders has been argued to contribute to up to 80% of heart attack and stroke. True CI exists if: a recommendation or clinical guideline exists; the provider knows the recommendation and believes it applies to the patient; the provider has the necessary resources to apply the recommendation but does not apply the recommendation for the particular patient (Reach, 2011).

Clinical inertia may arise in the context of evidence-based practice if the intervention for the disease or ailment has defined clinical outcomes such as goals or targets, if it has a recommended therapy that can be measured and if there is a window of time that it is appropriate for the initiation or intensification of treatment (O'Connor *et al.*, 2005). Indeed, for real clinical inertia to occur it is necessary to define intermediate outcomes that incorporate information and justification for decisions relating to treatment. However, non-adherence to guidelines may sometimes correspond to appropriate inaction as a result of good clinical reasoning. Apparent inertia is deemed to be present if a lack of intervention is deemed actually to reflect good judgement in clinical practice.

Clinical inertia has been extensively studied and reported on specific diseases and conditions in the medical literature (Phillips *et al.*, 2001; O'Connor *et al.*, 2005; Henka, Zaslavsky, McGuire, Ayanian & Rubeinstein, 2009; Byrnes, 2011; Morgan, 2010; Allen, Curtiss & Fairman, 2009). Researchers have focused on CI phenomenon particularly with regards to non-communicable diseases and neurological diseases and disorders. The cost associated with clinical inertia has been described as enormous (Henka *et al.*, 2009; Wang & Vasan, 2005). Clinical inertia related to the management of chronic non-communicable diseases such as diabetes and hypertension has been associated with poor control of risk factors which may lead to health problems (Grant *et al.*, 2004). Also, it has been identified to have an economic impact in terms of expenditures on healthcare and consequences for the patients (Wang & Vasan, 2005). Clinical medical therapies are rampant worldwide (Khunti *et al.*, 2012; Khunti, Vora & Davies, 2014; Ogura & Harada-Shiba, 2016) and no doubt it may be rampant in other interventional disciplines. Therefore, CI is a phenomenon that is necessarily of interest and concern to health practitioners.

Previous reports on CI were on interventions using drugs and related procedures and apparently by physicians. However, no report on interventions such as physiotherapy has been reported. Also, CI can be better appreciated within a specific context and practice situation. This is because the best practice is one that takes into consideration both the technical and non-technical aspects of care. While technical aspects can have universal applicability, non-technical aspects can be variable from place to place. Any intervention to assist patients and physicians in recognising and overcoming CI could

contribute to improved practice competence and could, thus, improve care in a population.

An explorative review on CI may, therefore, serve to create awareness of emerging trends on the delivery of quality interventions based on evidence. It may also serve to broaden the horizon of professionals and educators and to enrich their perspectives on effective care delivery while providing insights into performance improvement and clinical auditing in practice. Presently, the reports provided on the phenomenon of CI have been mostly related to the developed countries of western Europe and North America with the paucity of information in any health discipline in sub-Saharan Africa. The objective of this explorative review was, therefore, to elucidate clinical inertia and provoke interest and awareness on this phenomenon in physiotherapy. The review could have implications for facilitating reflections on care by practitioners, and could contribute to improvement in practice and clinical auditing in physiotherapy.

Methods

We searched PubMed using the terms ‘clinical inertia’, ‘clinical auditing’ and ‘physiotherapy’ from 2011 to 2016. The search yielded 159 articles; all the abstracts were reviewed for content relevance. Twenty-two articles were finally selected with only ten articles published within the last five years (2011 to 2016). These were analysed and synthesised and made obtainable for further research.

Results

One hundred and fifty-nine articles were obtained. Ten of these articles published within the last five years were selected based on content relevance and germaneness to the topic (Aujoulat *et al.*, 2014; Byrnes, 2011; Escobar *et al.*, 2013; Giugliano & Esposito, 2011; Huang *et al.*, 2015; Khunti *et al.*, 2012; Khunti *et al.*, 2014; Lebeau *et al.*, 2014; Martinez-St. John *et al.*, 2015; Ogura & Harada-Shiba, 2016). All the articles retrieved and reviewed were on drug interventions and were conducted by physicians; no article on CI in physiotherapy was found. Therefore, the apparent emphasis on CI in medical interventions using drugs and related approaches in this explorative review was not for its sake as it was in no other health discipline but medicine and its specialities with empirical data on clinical inertia and auditing.

