

# Educational preparation and training of the family caregivers of elderly patients with stroke in the pre-discharge period: A proposed innovation

Εκπαιδευτική προετοιμασία των οικογενειακών φροντιστών των ηλικιωμένων ασθενών με Αγγειακό Εγκεφαλικό Επεισόδιο κατά την περίοδο πριν το εξιτήριο: Μια προτεινόμενη καινοτομία

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## Abstract

**Introduction:** Stroke causes disability that affects the life of patients, their relatives and the society in general. Global healthcare policies, suggest the sooner possible discharge of stroke patients from hospitals, but the transition to home is a stressful experience for family caregivers who are suddenly faced with the responsibility of homecare provision. Sufficient international evidence suggest that a pre-discharge educational program for preparing family caregivers could lead to better care, less complications and better quality of life, but Cyprus still do not provide such a program.

**Objectives:** To challenge the current healthcare practices regarding the care of elderly patients with stroke and to propose an innovative training program that will be provided by the nurses during the pre-discharge period to family caregivers.

**Methodology:** The proposed innovation is discussed around an overview of the international literature regarding the family caregivers' education in discharge planning and the Lewin's change theory, since the development and implementation of the innovation as a whole is based on this theory.

**Results:** International literature highlights that family caregivers have a diversity of responsibilities at home but also unmet training needs. If these needs are not met, they may cause burden to caregivers, thus impeding their capacity to provide safe homecare to patients. Considering the significance of post-discharge homecare to the elderly patients with stroke, a proposed training program was designed for family caregivers, in an effort to motivate nurses in Cyprus to provide this preparation.

**Conclusions:** An attempt should be made as for the proposed innovation to be included in the future planning of the care of stroke patients as part of the improvement reforms that are being pursued with the new national health system of Cyprus. Additionally, it is suggested that the Ministry of Health should create discharge services of elderly stroke patients in each hospital with the creation of a Discharge Coordinator role, who could coordinate the proposed innovation, while he/she could also inform staff on how to provide the training program to family caregivers.

**Keywords:** discharge planning, family caregivers, educational program, change management, innovation, stroke, elderly patients.

## Περίληψη

**Εισαγωγή:** Το Αγγειακό Εγκεφαλικό Επεισόδιο προκαλεί αναπηρία που επηρεάζει τη ζωή των ασθενών, των συγγενών τους αλλά και της κοινωνίας γενικότερα. Οι διεθνείς πολιτικές υγειονομικής περίθαλψης υποδεικνύουν το όσο το δυνατόν πιο σύντομο εξιτήριο των ασθενών με Αγγειακό Εγκεφαλικό Επεισόδιο από τα νοσοκομεία, αλλά η μετάβαση στο σπίτι είναι μια αγχωτική εμπειρία για τους οικογενειακούς φροντιστές που αντιμετωπίζουν ξαφνικά την ευθύνη της παροχής φροντίδας στο σπίτι. Επαρκή διεθνή ερευνητικά στοιχεία υποδηλώνουν ότι ένα εκπαιδευτικό πρόγραμμα πριν το εξιτήριο για την προετοιμασία των οικογενειακών φροντιστών θα μπορούσε να οδηγήσει σε καλύτερη περίθαλψη, λιγότερες επιπλοκές και καλύτερη ποιότητα ζωής, αλλά η Κύπρος εξακολουθεί να μην παρέχει ένα τέτοιο πρόγραμμα.

**Σκοπός:** Να αμφισβητηθούν οι τρέχουσες πρακτικές υγειονομικής περίθαλψης σχετικά με τη φροντίδα των ηλικιωμένων ασθενών με Αγγειακό Εγκεφαλικό Επεισόδιο και να προταθεί ένα καινοτόμο εκπαιδευτικό πρόγραμμα που θα παρέχεται από τους νοσηλευτές στους οικογενειακούς φροντιστές κατά την περίοδο πριν το εξιτήριο του ασθενή.

**Μεθοδολογία:** Η προτεινόμενη καινοτομία συζητείται γύρω από μια γρήγορη επισκόπηση της διεθνούς βιβλιογραφίας σχετικά με την εκπαίδευση του οικογενειακού φροντιστή στον σχεδιασμό εξιτηρίου και τη θεωρία αλλαγής του Lewin, καθώς η ανάπτυξη και η εφαρμογή της καινοτομίας αυτής στο σύνολό της, βασίζεται σε αυτή τη θεωρία.

**Αποτελέσματα:** Η βιβλιογραφία υπογραμμίζει ότι οι οικογενειακοί φροντιστές έχουν ποικίλες ευθύνες στο σπίτι αλλά και ανεκπλήρωτες εκπαιδευτικές ανάγκες. Εάν δεν ικανοποιηθούν αυτές οι ανάγκες, μπορεί να προκαλέσουν επιβάρυνση στους φροντιστές, εμποδίζοντας έτσι την ικανότητά τους να παρέχουν ασφαλή φροντίδα στους ασθενείς τους στο σπίτι. Λαμβάνοντας υπόψη τη σημασία της κατ' οίκο φροντίδας μετά το εξιτήριο στους ηλικιωμένους ασθενείς με Αγγειακό Εγκεφαλικό Επεισόδιο, σχεδιάστηκε ένα πρόγραμμα κατάρτισης/εκπαίδευσης για τους οικογενειακούς φροντιστές, σε μια προσπάθεια να παρακινηθεί το νοσηλευτικό προσωπικό στην Κύπρο να παράσχει αυτή την προετοιμασία.

