

**Title Person Centred Discharge Education Following Coronary Artery Bypass Graft: A  
Critical Review**

**What does this paper contribute to the wider global clinical community?**

- This critical review contributes to the body of knowledge that individualised education helps reduce complications and promotes self care following Coronary artery bypass surgery.
- Individualised education and patient centred care ensures that patient needs are met.
- Patient empowerment through tailored education increases confidence and prepares patients for discharge following Coronary artery bypass surgery.

**Abstract**

**Aims and objectives.** This critical review examines the extent that individualised education helps reduce depression, anxiety and improves self-care for people who've undergone Coronary Artery Bypass Graft surgery (CABG).

**Background.** Individualised discharge planning is increasingly important following cardiac surgery due to recurrent admissions as well as the issue of anxiety and depression, often due to lack of preparation. The hospital to home transition is fundamental in the recovery process.

Individualised education and person centred care ensures that patients' educational needs are met. This empowers patients, increasing self efficacy or confidence, resulting in autonomy, a smoother discharge process and avoiding post discharge problems and rehospitalisation.

**Design.** A critical review of published peer-reviewed literature was conducted.

**Methods.** Electronic databases searched included MEDLINE, CINAHL, the Cochrane Library and PsychInfo 2009-2015. Data was selected and extracted by three reviewers based on PRISMA guidelines (Moher et al 2009)

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**Results.** Eight articles were identified for review, and a CASP framework was used to determine the quality of the papers, all of the papers focussed on CABG. The designs were typically experimental or quasi experimental with 2 reviews.

**Conclusion.**

A greater understanding of the patients needs allows tailored education to be provided which promotes self care management. This level of patient empowerment increases confidence and ultimately minimise anxiety and depression. Despite the varying teaching and learning methods

associated with individualised education, patient centred education has the potential to assist cardiac nurses in adequately preparing patients for discharge following their CABG.

#### **Relevance to clinical practice.**

Development of individualised education programmes is crucial in preparing patients for discharge. The reduction in readmission to hospital has a significant effect on already stretched resources, and the reduction in post operative complications during the recovery period linked with depression and anxiety will have a positive effect on the individuals' ability to self-care, health and well being.

#### **Key words**

Coronary heart disease

Coronary artery bypass graft (CABG)

Individualised education

Person centred care

Patient empowerment

Patient confidence / self efficacy

#### **Introduction**

Coronary Heart Disease (CHD) is acknowledged by the World Health Organisation (WHO 2013) as being the most significant cause of death globally. It was estimated that 7.4 million deaths from CHD were due to coronary heart disease and 6.2 million were due to stroke. One common surgical treatment is coronary artery bypass graft surgery (CABG); a revascularisation technique in which donor arteries are used to divert blood flow around narrowed arteries to improve blood flow to heart muscle. CABG surgery is a major operation with a high readmission rate of about 1 in 5 (Iribarne et al 2014). The most common causes of readmission, within 30 days of surgery, are infection, arrhythmia and volume overload. Readmission within 30 days following CABG surgery is likely to be a preventable complication for many people (Hannan et al 2003) and a reduction in the incidence of readmission should be made a priority (Iribarne et al 2014).

It is thought that patient education about self-care may reduce the number of preventable complications, hence, discharge planning is a fundamental part of the care process because it has the potential to promote self-care. Over the last decade the length of in hospital stay following CABG has decreased dramatically meaning that people are discharged home after a few days. This coupled with a greater emphasis on the provision of care in primary care settings can contribute to fragmented care. Little is known about the type of patient education that is most effective and there is ambiguity about the

effectiveness of different approaches. The transition between hospital and home care is now a key focus of health care management. Facilitating an individuals' readiness to leave the hospital setting following CABG is considered be key factor of a successful discharge (Brennan et al 2001) and a way to save scarce economic resources (Anthony & Hudson-Barr 2004).

