

Chapter 2

Literature review

2.1 INTRODUCTION

In this chapter a study of relevant literature on cost containment is presented. The following headings were used for this review:

- sources for review of literature
- position of the nurse manager regarding cost containment
- health care inflation
- strategies for cost containment
- cost-effectiveness in nursing management
- budgeting processes
- specific personnel issues relating to costs and cost containment

2.2 SOURCES FOR REVIEW OF LITERATURE

The following searches for relevant literature were carried out:

- CD-ROM search of journal articles related to the nurse manager's position in cost

containment in hospitals

- OPAC search for references to books in the University of South Africa (Unisa) library
- SABINET search for references to South African articles
- CINAHL search for sources relevant to nurses' positions with regard to cost containment issues
- MEDLINE searches, in an attempt to retrieve sources relevant to cost containment in health care situations

A nursing journal index was obtained from the Democratic Nurses Organisation of South Africa (DENOSA) library. Books and journals were obtained on request from the Unisa library. Use was also made of the University of Port Elizabeth's library. References listed at the end of articles from journals and books were found to be useful in directing further searches.

2.3 POSITION OF THE NURSE MANAGER REGARDING COST CONTAINMENT

The position of the nurse manager in the hospital situation is important for facilitating team efforts and effectiveness in controlling hospital costs. As a leader and role model, the nurse manager is in a position to teach subordinates about methods of cost containment, provided she is knowledgeable about costs and cost containment issues.

Increased emphasis on finance and cost containment has placed efficiency and efficacy high in the value hierarchy in current health services. Nurses are expected to avoid waste or redundancy, eliminate unnecessary procedures, and ensure that each treatment regimen is accomplished expeditiously, with the greatest possible benefit to the patient. Many of the niceties have been eliminated or reduced to a minimum (Spitzer-Lehmann 1994:413).

Nurses are also expected to look for cost savings by using less expensive substitutions, reducing the use of costly materials, and collaborating with physicians and other departments to save time and to meet patients' needs. This type of service delivery is particularly difficult for nurses, because their training has not necessarily included cost awareness and cost-effective practices (Spitzer-Lehmann 1994:413). It is thus obvious that the nurse manager has a heavier burden on her shoulders than previously, because nurses

must now be orientated to practise their profession in a cost-conscious environment.

In dealing with cost-conscious nursing practice, Yoder-Wise (1995:260) states that nurses, as direct care givers and managers, determine the type and quantity of resources used for patients. This includes supplies, staff and time. Knowledge of what things cost and how they are paid for is important. Yoder-Wise (1995:260) further states that the cost of nursing care is usually not calculated or billed separately to patients, but included as part of the general care provided. This approach results in the assumption that all patients consume the same amount of nursing care and that nursing, as a clinical service, is not perceived by management as generating revenue for the hospital. Rather, nursing is perceived predominantly as an expense to the organisation, because nurses' salaries constitute the largest percentage of all salaries paid by any hospital.

The key to powerful nursing management and leadership is information (Niguel 1987:1). The more knowledge nurse managers have about the financial aspects of the department, and health care in general, the better equipped they will be for making sound decisions and taking proper control of financial issues. It is a reality to be faced that the health care services in South Africa are undergoing a significant change. Financial resources for health care are being limited by budgetary controls and stressed by expenses incurred by large numbers of road accidents, the HIV/AIDS epidemic and by other periodic occurrences such as cholera outbreaks.

Hence Barnum and Kerfoot (1995:185) state that the most important task of a nurse executive (manager) "is to infuse the entire division of nursing with an entrepreneurial attitude", with the nurses managing their work situation as if they were operating their own business.

The need for financial preparation of the nurse manager is expressed by Lemire (2000:204), who states that the expanding role of the nurse manager requires competent financial knowledge/skills. Nurse managers need not function as accountants, but must possess the financial knowledge necessary to make sound financial decisions integrating clinical and business aspects of health care. Objectives for conducting a costing exercise are to

- improve budgeting by monitoring costs
- improve the efficiency of the intervention by identifying potential cost savings
- estimate the resources required to sustain the intervention by seeking an accurate estimate of the budget necessary to maintain it
- estimate the resources required to expand the intervention (Walker 2001:113)

A nurse manager who is able to prepare, implement and control the health care service budget will be able to account for expenditures and incomes on the basis of knowledge of the organisation's financial system. Such knowledge would also enable the nurse manager to acquire the necessary equipment/supplies for any department, rather than relying on non-nursing personnel to do so. Strasen (1987:v) also emphasises the need for the nurse manager to become more knowledgeable regarding economic aspects, affordable strategic planning and budgeting procedures.

Arford and Allred (1995:64) see the value ascribed to health care services as a function of both quality and cost. They aim to describe a methodology for developing a quality index to determine the cost-effectiveness of case management in different nursing practice environments. They conclude that managed care is forcing competition into the health care industry on the basis of price and quality; the economic realities of a competitive health care industry will force health care providers to be accountable for evaluating services rendered.

Niguel (1987:1) foresees greater competition for limited resources in the future, and states that nurse managers should know what financial information is regularly available to them in their effort to improve productivity and contain costs.

These authors' views are endorsed by Bultema (1995:38), who is of the opinion that the challenge for nurse managers is that "much needs changing". Bultema states that although periods of unfreezing and challenging of the status quo are recommended, time is running out, and nurse managers must define business imperatives and take action. The skill sought in the most senior health managerial positions is mainly a commercial orientation to management (Fralic 1987 35–38).

The importance of improving quality patient care while also reducing costs of providing

health care services cannot be overemphasised. Nurse managers can play a major role in establishing and maintaining effective cost containment measures, provided they are sufficiently knowledgeable and motivated to do so.

Caroselli (1996:297) points out that the most interesting findings of her study relate to the lack of economic awareness among nurses relative to the use of linen and other supplies. Economic awareness was defined as the level of knowledge possessed by nurses as it relates to health care budgeting on national and institutional levels. The respondents answered only slightly more than half of the economic knowledge questions correctly. Another finding was the lack of budgetary data provided to the nurse managers. In the same study two major sources of escalating costs were isolated as being

- unnecessarily long hospital stays
- inefficient use of supplies and equipment.

Nursing constitutes the largest and most labour-intensive component of hospital costs and is also present at the point of care. Nurses might not know what costs they actually initiate at the time they are giving care, or they might lack the economic awareness required for making cost-conscious decisions (Caroselli 1996:293).

The nurse manager who is responsible for the administration of one or more units in a hospital is in an ideal position to effect unit-based cost savings and also to increase economic awareness among staff. It would appear that awareness of the escalating costs of running the services, and deterioration in health care services due to a lack of financial resources will force the nurse manager to guide and assist nurses in cost containment at the point of providing services to patients (Caroselli 1996:293).

According to Hyett (1988:203), all nurse managers should have an understanding of at least four basic aspects of finance related to health care, namely knowledge about:

- where the money used to provide patient services and to run the hospital comes from
- functions of the budgetary control systems

- the overall accounting system used by the health care service
- how costs for different sectors of the service can be assessed

Understanding the above-mentioned concepts would place the nurse manager in a position to plan and implement cost containment in the institution. Like Niguel (1987:1), Lochhass (1987:2) also states that the key to powerful nursing management and leadership is *knowledge*, in order to be able to make informed decisions and maintain control during the implementation of the decisions. In preparation for basic budgeting the nurse manager should assume greater responsibility for planning, presenting and defending unit budgets, as greater pressure is being put on hospitals to find ways to keep costs below the fixed reimbursement rates.