Clinical Inertia

Therapeutic inertia is established in a situation where there is failure to intensify treatment in patients with persistent, elevated blood pressure or blood glucose (Huang *et al.*, 2015; Escobar *et al.*, 2013). In the context of multiple sclerosis, for example, therapeutic inertia is established if there is lack of treatment initiation or intensification when there is evidence of disease progression that is based on clinical and radiological data. Reasons for therapeutic inertia include lack of training and cultural organisation in practice at “treating to target”, competing demands and clinical uncertainty (Turner, Hollenbeak, Welner, Have & Tang, 2008). Although it can be seen that from the classical definition therapeutic inertia is focused, other forms of inertia have also been defined. These include diagnostic and documentation inertia.

Diagnostic inertia occurs when clinical guidelines for diagnosing diseases are not adhered to (Lebeau *et al.*, 2014), while documentation inertia can be real or apparent. The latter can be the case when a procedure or treatment is administered but not documented. It is a general belief that practitioners need to be helped to overcome CI rather than systematically blamed for inaction (Martinez-St John *et al.*, 2015) because inaction can occasionally be appropriate based on a sound reasoning as in apparent inertia. Clinical inertia should not be assumed as incompetence.

Factors that Contribute to Clinical Inertia

Factors that can contribute to clinical inertia have been categorised as provider-, patient- and system-related which can contribute up to 50%, 30% and 20% of CI respectively (O'Connor *et al.*, 2005). Provider-related factors, first described by Phillips *et al.* (2001), are the most common factors, constituting up to 75% of CI (O'Connor *et al.*, 2005; Byrnes, 2011; Giugliano & Esposito, 2011). They have been identified to include providers' overestimation of the care provided, use of soft reason to avoid providing therapy and lack of training, education or organising skills to achieve the therapeutic goals to provide the necessary care (Table 1). Patient-related factors include old age (Byrnes, 2011; Khunti *et al.*, 2014), severity in the level of condition, health literacy, health belief and self-efficacy which affect adherence to instructions. Table 2 displays some patient-related factors that can contribute to clinical inertia in diabetes mellitus. System-related factors include resource availability such as access to guidelines and availability of equipment.

Table 1: *Provider-related factors contributing to clinical inertia*

Factors	Examples
Providers' knowledge of and attitude towards evidence-based practice guidelines	(In)sufficient knowledge of guidelines (Dis)agreement with known guidelines (Dis)agreement with the applicability of guidelines
Providers' own clinical judgment and experience in relation to specific situations	Patient's characteristics Patient's medical factors Medical histories including comorbidities
Providers' awareness of patient's attitude	Behaviours and preferences Acknowledgement of patient's preferences Patient's adherence, health literacy and empowerment
Providers' ability to make the appropriate decision within a clinical and organisational context	Reluctance to or difficulty associated with exchanges Clinical uncertainties Limited time to handling a number of competing demands Organisational and structural factors

Note. Adapted from "Factors associated with clinical inertia: An integrative review," by I. Aujoulat *et al.*, 2014, *Adv Med Educ Pract*, 5, pp. 131-47.

Table 2: *Patient-related factors that can contribute to clinical inertia in diabetes*

Factors	Examples
Misconceptions about intervention	Belief that medications can remediate impairment Insulin is not an effective care
Perception of personal control	Fear of unwanted side effects Fear of supernatural involvement Fear of too many injections Fear that they will not be able to tolerate or administer many injections even if it can be tolerated

Note. Data from “Clinical Inertia to Insulin Initiation and Intensification in the UK: A Focused Literature Review,” by K. Khunti and D. Millar-Jones, 2017, *Prim Care Diabetes*, 11(1), pp. 3-12.

Discussion

Although healthcare is traditionally public, there is increasing involvement of private organisations in healthcare delivery. This is because of the belief that healthcare is a profitable business. In fact, this is getting widely accepted even in Nigeria. Nowadays, in developed countries, private companies constitute major players in healthcare services. Also, an increasing number of patients find the services affordable (Nosse & Friberg, 2010). However, in Nigeria, the majority of the population are uninsured, and are unable to afford healthcare services. A large proportion of the population in Nigeria still patronises the local or traditional healers. One of the objectives of this review was to present clinical inertia within the context of physiotherapy practice in Nigeria.

Practice guidelines are being developed for common conditions in physiotherapy in some developed countries such as Britain, the United States, Canada and Australia, but no such contributions have been made to practice guidelines within Nigeria. However, clinical guidelines on low back pain, stroke management (Roger *et al.*, 2009; Bates *et al.*, 2005) and a few other conditions exist. Many guidelines for managing conditions also incorporate physical activity and exercise in their overall management (Roger *et al.*, 2009; Davies, Wolfe, Mottola & MacKinnon, 2003). Today, the outcome of physiotherapy can be measured using appropriate tools and that the appropriate time for initiation and intensification of therapy can be discerned in physiotherapy.

