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How to cite this thesis
Purchasing and inventory management
in a homoeopathic practice

by

ANNA CHRISTINA LESSING

Dissertation
submitted as partial fulfilment of the requirements
for the degree

Magister Technologiae

in

Homoeopathy

in the
Department of Homoeopathy

in the
Faculty of Health and Biotechnology

at the
Technikon of the Witwatersrand

Supervisor: Mr C Scheepers
[MCom (Strategic Management)]
Co-supervisor: Dr MRA Moiloa
[MD (Homeopathy)]

Johannesburg
July 1998
DECLARATION

I hereby declare that this dissertation is my own work as it was compiled through literature research and interviews, and it was performed without assistance. This dissertation had never been submitted to any other institution for the purpose of obtaining a qualification.

AC Lessing

01/07/1998

Date
Firstly, I would like to thank the Lord who gave me the talent and insight to be able to progress and complete this study, thereby also growing into a dedicated homoeopathic practitioner myself.

I would also like to express my sincere appreciation to the following people for their support and assistance in the preparation of this work:

- my supervisors, Mr Cor Scheepers and Dr R Moiloa for their guidance, time and interest in this study;
- the practitioners who had shared their expertise regarding purchasing and inventory management;
- the language editor, Ms Riki Malan, for the thorough reading of this dissertation and all the corrections she suggested;
- the Technikon Witwatersrand staff for their input in the completion of the study;
- my parents, brother and sisters for their advice, assistance in editing and their support; and
- Josua for his assistance, patience and unfailing support.
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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COD</td>
<td>cash on delivery</td>
</tr>
<tr>
<td>EDI</td>
<td>electronic data interchange</td>
</tr>
<tr>
<td>EOQ</td>
<td>economic order quantity</td>
</tr>
<tr>
<td>ISR</td>
<td>interest, space and risk (costs)</td>
</tr>
<tr>
<td>JIT</td>
<td>just-in-time</td>
</tr>
<tr>
<td>Medunsa</td>
<td>Medical University of South Africa</td>
</tr>
<tr>
<td>MRO</td>
<td>maintenance, repair and operating (materials)</td>
</tr>
<tr>
<td>MRP</td>
<td>materials requirements planning</td>
</tr>
<tr>
<td>MRP II</td>
<td>manufacturing resource planning</td>
</tr>
<tr>
<td>OTC</td>
<td>over the counter (products, remedies)</td>
</tr>
<tr>
<td>PU for CHE</td>
<td>Potchefstroom University for Christian Higher Education</td>
</tr>
<tr>
<td>RAU</td>
<td>Rand Afrikaans University</td>
</tr>
<tr>
<td>ROI</td>
<td>return on investment</td>
</tr>
<tr>
<td>ROL</td>
<td>reorder level</td>
</tr>
<tr>
<td>RONA</td>
<td>return on net assets</td>
</tr>
<tr>
<td>ROP</td>
<td>reorder point</td>
</tr>
<tr>
<td>T Natal</td>
<td>Technikon Natal</td>
</tr>
<tr>
<td>TWR</td>
<td>Technikon Witwatersrand</td>
</tr>
<tr>
<td>UDW</td>
<td>University of Durban-Westville</td>
</tr>
<tr>
<td>UP</td>
<td>University of Pretoria</td>
</tr>
<tr>
<td>US</td>
<td>University of Stellenbosch</td>
</tr>
<tr>
<td>UOFS</td>
<td>University of the Free State</td>
</tr>
</tbody>
</table>
SYNOPSIS

NAME : LESSING, AC
DEGREE : Magister Technologiae (Homoeopathy)
TITLE : Purchasing and inventory management in a homoeopathic practice
TECHNIKON : Witwatersrand
SUPERVISORS : Mr C Scheepers & Dr MRA Moila
DATE : July 1998

Due to the fact that the homoeopathic practice is both a medical service and a small retail business, the homoeopath has to manage both these aspects well to ensure a successful practice. Some homoeopathic students are of the opinion that at the end of their formal education at the Technikon, they do not have sufficient training in business matters, to be able to manage a practice efficiently. Unfortunately, no literature is available that cover the management of the homoeopathic practice, especially to assist a newly qualified or new practitioner in this task. Apart from this, the available literature on management is very broad and relates to many aspects of different types of businesses. Management of the homoeopathic practice is therefore a suitable topic for research.

A dissertation of this kind is limited in respect of time and space and would not allow a detailed study of all the management issues discussed in management literature. The objective of this study is therefore narrowed to research only two of these aspects, namely purchasing and inventory management. The study highlights the role and importance of each of the mentioned aspects, states their objectives and includes a discussion of the processes involved with the operation and management of these aspects. All examples and applications throughout the study are made with direct relation to the homoeopathic practice.

At the end of this study a short summary of the results that were obtained through the study is given. A model is also compiled as a guide to practitioners in the management of the purchasing and inventories aspects of their practices.
Aangesien 'n homoeopatiese praktik twee fasette het, naamlik die mediese diens wat verskaf word en die feit dat dit 'n kleinhandelssaak is, moet albei hierdie fasette goed bestuur word om 'n suksesvolle praktik te verseker. Sommige homoeopatiese studente voel dat hulle aan die einde van hulle technikon-opleiding nie genoeg kennis het om 'n praktik doelmatig te bestuur nie. Ongelukkig is daar ook nie literatuur beskikbaar wat die bestuur van 'n homoeopatiese praktik toelig nie, veral nie vir die pasgekwalifiseerde of nuweling praktisyn nie. Afgesien van die gebrek aan inligting aangaande die homoeopatiese praktik, is die algemene bestuursliteratuur baie wyd en dek dit baie verskillende aspekte van bestuur. Die bestuur van 'n homoeopatiese praktik is daarom 'n geskikte onderwerp vir verdere navorsing.

'n Skripsie van hierdie aard is beperk in tyd en ruimte. Daarom is dit nie moontlik om 'n omvattende studie van al die bestuursaspekte te onderneme, soos wat dit in die algemene bestuursliteratuur beskryf word nie. Die doelwit van hierdie skripsie is daarom om slegs twee bestuursaspekte te bestudeer, naamlik aankope- en voorraadbestuur. In die studie word aandag gegee aan die rol en belangrikheid van albei die genoemde onderwerpe, asook aan die bestuursdoelwitte wat vir hierdie ondernemingsfunksies gestel word. Dit sluit ook 'n bespreking van die prosesse verbonden aan aankope en voorraadhandelinge en -beheer in. Voorbeeld en toepassings is deurgaans met betrekking tot die homoeopatiese veld gemaak.