The pedagogic approach used in discharge planning are a significant influence on effective discharge and, it is acknowledged that person centred engagement can help patients to understand the indicators of complications may to increase patients readiness for discharge (Anthony& Hudson-Barr 2004). The concept of person centred care emerged as an approach to nursing that challenges this philosophy through listening to 'patients as people' (Howarth 2014). Moreover, in the past two decades, the UK Department of Health has attempted to create a National Health Service that engages with 'patients' as people to facilitate more control in their care. The 'No Decision About Me, Without Me' (DH 2012) was one of the key campaigns that promoted the inclusion of patients and their carers in the decision making process. Equally, the principles of person centred practice are reflected globally as cardiac care strives to improve involvement of the patient and carer in decisions (Shepperd et al, 2013).

It has been suggested that person centred discharge planning approaches that involve the carer and family through an individualised discharge education approach could help prepare patients and reduce the risk of readmission (Shepperd et al, 2013). Pre-requisites associated with individualised patient education for discharge relate to person centred concepts that encourage health care providers to work in partnership with patients and significant others to develop shared decision making and this promote self-management to help prevent post-op complications. Patient centred individualised education has the ability to empower patients, utilising targeted interventions to build skills and confidence. As a result, patients are more able to confidently manage their health and are more likely to adapt healthy behaviour, resulting in lower readmissions to hospital (RCGP, 2014).

Within a cardiology context, it is understood that patient education has been delivered using a range of formats, which can be structured (standard) or individualised, that is, tailored to the individuals' needs and their health care preferences. For example, standard patient education is acknowledged by Fredericks &Yau (2013) as being "*patient education materials that are not reflective of an individuals perceived learning needs, beliefs, and/or values following heart surgery*" (pg 3) which does not provide an opportunity for the patient and carer to engage with the discharge process. Whereas, individualised patient education is considered to be reflective of the individuals perceived learning needs, beliefs, and/or values following heart surgery. Frederick &Yau (2012) defines this by articulating the detail of how education is communicated as "*the communication of information to enact change in health-related quality of life, hospitalisations, mortality, performance of specific health related behaviours, and cognition during the post-hospital discharge recovery period following cardiovascular surgery*". Individualised care encompasses direct or indirect care with a health care provider between the patient

or patient and significant other using a combination of formats and can be delivered in a range of settings such as hospital, community or in the patients home or convalescence residence. Arguably, the individualised approach encourages engagement with the individual to facilitate the development of a suitable and person centred method of patient education that can empower patients in self-care (Ross et al, 2015). Whilst it is generally understood that pre-op education is effective, it is however, reliant on the method of delivery. Significantly, person centred approaches are believed to be effective as they provide tailored discharge education for patients, which ultimately can prevent hospital readmissions through reducing post operative complications. More recently Lapum et al (2016) suggested that standardized discharge education methods may be inappropriate to use as patient and their families struggle to integrate the information into their daily lives. Lapum et al (2016) advocate that a more tailored approach to discharge planning could help improve the discharge process and subsequent recovery of the person at home. Similarly, Brown et al (2011) reviewed patient education in the management of coronary heart disease, and identified that further research was needed to evaluate the most clinically and cost effective ways of providing patient education. Although there is some evidence regarding the use of individualised education for cardiac patients post myocardial infarction (Garvey & Noonan 2013) there is little evidence to support the effectiveness of individualised educational interventions for CABG in particular. This paper seeks to explicate evidence that has measured the impact of individualised person centred education on patient outcomes to try to reduce the evidence gap and promote the use of individualised discharge education following CABG as a person centred approach. The focus of this paper is understanding whether individualised education within a discharge planning context could support shared decision making to help empowered patients to self-care, manage well-being and ultimately reduce readmissions, anxiety and depression.

### **Aims**

The aim of this review was to critically review the evidence to determine the extent to which individualised discharge education helps reduce depression, anxiety and improve self-care for people who have undergone CABG.

