Establishment of a Chronic Pain Clinic in a Tertiary Hospital in a Low-income Setting: A Proposed Model

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ABSTRACT

Neurologic pain is a type of chronic uncommon debilitating pain. Several approaches for managing chronic pain exist. These approaches will only get to the desired audience when there is a coordinated outpost for providing these services. Establishment of a pain clinic would serve as a suitable place to provide succour to patients with chronic pain. This however, is not without surmountable challenges in a low resource setting.

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INTRODUCTION

Chronic pain is a continuous emotional or sensory unpleasant experience which could be due to potential or actual nerve damage. Chronic pain persists for months after the cause of the pain has been removed. Chronic pain can impact negatively on health, and psychosocial wellbeing. Depression, anxiety state, phobia, suicidal thoughts, poor concentration, inattentiveness, anger bursts, insomnia, stress disorders, low mood and motivations are some of the mental changes that chronic pain could cause (Fine, 2011; Dueñas et al.,2016). Decreased libido, increased risk of coronary artery event, hypertension, reduced work output, increased opioid use could also result from chronic pain.

The estimates of chronic pain amongst United State of America adults range from 11% to 40% (Dahlhamer, 2018). In the UK the prevalence of chronic pain in adults ranged from 35.0% to 51.3% of chronic pain in the UK with neuropathic pain constituting 8.5% to 8.9% (Fayaz et al., 2016) while in Edinburg, 32% of patients attending pain clinics have functional neurologic disorders (Mason et al.,2023). Brazil has a prevalence of 39%. The mean age of occurrence is 41 years with a predominance of females (56%) (Souza et al., 2017). The overall pooled prevalence from 12 studies from developing countries that included South Africa and Libya is 18% (Sá et al., 2019). One in every five South Africans have chronic pain (Kamerman et al., 2020). The prevalence of chronic pain in Nigeria ranged from 32.5% to 73.53% (Bello et al., 2017). Majority of these patients have low back or knee pain. Neuropathic pain constitutes bulk of chronic lower back pain (Baron et al., 2016).

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Prevalence of Chronic pain in Nigeria

Pain is a universal currency that can affect anyone and reduce the quality of life, in 2008, the World

Mental Health Survey reported a prevalence of 50% chronic pain in Nigerians that are 18 years of age and above (Tsang et al., 2008). These population includes secondary school children. In south-south geopolitical zone 62% of fishermen had chronic pain against 73.5% professional drivers in the north (Dienye et al., 2016). This shows that the burden of chronic pain cut across social groups. Nevertheless, most of these patients had limited access to health care services. They relied mostly on over-the-counter painkiller for their pain management perhaps because of the paucity of pain management clinic.

Pattern of chronic pain

Phenological, chronic pain can be nociceptive, neuropathic, nociplastic or mixed. Nociceptive chronic pain like osteoarthritis, rheumatoid arthritis, low back pain, progress from ongoing tissue injury or inflammation. Nociceptive pain is localized and described as aching, throbbing dull in nature. On the contrary, neuropathic pain results from nerve injury or nervous system dysfunction. Diabetic neuropathy, postherpetic neuralgia, trigeminal neuralgia, radiculopathy are forms of neuropathic pain. Patients with neuropathic pain complain of burning, shooting, numbness and tingling sensations. Furthermore, patients with nociplastic, pain complain of widespread pain, fatigue and sleep disturbance. These set of patients present with fibromyalgia, some form of chronic headaches, irritable bowel syndrome that results from altered pain processing pathway with no definite evidence of tissue damage. The fourth pattern of chronic pain is seen in the mix pain pattern group where there is a combination of nociceptive and neuropathic pain mechanism. This pattern is seen in cancer pain, chronic back pain with nerve root compression (Nijs et al., 2023).

Aetiology

In general, chronic pain can result from cerebrovascular accident, diabetics neuropathy, myofascial pain, multiple sclerosis, metastatic tumour, radiotherapy, chronic pancreatitis, endometriosis, chronic liver disease, inflammatory bowel syndrome, fibromyalgia, chronic migraine, complex regional pain syndrome, post mastectomy, post thoracotomy, phantom limb failed back surgery, chronic pancreatitis and other causes.[14]

Predisposing factors

Patients' life style pattern, psychology, medical history and social factors are risk factors for the development of chronic pain. Increasing age, genetics, obesity, female gender, physical inactivity could predispose to chronic pain. Sociopsychological and lifestyle factors include low income earning, poor family support, social isolation, unemployment, anxiety, depression previous traumatic experience, poor coping mechanism., smoking, excessive use of alcohol, poor sleep quality. A previous history of trauma, and diabetic mellitus are also risk factors for the development of chronic pain (Cohen et al., 2022).