Aan die einde van die skripsie is 'n kort opsomming gemaak van die resultate en gevolgtekking waartoe in die navorsing gekom is. 'n Model is saamgestel wat deur praktisyns as riglyn gebruik kan word in die bestuur van aankope en voorraadbeheer in die homoeopatiese praktik.
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1.1 Background

From own experience it has been observed that in the training of the homoeopathic student the focus is mainly on clinical training and only negligible attention is devoted to the managerial aspects of a future homoeopathic practice. This is the accepted way of training in the various disciplines of the medical profession and is not specific to homoeopathic training, nor to the homoeopathic training at the TWR. A successful practice, however, rests on two pillars, namely the clinical aspects (being a good doctor) on the one hand, and the managerial aspects (being a good businessperson) on the other hand (TWR 1995). The practitioner needs to address both these aspects to ensure a balanced and successful practice. Being an exceptionally good businessperson but a very mediocre clinician may cause the practice to fail. Similarly, being an exceptionally good clinician, being able to diagnose and treat patients correctly, but neglecting the business aspects of the practice may lead to financial difficulties and even bankruptcy, and as a consequence eventual loss of a good homoeopathic practitioner.

Based on the above premise, it should be borne in mind that the homoeopathic practice is not merely about rendering a medical service, but it is also a business. If either of these aspects is not managed well, the practice will inevitably fail. The homoeopathic student has invested a lot of money and time in studying and qualifying for this career. The government subsidises the training institutions and therefore has also invested in the training. When a practice fails due to poor management or due to ignorance of the importance of the managerial aspects, it implies misuse of public resources and a loss of opportunities for other students who were not selected for the homoeopathic course.

In a search of completed theses and dissertations at South African tertiary institutions, (CCTD 1996; GKPV 1996; NISC 1995) it was found that little research has been conducted to assist newly graduated medical professionals to establish and maintain their own practices. Similarly, no books or articles in journals were found addressing this problem. A possible explanation for this could be that business researchers, as a rule, lack the insight of the specific requirements of the medical profession and the associated regulations. Another reason could be that the average
medical practitioner is not in a position to conduct research in the area of management due to lack of practical management exposure and/or management training.

An analysis of the syllabi of most medical and medical-related training courses was undertaken, using the official yearbooks of the various universities and technikons in South Africa. This is summarised in table 1.1. According to this analysis, most (but not all) courses require of students a one-year “business” course. This course is usually in the last or second last year of study, and covers only some aspects of business management or practice management. A course like this appears to be only an introduction to the subject to create awareness in students of the business side of a practice. According to discussions with students of various medical related disciplines, such as homoeopathic, medical, optometry and veterinary students, such a course is not intended to fully equip a newly qualified medical practitioner to make a success of the practice: either in establishing a new practice, or even joining a running business concern. They concede that it is difficult to start a new practice. This might be due to their lack of awareness of the real demands in establishing a services and medical retailing business.

Practitioners that are not fully trained for managing an enterprise, cause a financial risk. In practice it has been observed that very few students completing a three or four year degree course in the business field, are fully equipped to enter the business world with confidence as an independent entrepreneur. It could therefore not be expected from the student in the broad medical-related field to be a fully qualified businessperson. According to Steyn (1997), bank officials experience that newly graduated medical professionals have little training on the business side of practising and thus pose a risk for banks when applying for a loan. One has to bear in mind that banks are businesses as well. They need to look into the commercial viability of any loan that they grant. The higher risk for non-repaying of a loan causes reluctance at these institutions in granting loans to inexperienced practitioners for purposes of establishing practices.
Table 1.1  *Survey of business courses in a selection of medical-related training syllabi*

<table>
<thead>
<tr>
<th>Field of study</th>
<th>Institution</th>
<th>Course name</th>
<th>Year of study / Total years of course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBCHB</td>
<td>Medunsa</td>
<td>Medical ethics and Jurisprudence (attendance course)</td>
<td>6/6</td>
</tr>
<tr>
<td></td>
<td>U P</td>
<td>Family medicine (attendance course)</td>
<td>4/6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Family medicine</td>
<td>5/6</td>
</tr>
<tr>
<td></td>
<td>UOFS</td>
<td>Family medicine (attendance course)</td>
<td>5/6</td>
</tr>
<tr>
<td></td>
<td>U S</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>U D W</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Ch D</td>
<td>U D W</td>
<td>Ethics &amp; Practice management</td>
<td>6/6</td>
</tr>
<tr>
<td>B Ch D</td>
<td>U S</td>
<td>Dental practice management (attendance course)</td>
<td>6/6</td>
</tr>
<tr>
<td>Optometry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Optom</td>
<td>RAU</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>BTech: Optometry</td>
<td>TWR</td>
<td>Practice Management</td>
<td>4/4</td>
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<td>BTech: Optometry</td>
<td>U D W</td>
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<td></td>
</tr>
<tr>
<td>Pharmaceutics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Pharm</td>
<td>PU for CHE</td>
<td>Pharmacy practice</td>
<td>1 to 4/4</td>
</tr>
<tr>
<td>B Pharm</td>
<td>U D W</td>
<td>Pharmacy practice</td>
<td>2 to 4/4</td>
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<td>Veterinary Science</td>
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<td></td>
<td></td>
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<tr>
<td>B V Sc</td>
<td>UP</td>
<td>Veterinary Jurisprudence &amp; Ethics</td>
<td>5/5</td>
</tr>
<tr>
<td>Homoeopathy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTech (Hom)</td>
<td>TWR</td>
<td>Practice Management and Jurisprudence</td>
<td>5/5</td>
</tr>
<tr>
<td>MTech (Hom)</td>
<td>T Natal</td>
<td>Practice Management and Jurisprudence</td>
<td>5/5</td>
</tr>
</tbody>
</table>

Sources: Annual calendars of the various institutions, 1996/7.