At every level nurses are the greatest users of hospital resources. They also make decisions which affect money spent on equipment. In addition, nurse managers are responsible for decision-making on the use of human resources. They should receive some form of financial training to manage such tasks in a cost-effective manner. Zachry et al (1995:49) go further than merely recommending such training for the nurse manager, and also suggest that a position of “Director of Nursing Finance” should be created in hospitals. They state that such a position is necessary because of the complex and changing financial environment of the health care industry. They add that professionals outside the nursing field could assist nurse managers with the hospital’s financial management. Some areas employ accountants and other administrators. Although these authors feel that the Director of Nursing Finance would help in controlling health care costs, it is possible that this task would be carried out more efficiently by appropriately trained nurse managers as part of a hospital’s multidisciplinary management team.

There seems to be consensus among authors on the financial and budgeting aspects that extensive in-service education for nurse managers is necessary. Issel and Anderson (1996:81) identify transformations that constitute a paradigm shift from revenue management to cost management. They prophesy that all health services will be cost centres and that nurse executives will use their expertise to provide the leadership needed to develop new cost management systems in hospitals.

In her notes on basic budgeting for nurse managers, Niguel (1987) summarises the position of nurse managers in budgeting (and cost containment) as follows:

- Nurse managers should plan and defend their own unit budgets. They should consider the fiscal opportunity as a challenge to improve quality patient care and containment of costs.
- They should collect as much information as possible on matters of budgeting and cost containment and about financial operations in the area of function, in order to make informed decisions and to remain in control of the situation.

2.4 HEALTH CARE INFLATION

Previous studies relating to cost containment affirm that health care inflation is accelerating. Wyld (1996:2) traces the increase in health care costs in the USA from the 1980s to 1993, when President Bill Clinton presented his proposed Health Security Act to the American nation, introducing changes in the American health care system. President Clinton's plan reflected the goal of "health security" for all citizens. The plan was rejected by both Congress and the US public in favour of more individualised concerns, such as health care security for oneself, one's family and one's company. The major objectives of President Clinton's health care reform proposal were to control the growth of health care expenditures and to better utilise health care resources. Wyld (1996:3) states that these problems still remain in both fee-for-service medicine and in health maintenance organisations.

Chawla and Pellis (2000:76) state that the constrained economic circumstances and stagnant growth of the health sector have led many developing countries to consider **cost recovery** as a means of financing health care production. However, cost recovery could only have a limited impact on the cost containment of health care services rendered by the selected hospitals in the Eastern Cape. These government hospitals serve poor people with limited incomes, from whom costs cannot be recovered. People in the Eastern Cape with incomes and medical aid benefits will attend private hospitals, not government hospitals.

According to Moore (1995:16), changes in reimbursement policies force large and small entities in health care organisations to scramble for survival. Catchwords like redesigning, restructuring, re-engineering are used to describe the ways in which resources need to be curtailed. Cutting the budget is a common occurrence in health care centres in the Eastern Cape. According to Swansburg (1996:219), planning is a vital aspect of the process of cutting the budget. Swansburg further states that when clinical nurses are informed at the unit level and invited to give their input, they will help with suggestions for cutting costs. Consultation is vital when the budget needs to be cut, so that the nursing staff will assist with the implementation, and support the activities they recognise as their own professional responsibilities (Swansburg 1996:219).

Folland, Goodman and Stano (1993 :178) furthermore point out that consumers (patients) may want to use the health care services they prefer, rather than the ones selected by doctors or nurses. The logic is that consumers may choose the type of health care which is affordable to them.

Another point to consider is that the limitations put on health service finances might mean that some patients might be denied the type of treatment they would prefer. For example, the patient might be considered to be too old to receive an expensive type of treatment such as cardiac surgery, on the basis that such costly treatments should rather be reserved for patients falling below a specific age category. According to Morris (1998:50), this situation forces health care providers to take decisions and make choices to use limited resources in the best possible way. It thus seems that costs related to the system of provision of care and costs to health consumers constitute a complex and demanding issue for health service providers.

The situation of decreased financial resources in the Eastern Cape implies the need to modify health care budgetary systems to meet quality patient care requirements, while balancing allocation and deployment of resources. The way in which nurses utilise their skills in cost containment practices will have a considerable impact on cost containment efforts of any health care centre over any period of time, considering that nurses comprise the largest sector of a hospital's health care professionals (Barnum & Kerfoot 1995:190; Jones (1994:428).

◆ **Factors causing cost increases in health services**

Booyens (1996:197-200) lists the most commonly encountered factors associated with cost increases in health care services. The nurse manager should be able to enumerate the factors that contribute towards cost increases in a hospital's services including:

- preparation of the nurse manager in budgetary and financial matters
- orientation to hospital budgets and financial management
- cost containment
 - perception of own position regarding costs in health care services
 - personnel problems associated with costs (Caroselli 1996:293)

Personnel problems which could increase costs include:

- staff leaving points of service
- absenteeism
- staff resignations

◆ **Impact of the costs of production on the supply of health care**

The extent to which health care can be provided is limited by the size of the budget allocated to a provider for expenditure on treatment and care. This budget is usually *fixed*. Therefore, any change in the costs of supplying health care will affect the health care budget which, in turn, will directly affect the *quantity* of health care supplied. For example, if the costs of nursing labour were to rise through an increase in salaries, then fewer nursing staff would be employed and so the supply of health care would decrease. Hence,

as cost increases, less health care is supplied (Morris 1998:57).

2.5 STRATEGIES FOR COST CONTAINMENT

Marriner-Tomey (2000:205-207) discusses the following strategies for cost containment:

◆ Cost awareness

The nurse manager and nursing staff members are given in-service education on how the budget is completed and controlled, thus creating the necessary awareness among nurses. Awareness could be enhanced by providing a budget manual for each unit. This budget manual should contain budget forms, a budget calendar, and budget periods as well as the means of checking amounts spent against amounts budgeted at specific intervals.

◆ Cost monitoring

There should be monitoring of all activities and resources that cause escalation of costs, for example, staff absenteeism, turnover, recruitment and sick leave, as well as misuse of equipment. Monitoring would assist in creating an awareness of how, where, when and why the expenses were incurred, and whether or not these expenses exceeded budgeted amounts for specific periods of time.

◆ Cost avoidance

Some supplies of technology or services might not be purchased in order to keep costs to a minimum. This means analysing the least expensive and most effective supplies, equipment and services, and purchasing these instead of the more sophisticated, grand and costly ones. The equipment should meet the health care needs in the most cost-effective way rather than in the most technologically advanced manner.

◆ Cost reduction

A minimum amount of money is spent on goods and services to avoid waste, and, in addition, absenteeism, sick leave, and turnover should be reduced as far as possible. This

would mean that the organisation puts into place such programmes as: safety programmes to reduce the costs of workers' compensation, and absenteeism programmes that reduce time lost through sick leave, absenteeism and turnover. Volume buying (getting a cheaper price, because of economies of scale), conservation of supplies and careful handling of equipment to reduce costs of repair and replacements would also assist in cost reduction.

◆ **Cost control**

This is the effective use of available resources through careful forecasting, planning, budget preparation, reporting and monitoring. Among others, such actions as a good orientation programme, careful placement, mentoring of new personnel and helping employees feel appreciated, can assist in retaining personnel and thus in reducing recruitment, orientation and development expenses. Much damage and frustration can be saved by careful selection of supplies and equipment and by teaching staff about their proper utilisation. In the case of private patients, considerable costs can be recovered by charging through the utilisation of bar codes and charge slips for supplies and equipment.

