Setting Up Geriatric Care in Subsaharan Africa : A 1-Year Experience in the Yaounde Central Hospital of Cameroon

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Research Article

Keywords: ACE model, dependency, multidisciplinary team, geriatric care, sub-Saharan Africa

Posted Date: September 2nd, 2021

DOI: https://doi.org/10.21203/rs.3.rs-777213/v1

Abstract

Background: As the share of the older population is growing worldwide, health systems in developing countries need a policy shift to address the challenge of the optimization of healthcare across age groups. Many older people in resource-limited countries will seek specific care due to multimorbidity and frailty, as the burden of non-communicable diseases is getting heavier.

Methods: Over a one-year period, we trained healthcare workers and developed new procedures of care in the geriatric unit of the Yaoundé Central Hospital in Cameroon, using the Acute Care for Elders (ACE) model. This model of care in Geriatrics is based on a patient-centered approach and is focused on preventing functional decline in acutely ill older patients.

Results: During the implementation of the ACE model, 202 patients were hospitalized in the unit, of whom 60.9% (n=123) were female; the mean (SD) age was 79.3 (8.8) years. A multidisciplinary team was brought together, including a geriatrician, two general practitioners, two geriatric nurses, two advanced practice nurses and a social worker. After a thorough examination of the care procedures, nurses were given complementary missions, such as assessing functional status and providing therapeutic education to the patients and their family members. All hospitalized and ambulatory patients were offered a comprehensive geriatric assessment at the outpatient clinic.

Conclusion: It was possible to establish a comprehensive model of care for older patients in our hospital with few trained personnel. Further actions are needed to improve the care of older people in resource-limited settings.

Background

According to the World Health Organization (WHO), nearly 70% of people aged 60 and over currently live in developing countries and this proportion is expected to keep increasing over the next thirty years [1, 2]. To cope with the growing burden of age-related conditions and to promote Healthy Ageing, the WHO has published a global strategy and action plan on ageing and health that focuses on five main objectives : committing to actions that promote Healthy Ageing in every country, developing age-friendly environments, aligning health systems to the needs of older populations, developing sustainable and equitable systems for providing long-term care and improving measurement, monitoring and research on Healthy Ageing [1].

In Cameroon, a country of about 24 millions inhabitants in west-central Africa, life expectancy has increased by 10 years between 1950 and 2015 [3]. This is mainly due to improvements in maternal and child healthcare and in the management of communicable diseases like HIV/AIDS. According to the Demographic Survey on Health, about 1.2 million people in the country were aged 65 and over in 2018 [4]. Our health system is facing frequent admission of older patients but most of them lack insurance and are financially vulnerable [4, 5]. The burden of non-communicable diseases is growing and many older people

will seek specific care due to multimorbidity and frailty[6]. Furthermore, since the beginning of the COVID-19 outbreak, mortality has been very high among older adults in the country [7].

Although our health system has globally improved during the last two decades, it is clear that ageing will bring about new challenges. In a traditional approach, healthcare providers focus on diseases but older people require other specific procedures to avoid functional decline or poor quality of life, and to reduce morbidity and mortality [8–10]. In Cameroon, there is a paucity of health services dedicated to geriatrics, and few personnel are trained in specialized care to older adults. Training in Geriatrics is not included in the residency program of the country and the General Medicine training curriculum lacks specific course in Geriarics. In this context where policies on ageing and health are still embryonic, we aimed to share our experience on setting-up a functional geriatric unit in Cameroon, based on the Acute Care for Elders model of care (ACE) [11, 12], which designed to reduce the incidence and worsening of functional disability of hospitalized older adults in the context of an acute illness. This model has been shown to indeed reduce functional disability, but also the risk of admission in nursing home and the global costs of hospitalization [12, 13].

Methods

Location

The Yaoundé Central Hospital was created in 1933 and is currently one of the largest hospitals in Cameroon with a capacity 650 beds. This hospital has the only functional unit dedicated to geriatric care in the country. In spite of lack of a clear policy, the staff – two General Practitioners (GPs), two advanced practice nurses and two geriatric nurses– has been providing care to geriatric patients since 1999. About 200 older patients are admitted in the unit every year. A geriatrician joined the team on December 2018. The Geriatrics unit was a 9-bedded ward at the time of writing this manuscript.