Any business enterprise in a relatively free market system, such as South Africa, serves the community by providing services and products while expecting an adequate return on investment of capital and human resources. This is sometimes called "profit-seeking" in short. The term "return on investment" refers to profitability rate and is calculated as the net profit after interest and tax are deducted. It is expressed as a percentage of the amount of capital employed to
generate the profit from business activities (TWR 1995). In general it could be said that profit-seeking is the primary objective of any business enterprise: this is “to earn the highest income at the lowest cost, with profit as the favourable difference between the two” (Cronje et al. 1997:31). It has to be remembered that it is not maximum profit as such, but profitability over the long term that is needed to sustain growth of the enterprise, since mere survival is not good enough.

In the magnitude of management literature available, the importance of business management in any enterprise is emphasised. Management is the process of setting and accomplishing goals by using and co-ordinating available resources within a specific environment for example in an enterprise (Baird et al. 1990:6; Bartol et al. 1996:13). Efficient application of management principles and practices will guarantee smooth operation of the enterprise and larger profits. As all the principles and practices of business management are universally applicable, the homoeopathic practice can also benefit from the application of these principles and practices.

1.2 Statement of the problem

Following from the above, it is evident that the management of a homoeopathic practice requires knowledge of business practice as well as of homoeopathy. Thorough training and research in these two fields seem imperative for any successful practitioner, since a successful practice does not develop automatically.

The question that forms the basis of this research is what constitutes the required business and management knowledge for a homoeopath to successfully manage his practice. The research problem of this dissertation can hence be stated as follows:

*The homoeopathic practice is not only a medical service (consultation), but it is also a specialised retail business (supplying remedies); if either of these two aspects is not managed well, the practice, as an enterprise, may fail.*
1.3 The objectives of the study

The proposed research topic indicates the need for the integration of two different fields of study, namely homoeopathy and business management. The establishment and management of a homoeopathic practice entail a number of factors. The following are some common examples of these factors: finances for setting up a practice; working capital and other financial considerations; purchasing and inventory management; practice layout and equipment; legal considerations; enterprise form of business; and geographical location of the practice (micro and macro considerations). The total field of management as applicable to any enterprise and also to the homoeopathic practice, is too wide to cover in a dissertation of this kind. A selection had, therefore, to be made to narrow down the research field.

According to literature and own experience, purchasing management and inventory management are two of the most important aspects of management in the survival of any enterprise. These are of vital importance for success, and when neglected, can contribute to loss (Baily et al. 1994:5; Bodenstab 1993:10; Cronje et al. 1997:359; Hellriegel & Slocum 1996:662; Saunders 1997:1). Therefore, the focus of this study will be on purchasing and inventory management in a homoeopathic practice, as often-neglected factors which may, when managed well, contribute to the success and profitability of the practice. The content of medical-related courses does not cover these aspects sufficiently and it needs to be further researched.

The aim of the study, therefore, is to investigate the role and importance of purchasing and inventory management in the establishment and running of a homoeopathic practice.

The aim of purchasing management is to supply products and services to an enterprise so as to smoothen the transformation process from raw materials to need-satisfying products (Baily et al. 1994:17; Cronje et al. 1997:256; Hugo et al. 1997:5). The purchasing manager is responsible for seeing that inventory is available at the right time in the correct quantities and that they meet the specified quality requirements. In the homoeopathic practice this function will be to ensure that the homoeopath has a sufficient supply of remedies and other medication to offer to the patient.
The importance of inventory management is noticed when considering the capital tied up in stock. Inventory management aims to determine the optimum levels of stock per item. Too much inventory implies unnecessary capital that does not "work"; too little inventory has the danger that certain remedies may not be available when it is required. Thus the homoeopath has to maintain optimum inventory levels which allow for sufficient inventory in the practice without losing capital on inventory that does not sell, or that may expire.

This study specifically poses to assist the newly qualified practitioner with regards to purchasing and inventory management. The research starts out with a literature study on the two aspects. It is, however, already clear that no literature specifically relates these aspects with the homoeopathic practice. The findings of the literature survey will be supplemented by testing the principles with practitioners, and researching how they apply (or ignore) the theoretical guidelines. Through this study certain concepts in the management and business theory will be identified and applied to the homoeopathic practice.

1.4 Relevance of the study

Any conclusions arising from the research may assist both the new and the existing practitioners to increase the incidence of the successful establishment and running of a practice. Through the study, problems and pitfalls that could be relevant to the failure of starting and running a homoeopathic practice will be identified. Practitioners could benefit from this knowledge as well. Certain proposals will be made and possible guidelines will be given for the benefit of the homoeopath in managing the aspects of purchasing and inventory in the homoeopathic practice. It will also be of value to practising homoeopaths who are not managing purchasing and inventory in the best possible way. The focus will be on the execution of purchasing and inventory in the most effective way, and the main pitfalls that could hamper the successful starting and running of a homoeopathic practice will be highlighted.

The importance of purchasing and inventory management varies from one business to another, depending on the type of business and the activities the business is involved in. This is seen in the range of the value of purchasing as a percentage of a sales rand that can be almost 50c in the case of companies like Sasol and Anglo-Alpha, or even as high as 83c in the case of Pick 'n Pay.
(Cronje et al. 1997:65). Efficient purchasing can contribute greatly to increase the profitability of the practice. Equally important is the matter of inventory control from a financial point of view, but also to comply with regulations according to medicine control requirements (Regulation R2322 1984:Chapter 12).

This study will also benefit training institutions by bridging some of the shortcomings in the syllabus on this subject, as well as enhancing literature in this field.

The results flowing from the study will involve liaison with financial institutions. These institutions will benefit from this study as well since the successful homoeopath will be in a better position to repay his loans. This may eventually lead to more loans for new practitioners, and possibly, research funding flowing from the financial institutions to this branch of medicine.

The field of study implicated by this research topic is wide and comprehensive, covering a number of related aspects. For practical purposes the field of study needs to be delimited into a manageable unit. This study serves as a basis for future studies in either the same area or in related areas.

1.5 Delimitations and assumptions

A dissertation by definition, as an academic research report, is of limited scope. Attention would therefore be given to only two of the important factors for establishing and running a successful homoeopathic practice. These factors are purchasing and inventory management. Other factors not being researched in this study, may be of equal importance and should not be neglected in managing the homoeopathic practice.

A lack of applicable literature regarding the practical applications of purchasing and inventory management of the homoeopathic practice was experienced. Practical research in the form of interviews with homoeopathic practitioners will be conducted to overcome this limitation.

Information on two aspects, namely on purchasing as well as inventory management, will be gathered by means of a number of semi-structured interviews. This research protocol is time
Consuming and expensive. Therefore the empirical research will be limited to ten practising homoeopaths in the Gauteng area. It is assumed that the information gathered from the ten would be representative of the way practising homoeopaths manage their purchasing and inventory.