◆ **Cost incentives**

These are incentives to motivate staff towards cost-containment and to *reward* desired behaviour. In other words, rewards for the best money-saving ideas, for perfect attendance, or for being nominated "the nurse of the month", could help to acknowledge personnel members' efforts, and to enhance cost containment efforts' successes.

◆ **Cost-effectiveness**

According to Marriner-Tomey (1992:83), cost-effectiveness means comparing costs and identifying the most beneficial outcomes costwise by specifying programmes, identifying goals, analysing alternatives, comparing costs per programme unit of service and amount of service needed, assessing the effect of the outcome, and determining cost outcomes and cost-effectiveness.

◆ **Cost containment**

The term “cost containment” is seen by Marriner-Tomey (2000:205) as the overall term, including keeping costs within acceptable limits for volume, inflation and other parameters. It thus involves cost awareness, monitoring, management, and incentives to prevent, reduce and control costs.

To contain costs effectively in the performance of their duties in health care services, nurse managers need to understand the reasons for managing costs. In quoting Tappen, Booyens (1996:197) lists the following reasons:

- Costs determine how many nurses will be hired and how much they will be paid.
- Costs determine the quality and quantity of supplies and equipment available.
- Costs determine whether a service can be rendered.

The need for containment of costs should be continuously emphasised, not only to nurse managers but to all staff members in health care centres, as a large variety of resources are used in these centres. Booyens (1996:198) discusses some of the perspectives from which cost-conscious nursing practice may be approached, as follows:

(1) Manpower

- Empower personnel members by decentralising power and decision-making. Such actions improve the staff’s self-esteem and boost productivity levels.
- Discourage absenteeism among staff members by providing a staff health care service on the premises and introducing fitness programmes to keep staff members healthy. Financial losses incurred by obtaining extra staff from outside the service could thus be curbed.
- Handle staff matters fairly and consult staff members on decision-making; this may encourage cooperation and thus diminish strikes.
- Assess the number of posts, using a scientific method of patient classification and time studies. The organisation should employ a sufficient number of staff to cover the nursing care workload.
- Utilise the correct mix of nursing categories for the workload and avoid utilising nursing staff for too many non-nursing duties, thus enhancing productivity and staff

satisfaction.

(2) Finance

Create awareness of the organisation's operational costs, which can be negatively affected by

- telephone accounts which are too high
- electricity bills which are too high
- water and sanitation costs which are too high
- theft and misuse of sundries
- high rate of personnel sickness and/or absenteeism
- high rate of staff turnover
- vehicle expenses, for example, petrol and repairs

Capital costs which involve the organisation's investment in expensive equipment and buildings should be used effectively. Assets should be maintained regularly to avoid waste through states of disrepair.

(3) Equipment

Contain costs of replacement and repairs of equipment in health care services by

- standardisation when equipment is originally purchased
- intensive training of nursing and medical staff by the company from which the equipment is bought
- correct utilisation and maintenance
- centralisation of storing and cleaning of expensive equipment
- negotiated service contracts with suppliers of expensive equipment

(4) Supplies

The misuse, overstocking and theft of supplies are some of the main problems hampering cost control in health care centres. To curb costs related to supplies, the following

measures can be taken:

- The expiry dates of medications should be checked when ordering.
- The shelf-life of a product and its average weekly/monthly utilisation should determine the amount to be kept in stock.
- Prescriptions for storing medications and other supplies should be followed meticulously.
- Cleaning materials should be used properly according to prescribed rules.
- Mattresses and pillows should be covered with waterproof materials to protect them from unnecessary stains and soiling.
- Staff must be made aware of the costs of the items they use.

(5) Procedures and systems

- Work out standardised procedures to minimise mistakes and improve effectiveness.
- Streamline administrative procedures as far as possible. The effective utilisation of computers can help to save time.

(6) Patients

Patient satisfaction is a health care service's best advertisement. According to Koch (1992:99), the more a hospital's services are utilised, the higher the service turnover will be and this could improve cost-effectiveness, especially in private hospitals, but also in provincial hospitals attempting to attract private paying patients. Satisfaction of patients can be enhanced by

- good cooperation between medical and nursing staff
- examining patients as soon as possible after admission
- arranging for the requested tests without delay
- accurate and prompt execution of prescriptions
- effective record-keeping
- seeing to it that the environment is healthy, food is served hot and in an appetising way and that the nursing staff adopt a friendly and helpful attitude

(7) Management style

- Adopt a participative management style to improve team cohesiveness among nurses in the unit.
- Involve nurses in financial decision-making matters and feed financial information back to the units through monthly computer sheets, analysing the variance of the different items on the budget list. Empowerment of staff and continuous financial control are two of the most important management mechanisms to contain costs (Booyens 1996:197-200).

Koch (1992:167) stipulates further cost reduction actions (based on suggestions of other authors, including Swansburg, Swansburg & Swansburg 1988:211)

- giving more autonomy to unit managers
- increasing unit managers' managerial training
- reducing overtime work
- utilising flexible staffing patterns
- utilising centralised staffing
- expanding the use of computers
- expanding the monthly distribution of financial information to all units

In their study "Director of nursing finance controlling health care costs", Zachry et al (1995:49) report results of research conducted in the USA in which vice-presidents of nursing in 250 hospitals were asked whether they held someone specifically responsible for the nursing division's budget, as well as for coordinating all the departments' financial matters. Job duties related to a director of nursing's finance positions were explored, as well as the persons who performed such duties within each hospital. According to the results of the study, 42,0% of the respondents reported that a single person was held responsible for the nursing division's financial management. The specific job title for the position was inconsistent, which may be an indication that the hospital industry does not have a uniform organisational structure for nursing finances. Of the respondents, 58,0% reported that they did not have an individual responsible for nursing financial management. The statement implied that the financial management duties were performed by individuals *outside* the nursing division.

Zachry et al (1995:53) recommend that a position of Director of Nursing Finance should be created in hospitals. They believe the end result would be the provision of more cost-efficient nursing care. According to Barron, Ross and Algu (1998:9), financial controls have no value in themselves, their only value being in goal achievement. In practice these financial controls are often assigned some intrinsic values. Care has to be exercised to balance the control; too much control can stunt initiatives, while too little control can hinder the achievement of the desired goals.

Barron et al (1998:29) highlight four elements of a control system, namely as:

- a measuring instrument that provides information about what is happening
- some measure of comparison for assessing what is happening against a standard of what should be happening
- a method of changing the behaviour or the operation of the system
- a means of communication among these elements of the system

Barron et al also designed a model of a control system as shown in figure 2.1.

2.6 COST-EFFECTIVENESS IN NURSING MANAGEMENT

Koch (1992:148) is of the opinion that a nurse manager must possess essential financial skills and expertise in order to enhance the effective functioning of the institution.

Figure 2.1

According to Abedian, Strachan and Ajam (1998:82), cost-effectiveness does not mean cheapness, but the cost of service delivery is often directly linked to “service quality” as well as the “service standard”. Without specifying the service standard and its quality, it is difficult to determine whether the cost is reasonable or not. Cost-effectiveness analysis, in relation to public service, requires an examination of efficiency, efficacy and economy in conjunction with service quality. These three aspects are critical for both budgeting and auditing in relation to effective cost containment efforts.