**Συμπεράσματα και εισηγήσεις:** Θα πρέπει να γίνει προσπάθεια να συμπεριληφθεί η προτεινόμενη καινοτομία στο μελλοντικό σχεδιασμό της περίθαλψης των ασθενών με Αγγειακό Εγκεφαλικό Επεισόδιο, στο πλαίσιο των βελτιώσεων που επιδιώκονται με το νέο εθνικό σύστημα υγείας της Κύπρου. Επιπρόσθετα, προτείνεται στο Υπουργείο Υγείας της Κύπρου να δημιουργήσει υπηρεσίες εξιτηρίου για τους ηλικιωμένους ασθενείς με Αγγειακό Εγκεφαλικό Επεισόδιο σε κάθε νοσοκομείο με τη δημιουργία ρόλου συντονιστή εξιτηρίων. Αυτός ο συντονιστής θα μπορούσε να συντονίσει την προτεινόμενη καινοτομία, ενώ θα μπορούσε επίσης να ενημερώσει το νοσηλευτικό προσωπικό για τον τρόπο παροχής του προγράμματος κατάρτισης/εκπαίδευσης στους οικογενειακούς φροντιστές.

**Λέξεις κλειδιά:** Σχεδιασμός εξιτηρίου, οικογενειακοί φροντιστές, εκπαιδευτικό πρόγραμμα, διαχείριση.

## Introduction

Stroke, or brain attack is the second most common cause of death (CBD, 2015) and a well-documented health problem of elderly people, in low, middle and high-income countries (World health statistics, 2017). It affects worldwide about 17 million people each year (Stevens et al., 2017), while international data show that stroke ranks among the top ten leading causes of long-term disability of adults (Mudzi, Steward & Musenge, 2012; OECD, 2014; Stevens et al., 2017). Stroke survivors may suffer various long-lasting impairments (Stevens et al., 2017), the impacts of which are often complex in nature and may affect their own life as well the life of their significant others. These long-lasting impairments, may include problems with mobility, vision, speech and memory but also personality changes, fatigue and depression (WHO 2016; Wilkins et al., 2017).

Improvements in health systems globally, have resulted in a shift of elderly stroke care from in-patients clinical settings, to ambulatory or home settings (Shure et al., 2006; Cameron et al., 2013), thus stroke sufferers are being discharged home 'quicker and sicker' (Lutz et al., 2011: p.1). The bulk of their care is being delivered by informal family carers (Perry & Middleton, 2011; Yeung et al., 2007; Almborg et al., 2009), who are usually either a close relative or a spouse affected usually by patient's severity of sudden illness (Mudzi et al., 2012).

Indeed, the sudden and unexpected nature of stroke, together with its consequences for the elderly as regards the functional, cognitive and emotional functioning (Mackenzie et al., 2007; Ellis-Hill et al., 2009) present particular challenges and difficulties for informal carers, who undertake stroke care for elderly at home. The transition from hospital to home is a stressful experience for family caregivers since they are suddenly faced with the responsibility of home care provision which is a demanding and a long lasting situation (Shyu et al., 2008), leading to extra work burden or depression (Fens et al., 2014). Consequently, providing to caregivers, with education and training in all aspects of stroke care during a discharge process, is of paramount importance since it may predict caregivers' role strain and it can improve their perceived balance of competitive needs of the patients. This in turn, could lead to the improvement of the quality of provided care, as well as to the caregivers' quality of life (Shyu et al., 2008; Almborg et al., 2009).

The proposed innovation that is discussed in this article aims to prepare family caregivers for their future role by providing to them education and training during the pre-discharge period. It thus seemed appropriate to initiate the main text of this article by providing an overview of the literature regarding stroke

caregivers' education in discharge planning as for the reader to be introduced to the subject of the proposed innovation. After this initial information, the article explains the background, the aim and the objectives of the proposed innovation. Following, it discusses Lewin's change theory, since the development and implementation of the whole project is based on this theory. The article ends up with some conclusions and recommendations for future practice based on this proposed innovation.

## Stroke caregivers' education in discharge planning

Sufficient evidence from the available literature has demonstrated that family caregivers' preparation is crucial requirement for the successful discharge of the elderly patients with stroke at home (Shyu et al., 2008; Ellis -Hill's et al., 2009; King et al., 2010; Cecil et al., 2011) and this must be done well earlier before the patient is actually discharged from hospital (Mackenzie et al., 2007). Thus, for the best post-hospital discharge outcomes, the future caregivers must be adequately educated, trained and prepared for their new role and the future care plans (Ellis -Hill's et al., 2009) and on how to provide competent care (King et al., 2007; Cecil et al., 2011).

This preparation is absolutely necessary in order to assist caregivers in their effort to meet the patients' with stroke complex needs (Cameron et al., 2013) and deal with their multiple psychological, emotional and behavioural problems (Mackenzie et al., 2007; Cameron et al., 2013). Since family caregivers may face a complexity of patients' needs during the provision of care at home, their own needs and preferences (those of caregivers) should attentively be assessed and prioritised when designing and preparing a pre-discharge preparatory programme for their caregiving role.

As it was revealed in some studies (Greenwood et al., 2009; King et al., 2010; Gosman-Hedstrom and Dahl- in-Ivanoff, 2012; Cameron et al., 2013) the caregivers' needs are mostly related to the long treatment goals, the provision of care under uncertain conditions and to a patient with an altered body image and behaviour, the effort for secondary prevention of stroke and the need for ongoing care negotiations while navigating in the existing healthcare system. Other studies (Mackenzie et al., 2007; Hinojosa & Rittmann, 2007; Almborg et al., 2009) highlighted that family caregivers need preparation in order to deal with information deficits regarding all aspects of stroke care and in order to be adequately prepared, for dealing with the complex and multiple needs of the elderly patients with stroke.

In this light, some studies (e.g. Kinmond and Holmes, 2010; Ang et al., 2013; Tia et al., 2013; Ewan et al., 2010), have supported that in order for caregivers to obtain all required knowledge and to develop the appropriate caring skills that are needed for their care giving role,

they do prefer to have first all the necessary verbal information, that will be followed by a practical session of what has been taught. This in turn shows that an action observation method of training, would be an effective and appropriate method for preparation of caregivers for their role, since it could serve as a motivator, for someone, to follow such a training programme.