Since management principles and practices are universally applicable, it is assumed that:

- the management principles underlying this study in the functional management areas of purchasing and inventory management, will be applicable to the business role of a homoeopathic practice;

- the guidelines applicable to practices in the city are equally applicable to practices in the rural areas;

- the guidelines will be equally applicable to large and small practices; and

- those practitioners requested to contribute to this study, will be willing to share their knowledge and experience, and participate in this research.

1.6 Research methodology

The methodology of a specific research project is determined by a number of factors. The following are some of the most important (TWR 1996b):

- the topic of research;
- the research problem;
- the aim of research;
- the level of research;
- the scope and extent of the research report;
- the amount of the research budget;
- the available time for research;
- the availability of literature; and
- the possibility of collecting research data.
The methodology selected for a given research project needs to be reviewed according to the above-mentioned list of criteria, and must be chosen among various alternative research methodologies. The selected methodology must be justified as being appropriate to the given factors.

An obvious methodology for this research could be by means of a postal questionnaire. That would involve collecting data from a great number of practising homoeopaths. The method would require much time, catering for the preliminary (pilot) field study, the compilation and testing of a questionnaire, sending out of the questionnaire, awaiting responses and following up to increase the response rate, and analysing the statistics (TWR 1996b). Apart from the time constraint inherent in this method, it would also put a great burden on the financial resources available in the research budget for this particular dissertation.

Considering the high demands on time and money inherent in this methodology, the results would be subject to the assumption that the sample truly reflects the situation of the population. The researcher must furthermore assume that the actual respondents are really representing the selected sample. Although the sample may be compiled with caution and obeying all statistical rules of sampling, there is no guarantee that the actual respondents, especially in the case of a low response rate, are also equally statistically stratified. A real stumbling block would also be in acquiring an acceptable response rate of 30 per cent for a postal questionnaire. The results would then only reflect the facts and/or opinions of the respondents at a particular moment of time. Due to the high pressure on time that practitioners experience, it would be unlikely to get an adequate response from these people.

Of greater concern for the scientific validity of this research study is the fact that the results of such a questionnaire would in the true sense only be descriptive of the real life situation (or at least: as true as the respondents honestly supplied answers and facts to the questions). As was argued above that medical-related practitioners are not schooled in business-related matters, it can not be expected that the practitioners will act according to the business rules and guidelines. Researchers usually experience some reluctance from medical practitioners to reveal information
that they could consider being confidential to their practice. Practitioners could regard supplying information as an invasion in their privacy and a threat to their competitive position (TWR 1996b).

Students investigating the real situation in homoeopathic practices without knowledge of business principles would accept the found practice (as was reported by those contributing to the survey) as being the norm for managing purchasing and inventory in the homoeopathic practice. That would mean that the reported management practices would be regarded as the ideal situation.

Due to the high demands on time and research resources and an expected low quality return, it was decided not to follow the obvious research route. The selected methodology will be conducted in the following five phases.

**Phase 1: Literature pre-study**

This phase is used to get a broad overview from the relevant literature. It will concentrate on the subject matter of:

- purchasing management and
- inventory management.

The aim is to identify relevant issues to be studied and to be included in the interviews which will be conducted in phase 2.

**Phase 2: Pilot interviews**

This phase is used to get a broad overview of purchasing and inventory management from various homoeopathic practices. The aim is to narrow the gap between training in an academic environment, the exposition in the literature, and the application of these principles and guidelines in the practice. It is considered that through these interviews the crucial issues as experienced by the practitioners will be identified.
Phase 3: Literature study

In this phase the insight gained in the first two phases will be built on. A thorough literature study will be undertaken. Firstly a literature study covering multi-disciplinary fields, such as homoeopathy, business management, marketing management and law will be conducted. The literature study provides theoretical knowledge that can be used as basis for the structuring of the interviews. Secondly, an in-depth study will be done on the identified two functional management areas of purchasing and inventory management, concentrating on the practical issues as identified in phase 2. It must be remembered that the literature also covers corporate and industrial purchasing and inventory keeping, dealing with several million rand per annum. The issues relevant to the retail homoeopathic practice need to be identified and appropriately adapted to the needs.

The results of this phase will be reported on in chapter 2 (considerations on purchasing management) and chapter 3 (considerations on inventory management).

Phase 4: Practitioners' interviewing

This phase comprises interviews with practising homoeopaths according to a semi-structured interview schedule. This phase will thus build on the results gained in phase 3. The homoeopathic practitioners that participated in phase 2, will be requested to be included in this phase again. It is planned to include a minimum of ten homoeopathic practices in this phase. The aim of this phase is to test the insights gained from the literature (in the form of guidelines to practitioners) in the real life situation.

At this point it must be emphasised that it is not contemplated that all practices should work on a rigid set of rules concerning the two aspects of purchasing and inventory keeping. It has to be accepted that various ways of doing things could lead to similar results. The individuality of the management style of the practitioner and the local conditions, in which the practice operates, must most definitely be provided for.
Of equal importance is the notion that the research is in no way intended to evaluate the performance of the practitioners (relating the two identified areas) against the guidelines identified in the literature. The aim is purely to contribute to the managerial (and therefore financial) health of the practice. It is hoped that practitioners as well as final year students may benefit from these findings.

Phase 5: Conclusion and recommendations

In this phase the research study will be summarised. The conclusions reached in the research will be discussed and the recommendations and guidelines to be considered in the management of the homoeopathic practice will be listed and explained. This will be reported on in chapter 4.

As a sign of gratitude, a copy of these findings and recommendations will be given to all participating doctors.

1.7 Conclusion

The main focus of this study is to identify important aspects in the management of a homoeopathic practice by concentrating on purchasing and inventory holding. A literature study with practical examples from the homoeopathic field will be given in chapters 2 and 3, respectively on purchasing management and inventory management. In chapter 4 the study will be summarised and the guidelines on purchasing and inventory management in a retail homoeopathic practice will be listed.
CHAPTER 2: PURCHASING MANAGEMENT

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2.1 Introduction

Purchasing is a business function of an enterprise and can easily be underestimated. Consumers may regard that as a normal practise to satisfy their daily needs (Cronje et al. 1997:357). However, purchasing plays an important role in enterprises (including a homoeopathic practice) where profit making is an objective (Baily et al. 1994:19; Hugo et al. 1997:10-11). A reduction in purchasing costs will lead to an equal amount increase in the net profit (Pickle & Abrahamson 1990:412).