◆ **Efficiency**

According to Abedian et al (1998:83), efficiency is measured by the ratio of output to input. The larger the ratio, the more output per unit and hence the more efficient the operation. Efficiency is measured by ratio; therefore it follows that improved efficiency can be effected in four ways:

- by increasing output for the given input
- by increasing output by a larger proportion than the proportionate increase in input
- by decreasing input for the same output
- by decreasing input by a greater proportion than the proportionate decrease in output

In the case of different activities and types of service delivery, one or more of the above efficiency improvement measures may apply. Managerial judgements guided by technical advice need to be exercised in order to ascertain which measure is most suitable for improving efficiency in any given type of service delivery (Abedian et al 1998:83).

In general, in respect of public health service, efficiency analysis on its own is seldom constructive. More often than not, efficiency ratios need to be studied in conjunction with the analysis of efficacy.

◆ **Efficacy**

Efficacy, or effectiveness, relates to the success or otherwise in achieving objectives. It is concerned with outputs and/or outcomes. A set goal is achieved in the specified period.

According to Abedian et al (1998:85), effectiveness in health care delivery requires more than sound technical and managerial skills. Socio-cultural aspects of the service are also to be taken into account – that is, a holistic client orientation about the service is an integral part of efficacy.

◆ **Economy**

Economy relates to inputs. The two generic questions related to economy are:

- Was the service delivered as budgeted?
- Did the services delivered cost more than comparable services elsewhere? (Abedian et al 1998:85).

Efficiency, efficacy and economy are interrelated. Efficiency deals with inputs and outputs. Economy is about inputs, and efficacy is about outputs/outcomes. The concept of efficiency on its own may cause a problem of **market failure**. Abedian et al (1998:86) warn that a public service provider may increase charges for health care services and the consumer has no alternative but to pay the higher fees. This does not mean that the service supplier has exercised economy. The authors want to demonstrate that in the absence of effective competition, service providers tend to become complacent, while costs are ineffective and managerially stagnant. The majority of public services, including health care services, are subject to market failures as there is no penalty for low outputs (low standards of health care).

In health services, as in the other service sectors, outputs cannot be measured easily. It is difficult to quantify outputs signifying high standards of health care services. It is, therefore, necessary for nurse managers to consider all three concepts in order to gain insight into the cost structure and needs orientation of the health care services delivered. Efficiency, efficacy and economy used together would enhance value-for-money health care services.

2.6.1 Analysis of cost-effectiveness

Stone and Walker (1995:304) state that cost-effectiveness may be expressed as the costs incurred per unit of outcome achieved. Cost-effective analysis provides a systematic and transparent framework by which to assess the relative costs and consequences of different interventions that may assist in priority setting exercises. While this approach can answer questions about technical efficiency, which aims to maximise the achievement of a given objective within a specific budget (for example, should a new drug be used to treat a specific disease?), it fails to address allocative efficiency. This is the case because this approach seeks the optimal allocation of resources across a mix of programmes that cannot all be fully funded (Walker 2001:114).

The advent of new technologies causes dilemmas regarding managing costs. In the past, if a new piece of equipment was easier to use or benefited the patient in any way, it might have been used for everyone, irrespective of its cost. Health care managers are now compelled to make decisions determining which patients really need the new equipment and which ones could do without it. Essentially, managers are analysing the cost-effectiveness of the new equipment with regard to different types of patient. This is a new and sometimes difficult way to think about patient care for many health care providers and at times it may not “feel fair” (Westmoreland 1995:260).

According to Witter and Ensor (1997:8), a cost-effectiveness study can be carried out in which the outcomes of the treatments being compared are similar in nature but different in volume. Considering benefits in terms of some natural unit such as the treatment with the lowest ratio of costs to benefits will be preferred. The most common units used to determine this ratio are life years gained or deaths prevented. The following information is required for calculating the number of deaths being averted:

- number of cases treated
- effectiveness of the treatment
- case fatality rates

If the intervention is preventive, the probability of contracting the disease should be added to the equation. The product of the data determines the number of deaths averted. Witter and Ensor (1997:75) explain the calculation of averted deaths as follows:

$$\text{Cost per death prevented} = \frac{\text{Annual programme cost}}{\text{Case fatality rates} \times \text{efficacy} \times \text{number treated} \times \text{probability of contracting disease}}$$

Taking vaccinations as an example, if the efficacy of the vaccine is 85,0%, the case fatality rate is 5,0%, the probability of contracting the disease, if unvaccinated, is 5,0%, and the number of people vaccinated is 3 600: then the number of deaths averted would be 7,65.

Cost-effectiveness ratios can then be obtained by dividing the cost of the intervention by the number of deaths averted. Although cost-effectiveness analysis allows comparison of programmes that achieve similar benefits, there is no way of stating whether the procedure is rendering more benefits compared to its increased costs. Programmes having different effects can not be compared. In order to compare programmes having different effects, cost-benefit analyses prove better than cost-effectiveness analyses. It is also possible to determine whether the benefits exceeded the costs or not. Nurse managers need to acquire some knowledge of concepts such as cost-effectiveness and cost-benefit analysis to be able to calculate costs incurred in patient care.

2.6.2 Cost-benefit analysis

This is a method of comparing the monetary value of all benefits of a project with all the costs of that project (Witter & Ensor 1997:185). In business, the cost-benefit ratio is usually a financial one, where input costs are identified and compared with expected profits (Barnum & Kerfoot 1995:194). A cost-benefit ratio in nursing differs, in that it could be difficult to place any monetary value on some of the benefits, such as

- on human life which benefited from medical interventions
- on home nursing compared with hospital nursing for discharged patients suffering from strokes (Witter & Ensor 1997:76)

The actual benefit might be in the number of ambulant ex-hospital patients who are able to help themselves without being placed in a nursing home. Treatments can then be valued according to how much they increase the **health status index** multiplied by years of life added. Patient interviews and questionnaires can be used to obtain individual

evaluations of health status. Witter and Ensor (1997:76) stipulate some indexes that can be used in individual evaluations of the health status, including quality-adjusted life-years, life-years of health and disability-adjusted life-years. The cost of obtaining one quality-adjusted year can be calculated for a range of treatments.

Abedian et al (1998:169) identify the following advantages of cost-benefit analyses:

- The benefits are valued in terms of health effects rather than in terms of the general population's well-being.
- Focuses are on whether or not any particular project or programme should be implemented.
- The benefits flowing from a project are evaluated in monetary terms.

Knowledge about the abovementioned cost-analyses should assist the nurse manager to apply cost containment controls with a greater measure of certainty, thus enhancing the achievement of the hospital's cost-saving goals.

2.6.3 Establishment of cost centres

A cost centre is the smallest functional unit to which cost control and accountability can be assigned under the existing accounting system (Barnum & Kerfoot 1995:188). A hospital ward or department would be an example of a hospital cost centre. Each ward or department would be responsible for its own costs separately from other departments' costs. It would be easier for nurse managers in charge of these separate cost centres to account for costs in their own areas, than for the hospital's total cost structure to be addressed as a cost unit. Although this approach may appear on the surface to be fairly uncomplicated, it could prove difficult to calculate the number and types of service rendered in such a cost centre with the accompanying costs of each one. For example, in a ward or unit, the nursing services are seen as producing no revenue, unlike the laundry and linen used, the dietary services provided and the general maintenance of any specific unit (Spitzer-Lehmann 1994:456). The problem is that the charge person would have to become a real financial expert to account for those *parts* of expenses or revenues of *other* departments which inevitably become part of the in-patients' treatment regime in the department/ward he or she is responsible for as a cost centre.