### **Methods**

Building on a 30 paper review by Frederick (2009) that encouraged nurses to think about the relevance of their specific educational materials to individual patients who had undergone CABG this critical review included a search for English research papers published between 2009-2016. Papers that focussed on the impact of standardised, individualised or tailored discharge planning or education on an individual's self-care, anxiety and depression for people following CABG were selected. Two

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reviewers compiled an evidence table for consolidating key elements of the evidence identified to aid the synthesis of reported findings. The review was guided by a clearly formulated research question, which was “Do Individualised Educational Interventions Delivered Pre Discharge Following Coronary Artery Bypass Surgery Improve Patient Outcomes?” A data extraction tool was used to determine inclusion criteria, generate an evidence table and to summarize articles falling within the scope of the review, appraisal being undertaken using checklists designed by the UK Critical Appraisal Skills Programme (CASP, 2017). Data was selected and extracted by three reviewers based on PRISMA guidelines (Moher et al 2009)

#### Search strategy (Section restructured)

Scoping searches were undertaken on MEDLINE, Cumulative Index to Nursing and Allied Health (CINAHL), the Cochrane Library and PsychInfo to assess the potential size, nature and extent of available research literature (Grant et al 2009) on discharge planning for those who have undergone cardiac surgery. Keywords included: standardized discharge planning/education, individualized discharge planning/education, tailored discharge planning/education, coronary artery bypass graft (CABG), cardiovascular surgery, education, knowledge, information, communication, understanding, comprehension, self-care, depression, anxiety. Using Fredericks’ 2009 review as a starting point, search strategies were continually refined to retrieve research published in English between 2009-2016. Citations were tracked from identified items to locate additional items published prior to 2009 that were not included in the review by Fredericks.

#### Article selection and analysis

The inclusion criteria comprised English language research or review papers related to the education, knowledge or communication of individuals aged 18 and over undergoing a coronary artery bypass graft (CABG) or cardiovascular surgery as part of standardized, individualized or tailored discharge planning or education. The exclusion criteria were those papers published before 2009, non-English or where the population had not undertaken CABG and were under the age of 18. Identified titles and abstracts were screened by members of the research team and data extracted for inclusion in the evidence table (see table 1). A total of 346 articles were identified through data base searching. The abstracts of all the papers that were retrieved by the search were assessed against the inclusion and exclusion criteria. at this point 336 were excluded. From this a total of 2810 published, peer-reviewed articles were initially included and the research team members independently appraised articles using Critical Appraisal Skills Programme Checklists (CASP, 2017), comparing their independent

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evaluations and reaching consensus. Following this a further 2 articles were excluded with reason leaving a final sample of 8 articles were identified.

#### INSERT TABLE 1 : PRISMA FLOW DIAGRAM

A data extraction tool was used to summarise key element of the evidence including bibliographic details, population, outcomes, intervention, education tools used, surgery performed, study design, findings and conclusions. There is a diverse range of demographics associated with CABG which meant that the search strategy did not focus on a particular age group, or demographic.

#### INSERT TABLE 2: Evidence table

### RESULTS

The review located relevant evidence that was mainly quantitative and measured a diverse set of outcomes. Typically, the intervention was provided by nursing staff and was delivered either pre- or post-operatively. Samples sizes ranged from 36 – 198 and the population has undergone CV or CABG surgery. Eight papers met the review inclusion criteria and were extracted for analysis using the CASP framework. All of the papers had a primary focus on patients undergoing coronary artery bypass graft (CABG), one cardiovascular patient and one patient undergoing cardiovascular surgery. The study design of the papers included three randomised controlled trials, one comparative study, one quantitative comparative study, one quasi-experimental survey, one randomised clinical trial, and one randomised trial. The overall quality of the papers was assessed by the team using the CASP framework as a guide. In all the papers, the population were clearly defined, however, the process of randomisation in the RCT's was ambiguous and whilst the outcome measures were defined, the range of outcomes used was diverse which reduced homogeneity.