All business decisions should be guided by its business objectives. The purchasing objectives form a subset of the business objectives. These objectives should therefore guide the business person in deciding what to buy, when to buy and from whom to buy.

The literature on purchasing management treats the subject mainly generically. Very few books concentrate on purchasing in a specific type of enterprise or even in a specific industry. None was found on purchasing in the homoeopathic practice, or even in the medical-related field as such. Furthermore, the subject is normally treated in the literature from the point of view of large-scale industrial purchasing for manufacturing concerns. In the literature general purchasing principles are reported which should be adjusted to the specific required application. This will be done in this chapter regarding the homoeopathic practice. It constitutes a specific contribution of this dissertation.

Most homoeopathic practices usually exist as sole proprietorships. A single person is the homoeopathic practitioner, the business owner, as well as the manager of the practice. The homoeopath himself, therefore, usually also assumes the role of the purchasing manager of the practice. Insight into the principles and practices of purchasing is therefore necessary for the homoeopathic practitioner to ensure sound application of such, with a view to improve the practice as a sound business venture.

In this chapter the term purchasing will be defined (2.2), and the role and importance of purchasing in a homoeopathic practice will be considered (2.3), as well as the purchasing
objectives as guidelines for achieving the overall objectives of the enterprise (2.4). Then attention will be devoted to the classification of purchasing goods (2.5) and the make or buy decision (2.6). The chapter is concluded by an investigation into the three phases of the purchasing process (2.7) and the purchasing management process (2.8).

2.2 Definition of purchasing

Purchasing has become more complex and professional in recent years indicating the importance of this business function. The subject developed into procurement and is in some cases referred to as supply management. The focus has shifted to strategic planning to develop the full potential of the purchasing function (Dobler & Burt 1996:39). It can be concluded that the activity of purchasing, whatever name it is called, has a very important influence on any business enterprise.

A wide variety of definitions for the term purchasing can be found in the literature. It is worthwhile to mention specifically the definition used by Pickle & Abrahamson (1990:413). In this the authors indicate a number of attributes that are important in the purchasing function, namely “... the process of buying the right quality materials, products and supplies in the correct quantity at the best price and at the proper time from the right vendor”. These factors and attributes will be elaborated on under the heading: Purchasing process (2.7).

The following authors serve as a good representation of the various definitions and discussions about purchasing for the demarcation of the activities of purchasing: Cavinato 1984:3; Cronje et al. 1997:358; Dobler & Burt 1996:35; Kreitner 1986:621; Van Aardt & Van Aardt 1997:122-123; Van Weele 1995:9, 18. The definitions and descriptions used by these authors can be summarised as follows:

*Purchasing is the acquisition of equipment, maintenance materials, products and services from external sources for carrying out long- and short-term operations of an organisation.*
It is important to know that the purchasing function is not restricted to the type of venture that produce or sell products, but also includes those that render services (Van Aardt & Van Aardt 1997:123).

2.3 Role and importance of purchasing in a homoeopathic practice

Since the Second World War, the purchasing function in an enterprise has gained in importance more than ever before (Baily et al. 1994:61; Heinritz et al. 1991:2-3; Lee & Dobler 1977:3-18; Saunders 1997:20-21). In various literature sources the importance of different aspects of purchasing is explained. Some of these will be discussed below.

2.3.1 Large rand expenditures

Different studies have shown that approximately 40 to 60 per cent of a sales rand in a manufacturing enterprise is spent on the purchasing of materials, supplies and equipment required by that enterprise to manufacture its products (Baily et al. 1994:56; Heinritz et al. 1991:4). It is obvious that this implies large rand expenditures. It is possible to control the expenditure on purchases and the related activities by efficient purchasing management. By doing so, the costs of purchasing can be reduced and unnecessary expenses as well as serious wastes and losses can be avoided (Heinritz et al. 1991:6; Saunders 1997:20). If the purchasing agent can save even small amounts on many purchases, it eventually adds up to a great saving when large quantities are bought (Dobler & Burt 1996:113).

2.3.2 Profit leverage and profit impact

Businesses sell products or services to satisfy the needs of the customers and at the same time to generate profit. In general terms, profit is what remains of sales revenue after all costs to generate the sales, have been deducted. This indicates the profit-generating potential of sales (Cavinato 1984:8). The profit can be increased by selling more items at higher prices, or by lowering the
associated costs in generating the sales. This chapter focuses on one aspect of the associated costs, namely the purchasing costs.

Hugo et al. (1997:12) explains the concept of the profit-leverage effect as follows: “A relatively small percentage saving in the purchasing price may develop into a large percentage increase in net income”. This means for example, that if an enterprise can reduce its purchasing costs with one percent it can increase its profits with ten percent by efficient purchasing. The higher percentage increase in profits as a result of a given reduction in costs, indicates the leverage effect. The leverage can be altered by changes in the prices paid for goods and services, as well as reducing the associated purchasing and inventory keeping costs (Saunders 1997:21).

Along with the profit-leverage effect one can refer to the term purchasing multiplier. This figure shows the amount of additional sales that is required to have the same effect as a specific saving in purchasing costs (Heinritz et al. 1991:7; Hugo et al. 1997:12). The savings on a purchase may be R10, which will lead to an increased profit of R10 for an enterprise. On the other hand, a sales increase of R10 will only lead to an increased profit of a portion of that R10, depending on the profit mark-up of that enterprise (Heinritz et al. 1991:7). Since purchasing costs constitute a large portion of the expenses of an enterprise, a saving in purchasing costs will have a greater profit potential for the enterprise than a similar increase in sales will have (Cronje et al. 1997:361). Furthermore, it is easier for a businessman, even in a one-man business like a homoeopathic practice, to facilitate savings in purchasing than to influence the sales revenue. However, the two approaches, namely increasing the sales revenue and the reduction in the associated costs, are not mutually exclusive: both can be utilised for an even greater improvement in the profit situation.

2.3.3 Return on net assets (RONA)

There are various ratios that can be calculated to indicate the efficiency of a business. One of these is called RONA and indicates the return on net assets (Van Weele 1995:12-14). This ratio is used to express the net profit of the enterprise as a percentage of the assets used to generate the profit. Obviously, a higher ratio indicates more efficient utilisation of the assets. The ratio can be
increased by either increasing the profit figure (return), or by lowering the assets used to generate the profit, or by doing both.