Thus departments, rather than units or wards, are usually assigned the status of a cost centre: for example, the radiology department, the pharmacy and the physical therapy department (Spitzer-Lehmann 1994:456).

2.7 BUDGETING PROCESS

2.7.1 Definition of the term “budget”

The term “budget” refers to a financial planning and management tool that governments or individuals use to outline the use of public and private resources (including money and human resources) for providing programmes or services (Abedian et al 1998:193).

Spitzer-Lehmann (1994:424) further defines the term “budgeting” as an annual statement of the expected revenues and expenditures of the organisation, in which expected receipts are compared with expected expenditures to ascertain the organisation’s expected financial position.

Booyens (1996:188) sees the term as indicating the detailed financial plan for a set period of time (usually a fiscal year) in which the organisation determines the proposed income and expenditure. From these definitions it can be determined that budgeting is composed of a plan of revenue and expenditure proposed for a fiscal year in order to ascertain the financial position of the organisation for that fiscal year.

2.7.2 Budget preparation

The importance of budgeting in a health organisation makes it advisable for a nurse manager to be well versed in the budgeting process so that the health care services can function within a budget-controlled environment. Involvement in planning a health care service budget may provide the nurse manager with useful knowledge leading to cost containment in the hospital. This should enable the nurse manager to educate all nurses in important aspects of budget control, in order to use hospital resources economically.

According to Schmied (1979:27), many nurse managers feel so uncomfortable working with budgets that they do everything possible to let another level of administration

personnel budget for them. The resulting budgets either fail to recognise all the costs a department might incur, or overestimate the finances required. Budgeting responsibilities that involve all levels of management result in more realistic budgets and in more cost-saving ideas.

According to Booyens (1996:169), a budget is a master plan for annual operations, a control device, and an evaluation tool to determine the organisation's performance over the past year or for a specific period of time. A detailed budgetary plan is required, in which organisational goals on which the budget is based are determined. Booyens (1996:188-189) lists the following points to be decided upon when planning a budget:

- goals and objectives to be achieved
- projects that must be instituted or increased and those that must be scaled down or cancelled
- long-term payments for capital projects/equipment which must be included in the present budget
- the extent to which the personnel component of the overall budget will differ from that of the previous year
- the extent to which the supplies and provisions component will differ from that of the previous year
- the estimated number of patients, acuity levels, bed-occupancy levels, clinic visits, theatre cases, and out-patient visits that must be planned for
- the extent to which the budget component for the provision of auxiliary services differs from that of the previous year

From the listed items, it becomes evident that the previous year's budgetary outcome is taken into consideration when planning the new year's budget. However, it is important that economy should be borne in mind, so that waste of money is avoided even if excess money may be expected when the budget is implemented.

Budget preparation is a process that takes many months. Due to limited resources, decisions about priorities in budgeting must be made. The result is a financial plan for the coming year for a particular institution.

2.7.3 Purposes of budget preparation

Starck, Faan and Bailes (1996:69) identify the following aims for the preparation of a budget:

- Budget preparation serves as a plan of action for the organisational unit. It determines what funding can be expected, where funds will come from, how the funds are currently being used, and what funds will be needed for the future.
- Budget preparation forces administrators to evaluate existing programmes, including their needs and usefulness to their customers and whether they should be continued.
- It serves as an effective means of establishing priorities of programmes and projects.
- It serves to promote communication among all levels of staff members, as the needs of all the hospital departments are communicated during the budget preparation meetings.
- Budget preparation is a process that develops negotiations and political acumen. Such skills are necessary when budget allocation is established.
- Starck et al (1996:69) state that invariably budgeting and financial management are identified as areas in which further development is needed. Although budgeting is a key factor in administration, the process appears to be difficult, and apparently only on-the-job training can help staff to master it.

Niguel (1987:11) sees the budget as a tool that helps managers perform both planning and control functions. It is the financial expression of an action plan that provides a basis for guiding employees in performing their activities and for evaluating employee performance. The plan is translated into money required for a given period of time, and allows the manager to monitor how the expenditure compares to the income received at any given time of the financial year concerned.

Budgets are a different form of financial control in that they are an expression in monetary terms of what *should* happen. Budgets, therefore, depend on forecasts regarding future demands. Both Koch (1992:157) and Niguel (1987:11) stipulate that planning should be

integral to effective budgeting. The plan represents the managers' expectations and the budget process needs to be planned in steps.

Spitzer-Lehmann (1994:425-426) divides the budget planning process into the following steps:

- assessment of the organisational environment, its status, threats and opportunities, and trends in the industry
- review of the organisational mission and long-term objectives
- specification of assumptions regarding price changes and staffing

These assumptions, together with the organisation's long-term objectives, are then used to develop operating objectives or to develop goals for the coming year, including:

- preparation of forecasts, that is, future volumes of different services and products
- preparation of budgets at cost centre levels, with assistance from the finance office
- budget hearings, where departmental managers may negotiate with the budget officer on various items required by the departments
- presentation of the proposed budget to the finance committee of the board of directors, such as the Health Department of each province in South Africa.

If approved, the budget is ready for implementation. Careful monitoring of the budget is continuous and changes may be made from time to time, after consultation with all stakeholders.

Budgets are usually prepared annually with monthly projections and then prepared within the annual budget. Evaluations and adjustments of performance need to be done throughout the year.

2.7.4 Budgeting process

The budgeting process in any organisation will depend as much on the specific individuals working in that organisation as it will on the formalised methodical steps involved in budget preparation and use. The role of the individual human beings in the budget process cannot

be overemphasised. The amount of participation that an individual manager has in the budget process depends on the approach or philosophy of the organisation's top management (Finkler et al 1994:25), as well as on the individual nurse manager's level of financial expertise.

A useful guideline regarding budgeting is put forward by Booyens (1996:194-195), who identifies steps which may assist nurse managers in preparing health care service budgets.

Step 1: Information gathering and planning by the organisation's top-level management

An environmental assessment of the organisation is carried out to establish, among other factors, the health care needs of the community, the economic status of the community (for example, levels of unemployment), and governmental health care funding. Such information is one component of the organisation's strategic planning process (Spitzer-Lehmann 1994:425).

Step 2: Reassessment of missions, goals and objectives

Long-term goals and objectives are reassessed according to the results of the environmental analysis. Programmes are prioritised so that the resources for the programmes can be allocated accordingly.

Step 3: Establishment of measurable financial objectives

Specific financial objectives to be achieved are stipulated, for example, a reduction in supply costs by 2,0% during a specific period.

Step 4: Reviewing of proposed plan and guidelines

Information about the general budget plan is supplied to the nurse manager to give guidance on the budget data, historical data, worksheets, forecast information and instructions on how to prepare the budget.

Step 5: Formulation of unit goals and objectives

The organisational goals and objectives are reviewed in order to formulate goals and objectives for each unit. A review of financial information and workload indices for the past 12 to 18 months is compiled so that it can be established whether there are any new activities, programmes or procedures which might affect the unit's budgetary needs for the following year.

Step 6: Estimation of future staffing needs

This estimation is based on anticipated activities and workload which may be necessary to ensure quality outcomes.

Step 7: Estimation of future supply needs

This estimation is based on anticipated activities, workload and cost of provisions and supplies.

Step 8: Estimation of capital equipment needs

The type of capital equipment needed may affect the need for staffing and supplies.