True inertia in physiotherapy can arise if the right exercise is not administered to address a patient’s condition. For example, if the 1 repetition maximum of a weak muscle is not determined before resistance is selected, therapeutic inertia may occur because the appropriate resistance cannot be applied. Also, if exercise is not appropriately dosed based on some symptom-limited exercise testing, therapeutic inertia could ensue. Not determining the level of physical activity of a patient or client before prescribing physical activity status can lead to therapeutic inertia. If short wave diathermy happens to be the modality that is capable of improving a knee joint pain for an obese patient, then therapeutic inertia can occur if this treatment is not applied.

Diagnostic inertia may arise if, for example, a practitioner does not distinguish the variants of low back pain as may arise due to facet joint pathology, or herniated disc.

Given that there are benefits of classification on the selection of intervention tool (Bjorck-Akesson *et al.*, 2010), diagnostic inertia can lead to ineffective care. Diagnostic inertia may also occur in the course of managing other conditions in physiotherapy. For example, failure to assess the Strength Duration Curve (SDC) following a nerve injury can be termed examination or diagnostic inertia. SDC is diagnostic because it can be used to determine useful parameters such as rheobase and chronaxy and to ascertain whether a muscle is innervated or denervated. Failure to document any component parts of care in an episode constitute documentation inertia. Documentation inertia may, however, be as a result of failure to document a component of care but it may also actually be a true CI.

In physiotherapy, the physical demand of a procedure can contribute to CI in healthcare. An obese patient with a severe stroke can present with severe disability and may require grueling exercise on the mat for an hour. Such a patient may be at risk of receiving insufficient care. Stroke survivors with cognitive impairment, aphasia and who present severe difficulties with following command may be challenging to handle and are at risk for minimised care because of the possible extra care that may be demanded. A patient with brain-stem CVA who survived stroke with impaired position sense or proprioception may be more difficult to manage and contribute to CI. These issues could be minimised with a positive attitude to professional services and proper monitoring through the use of clinical guidelines.

Many studies have been conducted about clinicians under treating patients (Okonofua *et al.*, 2006; O'Connor *et al.*, 2005; Fine & Cutler, 2006). Nowadays, non-communicable diseases including diabetes, obesity and metabolic syndrome are assumed to reach epidemic proportions in developing countries. The populations in developing countries are increasingly assumed to be hypoactive lifestyle due to rural-urban migration and mechanisation (Monteiro, Moura, Conde & Popkin, 2004; Ebrahim *et al.*, 2010). It has been shown that physicians and physiotherapists are considered to be experts in physical activity. However, they seldom assess the physical activity level of their patients as part of routine care assessment in their practice (Lobelo *et al.*, 2018). Therefore, there is, potentially, the risk of failure to initiate treatment for hypoactivity constituting CI.

Clinical practice guidelines are not much readily available in physiotherapy. The few that are available may not be accessible to physiotherapists in the country, particularly with regards to practice in Nigeria where access to the internet and databases is not readily available to the average practitioner. Akinpelu and Eluchie (2006) reported about lack of use of outcome measures among physiotherapists in the country. Since physiotherapists in this country may not always have access to the resources and support needed, a tenuous argument can be made that Nigerian physiotherapists may not be adequately equipped to guard against clinical inertia.

In order to overcome CI, three approaches, targeted at each of the parties involved are necessary. In tackling the provider or clinician barriers, continuing professional education and automated decision support tool may help clinicians. A compendium of common tasks and functions with analysis for each motion and function is necessary, just as enhancing the skills of clinicians to accurately analyse tasks is necessarily

needed to be able to help patients. Specialisation can also improve the risk of CI as clinician specialists tend to be more aggressive, for example, in insulin initiation for diabetic management than primary care physicians (Wens *et al.*, 2005). Patient-level barriers can be tackled through patient education and time-saving strategies such as patient empowerment and self-management programmes designed to assist patients to administer care.

Conclusion

The review indicated true clinical inertia, apart from apparent inertia which may reflect good judgment in clinical practice. Contributors to clinical inertia are factors that relate to the provider, patient as well as the system. Clinical inertia needs to be addressed through tackling therapeutic barriers, provision of equipment and innovations that enhance services.

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