In all cases, however, there is sufficient evidence to suggest that the increasing of caregivers' knowledge regarding all aspects of stroke care and the strengthening of their problem-solving abilities in relation to the problems that may arise during this care provision, can reduce their exhaustion, their grief, their mental strain, their depression, their anxiety and subsequently their sense of burden from the caregiving role (Yeung et al., 2007; King et al., 2007; Haley et al., 2009; Ellis -Hill's et al., 2009; Oupra et al., 2010; Klinendist et al., 2012; Plank et al., 2012). Additionally, an adequate preparation for the caregiving role at home, could improve the quality of provided care (Shyu et al., 2010), could reduce the patients' post-discharge complications (King et al., 2007). Moreover, it could increase the carers' satisfaction (Oupra et al., 2010) (Aguirrezabal et al., 2013) and improve their quality of life (Oupra et al., 2010).

### Rationale and background of the proposed innovation

Internationally collected data (GBD, 2015) estimate that 564 new cases of stroke, are being diagnosed each year in Cyprus (i.e. incidence rate 564 stroke cases/ year), while 3,710 patients with stroke, were present in the Cypriot population in 2015 (i.e. the prevalence of this disease in the country in 2015). Despite the fact that the care for stroke patients is costing about 8.4 million in the healthcare services of Cyprus (Wilkins et al., 2017), the outpatient care is not well-coordinated with inpatient care (Theodorou et al., 2012).

Moreover, in Cyprus there is no funding for post-discharge rehabilitation, while early supported discharge is not available (Stevens et al., 2017). However, previous local statistics (Statistical Service of Cyprus, 2006) ranked stroke as the second leading cause of elderly peoples' disability in Cyprus. More recently, a published official report regarding the burden of Stroke in Europe (Stevens et al., 2017), had estimated that the number of healthy life-years that will be lost in Cypriot population due to stroke will be increased by 62%, in the next 20 years to come (estimated percentage change 2015-2035). The estimation had been performed with the Disability Adjusted Life Years lost (DALYs lost), which measures the long-term societal burden from a specific illness by combining its morbidity (i.e. the number of years that people live with a certain level of disability from this illness) and the mortality of

this illness, thereby estimating the number of healthy life-years that are lost in a population due to this illness (Stevens et al., 2017).

In addition, the World Health Organization, (WHO, 2012) estimates that the number of elderly adult in Cyprus is increasing, and consists about the 10,4% of the total population. Moreover, the life expectancy at birth, in years, in Cyprus was 78.2 years for the males and 82.7 years for the females (among the higher in the world) (World Health Organization, 2017). Based on these estimations one can assume that in the next few years, stroke will possibly affect a significant amount of elderly people. This, in conjunction with the fact that 73% of elderly adults still remain in the community and cared by a family member (Phellas et al., 2009), it increases the concerns and the challenges on future home care for elderly stroke patients in the country. Globally, the family's involvement in the care of these patients has been increased, and their responsibilities include, additionally to the caring role, domestic and care activities (Almborg et al., 2009). Similarly in Cyprus families undertake greater responsibility in providing home care to their loved ones and this is supported by the prevailing culture in the country which is based on strong family bonds, filial obligation and parental responsibility, derived from the ancient Greek cultural and traditional roots (Douglas, 2007).

However, despite the above considerations and the global improvements of health care services for the elderly (Cameron et al., 2013), Cyprus still do not provide any organised pre-discharge educational programme for family members who will provide homecare to an elderly stroke patient. According to Katsioloudes (2007), in Cypriot hospitals there is not a discharge coordinator who will assess elderly stroke family caregivers' educational needs and could provide them with training on all aspects of home care. In most cases, elderly stroke patients are being discharged to their home without any pre-discharged, planned education and preparation for their caregivers (Katsioloudes, 2007), thus creating ambiguities and concerns about the quality of homecare the patients receive. Additionally, the lack of educational provision might also have a negative impact on the carers' health, causing unnecessary anxiety or even depression (Oliveira et al., 2013). This could result in more difficulties for them to adapt to this new role and new experiences which they come face to face in their own homes. Consequently, a situation is created, necessitating for an intervention which will adequately provide carers with knowledge and skills about stroke care, thus increasing the quality of home care Cypriot patients receive.

### Aims and objectives

After analysing and explaining the current practice that

prevails in local healthcare settings in Cyprus, as well as the cultural characteristics of the local society, the article's objective is to challenge the current healthcare practices (in the absence of local policy) and based on Lewin's change theory (Lewin, 1951), to propose the creation of an innovation in the care of elderly stroke patients and their family caregivers. To achieve this objective, this project aims to develop a proposed pre-discharge educational programme for family caregivers and to provide ways in establishing an innovation plan in preparing families during the pre-discharge period in all local hospital settings. This proposed educational programme will be tested using an identified team of four staff nurses in the Medical Ward of one local hospital.

### Scope and limitations of the study

The scope of this proposed innovation is to evaluate the current nursing practice in the preparation of stroke patients and carers' education before discharge. However, due to financial and economic constraints, as well as, the difficulties with the current health system in Cyprus, we only outline the prospective innovation, in this article, since it was not possible to implement and evaluate it in practice. Rationale for this is critically discussed at the conclusion of the article.

### The Lewin's Change Theory

A crucial factor for the effectiveness of healthcare organisations is their ability to adapt to changes (Brisson-Banks, 2010), thus improving the quality of the services provided. However, organizational change is complex and multi-faceted as there are many variables and problems involved in the change process. Consequently, change can be viewed from a number of different perspectives through a range of change models (Burnes & Cooke, 2012). Lewin's classical model of change (Lewin, 1951) is one well known and influential model, which reflects the planned, linear approach to change. It uses a three-step process that help leaders to implement successful changes, thus reshaping culture (Petrescu, 2010). According to Kritsonis (2005), this model of change can shift the balance between the driving forces that facilitate change and the restraining forces that hinder change.