Design

The implementation of the Acute Care for Elders (ACE) model on the unit started on January 2019. This model of care in Geriatrics promotes a patient-centred approach and is focused on preventing functional decline in acutely ill older patients. This model includes several key components, such as a safe care environment designed for older patients that promote self-care and the improvement of functional outcomes and care plans to prevent disability and to prepare the patient's release from the hospital.

Records of patients admitted in the unit were reviewed after the implementation of the model to collect demographic characteristics, comorbidities, geriatric syndromes and outcome.

Results

Although the existing geriatric ward could not be redesigned according to the ACE model specifications due to financial constraints, we have dedicated our resources to the training of a multidisciplinary team

and to the development of new care procedures.

Training of nurses and GPs

Training of healthcare staff took place twice a month for four months. These one-hour seminars focused on geriatric topics, such as the specificities of the older patient, assessment of disability and recognition of other geriatric syndromes (GS). All the seminars were done under the supervision of the geriatrician of the unit.

Admission procedures

Admission criteria were reviewed taking into account human resources and the bed capacity of the unit. Thus, with the approval of the hospital's management team, it was agreed that any patient aged 65 years and over with at least one geriatric condition (disability, dementia, delirium, falls, etc.) or multimorbidity be admitted, as well as those requiring palliative or end-of-life care. The cut-off age of 65 is a reflection of the median age of older people consulting health facilities in urban areas in Cameroon [14].

Equipment

The unit has been equipped with three walkers and two wheelchairs.

Changes in nursing care procedures

At the initiation of this model, two advanced practice nurses and two geriatric nurses were already working according to the patient-centred approach, by assessing patient's social and physical profile during hospitalization. After the initial training phase, their role was expanded and other elements were included in their routine evaluation of older patients:

- Assessment of functional status with the Katz Index of independence in Activities of Daily Living (ADL) [15]

- Review of all catheters and tubes

- Collection of information on bowel movements and patient's diet

- Detection of acute change in mental status

- Prevention of falls during hospitalization

- Promotion of mobility and early ambulation of patients to promote ADL independence

- Therapeutic education for patients and family members

Creation of a multidisciplinary team

Medical rounds led by the geriatrician are done every day at 8.30 am with GPs and nurses. An on-call system is being implemented in the unit to ensure that patients will be provided with the same level of

care on weekends and public holidays.

The multidisciplinary team includes a geriatrician, who joined the team in 2018, two GPs, three geriatric nurses and a social worker. A pharmacist and a physiotherapist attend meetings (occasionally for now). The multidisciplinary team rounds take place on Tuesdays at 9.00 am. All patients' files are reviewed during the round. They are prepared by the nurses the day before the meeting to update all the missing information (such as sociodemographic characteristics or lifestyle). A nurse checks the availability of these documents before the round. A specific form has been developed by our team for this purpose. The round is led by the geriatrician according to the following protocol:

- Presentation of the patient and the reason for admission in the unit (brief summary by a GP)

- Presentation of the following by a nurse: current functional status according to ADL ; pain and comfort status ; ongoing medication

- Review of all geriatric syndromes as assessed by the form

- Inputs by any member of the team

- Identification of patient's active problems, discussion of complex situations and their possible solutions

- Elaboration of treatment goals for this hospitalization and plans for early discharge

Geriatric mobile team

A geriatric mobile team (GMT) was created to provide geriatric care and comprehensive geriatric assessments as well as to assist with the elaboration of treatment goals for older patients hospitalized in non-geriatric wards. The GMT includes a GP and a nurse, both supervised by the geriatrician.

Outpatients care

An outpatient geriatric consultation now provides consultations on Tuesdays and Thursdays at the outpatient unit of the hospital. The geriatrician systematically sees patients discharged from the hospital after two weeks or a month depending on the need. This outpatient consultation is also an opportunity to carry out comprehensive geriatric assessments for patients aged 65 and over, seen routinely or at the request of other colleagues.

Patients' characteristics

During the implementation of the ACE model, 202 patients were hospitalized in the unit, of whom 60.9% (n = 123) were female. The mean age was 79.3 ± 8.8 years, with age ranging from 65 to 109. About 85.9% (n = 171) of our patients had at least one chronic medical condition. The most common comorbidities were hypertension (54.3%, n = 108), joints disorders (25.3%, n = 50), diabetes mellitus (24.1%, n = 48) and cerebrovascular diseases (13.1%, n = 26). At least one geriatric syndrome (GS) was present in about 83.7% (n = 169) of patients. The most prevalent GS were ADL disability in 85.8% of patients (n = 123),

urinary incontinence in 55% (n = 105) and delirium in 41.1% (n = 78). Polypharmacy was present in 10% of participants. The mean length of hospitalisation was 7.48 ± 5.14 days with a mortality rate of about 25%.