Step 9: Preparation of the budget proposal and its submission for approval

This phase includes the completion and submission of the budget worksheets for approval. Because of financial restrictions, not all resources may be approved, and it may be necessary to submit strong motivations/substantiations for some of the requested items.

Step 10: Implementing and monitoring of the budget

The control function of management is a final and ongoing phase of the budgeting process. According to Finkler et al (1994:3), a budget without a formal control system to ensure that

actual results conform as closely as possible to the plan loses much of its managerial value for improving the organisation's control over its use of scarce resources (Finkler et al 1994:3). An efficient and well-controlled method of budgeting would be of value in the Eastern Cape's health care services, where health care resources continue to be scarce, and demands for services continue to exceed those which the available resources can supply.

The final budget is communicated to the different hospital departments. The monthly projections are distributed to all the departments of the hospital by the finance officer. These are carefully checked and an explanation is required for each difference exceeding an agreed-upon percentage, for example, 5,0%. When the variance is high or when it regularly exceeds 5,0% (or any previously agreed-upon percentage), the reasons for the excess costs should be investigated. If the reason is justified, such as the unforeseen admission of large numbers of patients suffering from meningo-coccal meningitis, the reason is explained, accepted and then the necessary adjustments are made. This might imply reducing finances allocated to other hospital departments. The variance percentage is supplied on a monthly report and is calculated as follows:

$$\frac{\text{Actual expenditure}}{\text{Budgeted expenditure}} \times 100 = \% \text{ variance}$$

(Koch 1992:165)

◆ **Auditing of costs**

The hospital financial officer will audit the hospital budget at regular intervals and at the end of each financial year. Auditing is the process by which the feasibility of the operations and activities of an organisation is examined (internal audit) and a report on the annual accounts is produced, the latter termed the external audit (Witter & Ensor 1997:183). The term auditing could be used more widely, to include clinical activities and a management audit of the effectiveness and efficiency of organisational and management arrangements. It is hence proposed that auditors should provide ongoing fiscal reports for the hospital as a whole, as well as for individual hospital departments.

Abedian et al (1998:148) also distinguish between internal and external auditing. Internal auditing is performed in large institutions and corporations to provide an objective analysis of the organisation's management and financial practices. The auditor reports directly to the chairman of the board of directors, focusing on the internal control of the budget system, and aiming to ensure that

- management policies and directives are adhered to
- assets are safeguarded
- records are complete and accurately kept for reliability of and access to information
- statutory requirements are complied with

External auditing is mainly concerned with an independent examination of the financial statements within the organisation. In addition external auditing examines aspects like

- adequacy of the internal control system
- compliance with statutory, regulatory or contractual matters
- economy, efficiency and effectiveness in the use of resources
- environmental practices

External auditing strives mainly to enhance effective public service delivery. Abedian et al (1998:15) state that external auditing in governmental organisations has a wider significance than just financial aspects. They point out that in a democratic society, external audit is a built-in mechanism for effecting accountability (to the public) and transparency. In South Africa external auditing is carried out by the Auditor-General, who is responsible to parliament. Its statutory mandate is based largely on the regularity of governmental financial and general management practices (Abedian et al 1998:150).

2.7.5 Institutional budgets

According to Barnum and Kerfoot (1995:193), several types of budget need to be prepared by health care institutions. Booyens (1998:170) discusses the types of budgets that are commonly used in health care institutions as follows:

- operating budgets (including personnel or salary budgets, and supplies and

expenses budgets)

- capital budget
- cash budget

According to Troskie (1996:259), budgeting should be done annually in order to ensure the availability of the necessary facilities, equipment and supplies used in health care institutions. Budget planning is started, as a rule, several months before the end of the fiscal year. This is to allow ample time to work out a detailed financial plan for carrying out the activities that the organisation wants to accomplish for the fiscal year of budgeting. After the initial compilation of the budget, the needs should be subjected to close scrutiny by all persons with vested interests in this budget. Specified periods of time should be allowed for inputs from all interested persons/departments. Dates should be set for follow-up discussions of the budget. Planning encourages evaluation of different options and assists in the more cost-effective use of resources (Yoder-Wise 1995:264).

Troskie (1996:259) suggests two methods of budgeting which could be implemented by nurse managers:

- In *incremental budgeting* the previous year's expenditures plus new programmes and the inflation rate are used to prepare the current year's budget.
- *Zero-based budgeting* involves rejustification of the needs every year and prioritising of all requests. Although zero-based budgeting takes time to prepare it is more cost-effective. Troskie's views are shared by Marriner-Tomey (1992:79), who states that with zero-based budgeting, no programme is taken for granted. Each programme or service must be justified each time funds are requested. Managers decide what will be done, what will not be done, and how much of an activity will be implemented. Decision packages are developed in rank order of decreasing benefits to the organisation. The cost of each package is added to the cost of approved packages until the agreed-upon spending level is reached, thus lower-ranked packages might be excluded (not approved) if insufficient funds are available.

◆ **Operating budget**

Finkler et al (1994), as well as Koch (1993:167), state that the operating budget consists of the plan for everyday operating expenses for a period of a year. The budget deals with the routine operating costs of each department in the organisation. The manager develops the budget after considering the operating goals and objectives of the organisation.

Booyens (1998:170) discusses Spitzer-Lehmann's classification of types of operating budget as the

- statistics or volume budget
- revenue budget
- expense budget

The volume (statistics) budget provides measures of workload activity for each department or cost centre for the upcoming year. The previous year's expenditure is not sufficient for preparing the budget. Additional indicators like variations in length of stay, patient acuity levels, patient profile and seasonal changes are essential for forecasting the budget and statistics (Booyens 1998:170).

The revenue budget is an assessment of the revenue the organisation might earn in the forthcoming year, based on an analysis of direct costs, indirect costs and the desired contribution margin of each service or product (Booyens 1998:171). Revenue is the income from the sale of products and services (Swansburg 1990:18). Any source of income to the organisation is classified under revenue, for example, payment for services rendered, donations, income from rentals of equipment and from parking fees.

The hospital must generate revenue to cover operating costs and make a profit, otherwise it would not be possible to run the hospital; revenue budgeting is necessary to determine the revenues required to cover anticipated costs. Revenue budgeting, in short, is an estimate of the gross revenue to be achieved from services rendered, plus revenue from other operating or nonoperating services (Booyens 1998:171).

The expense budget involves the process of forecasting, recording and monitoring the

manpower, materials and supplies and monetary needs of an organisation in such a manner that the operation of the various components of the organisation can be controlled (Swansburg 1996:181). Cost centres are regarded as the components of expense budgeting and within the cost centres the purposes of expense budgeting include:

- prediction of labour hours, materials and supplies, and cash-flow needs for future time periods
- establishing procedures for making comparative studies
- providing a mechanism for determining when changes in procedures need to be made, providing gross information on the kinds of changes needed, and providing evidence that control has been established or re-established (Swansburg 1996:181)

It may be of value to make use of historical trend indicators as a valid prediction of operating input, and an output analysis of expected revenues and expenses. Booyens (1998:171) categorises the expense budget under two main headings.

- the personnel/salary budget
- the supplies/commodities budget

(1) The personnel budget/manpower budget

This budget can at times account for as much as 90% of the total nursing service budget (Booyens 1998:171), as it includes nurses' salaries, compensation for sick leave, overtime payments, pay increases, and in-service and college education.