The first step in this process (Lewin, 1951), is unfreezing in which the motivation and understanding of change needs to be understood and explained to the organization as well as to the staff (Sharing, 2014). Unfreezing involves the use of information that demonstrate existence of problems (Graetz et al., 2011) following by the increase of driving forces that direct change away from the existing situation and the decrease of restraining forces that negatively affect the whole process (Kritsonis, 2005). Lewin's second step is movement or transition in which there should be a creation of recognition in the work

force of the need for change following by the actual implementation of the change (Longo, 2011). In this stage, an organization is in the process of transitioning to the new way of doing things, thus moving the organization to a new level of equilibrium and stability (Sharing, 2014). The third step is refreezing and it occurs after the change has been implemented in order for it to be sustained or "stick" over time (Brisson-Banks, 2010). It is about stability and consolidating the new situation as well as preventing individuals from going back to the previous ways of doing things (Longo, 2011).

It is evident that Lewin's three-step model provides a structure to a complex and ever changing process, thus focusing on the planning for change and helping leaders to avoid making mistakes and to move towards the ultimate goal (Sharing, 2014). It reflects a rational strategic planning approach that help leaders to implement a successful change (McAlesse et al., 2013) and enable organizations to successfully plan, design and implement change (Longo, 2011). Consequently, it can be said that Lewin's model that was developed during a time of a relative stability (McAleese et al., 2013) perceives change as a series of linear events with a given period of time.

However, the organizations of today are operating in a different external environment with global competitive markets, an increased technological escalation and uncertainty in consumer confidence. These circumstances are in turn making the pace of change a continuous open-ended and faster process of adaptation and not a static and linear condition (Miles, 2013). It could be argued therefore that the Lewin's model might lack the flexibility required in order to address the complex changing circumstances and the competitive culture of modern organizations. On the other hand, this model may be more relevant to small scale organizations which operate in stable and stale conditions and they can be responsive to pre-planned shifts from one stable environment to another (Graetz et al., 2011).

Moreover, as McAleese et al. (2013) supports old systems (such as the current healthcare system in Cyprus), could only be changed by an equal strong opposite force with a leader to be instrumental in unfreezing the old systems of practice. The hospitals in Cyprus, are still operating in a linear and a pre-planned manner, while nurses are not yet autonomous to assess existing forms of care, or to change the old and outdated practices and to implement newer and broadly acceptable evidence-based practices. This rigid way of practice prevents them from facing change as an open-ended process of adaptation to today's changing environment of healthcare. In this light, the choice of Lewin's model for the forthcoming proposed innovation (i.e. to unfreeze the lack of pre-discharge

preparation of family caregivers and to move towards their pre-discharge education and training) seems a more suitable and adaptive process of change, due to the current static and bureaucratic conditions, that prevail in the hospitals of the country.

### The Implementation of proposed innovation and change Unfreezing

Most European countries emphasize the early discharge of elderly patients with stroke as well as a clear preference towards the care at home for these patients (Agu- irrezabal et al., 2013). Thus, all efforts focus to help patients to remain in the community as long as possible; and addressing their needs in their own environment. In this light healthcare policies in seven European countries (European Implementation Score Report Summary, 2014) are reflecting these efforts.

However, the realities within the Cypriot healthcare system seem to be different. Apart from no availability of stroke rehabilitation services, family caregivers also lack educational preparation due to the absence of an organised discharge programme and of a discharge coordinator (Katsioloudes, 2007). The absence of these services results in a longer stay of these patients in hospitals and consequently health professionals may give more emphasis in the provision of hospital care and neglecting the importance of post-discharge care. Inevitably family caregivers may remain un-prepared for the role are expected to undertake after discharge. This often contributes to frequent re -admissions of elderly patients with stroke which in sequence may lead to longer hospitalizations and higher mortality rates (Oliveira et al., 2013).

This inefficiency is perpetuated by the bureaucratic processes with mechanistic structures that still prevail in Cypriot hospitals that may apply strict managerial power and too many rules and procedures, which in turn may hinder the efforts of staff to make the needed changes (Rosenberg & Mosca, 2011). Moreover is perpetuated by the apparent lack of opportunities for healthcare professionals to plan and to offer the necessary preparatory training to family caregivers or to help the patients with stroke to be prepared to receive care at home. This may be partly attributed to the lack of professional autonomy of the nurses and to the dominance of medical profession, over the nursing profession, in Cyprus (Pati- raki-Kourbani, 2003), that may lead to the inability of nurses to implement changes in order to improve the organization's function and to increase the quality of services (Rosenberg & Mosca, 2011).

The current situation is also challenged by the fact that the current healthcare system in Cyprus has for long been criticized for its inefficiency to respond to the expectations

of the population (World Health Organization, 2014), (Mercer, 2013) and thus it is undergoing many reforms, for the establishment of a new National Health System (Pavlakis et al., 2011). However and although the new National Health System in Cyprus has been recently (June, 2017) passed as government bills and regulations by the House of Representatives and is expected to be in full swing by July 1, 2020 (OECD/European Observatory on Health Systems and Policies, 2017) in the new system there is no reference or any suggestions about the education of family caregivers in providing home care to elderly stroke patients. In this light the current status quo will be continue as it is and the family caregivers will be left once more with no training and home care support.

The recognition of this status quo and the need for change as it was revealed from the above discussion, provide the first step in the attempt to unfreeze the current situation and to challenge the current practices by suggesting this innovation in practice. This recognition lead the authors of the proposed innovation, as an important first step in the whole change process, to attempt to communicate with all nurses caring for elderly patients with stroke at the local hospitals, in order these staff to sound a support towards this proposed innovation. A nurse leader, in a time of attempting an organisational change, should create and maintain an atmosphere where discussion and reflection is encouraged (Fagerstrom & Salmela 2010) as well as an open communication and an ongoing dialogue, with all nursing personnel that is affected by the forthcoming change (Salmela et al., 2011; Fagerstrom & Salmela, 2010) as to invite and listen openly and actively to the opinions and ideas of all the staff who will be part of the change process (Salmela et al., 2011).