The efficiency of purchasing also influences the return on net assets of an enterprise. The profit-generating power of an enterprise is based on the assets that are necessary to produce the profits. By decreasing all unnecessary direct material costs (of which the purchasing price is the major component), the enterprise will possibly increase its profit margin. This can be done in several ways that will be discussed in the purchasing process (in 2.7). Another option to increase the RONA of the enterprise is by reducing the net capital employed by the enterprise. This can be achieved by leasing equipment rather than buying it or by lowering inventory levels (Cavinato 1984:8; Van Weele 1995:12-13). Strictly speaking, when equipment is leased, it is still a case that assets are used in generating profit, but these are not considered as assets in the financial sense of the word, meaning property of the enterprise.

2.3.4 Return on investment (ROI)

The ROI concept is similar to RONA. In this case the investment (in money terms) made by the owners of the business, rather than the net assets is used as denominator in the ratio. It measures management’s effectiveness in generating profits from the total investment (Bartol et al. 1995:711; Hellriegel & Slocum 1996:599-600; Koontz et al. 1994:620-625; Mondi et al. 1986:503; Stoner et al. 1992:611-612). Leasing equipment will equally decrease the capital amount invested in the business. Similarly, reducing the inventory levels will also reduce the investment required from the owners.

These four aspects are very important indicators (although not the only ones) that are taken into account when banks and other financing institutions consider possible loans to businesses. These financial ratios will also be considered when suppliers or rental firms of capital equipment have to decide whether and to what extent and on what terms credit can be granted. Lastly, even when determining the value of a homoeopathic practice, when buying or selling a practice as a going concern, these aspects will play an important role.
2.4 Purchasing objectives

The overall primary objective of any business concern is the profit motive. This, however, can not be separated by the motive of supplying need-satisfying goods and services. The primary objective of profit generation is usually supported by various secondary objectives. In the case of a homoeopathic practice, these could include aspects of rendering homoeopathic medical services as allowed under the law to people in need (TWR1995).

The objective of the purchasing function must, however, support the overall objective of the business, although it has to concentrate on the particular function of purchasing. *The purchasing objective can therefore be stated as to obtain maximum value for the enterprise in acquiring the necessary supplies and services for the enterprise.* Thus the desired quantity, quality and range of supplies and services should be obtained at the lowest possible overall costs. The overall costs include the actual price paid for the supplies and services, the costs involved in ordering and delivering at the required premises, as well as costs involved in keeping the inventories (Cavinato 1984:6).

According to literature, management can reach the objective of maximising purchase value, by considering the following guidelines:

- purchasing at the lowest possible cost for specific quality of goods and services;
- maintaining consistent quality of materials;
- establishing and maintaining a database of purchasing and stores information;
- continually searching for new and alternative ideas and products;
- utilising vendor resources to the advantage of the enterprise;
- developing reliable and competitive supplier sources with good supplier relations and goodwill;
- avoiding duplication, wastage and obsolescence related to materials;
- reducing administrative costs of purchasing and materials management;
- maintaining the practice’s competitive position;
- maintaining effective recording and other information systems;
Purchasing and inventory management in a homoeopathic practice

- maintaining maximum integration with other functions of practice;
- maintaining continuity of supply to support manufacturing of end products;
- maintaining a sufficient inventory; and
- maintaining minimum investment in materials inventory.


When a purchase is made, all these goals should be kept in mind to ensure efficient purchasing. That is receiving the best value for the money spent by the business for certain supplies or services.

These ways of operationalising the purchasing objective can be summarised as follows:

*The purchasing function of an enterprise must supplement the overall strategic objective of the enterprise, in supporting both the primary and secondary objectives of the enterprise.*

### 2.5 Classification of purchasing goods

There are different considerations for various types of purchases. An elementary fourway classification of purchasing goods can be made to distinguish between various types of goods. Each one of these four categories will be briefly discussed in relation to the homoeopathic enterprise, namely supplies required *in* the production process (2.5.1), supplies required *for* the production process (2.5.2), supplies for *direct resale* (2.5.3), and supplies for the smooth *operation* of the practice (2.5.4).

#### 2.5.1 Supplies required in the production process

Most homoeopathic practises can be considered as micro production units in so far as that the homoeopath dispenses certain medications according to the specific needs and requirements of a particular patient. The materials required for the specific dispensing can be regarded as supplies required in the production process and are materials that may be altered during dispensing.
Raw materials: these are materials which are generally used as a basis for a production process, for example substances of plant, animal or mineral origin.

Semi-manufactured products: these products have been processed to some extent, but are not ready for retail as they need to be processed further. They are physically present in the end product, for example unmedicated lactose granules and laboratory potencies.

Components: these are manufactured goods which will not undergo any more physical changes before they are incorporated in a functional relationship with other components to form the end product, for example glass containers and other packaging materials (Van Weele 1995:15-16).

2.5.2 Supplies required for the production process

These are accessory materials that are essential for the manufacturing process, without physical incorporation into the final product (Van Weele 1995:15-16).

Supplementary materials: these materials are not absorbed physically in the end product, but are used during the production process, for example distilled water and 96% alcohol.

Investment goods or capital equipment: these products are not consumed immediately, but their purchasing value depreciates over some time, for example containers for unmedicated granules, measuring cups used in preparation of remedies and pestle and mortar.

Maintenance, repair and operating materials (MRO items): these materials are necessary to maintain production. They may also be referred to as indirect materials or consumable items, for example office supplies, labels, cleaning materials and paper.

Services: these are activities performed by suppliers or vendors on a contract basis for example an accountant, receptionist, cleaning services and temporary staff.
2.5.3 Supplies for direct resale

These are finished products that are bought with the primary aim to be resold. These include all products that are purchased to be resold with negligible added value (Van Weele 1995:15-16), for example vitamins, minerals, food supplements and registered over-the-counter (OTC) complexes, as well as specially manufactured simplexes or complexes ordered by the practitioner.

2.5.4 Supplies for the operation of the practice

These are items that are found commonly in a medical practice. Some are bought once to use for years, while others are purchased on a more regular basis.

- **Capital investments** for the front office, for example a computer with the necessary hard- and software, calculators, telephone system and a fax/photocopying machine.