#### The Population:

The search criteria explored the evidence base for papers that included patients who had undergone CABG or CV. The research papers focussed purely in studies of patients who had undergone a CABG.

#### The Intervention: Individualised Education

The descriptions of Individualised Education in each of the papers was examined for consistency. This identified a common element that reflected the attempts to engage with patients using a range of techniques. The unique learning needs of each individual CABG surgery patient and their care givers was common within the papers as was viewed as a positive influence in the transition home, and a significant element of individualised patient education was predicated on the way in which the learning needs of the patient were identified and then used to develop a tailored discharge education plan. For example, using pedagogic methods such as 'teach back' (Bates et al 2014) was one approach described. Bates et al's (2014) quantitative comparative study used the teach back methodology in which patients or family care givers to teach back newly learned information, assessed their comprehension of

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educational materials, and their ability to reiterate information. Bates et al (2014) revealed that 91.6% of participants rated teach-back as effective or highly effective.

In Fredericks (2008 & 2009) RCT's, patient learning needs were assessed using a validated questionnaire which tested patients understanding about complications, medication and symptoms. This study, reported over two papers, used the 15 item knowledge inventory developed by McHugh-Schuster, Wright and Tomich (1995). Self-care behaviours were measured by using the revised heart failure self-care behaviour (RSCB) scale developed by Artinian, Magnan, Sloan and Lange (2002). In these examples, the patients were described as being central to the process and their learning needs directed the development of the discharge education tool used.

Several papers used validated tools, for example Yildiz et al's (2014) comparative study which used a patient targeted education package delivered 1-1 by a trained nurse.

### **Outcomes Measured**

Interestingly, readmission rates were reported in only one paper (Bates et al 2014). The effect of education on anxiety and depression as outcomes were explored in three of the studies (Cebeci & Celik, 2011; Sorlie et al, 2007; Yildiz et al, 2014) who found that discharge and counselling may have a positive effect on decreasing anxiety and depression scores by building patients self confidence in continuing their care at home. Sorlie et al's (2007) RCT suggested that at discharge intervention patients reported less anxiety and better subjective health. This RCT explored anxiety and depression as an outcome measurement of IE and examined whether a discharge intervention would have any persistent overall effects on emotional effects. Sorlie et al's (2007) outcome variables included anxiety, depression and subjective health, measured using validated tools such as Beck Anxiety Inventory which is a 21 item scale with high internal validity (CI 0.90-0.95). Equally, Yildiz et al (2014) used comparative research to compare standard and patient targeted in patient education in terms of their effect on patients' anxiety about self-care after discharge. They found anxiety decreased after patient targeted education but not after standard education. Depression was measured using Zung self-rating depression scale (20 item scale valid tool CI = 0.88-0.93). Subjective health was measured using the SF 36 item questionnaire with internal validity of CI 0.81-0.75. Significantly, self-care, anxiety and depression were common outcomes measured, however, self-care outcomes also include knowledge and understanding and adherence to medication regimens (Zarini et al 2012).

### ***Anxiety and Depression***

The effect of individualised education on anxiety and depression as outcomes were explored in three of the studies (Cebeci & Celik, 2011; Sorlie et al, 2007; Yildiz et al, 2014). Cebeci & Celik (2011)

identified the effect on planned discharge teaching combined with counselling appeared to reduce levels of anxiety and depression. Similarly, Sorlie et al's (2007) RCT examined if the intervention have any persistent overall effects on emotional effects, the outcome variables included anxiety, depression and subjective health which were measured using validated tools such as the SF 36. Sorlie et al's (2007) RCT suggested that a combined method based on the individual can reduce anxiety and depression. Similarly, Yildiz et al (2014) used comparative research to examine standard and patient targeted in patient education in terms of their effect on patients' anxiety about self care after discharge. They found anxiety decreased after patient targeted education but not after standard education. Like all other papers, Yildiz et al (2014) concluded that patient education should be individualised based on assessment of the patients self-reported needs.