This open, two-way dialogue, in turn is expected to lead in mutual trust where all staff opinions are valued and respected and will help to create an atmosphere of change, by giving time to all involved to understand and recognise the necessity and the rewards of the future change (Moen & Core, 2012). Additionally, it will prompt personnel to share their views, opinions and feelings about the future change and this may increase their positive attitude towards the proposed innovation and their ability and willingness to effectively engage with the whole change process (Rosenberg & Mosca, 2011). Furthermore, it could help personnel to understand why the current situation impinge everyday practice and why the provision of an education programme to the family caregivers of elderly patients with stroke can also positively affect their own practice. In this first step, the authors of the proposed innovation could also explain and analyse the policies that prevail in other European countries as regards the care of elderly patients with stroke.

The analysis of the rewards and barriers for change could also include an analysis of the emotions of staff regarding change since the change process creates feelings of anxiety, uncertainty, perceived loss of security and fear of the unknown, thus affecting negatively staff motivation to accept and participate in the change process (Rosenberg & Mosca, 2011). In this light, the authors of the proposed innovation, could encourage staff to express their feelings, their fears or their anxieties, regarding the planning of the pre-discharge educational programme for the caregivers of patients with stroke. This will enable the authors to assess possible barriers that could impede the implementation of such a programme. Moreover, the uncovering of possible negative feelings of uncertainty and anxiety could reduce personnel's level of anxiety while it also could motivate them to participate in the suggested change. Indeed, the awareness of staff fears or anxieties that are associated with a proposed change, could also act as a motivator to personnel, in order to alter their behaviours, and to take actions in an attempt to alleviate their anxiety, resulting to the reduction of possible barriers towards this change (Moen & Core, 2012).

However, and despite the fact that people often feel threatened by a change (Coetzee et al., 2012), because of the 'unknown' there will be also staff who, in the prospect of change, could be potentially enthusiastic about the whole process or with the same the proposed innovation. These staff members by acting as driving forces (Kritsonis 2005; Brisson-Banks, 2010), may direct behaviours and actions away from the existing status quo (Kritsonis, 2005) and in this light are considered critical to the process of change by affecting positively the transition from the old, towards the new state of reality (Brisson-Banks, 2010). The authors will attempt to encourage colleagues who could be willing to participate in the process of change as regards the proposed innovation, in order to commit themselves and help to organize the whole process. These colleagues could act as change agents and encourage other staff reluctant to the proposed change to understand the rationale and the practicalities that this change could bring to staff, patients and their family caregivers.

This, in turn, could lead to exchange of views between the two parts, thus lessening even more, possible feelings of anxiety and creating a more positive attitude towards the proposed innovation. To empower the culture of change, the leaders of this innovation (in this instance the authors of this article), will attempt to engage more individuals, of those who will embrace the idea of change. In this light they will attempt to create a "controlled crisis", which adds to the needed motivation to make a change (Rosenberg & Mosca, 2011). It is well documented that if people choose to implement a specific change rather

than be forced into it (Moen & Core, 2012) the results could be better and more positive. Therefore, and having considered all these factors the initial attempt will be to "unfreeze" the current situation (thus altering the current status quo) and to motivate nursing staff to be engaged in the formulation of the educational programme for the caregivers of the elderly patients with stroke.

## Movement

Movement or transition comprises the second step of Lewin's model of change. Change is expected to start once nursing staff will realize the importance of the suggested innovation and internalize its necessity for everybody involved. The next step will include an exchange of ideas between all staff involved to find the best possible solutions for implementing the innovation in practice. By keeping a climate of open communication and respect of all views (Fagerstrom & Salmela, 2010) the leaders of this proposed innovation will hear and value all suggestions from involved staff.

Having many years of working experience as nurses in various wards caring for elderly stroke patients, they will then organize a meeting with a team of nurses, willing to participate more actively in the proposed innovation in order to explain and analyse the whole action plan of it. This plan, that is entitled as "Stroke Care Training Programme for Carers" (StroCare Pro), has two parts. The first part deal with the provision and testing of the actual training programme to caregivers of patients with stroke based on action observation method. This part will be done by the trainers of the StroCare Pro which will be the leaders of the suggested innovation together with the four other nurses (working with stroke patients in one of the hospitals of Cyprus) who will be willing to participate in the training. The second part of the plan will attempt to engage all involved staff of this hospital in the provision of the StroCare Pro, based on mixed observation method. The whole plan will try to implement this training programme as a permanent intervention, of the discharge planning of stroke patients in this local hospital and if succeed, an effort will be made, as to apply this plan to other hospitals of Cyprus as well.

Based on existing research evidence that show that caregivers prefer a combination of 'hearing' and 'hands-on experience' for their training, rather than just a leaflet or a formal talk of how to care for their loved ones (Tia et al., 2010; Ang et al., 2013), and other studies that supported that the "on action observation method" may be a valid intervention to educate family caregivers and to improve the perspectives of rehabilitation care of elderly patients with stroke (Bird & Heyes 2005; Kim & Lee, 2013), the leaders of the proposed change will explain the reasons for why this particular method has been selected as an

educational approach for the caregivers in the local hospital. The whole subject could be further enhanced by explaining that this method is widely applied in healthcare area, including stroke care, since successful learning of stroke care skills occurs when provision of information and demonstration of skills is followed by the implementation of practical strategies (Tia et al., 2010). Based on these arguments an attempt will be made to achieve a mutual agreement of all potential trainers regarding the method of training that will be used for caregivers.

Action observation is an active and engaging educational approach which requires imitation of a specific movement, following an observation (Mulder, 2007). Imitation can be used in order for caregivers of patients with stroke to learn and acquire new skills, learn movement patterns and behaviours and implement practical strategies (Ewan et al., 2010). For example, the trainers will demonstrate step by step the whole procedure of a specific skill needed to be acquired by the caregivers (e.g. how they should safely move the stroke patient in and out of bed, using the appropriate movements and the necessary moving aids). The caregiver will then be encouraged to ask questions as well as to perform the specific skill under the direct supervision of one of the trainers. This process will be repeated on as many times as needed in order for the caregiver to acquire the necessary skill and be able to perform the activity while at the same time ensuring the safety of the patient as well as its own safety.