- **Furniture** for the consulting room, the reception area, the dispensary and the front office, including filing cabinets and shelves.

- **Diagnostic equipment and material**, for example stethoscope, patella hammer and urine dipsticks.

- **Office supplies**, for example prescription pads, appointment book and other stationery.

- **Reading material** in the waiting room, for example newspapers, magazines and colouring books with crayons to occupy younger patients while waiting.

- **Refreshments** for the staff and patients, for example cold water, coffee and tea.

- **First aid and minor surgery supplies**, for example cotton wool, gauze, Band-aids, towels and disinfecting liquid.
Routine sterile equipment, for example tongue depressors, surgical gloves and a white coat.


2.6 Make-or-buy decision

The decision whether to make or buy products can be quite involved in certain industries (Baily et al. 1994:187-191; Lee & Dobler 1977:313-315; Saunders 1997:153-162; Van Weele 1995:18). In the homoeopathic practice it can also play an important role. A thorough analysis is necessary to determine whether to buy raw materials, semi-manufactured products for own preparation of remedies in the practice, or to buy the finished product for direct resale. It is also possible that a homoeopathic practitioner can specify the ingredients as well as process to prepare specific remedies and contract an outside vendor to supply these. This is referred to as outsourcing or subcontracting (Baily et al. 1994:193-199; Dobler & Burt 1996:191; Saunders 1997:156, 269-272).

There are a number of factors that influence the make-or-buy decision, namely cost considerations, quantity required, frequency of use, quality control on the product (bearing in mind that these products are homoeopathic remedies), reliability of suppliers and considerations regarding inventory keeping. The practitioner needs to take all these factors into account before deciding on a specific route. Concentrating on one or two factors only could lead to a wrong decision.

2.6.1 Cost considerations

The calculation of the costs should include the total costs involved in making the product compared to the total costs involved in buying the final product. There are certain factors to keep in mind when analysing production costs. These are the costs of raw materials, delivery costs to the enterprise, direct labour costs (in manufacturing the remedies), overhead expenses, set-up costs, equipment maintenance and depreciation of equipment, packaging and normal wastage and

2.6.1.1 Making products

In the homoeopathic practice, there are two different ways of preparing remedies (TWR 1995). Firstly, the homoeopath can buy different stock remedies in different potencies from laboratories. These stock remedies have a high alcohol content and are used to impregnate unmedicated lactose tablets, pillules, granules, powders or alcohol-water solutions. Secondly, the practitioner can buy the crude substance for each remedy and prepare the mother tincture and subsequent potencies by hand. Apart from the disadvantage that this is a long and laborious process, some of the crude substances are not readily available, for example arsenic and cannabis (dagga) (TWR 1996a). Depending on the nature of the crude substances, special laws and regulations need to be attended to (TWR 1995).

Cost of raw material

Regarding the costs of raw material, the analyst should consider all components involved in remedy preparation, including unmedicated stock, crude substances and alcohol or different potencies of the different remedies as are described in the materia medica, clean amber glass containers with lids, and labels (TWR 1996a). In analysing the costs it is important to focus on the long term for future cost changes of raw material, material transportation and labour, as well as changes in the exchange rate since the supply of a large number of remedies is dependent, directly or indirectly, on suppliers overseas. These costs should be calculated in reference to statistics of price increases of suppliers during the previous few years (Dobler & Burt 1996:195).

Delivery costs

Delivery costs must in all cases be included in the total cost calculations. The transportation costs of raw materials will depend on the specific raw material and the place of its availability.

Direct labour costs

Direct labour costs are minimal when the practising homoeopath prepares the remedies himself or when the receptionist assists with it as part of her normal duties without extra
payments involved. The receptionist is, however, not allowed to prepare or dispense remedies (TWR 1995). The cost of time should also be discussed here. If the time spent by the homoeopath to prepare these remedies could have been used to consult more patients and thus generate an income through consultation fees and the supply of remedies, this cost should be seriously considered.

Overhead expenses
Overhead expenses depend on the facilities that already exist in the practice. For preparing remedies from crude substances, a practitioner will need much more storage and working space to desiccate plant substances or for the trituration of elemental or animal substances. He will need, for example, a basin with hot and cold running water and a large storeroom to store tincture and potencies away from light. For the preparation of remedies from stock potencies, the practice must have a basin with hot and cold running water as well, a relatively small area for the final preparation of the product and less storage space to keep all the stock potencies and unmedicated lactose units (TWR 1996a).

Set-up costs
The set-up costs for base preparation from crude substances will also vary, depending on the extent of preparation. For the full preparation much more equipment is necessary. These include: cutting boards, knives, pestle and mortar, various sizes measuring equipment, an accurate scale, many large amber glass containers to keep mother tinctures for long periods of time, and an oven or autoclave for sterilisation of all the equipment. For the preparation of remedies from stock potencies the practitioner may only need measuring cups (TWR 1996a).

Equipment maintenance and depreciation of equipment
Regarding equipment maintenance, the practitioner must bear in mind that glassware can break easily and then need to be replaced. Similarly, most equipment depreciate with time due to a limited life span or it will need expert service from time to time.
Packaging
Packaging would be equally costly for the preparation of remedies from crude substances or from stock potencies.

Wastage and spoilage costs
Wastage and spoilage costs can be high if a practitioner prepares remedies from the crude substances. Not every part of the purchased crude substance can be used. If anything adverse occurs during the preparation of a tincture or potency, the whole batch may be spoiled. This coincides with other risks, for example, the wrong crude substance may be purchased, it may be contaminated, or the quality might for whatever reason, not be up to standard.

Another issue concerning risk of spoilage is that many of the potencies made in the potentising process are not regularly used and are discarded and cannot be recovered by the cost of the practitioner. For example, to make a 30 CH potency only one part 29 CH in 99 parts water/alcohol is used, and all the other potencies are discarded. Thus it will be sufficient to keep one container with 29 CH to use as medicating potency.

The spoilage risk of preparing remedies from stock potencies is much lower as the practitioner works with a smaller quantity at a time. This risk may include accidental spoilage of an entire container of liquid or pillules, inaccurate labelling of remedies, and the risk of a faulty delivery from a laboratory.

It is seen that there are a vast number of factors to consider when investigating the cost of making a product.