### *Self-Care Behaviour*

Self care behaviour was an outcome measured in three of the included studies (Fredericks, 2009; Tuna & Celik, 2014; Zarani et al, 2012). The outcomes of interest in Frederick's study (2009) were self-care knowledge, performance of self care behaviours and symptom frequency. Frederick's (2009) RCT assessed the levels of anxiety and the results highlighted that education can be given at any time without significant influence to the outcomes of interest, but concluded that education should be individualised, addressing the patients identified learning needs to be effective in producing changes of outcome. Alternatively, Zarani et al's RCT (2012) focused on information, motivation and behaviour suggested that more time, follow up session and multi session interventions are more likely to result in improvement of behavioural skills. Zarani et al (2012) identified that there was a significant effect of the information motivation behaviour skills intervention on the information and motivation of the patients but they found no significant effect on the behavioural skills. Similarly, Tuna & Celik's (2014) RCT used self-care behaviours as an outcome measure to explore discharge training, and as with others (Yildiz 2014, Sorlie et al 2007, Fredericks 2009). Tuna & Celik (2014) identified that training and counselling can help to develop self care behaviours and increase independence, averting problems and rehospitalisations. Measuring self-care appeared to be a significant indicator of the impact of IE.

### **DISCUSSION**

The findings from the review suggest that the concept of IE is broad, but was often predicated on common denominators such as self-care, reduction in depression and anxiety. Common outcome measures included, anxiety, depression (Cebeci & Celik, 2011, Sorlie et al 2007, Yildiz et al 2014) and the ability to self-care (Frederick's et al 2008, Fredericks et al 2009, Veronici et al 2014) that was person centred through mixed teaching approaches to individualised discharge education.



The review identified that IE provided an opportunity for health professionals to ascertain a greater understanding and assessment of patient needs which facilitated a tailored approach to the discharge planning. A range of teaching and learning methods are used to support IE which could influence the level of understanding about the patients discharge needs. The evidence base suggests that patient individualised education can support a successful discharge, but knowledge about the effectiveness of the type and pedagogic approach is less well-known. Limitations to the evidence base included lack of description and detail about how randomisation occurs which is significant because it is pivotal in ensuring that the process is robust and that results were as a result of the intervention without hindrance by research selection bias (Greenhalgh 2010). The intervention was not homogenous and typical interventions although described as IE, were varied and included a range of teaching and learning methods that used a range of teaching materials.

Individualised education appears to use combined teaching and learning approaches that are based on person centred principles to ensure that patients are empowered to develop self-efficacy. The evidence located and appraised in this review suggests that IE was important because it tailored the discharge planning to the patients' needs using a range of methods, which enabled staff to fully assess the patient's education needs and hence facilitate a smooth discharge. The tailored approach resonated with the principles of person centred care because it engages with the person and their self-reported needs as opposed to a pre-determined criteria set by health professionals (Howarth 2014). Explicating the person through individualised assessment in order to tailor discharge planning has the potential to ensure that patients are empowered and confident to self-care and manage once at home, which could also help to reduce anxiety and subsequent depression.

#### **Individualised Education: A Person Centred Approach?**

The evidence in this review suggests that successful discharge planning should be predicated on patient education through which health professionals and others impart information to patients that will alter their health behaviours or improve their health status" (Koongstvedt 2001). The discharge planning process relies on sound patient education which should arguably be applied within any care context or trajectory. A range of teaching modalities are included that are normally tailored to the individual's needs. Based on Shepperd et al's systematic review (2013 pg6) which defines discharge planning as "*The development of an individualised discharge plan for a patient prior to them leaving hospital for home*", our review suggests that individualised patient education programmes are determined by the way in which they are tailored to an individual's needs. This has resulted in a range of ways in which individualised patient education has been described. This concurs with the key characteristics of an individualised patient education programme, as described in Brown et al's systematic review (2011) which suggests that individualised patient education programmes are tailored to the individual's needs