The next step of the plan of action is the implementation of the proposed innovation i.e. the actual training of potential home caregivers. The training will be provided separately to each different caregiver (i.e. via one-to-one method) and not via a group training (i.e. to more than one caregivers at the same time). This method of providing information and education could thus be tailored to each patient's and carer's educational needs and preferences allowing the opportunity for both, to actively participate in the care processes (King et al., 2007; Gustafsson, 2008; Eames et al., 2010; Ang et al., 2013).

In this step the leaders of change will initially assess a patient recovering from stroke whose condition is stabilized and who is in the stage of preparation for home discharge and whose family is willing to provide home care in order for the necessary training to be arranged. They will then identify and approach the potential caregiver within the family, in order to assess his/her training/educational needs in how to care for a patient with stroke at home. The holistic assessment, the identification and the understanding of the caregiver's educational needs is very important for the development of an appropriate plan for meeting these needs (Koh et al., 2014) and can bridge the gap between hospital and community care (Chow et

al., 2007; Mak et al., 2007). This in turn could benefit both the patients and their caregivers and improve the care outcomes by helping in the preparation of family caregivers for their new role, in order for the potential impairments and chronic distress to be minimized as much as possible (King & Semik, 2006).

Such an assessment, could be done through the use of open-ended questions that provide an element of interactivity with the learners and thus facilitate the in-depth understanding of learners' educational needs (Kim et al., 2009). This type of questions have been proved to be a useful tool in the identification and retrieval of healthcare information (Olvera-Lobo & Gutierrez-Artachos, 2010) and they can provide additional information since they allow people to express their views and expectations of care which they may not be obtained from closed questions (Marcinowicz et al., 2007). In this light an attempt will be made to elicit the caregiver's training needs as well as to uncover possible barriers, potential strain and distress, regarding care at home. Examples of open-ended questions that could be used might be:

- "Can you tell me in your own words, what you understand about stroke?"
- "What are the main issue that worries you in managing care at home, of your patient?"
- "What other problems you think that you will envisage during the managing of care at home, of your patient?"

After the holistic assessment, each entitle trainer can then proceed to the provision of all needed training, to a specific family caregiver, and this training should be relevant to the elderly patient's condition and to the caregiver's educational needs. For example, trainers could provide education related to the following possible problems: prevention of recurrent stroke, nutrition and hydration, swallowing difficulties, prevention of pressure ulcers, and prevention of urinary tract infections, mobility and positioning, managing problems of communication and of depressive symptoms, in the elderly patients with stroke. These information may be part of a series of training sessions since they have been found to decrease the strain of family caregivers and improve their capacity to provide adequate home care (Oupra et al., 2010; Ang et al., 2013).

Relevant to the needs of caregivers is also their training on problem-solving abilities, i.e. to learn to recognize and define a problem that may arise at home and find the solution of this problem. The leaders of the proposed innovation are suggesting that this kind of training must be also included in the training sessions of the caregivers of patients with stroke in Cyprus, because it has been found elsewhere that such a

training to the caregivers may increase their confidence and capacity in providing care at home (King et al., 2007) and to lessen their distress, levels of anxiety and possible depressive symptoms (Yeung et al., 2007). Moreover, it has been found that this type of training can increase their confidence for managing daily problems, their feeling of having social support when they are performing their new role and their perception of physical and emotional wellbeing (Lui et al., 2011). In this light and according to each patient's clinical condition the training should also focus on other problems that may arise and how to manage these problems. For example caregivers can learn how to recognise symptoms hypo- glycaemia and how to manage this problem if appears.

Even though verbal information and training is a favourable training approach for the caregivers of elderly patients with stroke the reinforcement with written educational materials is a useful approach of supporting education that had been provided to caregivers verbally (Hoffmann, et al., 2007; Gustafsson 2008; Hinojosa & Rittmann 2009; Gustafsson et al., 2010). This method may also improve the knowledge of caregivers on stroke care, can assist them in order to follow recommendations and advices (Gustafsson et al., 2010) as well as can assist them in order to clarify and reinforce verbal educational sessions (Hoffmann, et al., 2007; Gustafsson 2008; Hinojosa & Rittmann 2009). Having this in mind, following the oral/ practical training sessions, the trainer will provide written educational materials, specifically tailored to this particular caregiver's training needs, and which will be related to the taught topics in an effort to achieve a more individualised educational package (Gustafsson et al., 2010), that would allow his/her educational needs to be better met.

Following the provision of verbal and written information, the trainers will proceed in the demonstration of the practical skills that should be acquired by the caregivers, in order to relate these skills to the taught themes and the problem-solving skills that had be previously provided. In all cases a caregiver of a patient with stroke, as an adult learner, should have opportunities for active participation in the learning process as well as to have opportunities to apply or use this new acquired knowledge and information in practice situations (Gustafsson, 2008). For enhancing this argument Gustafsson et al, (2010) support that the successful training of these caregivers, occurs when demonstration and practice engagement with skills are included within the programme of training that is provided, thus helping them to improve and recall stroke care education. After the observation of skills, each trainer should allow as much time as needed for the caregiver to practice and learn each skill, helping him/her in this way to develop efficacy and competency in the provision of practical aspects of stroke care (Ang et al., 2013).

In order to ensure that the caregiver had reached an adequate level of practical competency in providing the practical aspects of care, the trainer could evaluate his/her performance using a checklist of skills that are needed to be acquired. Such an evaluation process should involve the judging of competence against explicit, objective and context specific criteria so as to ensure the validity of the findings of this process (Mckinley et al., 2008). In this light, the leaders of the proposed innovation suggest that the trainers could use a valid and reliable assessment tool, such as the "London Stroke Caregivers Training Course" (LSCTC). However, a permission should be obtained, in advance, from those they have the copyright of this assessment tool, for its usage, its translation in the Greek language and perhaps for doing some necessary modifications (in order for it to be adapted to the context of the hospitals in Cyprus).