The manpower budget is usually the largest single expense in the nursing budget (Barnum & Kerfoot 1995:190). When planning this budget the number of persons needed in each job category for the planned fiscal year is determined. It is important to establish whether the present manpower is adequate for performing the current activities of the unit being budgeted for. The exact accounting of employees on the payroll is required.

The manager then adjusts the figure on the basis of the planned alterations in unit activities for the proposed fiscal period. Adjustments may involve raising or lowering of the skill mix

and changing the number of persons in each job category, as well as increasing or decreasing the total number of employees. Indicators for adjustment would include such aspects as increasing or decreasing patient bed occupancy rates or the total bed capacity; functional changes in role expectations; addition of new departments; and determination of patient acuity levels (a classification system of patients where nursing care needs are expressed in terms of nursing care hours to be provided per unit, per week or per month as explained by Koch (1993:171).

In order to make sound decisions on manpower budgeting it is important for the nurse manager to take cognisance of the following aspects:

- the different salaries of different nursing categories
- new appointments, including recruitment and orientation
- extra manpower needed for hours of staff illnesses, vacations, education time and overtime
- fringe benefits
- anticipated increments in salaries
- employee turnover and absenteeism
- retirement benefits (Barnum & Kerfoot 1995:190)

It is important to use estimates rather than individual salary details, as unexpected resignations and changes within the staff structure might significantly affect/change the manpower budget picture during any fiscal year (Barnum & Kerfoot 1995:190-191)

Flexibility should be built into the manpower budget by requesting funds to cover all staff positions in the plan. If some positions remain vacant, the unused funds may be applied to pay for temporary relief staff in case of crises (Barnum & Kerfoot 1995:190).

Booyens (1998:171-172) lists the following steps in the calculation of the manpower budget per hospital unit:

- (a) Assess the bed capacity, implying the number of beds in the unit.

- (b) Assess the average bed occupancy rate, referring to the number of beds occupied by patients at a particular time, expressed as a percentage of available beds or as the number of days each bed is occupied each year (Witter & Ensor 1997:184). The pattern of bed occupancy will determine the staffing patterns of the unit per given time. For example, the hospital male surgery unit may show an increased bed occupancy rate during weekends due to the admission of more trauma patients at this time than during week days, resulting in the need for more nursing staff during weekends.
- (c) Consideration of other factors affecting staffing needs. Examples of such factors are:
- technological advances, for example, new machinery introduced into the hospital which may require more nurses for monitoring patient care, or fewer nurses if the machinery takes over some of the nurses' duties
 - statutory staff norms on which nursing staff needs are generally based, and which may be adjusted by management as the need arises
 - new plans for the future, which may involve the establishment of new projects in patient care, or the establishment of new patient health care facilities
 - determination of patient acuity levels; the higher the acuity level of the patient, the more nursing care hours are required, and therefore the more nurses are needed for the unit
 - determination of staffing patterns and the staffing mix to ensure that each nursing unit has adequate coverage of nursing staff to render quality patient care (per time) for 24 hours each day.
 - staff benefits and differentials, including sick leave, leave pay, pension contributions, travel expenses, allowances paid for staff allocation in inconveniently high patient acuity level areas such as in intensive care units, casualty departments and operating theatres

(2) The supplies and services budget

This budget includes medical as well as non-medical supplies and services such as meals and linen (Booyens 1998:173). According to Swansburg (1990:155), the supplies and equipment budget is part of the operating budget and includes all supplies and equipment used in the provision of services, except capital equipment and supplies charged directly to patients as revenue. Examples of supplies to be budgeted for include office supplies, medical/surgical supplies and pharmacy supplies.

In developing the supplies budget a cost per unit of service is identified: for example, the cost of one dressing used in a unit per day. The price is then multiplied by the projected number of units of service for the year. An adjustment for inflation is made. The increased number of patients per unit and increased levels of acuity may increase the use of supplies in the unit. The previous year's numbers may provide a guide for the estimation of the present budget, although this estimate may be far from accurate due to variations in any year's number of patients admitted. Levels of acuity and inflation rates also need to be included in budgetary allocations.

Minor equipment includes equipment costing less than the base set for capital equipment (for example, R3 000 in the health centres of research in the Eastern Cape). If the base set is above this amount then the specific item is classified as capital budgeting.

◆ **Cash budget**

A cash budget ensures that the health care service will have the necessary cash flow to be able to pay its bills (Booyens 1998:174). The survival of the health care service depends on the timeous payment of bills. The chief financial officer is normally responsible for the cash budget and ensuring that the health care service is able to pay current liabilities like employees' salaries. In an article on managing costs and budgeting Westmoreland, in Yoder-Wise (1995:267) points out that organisations can be making a profit and still run out of cash. A profitable trend, such as a rapidly growing census, may produce a cash shortage due to increased expenses in the short run. Major capital expenditures may also cause a temporary cash crisis. Cash is an important commodity in the running of a health service. So the cash budget is the operating plan for monthly cash receipts and disbursements (Yoder-Wise 1995:267). According to Koch (1992:169), this budget may be compiled on a monthly, weekly, or daily basis.

It is important that the health care service has sufficient cash on hand during the budgetary period. Income does not always coincide with expenditure, due to fluctuations in need for resources; for example, a bus or train accident requiring health care services to provide life-saving care to large numbers of victims may drain its budget. Marriner-Tomey (1992:77) is of the opinion that budgeting for cash requirements may not significantly affect profits, but it does ensure a liquid position and is a sign of prudent management.

Awareness of cost containment in health care services would require nurse managers to be involved in methods of generating cash, while at the same time keeping expenditures low. Although cash budgeting may not be the direct responsibility of the nursing division, nurse managers are required to provide financial information regarding when expenses are to be paid and/or when additional cash may be required (Koch 1993:169). This knowledge of cash budgeting should be regarded as an important aspect of the nurse manager's financial competencies.

The cash budget, as a projection of cash balances on a monthly basis throughout the budget year, provides management with a tool to project temporary money excesses which could be invested, or shortfalls that need to be covered. Spitzer-Lehmann (1994:439) observes that any organisation needs to institute strategies for increasing cash flow and reducing expenditure, including

- quicker internal processing of patients' bills
- reducing cash floats by using locked boxes in strategic areas throughout the institution
- making bank deposits twice per day
- requiring deposits before services are rendered
- using credit cards for payment
- identifying new, revenue-generating programmes

Spitzer-Lehmann's (1994:439) study was conducted in Philadelphia (USA), therefore there might be differences regarding methods of increasing cash flow in South Africa. For example, the method of using locked boxes in strategic areas to reduce collection floats might attract criminal activities. Requiring deposits before services are rendered might not be possible with most of the public health consumers in the Eastern Cape, due to lack of

personal financial resources. Most health care services in the Eastern Cape are provided by the government, unlike most health care services in the USA which operate on a fee-for-service basis.

◆ **Capital budget**

This is a plan that identifies the major asset items that have been assigned high priority for purchase, and the expected sources of funds for such purchases. This budget is based on investment decisions of whether to buy or lease specific capital items (Spitzer-Lehmann 1994:437).

Barnum and Kerfoot (1995:192) define a capital budget as the projection of costs for major purchases. Each institution has its own definition of what qualifies as a capital expense.