Discussion

Despite the scarcity of policies on ageing in Cameroon, we report our experience on establishing in-hospital geriatric care in a resource-limited setting, with few trained personnel. Many older Cameroonian go to hospital for various health issues and most of them live with chronic illnesses and/or disability [4, 6]. In addition, the majority of them has no medical insurance and is financially vulnerable. In 2012, the ministry of social affairs launched a national plan for actions in favour of older people. It includes the promotion of healthy behaviours for successful ageing, but also financial aid to cover daily expenses of older patients, including food and drugs [5, 16]. However, its implementation is not yet effective. In addition, to mitigate the healthcare expenses of families, the ministry of public health has proposed essential care packages providing universal health coverage. Their implementation is still in progress. While waiting for the effective generalization of this universal health coverage, family solidarity remains the main support to afford healthcare but it is not enough, especially when long-term care is needed. Standards of care are mainly focused on treating acute illness, while older patients are characterized by a mosaic of problems. Indeed, they usually present with physical problems but also with functional, psychological, social as well as spiritual issues. Our health facilities are not age-friendly environments; the configuration of hospital wards may contribute to hospital-induced dependency. Furthermore, specific care to older people is not included in the primary care programmes of the country. Geriatric medicine is still at its beginning as a specialty in Cameroon. There is a dearth of healthcare providers and social workers trained to provide specific care to older patients. Benefits of the patient-centred approach during hospitalization are well documented in developed countries: reduction in re-admissions, reduction of adverse events including falls and pressure ulcers, a decrease in length of stay, better outcome without an increase of hospital costs [12, 13, 17]. This model of care can be suitable for our setting but we need new healthcare policies to alleviate the burden related to geriatric conditions. COVID-19 mortality is high among older people in Cameroon and the pandemic has also come to underline our limits in providing care to older people, including palliative and end-of-life care[18]. Based on the concept of healthy ageing, the WHO has recently published guidelines to promote integrated care for older people in the community (ICOPE) also declined as an application, ICOPE-Monitor. ICOPE provides tools and guidance to community health workers, to develop community-based, integrated-care approaches to support older people intrinsic capacity and functional ability [1, 19–21].The ICOPE approach is a real opportunity for Cameroon: universal health coverage is in its infancy, there is only one geriatric unit and one nursing home in the whole country. Programmes to promote primary prevention in the community are not only relevant, but also necessary. ICOPE can serve as template for further national guidelines to allocate available healthcare resources, taking into account the growing older population.

Conclusion

Through the ACE model, we seek to provide a patient-centred approach to care, with the support of a multidisciplinary team. Although the classic, illness-centred approach to care remains important to address the medical conditions of older people, there is a need to balance available healthcare resources, by setting-up age-friendly environment. Further actions are needed to increase awareness of policy-makers on the growing burden of age-related conditions in our country and in our healthcare settings.

Declarations

Acknowledgements

Authors thank all healthcare workers of the Geriatric Unit of the Yaounde Central Hospital.

Author’s contributions

MJNE designed the study and wrote the manuscript. GP and MZO contributed in data collection of patients records. VNB, SRS, SPC, LC, ES and MTT provided substantial feedbacks on the manuscript. All authors read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

Funding

None.

Ethics approval and consent for participate

All healthcare workers of the unit provided a verbal consent to participate to the training phase because they were informed that it was an opportunity to improve care to elders. Concerning clinical data, we did not sought consent of patients because records were retrospectively consulted to provide available data. This study was approved by the board of the Yaounde Central Hospital under the reference number 11ACE/CIE/MINSANTE/SG/DHCY/PCE.

Consent for publication

Not applicable

Accordance

All methods were performed in accordance with the relevant guidelines and regulations.