However, the acquisition of certain competencies and practical skills by the caregiver requires also the provision of feedback from the trainer after each practice session (Liu et al., 2013). The provision of feedback is important in skill learning since it can help to the provision of an accurate picture of a learner's competence (Mehta et al., 2013), and can enhance learning of a new task as well as to improve performance of tasks, which have already been acquired (Gilmore & Spaulding, 2007). The intended effect of feedback is to help trainees learn and improve their performance. This effect is based on the assumption that feedback creates awareness of shortcomings and it thereby guide trainees to the correct performance (Chiviacowsky & Wulf, 2007), and it motivates them to improve their expertise (Pelgrim et al., 2012). However, the provision of positive feedback to trainees after a good practice session has been found to be more preferable for facilitating the learning procedure than the feedback in less good practice sessions (Chiviacowsky & Wulf, 2005).

In this light and for the purpose of the proposed educational programme in Cyprus, each trainer could choose to provide immediate positive feedback to the caregiver after a successful practice session. This could increase the caregiver's self-confidence in performing a practical care task and in this way to enhance more his/her awareness of his/her competence in providing stroke care. Additionally the provision of positive feedback could enhance the caregiver's motivation for learning to provide care at home to their elderly patient with stroke and in this light, could help in the gradual improvement of his/ her performance in providing care.

When the educational programme will reach to its completion and the caregiver will be assessed as competent in providing adequate home care, the trainer could then



communicate again with other nursing personnel that is involved in the care of elderly patients with stroke. The intended effect of this new communication will be the reminding of these staff about the potential rewards and possible benefits of the proposed innovation, in an attempt to motivate them to participate in the whole programme and to embrace this change in their own every day practice. As Rosenberg and Mosca (2011) recommend, nurse leaders should pay more attention in rooting the concept of change into an organisation's culture, thus helping people to embrace the idea of a changing process.

### Refreezing

The 3rd step of Lewin's model of change (Lewin, 1951) is called refreezing and is stage that occurs once the change has already been made and in which an attempt is made to establish a stability of this change (Petrescu, 2010). Consequently in this stage, the leaders of the proposed innovation could try to establish the educational programme as a permanent pre-discharge care intervention for every family caregiver of every elder patient with stroke. In this way an attempt will be made to change the existing practice. Thus, through the establishment of a new way to deal with discharge planning that will include the pre-discharge training of each family caregiver, who will potentially provide care at home (during the post-discharge period) to a particular patient with stroke, an attempt will be made to improve care outcomes for the elderly patients with stroke in Cyprus and their family caregivers.

However, since in organizational terms, refreezing requires also changes in organizational policies (Sarayreh, Khudair & Barakat, 2013), the leaders of the proposed innovation could proceed to inform the hospital's administration personnel in order to obtain their approval on the suggested innovation. The attempt will be to persuade hospital administrators and nursing managers to challenge the current practice on the care of stroke patients by realizing that the proposed changes are needed and then these people to influence the needed changes in the culture of stroke care in the hospital. Fagerstrom and Salmela (2010) support that for genuine change to happen, an important first thing, is the changing of peoples' ideas and values and the changing of managers' thought patterns. As a consequence, possible approval of the suggested educational programme by staff and administrators (either formally or informally) would be seen as a necessary next step in changing the ward's everyday practice with an aim to improve the care of elderly patients with stroke.

The leaders of the proposed innovation could then try to engage all other nursing personnel in assessing the

patients with stroke (who are ready to be discharged at home) for their needs for care at home and in assessing their potential family caregivers for their needs for training and education in how to care for their relatives with stroke at home. In this light, the leaders of the proposed innovation, could then take the role of a discharge coordinator (although this role not yet exist in the Cypriot hospitals) in order to co-ordinate all efforts of assessing the needs of patients and of family caregivers, thus ensuring the implementation of this important part of the change process. In addition, the leaders of the proposed change, could co-ordinate and facilitate the efforts of the four trainers, as well as the efforts of every nurse who will be willing to assist or to participate by any means to the training of caregivers. This in turn will maximize the possibility that more nurses will express the desire to participate in the programmes and that all running training sessions will have a better outcome for caregivers. Furthermore, the co-ordinators in consultation with the hospital administration, will ensure that there are appropriate incentives and facilities for the involvement of staff in these procedures, as well as the necessary encouragement and rewards. Coetzee et al, (2012) suggest that this approach of a change implementation can help a leader pre-defined an innovation in practice within an organisation and Petrescu (2010) argue that since a change is being accepted and become a new norm, practitioners become more comfortable with their new routines.

However, the process of establishing new behaviours and new routines could take time (Petrescu, 2010), suggesting that people in an organization may need more time than expected to implement a change in their everyday practice. On the other hand, in today's changing world, the next new change could happen in weeks or less, thus leaving people with no time to settle into comfortable routines (Petrescu, 2010). Having these arguments in mind, and in an attempt to lessen the time of the implementation of this innovation in practice and to ensure that the new approach would be sustained, the leaders of the proposed innovation could encourage and prompt all personnel, experts and less experienced, to provide this educational programme to the family caregivers of elderly patients with stroke. According to Moen and Core (2012), this approach of reinforcement of active participation of all staff, can lead to a more positive attitude to effectively engage in the changing process, thus helping in this way the innovation to be established and for this to become a permanent practice.