through the inclusion of family of significant others, and a range of mediums. Individualised patient education is predicated on good communication between the health care provider and the patient and is reliant upon a good relationship. The effectiveness of this method of educating patients has been explored by others (White et al, 2013) and also its usefulness in retention of information (Kripalani et al 2008). For individualised education to be successful and to reduce anxiety and depression, the information needs to be interactive and include the patients and or significant others in decision making. In addition to the written information, some studies (Fredericks 2009, Sorlie et al 2007) reported the use of visual aids such as a power point presentation or video to supplement the written information. In all cases reported, the provision of information and mode of delivery was informed by an assessment of the patient's individual needs. This appeared to distinguish tailored individualised patient education from that of standard education. Often there was a follow up with a nominated healthcare provider and in some cases, there is regular contact following discharge. The duration of the education also varied, but a minimum of 20 minutes per individual was common amongst the papers included. Key to the success of discharge education is the ability of the health provider to use approaches that engage with patients to facilitate a transfer of responsibility through a 'process' that should be structured, evidence based and person centred.

Discharge planning is a multidimensional process that relies on a range of interventions to secure a successful outcome. Our review highlighted that individualised education provide person centred approaches that involve the patient and family within the discharge planning process. The essential attributes of person-centred care are influenced by the way in which professionals engage with patients as people based on authenticity, respect and the promotion of autonomy (Gadow 1999 year). Not surprisingly, facilitating a person-centred approach means entering into a partnership with 'the patient' as a person to facilitate their choice in care (Ford & McCormack 2000). Typically, these styles of partnerships offer the promise of empowerment through which the patient gains 'participatory competence' (Kieffer 1984) and through which the nurse and patient work together towards a mutually defined goal (Gallant *et al* 2002). These concepts were broadly reflected in the pedagogic approaches used and outcomes measured; this review suggests that person centred models have the potential to empower patients to become autonomous following a cardiac episode and can significantly influence lifestyle and self-care behaviours. (Ahmad et al, 2014; Ross et al; 2015 ). Patient centred care places patients as active participants in their own care and in the educational process (Bergvik et al, 2008). Moreover, Gadow (1999) believes that health professionals should engage with patients through based on levels of ethical knowing. This form of ethics relates to a philosophy known as relational ethics, the core elements of which are; engagement, mutual respect, embodied knowledge, and the acceptance of uncertainty/vulnerability within the clinical environment (Aujoulat 2007).Overcoming paternalistic practices and promoting person centred practice requires nurses to engage with patients as people at a level where the values of the patients and health professional are jointly crafted. IE provides scope for

the engagement of patients to fully assess and understand the patients discharge needs, which is critical when considering the often complex needs of the individual following CABG.

### **Individualised Discharge Education within Cardiac Nursing**

It is argued that a medical model is the predominant care paradigm in the context of cardiac nursing, (Ekman et al 2007), hence, there is scope to embed IE as a person centred approach that could support discharge planning and prevent post-operative complications exacerbated through anxiety and depression. The concept of individualised is predicated on the need for health care staff to work with patients and carers to identify the key areas that they feel they need to understand in order to prepare them for discharge and prevent complications, anxiety and potential readmission into hospital. The time, method and delivery of the IE varies, but a common pre-requisite needed for successful individualised education is the early identification of the patients learning needs using methods that enabled nurses to assess the patients knowledge, understanding and subsequent needs. The person centred approach used, could lead to a more effective discharge that equips patients and carers with the relevant knowledge and thus prevent post discharge complications. Our review has reported evidence to support the inclusion of the family and carers in the education is crucial as they will often assume caring responsibilities. Indeed, successful methods of involving patients and their families have been explored by Bates et al (2014) which highlighted how patient feedback and teach back methods of individualised education were highly effective in helping reduce 30 day readmission rates. Hence, the individualisation of this teaching is key to ensure that the education is tailored to the individual patients needs. Moreover and as reported in our review, Fredericks, (2009) also emphasised the importance of individualised education and suggested that it be incorporated into nursing care plans.