A capital budget is required for items costing more than a specified amount and having a life-span of more than one year (Booyens 1998:173). Koch (1992:169) explains that each organisation holds its own views on what will qualify as a capital expense, but usually the item should cost more than a specified amount, such as R3 000; and the item's expected life-span should be longer than a specified time of approximately three to five years. Barnum and Kerfoot (1995:192) give an example of an institution's deciding that all items costing more than US\$5 000 with a life-span of at least three years are capital expenses. With a baseline of three years, a purchase of a US\$ 6 000 item with a life-span of one year would not be considered a capital purchase. The cost of the item and the item's life-span would seem to be the main considerations in determining whether or not a specific item belongs in a capital budget.

Booyens (1998:173) lists examples of major capital budget categories such as land, buildings, fixed equipment, and major movable equipment.

In making investment decisions, it is important to determine whether to commit the organisation to a pattern of financial demands or not. Special forms are used for the requisition of a capital budget item and a motivation/substantiation should accompany each request. It is common practice to request technicians or agents from the company from which the item has been purchased to assist the nurses by demonstrating how the item

is to be used. The nurse manager of the particular unit makes sure that all staff involved in the use of the item attend these sessions and know how it is to be operated.

2.8 SPECIFIC PERSONNEL ISSUES RELATING TO COSTS

The way in which the nurse manager manages her department and staff influences costs. The more specific direct personnel issues relating to costs and cost containment are absenteeism, turnover and resignations of staff members as well as their levels of motivation and productivity.

2.8.1 Absenteeism, turnover and resignations

According to Undén (1996:47) several studies have shown that absenteeism from work because of ill health has increased in recent years. In a study undertaken in Greece, it was shown that absenteeism due to sickness increased from 12,6 days in 1975 to 16,6 days in 1990 in the health services (Plati, Lanara, Katostaras & Mantas 1994:149). Absenteeism is a cost factor, because among other things, the employee who is absent must be *paid* for the duration of the absence if the reason for it is considered to be valid. In the case of a high absenteeism rate, this could become very costly, as the rest of the staff members must then work overtime to recover the time lost through their colleagues' absence(s) and additional (agency) staff might need to be hired (Arendse 1996:15).

Absenteeism is costly not only because the hospital must pay the absent worker, but because it must now also pay for the agency or other nurse who replaces the absent nurse. This replacement nurse may not be as knowledgeable about the situation in which she now needs to operate, and will invariably need more supervision and orientation to the work situation than the absent employee would require. The morale of the other staff is lowered by overtime work and the heavier burden of the additional supervision of substitute nurses that they are expected to provide (Lee & Erikson 1990:37). Continuity and quality of patient care may be negatively affected by the absenteeism of nurses (Taunton, Krampitz & Woods 1989:13; Matrunola 1998:827).

The rate of absenteeism should be contained as far as possible by having a well-known attendance policy in existence, so that all employees are informed as to how vacation leave could be used so as to avoid unscheduled and unexcused absences. According to

Arendse (1996:15), it is also necessary to keep accurate records to identify each employee's *attendance pattern*, particularly during the early periods of employment. Prompt action is essential to prevent chronic absenteeism. Arendse (1996:16) further recommends that personnel should be made aware of absenteeism rates, and graphs depicting absenteeism should be made available in all the departments and units. Personnel often do not realise the macro effect of their attendance patterns until these are graphically depicted. The author suggests that perhaps a paradigm shift should be made among nurses from the "it-is-expected" traditional culture to one which provides incentives for those with excellent attendance patterns (Arendse 1996:15).

According to Booyens (1998:369), "It is essential for management to introduce measures for reducing the turnover rate among personnel in order to run an organisation cost-effectively."

Turnover expenses are influenced by the following:

- advertising for and recruiting new personnel
- temporary filling of staff vacancies
- interviewing and hiring new employees
- procedures and costs involved in terminating an employee's service
- orientation and training of new staff members
- lower productivity levels of the newly appointed staff member (Jonas 1990:12)

In a report on nurse recruitment and retention prepared by the Health Care Advisory Board in the USA in 1987, the cost of nurse turnover was estimated to be between \$5 600 and \$17 500 per nurse – and thought to be rising. These costs included recruitment, orientation, loss of productivity, and agency replacement if applicable (Wolf & Orem 1994:203).

2.8.2 Motivation and productivity

Koch (1992:59) states that "the development of staff, which leads to higher levels of motivation and thus enhanced services by personnel, is often not taken into consideration when financial planning is done". According to Scott and Rochester (1987:121), the

“feeling” which workers have is of paramount importance in the enhancement of productivity.

“Any attempt to provide the best possible care within an available budget has to include an in-depth scrutiny of productivity” (Du Toit 1998:475). Motivation of workers and productivity go hand in hand. In general, the more motivated an employee, the higher his/her productivity. The nurse manager is often held responsible for the level of motivation among the staff. There are many factors which could influence an employee’s motivation, but according to Jooste (1998: 475-476), the following deserve attention in any health care institution:

- Include nurses in policy formulation whenever possible.
- Reward success due to effort and ability.
- Address the learning needs of staff in personnel development programmes.
- Maintain flexibility regarding work schedules
- Delegate authority together with the task in order to develop staff members’ capabilities
- Do merit rating according to criteria agreed upon by nurses themselves.
- Be as flexible regarding hours of shift work as possible.

Motivation is promoted by the nurse manager who is regarded as trustworthy and supportive, and who evaluates fairly and provides adequate feedback. Although the higher the employee’s productivity levels, the lower the costs, and the higher the cost-effectiveness of the service in general, it is unfortunately particularly difficult to measure productivity in nursing. According to Everson-Bates and Jenkins (1994:65), productivity is directly affected by the nurse’s ability to prioritise, delegate, and manage time. The extent to which organisational goals and expectations can be synchronised with individuals’ values will determine the extent to which improved productivity can be achieved.

According to Kaazemek and Channon (1989:94), the enhancement of productivity has become a strategy for survival for many hospitals at present. These authors regard productivity as the key to cost control and maintenance of competitive prices between different hospitals. Nursing management is a process with measurable outcomes. The achievement of these outcomes is measured as productivity, which is an economic concept

that compares the output of an industry to the resources or input required to produce products or provide services. Productivity also refers to the quality and quantity of that product or service.

$$\text{Output minus Input} = \text{Productivity}$$

Input may include the costs of labour, technology, supplies and services. Labour productivity is the ratio of the money value of the product to the labour hours used to produce it (Spitzer-Lehmann 1994:65). This author maintains that it is more complex to define productivity in health care, since there are many variables in the measurement of input and output, for example, measuring the output of patient care quality. The measurement of nurses' labour costs is complicated by the fact that nurses have varying levels of pay, and even those with similar pay may provide nursing services which vary in efficiency and competence.

Difficulty in measuring productivity in health care, particularly nursing services, is due to the uniqueness of services provided and the lack of consensus about how to measure the outcomes of those services. According to Spitzer-Lehmann (1994:65), productivity is related to organisational goals, departmental objectives, and personal values. The more synchronised these expectations become, the easier it is to accomplish established objectives and to improve productivity.

Nurse managers can help to contain hospital costs by effectively addressing issues pertaining to absenteeism, turnover and resignations. Hospital costs might be contained if nurses remained committed to maintaining high productivity levels.

2.9 CONCLUSION

The review of the literature relevant to cost containment in health care services addressed a variety of aspects. The escalation of costs of running health services, coupled with a deterioration in health care services due to the lack of financial resources and limited knowledge about cost controls in health care centres, compel nurse managers to enhance their financial knowledge and skills through in-service education related to financial matters. The financial health of the health service depends to a large extent upon the cost control activities of nurses, coordinated by nurse managers.

The following chapter deals with the conceptual framework designed for this study.