It is vital that haemodialysis patients adhere to a strict diet, fluid and medication regimen – which is no mean feat, writes Margaret Higgins

ADHERENCE behaviour is a clinical concern in the care of haemodialysis patients. Adherence is necessary for optimal health and wellbeing. Non-adherence leads to individual suffering for patients and their families and an economic expense for society. If non-adherence is undetected the human cost is considerable. It can contribute to unnecessary diagnostic testing and result in potentially harmful regimen changes.

From a review of the literature in relation to adherence to diet, fluid and medication regimes by haemodialysis patients, it was found that there is no gold standard for measuring adherence in haemodialysis patients.

Is it adherence or compliance? There is lack of a generally accepted definition. Compliance is where the patient is merely told what to do with regard to treatment and expected to follow the recommendations unquestionably. On the other hand, adherence assumes a collaboration between the patient and the treatment provider.

Two major themes were identified which formed the structure of the review:
- Barriers to adherence
- Factors facilitating adherence.

The review indicated that non-adherence with medical treatment is estimated to occur in more than 50% of patients. Barriers to adherence include: perceptions of chronic illness, depression, health beliefs and locus of control, and situational factors. Confronted with a ‘new way of being’ in the world, patients are cognisant of an uncertain future, continuous dependence on life-sustaining technology and on healthcare providers. Disease status even occupied dreams. Patients feel deprived of ‘normal life’.

Evidence suggests that an individual’s perception of their situation will determine whether they will adhere to medical regimens. This highlights the need for nurses to help patients to articulate the meaning that they ascribe to their illness. An unrealistic negative evaluation of themselves causes loss of self worth and an embittered outlook.

Incidence of depression varies from 2% to 60%. Incidence of suicides are reported to range between four to 400 times that of the general population. Early psychological assessment by nurses is important so that patients can be supported appropriately.

The Health Belief Model identifies four main beliefs that can influence adherence to regimens. Perceived benefits, barriers, susceptibility to illness, severity of the outcome of non-adherence. Some 19 studies using meta-analysis engaged the Health Belief Model to predict adherence. The best predictions were perceived benefits of treatment and perceived seriousness of the disease. Beliefs about the side effects of medication is a barrier to adherence.

In the Health Belief Model an assessment of the risks versus the benefits of a course of action takes place. Patients may have little incentive to take phosphate-binding medication if they do not perceive the link between phosphate and a tangible outcome such as worsening symptoms. It is important for nurses to acknowledge and discuss medication side effects with patients.

Locus of control (LOC) is the way a person perceives their ability to control their lives. Internally-orientated patients are more likely to take responsibility for and place a higher value on health. Patients with external LOC generally display poor adherence. Being male, young and having external LOC are associated with poor adherence to fluid restriction. It is important that nurses are aware of such personality characteristics as LOC to help patients at risk of maladaptive behaviour. Patients will need more advice.

Situational factors include:
- Inability to accept limitation of diet
- Consumption of food in private or public
- Consumption of food or fluids by others at home, in restaurants and entertaining guests
- Multiple prescriptions, under-dosing, over-dosing, missing medications.

Nurses are in a position to analyse environmental factors likely to interfere with adherence and to facilitate desired behaviour. Factors facilitating adherence include: family support, knowledge of the benefits
of diet and fluid restriction, patient medication education, and professional support.

With regard to family support, high levels of satisfaction with support provided by family determines better fluid adherence. Patients holding perceptions of a more supportive family environment significantly adhere more favourably to fluid restriction. Lower phosphate levels are associated with greater amounts of family support. Patients without family support have a three times greater mortality risk than those with support. Positive supportive relationships facilitate good health behaviours.

Patients must be made aware of the benefits of diet and fluid restrictions. Nurses need to know that patients move through a series of stages when adopting a health-related behaviour: precontemplation, contemplation, action, maintenance. Targeting patients in the precontemplation stage is an important first step in moving towards fluid adherence. Gentle guidance and knowledge over a number of months achieves the best results in fluid adherence. Patients need to hear that limiting fluids will keep leg swelling down, blood pressure under control or make breathing easier between treatments.

Knowledge of phosphate control has increased significantly and calcium levels have improved significantly following one to one education by nephrology nurses. Patients have identified tangible health benefits from improved adherence through the knowledge of benefits. They have reported decreased joint pains and pruritis and increased activity.

Mutually agreed upon goals between nurses and patients, signed by patient’s known as ‘contracts’, have been successful in dietary adherence. The contracting process involves the patient in a therapeutic decision – making process of a specific behaviour.

Continuous patient medication education is vital for adherence. Patients must have clearly labelled containers, physical appliances to open them and simplified regimens. Education has improved adherence. Only 4% of patients knew the dosage of all medications, 50% knew nothing of the consequences of exceeding dosage in one study. Verbal information should always be followed up by written information. Cognitive function decreases during dialysis and is not always a suitable teaching time. The importance of continuous reinforcement of information cannot be overemphasised as education outside the dialysis setting is not always possible due to lack of resources.

Professional support must always be available for nephrology patients. Cognitive interventions such as counselling has shown an immediate drop in interdialytic weight gain and behaviour interventions such as video-taped advice to reinforce adherence have proved successful. Frequent interventions are more likely to be effective. For patients with a high risk of ineffective self-management the use of the Dungan Model is designed to promote personal growth and self-responsibility. This model involves eight to ten therapeutic sessions over five weeks taking into account cultural, material and emotional environments including the family. It appears patients adhere initially and then there is a decrease in adherence over time. Therefore, it is important that interventions are staged and managed to ensure patients are followed up.

Nurses are ideally placed to influence patients. They can reinforce and evaluate patients’ understanding of treatment regimens due to their sustained contact with patients. Nurses can become familiar with individual lifestyles and plan the feasibility of making changes contributing to adherence to treatment. The need for nurses to understand difficulties associated with adherence cannot be over-emphasised as lack of adherence affects delivery of care, morbidity and mortality.

All patients with renal disease are required to adhere to diet fluid and medications regimens. Although technology today is increasingly efficient, the dialysis treatment does not perfectly reproduce normal kidney function. Thus the need for dialysis patients requiring diet therapy to avoid complications of high potassium, itching, weight loss, fluid overload and bone disease. Excess fluid, which includes all beverages that become liquid at room temperature, can cause oedema, hypertension, shortness of breath and in some cases cardiac failure.

The haemodialysis patient has to take a minimum of seven prescribed medications daily, including: adrenergic blocking agents, analgesics, antacids and phosphate binding agents, anti-anaemics, anti-emetics, anti-diarrheals, stool softeners, anti-hyper tensives, cardiotonics, cation exchange resins, diuretics, dopamine receptor agonists, electrolyte replacements, heavy metal chelating agents, vitamins and due to susceptibility to infections these patients frequently require antimicrobial agents to combat infections.

Not only are patients required to take several types of medications at varying times throughout the day, they must only ingest the approved amounts and types of fluids and foods, and adhere to a preset dialysis schedule. Such activities require an inordinate amount of attention and self-discipline in order to adhere. As a consequence, patients’ lives become restructured based on the interference of externally imposed obligations.