Arguably, the significance of 'getting to know' the patient with cardiac disease must be at the centre of patient care if nurses are able to competently and effectively provide individualised patient education. This can help support the patient and family through health, wellbeing and social readjustments, for example, the social factors associated with the CABG, often includes difficulty resuming sexual activity and daily physical activities which can lead to social withdrawal. The expectations of the patient and their family will have an impact on the engagement with education and subsequent levels of anxiety can seriously impede recovery and can be a result of uncertainties and worries. This anxiety can be related to the cardiac surgery or the chronic nature of cardiac disease, these fears can exacerbate the underlying symptoms (Guo et al, 2014) associated with chest pain symptoms. Laferton et al (2013) believe that understanding patient's expectations might allow nurses to take the opportunity to enhance the outcomes following surgery if education and support can be put in place. However, the barrier to

person centred approaches such as IE can be a result of limited contact and communication with patients due to a heavy workload and lack of time to devote to individual patients. It is also questioned whether some staff discourage conversation with patients before surgery perhaps due to their own lack of knowledge and confidence (Guo et al, 2014). The reality is that wards are often resource stretched, and having time to spend with individuals is often not plentiful. Nevertheless, if a valuable therapeutic relationship is to be formed (Sorlie et al, 2007), which is no doubt an important element of getting to know the patients you are caring for, the argument would be that more time should be devoted to this crucial role of the nurse.

Patients who require CABG often feel anger, depression and anxiety and a loss of confidence. The nurse is at the forefront of patient care and should be in an ideal position to help the patient to alleviate some fears by providing information and education. Our review findings suggest that the nurse's role in individualised patient discharge education should be to focus on patient support and education. However, the review findings indicate that many nurses may not be adequately equipped with the skills to deliver the required level of support and counselling to patients before and after the CABG (Commodore- Mensah & Dennison Himmelfarb, 2012). Thus the development of the nurses' skills in these areas should be prioritised as the patients that they are dealing with often have multi-faceted expectations and requirements from education and support, often which include a fear of the procedure, or of becoming a burden, or potentially losing their social identity. However, there are numerous challenges associated with providing education and counselling. Commodore- Mensah & Dennison Himmelfarb (2012) supported this by emphasising that patients and their families are often not physically or psychologically prepared for learning during hospital admission and they believe that the patient's level of illness and anxiety may affect their ability to effectively engage in education activities.

### **Relevance to Clinical Practice**

IE in cardiac care areas places emphasis on the individual meaning of the illness and patient educational needs (Bergvik et al, 2008). This affects an individual's confidence to control their symptoms by promoting self efficacy and self management with self efficacy being a pre-requisite for behavioural changes (Weibel et al, 2016). Ultimately nurses are in the best position to facilitate IE, which enhances the therapeutic relationship. A lack of knowledge and skills is no doubt a barrier to successful implementation of IE. Similarly the increasing heavy workload for staff could act as a barrier to IE's success (Bergvik et al 2008). To overcome such barriers organisations need to support the nurses by providing training and development in the key aspects of IE. The key to success in any change is the ability to maintain the change in the long term, which is often a struggle due to a lack of resources or personnel (NICE, 2007). It is therefore acknowledged that nurses may require further training in IE, a

concept explored by Bergvik et al (2008) whose training programme helped nurses to develop skills required for a patient centred approach to caring.