Framework and guidelines

The Scotland chronic pain service framework described four levels of care. level 1 provides advice and information about pain and what to do about it. Level 2 – provides General Practice or therapist consultation. Level 3 provides more specialist help from a chronic pain management service while Level 4 chronic pain requires highly specialized care (Scottish Government consultations, 2023). Level one requires effective communication which could be done through any of the social medial platform or dial services. This will require dedicated 24 hours online staff in hospital integrated chronic pain clinics that can respond to requests and guide the caller appropriately. A level two provider in low resource setting may adopt this aspect to enhance their care for those experiencing chronic limiting neuropathic pain. Hospital integrated, a secondary or tertiary hospital will have the resources to accommodate this scope of care.

There are about eight models of pain clinics. These include patient case mix, single-modality treatment, multidisciplinary treatment, interdisciplinary treatment, provider supervision, provider composition, marketing and outcome categories (Andraka-Christou et al., 2018). The theoretical approach describes framework for neuropathic pain (Cook et al., 2023). The understanding of the pathway helps in the general care of patients with neuropathic pain. The World Health Organizations analgesic ladder, either the three or four ladder guidelines should be adopted in managing chronic pain. The Nigerian Federal Ministry of Health's guideline on pain management recommends systematic clinical evaluation and use of appropriate pain scores (Federal Ministry of Health, 2018)

Location and staffing

The clinic could be located in specialist patient or general outpatient clinic with an attached adequately ventilated examination and procedure room. The wall painting, non-slippery floor tiles, furniture should be attractive and not depressing. The appropriate number of nursing and supporting

staff like cleaners, porters, health assistants and secretaries should be considered. Provision for regular staff training and updates should be included in the set up to improve the quality of care. Multidisciplinary approach to care should be the goal of team centered care. Physiotherapists should be involved early in patient care. Intervention Radiologists, Rheumatologists, Oncologists, Neurologists, Anesthesiologists, Orthopaedic Surgeons, Oral Medicine experts, Maxillofacial Surgeons, Neurosurgeons, Medical Record Officers, Pharmacists and other chronic pain specialist should be members of the team. Provision for collaborations with other centers should be considered and integrated into the clinic service delivery plan (Williams et al., 2001). Telemedicine will be of immense benefit to distant collaborators. Electronic medical records should be considered over manual record system.

Equipment

Basic office materials like tables chairs, stationaries, physiotherapy materials, diverse analgesics, high resolution doppler ultrasound, local anaesthetics agents for peripheral nerve or regional nerve blocks. Most tertiary hospitals may have equipment like CT scam, MRI, functioning operating rooms that could be used when the need arise (Vas, 2006).

Challenges

Space, drugs especially opioids, instruments for advanced pain interventions, physiotherapy equipment, funding, dedicated procedure room or operation room with appropriate staff could be a challenge. Getting managements support for establishment of the clinic could be an uphill task. Evidence that provision of pain relief services as a self-sustaining endeavour may impress hospital management. Feasibility studies on the patient population, cost implications, overheard cost and marginal gains have to be done and presented in a convincing proposal to stakeholders to get approval and funding. Non-governmental fund drive would help immensely in raising the essential start off and running cost.

Summary

Neuropathic pain is a subset of chronic pain is common worldwide. Provision of pain relief services requires coordinated care that is delivered through establishment of a pain clinic. Pain clinic services can be a standalone clinic, or a part of a tertiary government or non-government health facility. Either type of facility needs to have established operating protocols based on existing framework and guidelines.