Andrieux & Proteau (2013), supported that during the instruction of a caregiver, the observing of an experienced nurse working with a junior nurse, favours a better learning model and enables the caregiver, to learn a broader spectrum of working strategies. Also this model enables learners to detect

possible errors and possible corrections of the errors, which may improve learning. These researchers (Andrieux and Proteau, 2013) found that the observation of role model, that includes both an expert nurse and a novice nurse, can benefit the initial performance of a learner (caregiver of patient with stroke) since it can reduce the risk of possible injury and can lead to a better short-term retention of the observed motor skill. Additionally, such a role model followed by physical application of care tasks in practice can result in better long-term retention and better performance of a skill compared to the observation of a role model from a single nurse (Andrieux & Proteau, 2013). Similarly, and supporting this learning approach Rohbanfard and Proteau (2011), have shown that the observation of a role model from a novice nurse, is not as effective for the learning of care tasks as it is the observation of a mixed role model (i.e. from an experienced nurse working with a novice nurse) and that the observation of a novice and expert role model provides to learners a more accurate template of what to do. Additionally, the researchers proved that learners of the mixed group who were allowed to perform the tasks with supervision and feedback (for their performance) from the trainers, have outperformed the other observation groups (in performance) in the first few sessions of practice (Rohbanfard & Proteau 2011). Based on the above considerations the leaders of the proposed innovation could try to motivate all personnel to work together and create groups of two persons, with each group consisting of one experienced and one junior nurse. In the process, each group could provide the educational programme to one family caregiver of stroke patient, followed by the practical application of the skill and the provision of feedback to the caregiver about his/her performance. After each educational session, the leaders of this change, as facilitators and coordinators should provide encouraging feedback and acknowledgement to the colleagues' efforts to implement the innovation in practice. Positive reinforcement to the caregivers provides encouragement that could lead to the implementation of the suggested innovation in practice and to the stabilization of this innovation in the organisation thereby promoting a sense of ownership, of the new practice (Kritsonis, 2005; Moen & Core, 2012). Active participation of all staff through the approach of a mixed observation method it could lead to the acceptance and to the "stickiness" of this innovation in practice thus freezing it and making it a permanent new situation while, at the same time, promoting better education and training for family caregivers of the patients with stroke.

In the near future the leaders of the proposed innovation are proposing to carry out two separate pilot studies, one for the ward staff and one for family caregivers in an attempt to further establish this innovation in practice.

The purpose of these studies will be to examine the usefulness of this new approach in the preparation of nurses and the caregiver's new roles. In this way, this innovation in practice would be concrete and ideas and values of current local culture and practice could change permanently. For genuine change to happen, ideas, values and opinions need to be reshaped, leading to a change of thought patterns and culture of all affected people (Salmela et al., 2011).

## Conclusion and Recommendations

Undoubtedly, the onset of a stroke in an elderly person creates a crisis for the family because of the role constraints and role changes, the burden of physical care and the interruption of interpersonal relationships within the family. Considering the significance of the role of family caregiver when it comes to provide post-discharge homecare, modern healthcare systems attempted to provide educational and training pre-discharge programmes for the caregivers of elderly patients with stroke, as analysed above. This has been done in an effort to support these caregivers and enable them to provide skilled and safe post-discharge care.

According to a recently published report of the Stroke Alliance for Europe (SAFE) (Stevens et al., 2017) that examined the burden of stroke in Europe each European Country, including Cyprus, should have a national stroke strategy actively supported and sponsored by Government that will covers the whole stroke pathway to include awareness, prevention, diagnosis, treatment, rehabilitation, long-term care and support, social integration and participation in community life and end-of-life care. However, despite the efforts that have been promoted in various other countries to address the educational needs of family caregivers, in Cyprus up to now, no effort or other initiatives have been developed regarding the education and training of caregivers of elderly patients with stroke.

Although the proposed innovation has been outlined in some detail, in this article, it has not been implemented in practice due to various administrative as well as professional constraints that nursing in Cyprus is facing presently. The authors of this article were only able to promote the idea of this innovation in two care units of a hospital in Cyprus where elderly patients with stroke are being treated and cared for, by arranging a number of meetings and detailed discussions with nursing staff and the nurse leaders of these wards. Although the colleagues and the leaders in these care units showed willingness to discuss the whole issue and expressed an interest regarding the suggested innovation, there was an agreement that such an innovation should be discussed with those of policy making, perhaps at the level of the Ministry of health of

Cyprus as part of the improvement reforms that are being pursued. Given that the new national health system of Cyprus, has been legally established (OECD, 2017) an attempt should be made as for this proposed innovation to be included in the future planning of the care of stroke patients.

In order to improve the care of patients with stroke in Cyprus, to promote a better rehabilitation of these patients and to prevent the mortality and disability rates that can be the result of this disease to be increased, the Ministry of Health in this country should create a national stroke strategy that will covers the whole pathway of the stroke disease (Stevens et al., 2017). However as it was revealed from the discussion of the proposed innovation, presented in this article, it seems that the family caregivers of patient with stroke could play a crucial role in any national strategy that could be created by policy makers, since these caregivers could undertake great responsibilities, especially as regards the care of elderly patients with stroke at home. The potential beneficial role of family caregivers in providing quality care at home, to these patients, after their discharge from hospital and to help them live safely in their own home environment, is well documented in the international literature. Having discussed the proposed innovation, this article can then suggest that politicians, the healthcare administrators and those undertaking policy making, at the level of ministry of health in Cyprus, should identify this crucial role and thus could begin to reshape ideas and values about family caregiving, thus updating the importance of this role within the new policies of the new health care system in Cyprus.

Additionally, it is suggested that the Ministry of Health should create discharge services of elderly stroke patients in each hospital with the creation of a Discharge Coordinator role, who could coordinate the innovation, that has been proposed in this article, in the practice of care of elderly patients with stroke in Cyprus, while he/ she could also inform and educate staff on how to provide the training programme to family caregivers. With the implementation of the new National Health System, nurses responsible for the care of elderly patients with stroke, should carry out research to identify and if needed, to modify existing assessment tools to assess family caregivers' needs. Also there is a need to develop tools for assessing skills' performance of family caregivers, as to further enhance the validity of this educational programme. The nurse leaders of local hospitals in Cyprus, should regularly evaluate every day's nursing practice, thus giving more chances to nursing personnel to create and implement changes that could increase the quality of life of both the elderly patients with stroke and their caregivers. Concluding, it is supported in this article that

with the proposed innovation, and if these improvement steps will be taken, both elderly patients with stroke and their family caregivers would benefit from a higher level of care and support.

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