Individualised education programs, as opposed to the current practice using standardised education, will ensure that patients are adequately prepared for discharge. The reduction in readmissions to hospital will have a significant effect on already stretched resources, and the reduction in post operative complications including depression and anxiety, during the recovery period will have a positive effect on the individuals' health and well being. The provision of nursing care which adopts this individualised patient centred approach will enhance the nurse – patient relationship and improve the patient experience. The educational requirements of the nursing staff with regards to IE should be incorporated into formal training to adequately equip them with the necessary skills.

### **Conclusions**

IE is an effective way in which discharge planning is tailored through greater understanding and assessment of patient needs. IE can help to increase confidence by empowering the patient, thus reducing anxiety and depression and promoting self-care. Enabling patients through IE to self-report their discharge needs appears to be a person centred approach which has the potential to support nurses in cardiac care to assess, plan and organised a successful discharge plan. As the name suggests, individualised education advocates a move to placing the patient rather than the process, central to discharge planning and involves shared decision making between the patient, health professional and where needed – carer or significant other.

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Author	Year	Title	Design	Population	Intervention	Outcome measures
Bates O'Connor, Dunn, Hasenau,	2014	Applying STAAR Interventions in Incremental Bundles: Improving Post-CABG Surgical Patient Care	quantitative comparative	189 post-CABG	State Action on Avoidable Rehospitalisation's	Readmission rates before 30 days
Cebeci, & Çelik	2010	Effects of discharge teaching and counselling on anxiety and depression level of CABG patients	quasi-experimental survey	109 patients CABG	Planned discharge teaching and counselling by the research nurse beginning from hospitalization	"Personal Information Form" and the Hospital Anxiety and Depression Scale
Fredericks, Sidani and Shugurensky	2008	The effect of Anxiety on Learning Outcomes Post CABG	Descriptive correlation as part of a Randomised clinical trial	130 1st time CABG patients	Individualised patient education intervention telephone 1-1 patient nurse interaction. Patient identified the topics. Then the nurse used the educational material in post discharge intervention information.	Self care knowledge inventory - McHugh-Schuster, Wright and Tomich (1995) Self care behaviours-- revised heart failure self care behaviour scale developed by Artinian, Magnan, Sloan and Lange (2002) Symptoms- inventory developed by Artinian, Duggan and Miller (1993) Anxiety - Spielbergers (1995) state anxiety scale
Fredericks	2009	Timing for Delivering Individualized Patient Education Intervention to Coronary Artery Bypass Graft patients: An RCT	RCT	CABG 1 <sup>st</sup> time isolated	Individualised assessment tool used to determine education needed plus videos and written material	Self-care knowledge, behaviours Symptoms, anxiety
Sørli Busund Sexton Sexton Sørli	2007	Video information combined with individualized information sessions: Effects upon emotional well-being following coronary artery bypass surgery—A randomized trial	Randomised trial	136 CABG	Pre-admission video, patient centred info at admission and discharge 'v' standard care – nurses trained to deliver	Psychological measures anxiety, depression, subjective health LOS
Tuna	2014	Discharge training and counselling: Functional autonomy and post-discharge problems of elderly patients undergoing coronary artery bypass graft surgery	RCT	36 CABG	Discharge training and counselling assessed preoperatively and at 2 <sup>nd</sup> and 10 <sup>th</sup> day post-discharge days & end of ninth week.	Functional independence using validated tool

Yildiz, Gürkan, Gür, Ünsal, Baltacı, Özen	2014	Effect of standard versus patient-targeted in-patient education on patients' anxiety about self-care after discharge from cardiovascular surgery clinics	Comparative	198 CABG	Patient targeted education, IE using learning needs scale to assess	Anxiety,
Zarani Besharat Sarami & Sadeghian	2012	An Information–Motivation–Behavioral Skills (IMB) Model-Based Intervention for CABG Patients	RCT	152 CABG	Information moderation behavioural model using a range of teaching to small groups ?not individualised.	Adherence, information, motivation, behaviour

**Table 1: Evidence Table**