REFERENCES

Andraka-Christou B, Rager JB, Brown-Podgorski B, Silverman RD, Watson DP (2018). Pain clinic definitions in the medical literature and U.S. state laws: an integrative systematic review and comparison. Subst Abuse Treat Prev Policy; 13(1):17. doi:10.1186/s13011-018-0153-6

Baron R, Binder A, Attal N, Casale R, Dickenson AH, Treede R (2016). Neuropathic low back pain in clinical practice. Eur J Pain; 20(6):861-873. doi:10.1002/ejp.838

Bello B, Bello Adebayo H (2017). A Systematic Review on the Prevalence of Low Back Pain in Nigeria. Middle East J Rehabil Health; 4(2). doi:10.5812/mejrh.45262

Cohen SP, Wang EJ, Doshi TL, Vase L, Cawcutt KA, Tontisirin N (2022). Chronic pain and infection: mechanisms, causes, conditions, treatments, and controversies. BMJ Med. doi:10.1136/bmjmed-2021-000108

Cook CE, Rhon DI, Bialosky J, Donaldson M, George SZ, Hall T, et al (2023). Developing Manual Therapy Frameworks for Dedicated Pain Mechanism. Jospt Open; 1(1):1-16. doi:10.2519/ josptopen.2023.0002

Dahlhamer J (2018). Prevalence of Chronic Pain and High-Impact Chronic Pain Among Adults — United States, 2016. MMWR Morb Mortal Wkly Rep; 67. doi:10.15585/mmwr.mm6736a2

Dienye PO, Birabi BN, Diete-Spiff KO, Dienye NP (2016). The burden of low back pain among fishermen: A survey in a rural fishing settlement in Rivers State, Nigeria. Am J Mens Health; 10(6):89–98.doi:10.1177/1557988315584375

Dueñas M, Ojeda B, Salazar A, Mico JA, Failde I (2016). A review of chronic pain impact on patients, their social environment and the health care system. J Pain Res; 9:457–467. doi:10.2147/JPR.S105892

Fayaz A, Croft P, Langford RM, Donaldson LJ, Jones GT (2016). Prevalence of chronic pain in the UK: a systematic review and meta-analysis of population studies. BMJ Open; 6(6):e010364.doi:10.1136/bmjopen-2015-010364

Fine PG (2011). Long-Term consequences of chronic pain: mounting evidence for pain as a neurological disease and parallels with other chronic disease states. Pain Med; 12(7):996-1004. doi:10.1111/j.1526-4637.2011. 01187.x

Federal Ministry of Health (2018). Guidelines for the Management of Pain in Nigeria. Nigeria Federal Ministry of Health; Available from: http://www.health.gov.ng

Kamerman PR, Bradshaw D, Laubscher R, Pillay-van Wyk V, Gray GE, Mitchell D, et al (2020). Almost 1 in 5 South African adults have chronic pain: a prevalence study conducted in a large nationally representative sample. Pain; 161(7):1629-1635. doi:10.1097/j.pain.0000000000001844

Mason I, Renée J, Marples I, McWhirter L, Carson A, Stone J, et al. Functional neurological disorder is common in patients attending chronic pain clinics. Eur J Neurol. 2023 Sep;30(9):2669–74. doi:10.1111/ene.15892

Nijs J, De Baets L, Hodges P (2023). Phenotyping nociceptive, neuropathic, and nociplastic pain: who, how, & why? Braz J Phys Ther; 27(4):100537. doi:10.1016/j.bjpt.2023.100537

Sá KN, Moreira L, Baptista AF, Yeng LT, Teixeira MJ, Galhardoni R, et al (2019). Prevalence of chronic pain in developing countries: systematic review and meta-analysis. Pain Rep;4(6):e779.doi:10.1097/PR9.0000000000000779

Scottish Government consultations (2023). Draft framework for pain management service delivery - - Citizen Space. Available from: https://consult.gov.scot/healthcare-quality-and-improvement/pain-management-service-delivery/

Souza JBD, Grossmann E, Perissinotti DMN, Oliveira Junior JOD, Fonseca PRBD, Posso IDP (2017). Prevalence of Chronic Pain, Treatments, Perception, and Interference on Life Activities: Brazilian Population-Based Survey. Pain Res Manag; 2017:1–9. doi:10.1155/2017/4643830

Tsang A, Von Korff M, Lee S, Alonso J, Karam E, Angermeyer MC et al (2008). Common chronic pain conditions in developed and developing countries: gender and age differences and comorbidity with depression-anxiety disorders. J Pain; 9(10):883-891. doi: 10.1016/j.jpain.2008.05.005

Vas L (2006). How to set up a pain clinic and practice as a pain management specialist. Indian J Anaesth; 50(5):408-414.

Williams JE, Chandler A, Ranwala R, DeSilva BS, Amarasinghe I (2001). Establishing a cancer pain clinic in a developing country: effect of a collaborative link project with a UK cancer pain center. J Pain Symptom Manage; 22(4):872-878.doi:10.1016/s0885-3924(01)00342-6.