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

References

1. WHO The Global strategy and action plan on ageing and health. http://www.who.int/ageing/global-strategy/en/. Accessed 4 July 2021.
2. OMS Vieillissement et santé. http://www.who.int/mediacentre/factsheets/fs404/fr/ Accessed 4 July 2021.
3. Cameroon Population aged 60 + years, 1950–2019. https://knoema.com//atlas/Cameroon/topics/Demographics/Age/Population-aged-60-years. Accessed 19 July 2021.
4. Rapport de suivi des 100 indicateurs cles de sante au Cameroun en 2017. http://cdnss.minsante.cm/?q=fr/content/rapport-de-suivi-des-100-indicateurs-cles-de-sante-au-cameroun-en-2017. Accessed 22 June 2021.
5. Stratégie Nationale de Développement 2020–2030 Pour la transformation structurelle et le développement inclusif, SND30.http://cdnss.minsante.cm/?q=fr/content/strat%C3%A9gie-nationale-de-d%C3%A9veloppement-2020-2030-pour-la-transformation-structurelle-et-le. Accessed 21 June 2021.
6. Essomba MJN, Atsa D, Noah DZ, Zingui-Ottou M, Paula G, Nkeck JR, et al. Geriatric syndromes in an urban elderly population in Cameroon: a focus on disability, sarcopenia and cognitive impairment. Pan Afr Med J. 2020;37:229.
7. Ngatchou W, Yombi J, Temgoua Ngou M, Mfeukeu-Kuate L, Kouanfack C, Sobngwi E, et al. Relatively low mortality rate of COVID-19 in Cameroon: what if age was the main factor? Rev Med Brux. 2021;42(1):26–8.
8. Creditor MC. Hazards of hospitalization of the elderly. Ann Intern Med. 1993 Feb 1;118(3):219–23.
9. Tinetti ME, Inouye SK, Gill TM, Doucette JT. Shared risk factors for falls, incontinence, and functional dependence. Unifying the approach to geriatric syndromes. JAMA. 1995 May 3;273(17):1348–53.
10. Olde Rikkert MGM, Rigaud AS, van Hoeyweghen RJ, de Graaf J. Geriatric syndromes: medical misnomer or progress in geriatrics? Neth J Med. 2003 Mar;61(3):83–7.
11. Palmer RM, Landefeld CS, Kresevic D, Kowal J. A medical unit for the acute care of the elderly. J Am Geriatr Soc. 1994 May;42(5):545–52.

12. Palmer RM. The Acute Care for Elders Unit Model of Care. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6319242/ Accessed 19 July 2021.
13. Covinsky KE, King JT, Quinn LM, Siddique R, Palmer R, Kresevic DM, et al. Do acute care for elders units increase hospital costs? A cost analysis using the hospital perspective. J Am Geriatr Soc. 1997 Jun;45(6):729–34.
14. Callixte K-T, Clet TB, Jacques D, Faustin Y, François DJ, Maturin T-T. The pattern of neurological diseases in elderly people in outpatient consultations in Sub-Saharan Africa. http://www.biomedcentral.com/1756-0500/8/159. Accessed 19 July 2021.
15. Katz S. Assessing self-maintenance: activities of daily living, mobility, and instrumental activities of daily living. J Am Geriatr Soc. 1983 Dec;31(12):721–7.
16. Nangia E, Njikam M, Vubo E. Care for Older Persons in Cameroon: Alternatives for Social Development. Greener Journal of Social Sciences. 2015 Jan 15;5:001–12.
17. Barnes DE, Palmer RM, Kresevic DM, Fortinsky RH, Kowal J, Chren M-M, et al. Acute Care For Elders Units Produced Shorter Hospital Stays At Lower Cost While Maintaining Patients' Functional Status. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3870859/. Accessed 19 July 2021.
18. Essomba MJN, Ciaffi L, Etoundi PO, Esiene A. Palliative and end-of-life care in COVID-19 management in sub-Saharan Africa: a matter of concern. Pan Afr Med J. 2020 Aug 3;35(Suppl 2):130.
19. Beard JR, Officer A, de Carvalho IA, Sadana R, Pot AM, Michel J-P, et al. The World report on ageing and health: a policy framework for healthy ageing. Lancet. 2016 May 21;387(10033):2145–54.
20. Michel J-P, Leonardi M, Martin M, Prina M. WHO's report for the decade of healthy ageing 2021–30 sets the stage for globally comparable data on healthy ageing. The Lancet Healthy Longevity. Elsevier; 2021 Mar 1;2(3):e121–2.
21. ICOPE MONITOR, une application pour prévenir le déclin des fonctions chez les personnes âgées - Centre Hospitalier Universitaire (CHU) de Toulouse. https://www.chu-toulouse.fr/icope-monitor-une-application-pour-prevenir-le. Accessed 21 June 2021.