2.6.1.2 Buying finished products
The costs involved in buying a finished product include the total cost of finished products as per invoice, transportation charges and costs in respect of handling and storage (Heinritz et al. 1991:162-164).
Overhead expenses

Overhead expenses for buying the final product consist mainly of large storage space for all the remedies purchased. It is also apparent that quality control in an independent homoeopathic practice can not be at the same level as in a professional homoeopathic laboratory.

Set-up costs

No set-up costs are involved in buying the final product.

Packaging

The packaging of final products may be negligible if these are resold as they are received from the various laboratories. In the case when the practitioner buys remedies in bulk and repacks in smaller quantities, or dispenses per specific patient, the cost of packaging materials will obviously be substantially higher.

Wastage and spoilage costs

The spoilage risk in buying finished products is almost negligible and only accounts for accidental breakage of a container.

It is seen that some of the costs to consider in buying the finished product are similar as were found in the investigation for making remedies.

2.6.2 Quantity factor

When considering making remedies from crude substances it should be decided if the practitioner will need enough of a specific remedy to warrant the process and time input. As mentioned before, this is a laborious and time-consuming process.

In analysing the make or buy situation, it should be noted that normally only in the case of large quantities of products to be manufactured, a cost saving potential is possible that is sufficient to warrant the special manufacturing process (Dobler & Burt 1996:201-202; Heinritz et al. 1991:164). With the ever-present added risks and hidden costs, one must be very cautious to
venture on this route. As a general guideline, this should only be considered in a large practise when a great need for the specific substance, over the longer term, is expected. Alternatively, this route can also be considered when the particular remedy is not otherwise available.

2.6.3 Quality control

Manufacturers often decide to produce their own components for better quality control (Heinritz et al. 1991:164). In a homoeopathic practice this is often the other way, around. Large laboratories perform regular tests of diverse nature on their products to check the consistency of the quality. The equipment used for these tests is large and expensive and not readily available to practitioners. It must also be noted that this additional equipment would negatively impact on financial ratios such as RONA and ROI (as discussed in 2.3). If the use of these cannot improve the average profitability of the practice, it should rather not be used. On the criterion of quality control of remedies as such, a buying decision would in general terms be favoured, either of the final product and of stock potencies.

2.6.4 Suppliers

Unreliable supplies can often force a practitioner to manufacture his own products. At present, this is not such a serious problem as was the case some years ago. The position was relieved due to a larger number of suppliers available to choose from (Cavinato 1984:27; Dobler & Burt 1996:201). In South Africa there are various reliable suppliers, namely Bioforce, Homeomed, Natura, Pharma Natura, W Last and others. Apart from these laboratories, with the lifting of sanctions against the country, it is possible to directly import the required remedies (either as final product, semi-manufactured product or as raw materials) from overseas laboratories. As a matter of fact, this route is used extensively by a number of practising homoeopaths.

A factor influencing the decision to buy is the supplier’s specialised knowledge and research (Dobler & Burt 1996:201; Heinritz et al. 1991:166). Homoeopathic laboratories are specialised to manufacture different simplex remedies in different potencies, as well as complex remedies. They usually have specialised equipment to increase their efficiency and their quality control.
Design secrecy (Dobler & Burt 1996:200) on the side of the suppliers can force a practitioner to buy a specific product which he knows is effective for a certain disease condition (for example complex remedies). On the other hand, the practitioner may rather prepare his own complexes from stock solutions if he has a secret formula for a remedy complex that works well. Freedom of selection from different suppliers may favour a buying decision if the practitioner does not want to stick to the same product for long.

Suppliers may discriminate against practitioners who only buy part of their supplies from them and give preferential treatment to practitioners who buy the final product from them (Heinritz et al. 1991:164). In a small market like that of South Africa, and with competition by international laboratories, it would be shortsighted if the local laboratories refuse to serve the local practitioners with what they require. A negative attitude (of boycotting local needs) would eventually impact negatively on the business prospects of such laboratories.

2.6.5 Inventory considerations

The inventory considerations will be investigated in Chapter 3.

2.6.6 Other considerations

There are various other aspects that need to be attended to. Since they are not as important to warrant a full discussion in a dissertation of limited scope, some are listed below merely to give a more comprehensive picture of the magnitude of the issue.

**Government regulations** may prohibit the manufacturing of specific products (Heinritz et al. 1991:165), for example the preparation of opium from the crude substance.

**Tax policies** may influence the practitioner in various ways (Heinritz et al. 1991:165), for example different import regulations and tariffs may apply to the import of crude substances, raw materials or ready-to-use remedies.
War, boycotts, strikes or bad economical conditions can influence the choice to make or buy (Heinritz et al. 1991:166). The practitioner may find that it is difficult for suppliers to fulfil his needs if these conditions prevail.

2.7 Purchasing Process

Three phases in the purchasing process are identified in various sources of literature (Cavinato 1984:25, 52, 248; Cronje et al. 1997:347, 378-383; Dobler & Burt 1996:64; Heinritz et al. 1991:76; Pickle & Abrahamson 1990:420; Van Weele 1995:148). The first is the notification or need detection phase (2.7.1) which is concerned with purchase order specifications including a product description and the quantity, quality and timing of the need. This is followed by the order phase (2.7.2) which includes the selection of suppliers, negotiation, placing of the order, receipt and inspection of the purchased goods, and expediting of the purchase. Lastly, the post-order phase (2.7.3) is described during which discrepancies are sorted out, documentation handled and processed, and the supplier is paid.

2.7.1 Phase 1: Need detection phase

Cavinato (1984:25-26) states six categories into which different types of needs can be divided. These are raw materials, semi-finished goods, finished goods for resale, MRO items (maintenance, repair and operating supplies), general services of all types and capital goods for long-term use. The entrepreneur often concentrates so much on the first three categories that the latter three are forgotten. However, the same general guidelines apply to all six categories.

According to Cavinato (1984:28), need detection is the determination and communication of the desire to obtain specific goods or services. In larger firms a requisition must be filled out and sent to the purchasing department (Dobler & Burt 1996:64; Heinritz et al. 1991:73). In the homoeopathic practice where the owner usually handles the purchasing action, a requisition is seldom used. However, the identified need should still be recorded.
The need must be described sufficiently to ensure the purchasing of the correct product (2.7.1.1) in the correct quantity (2.7.1.2) and with the desired quality (2.7.1.3) at the right time (2.7.1.4) without misunderstanding on the part of either the supplier or purchaser (Pickle & Abrahamson 1990:420). This will be described briefly.

### 2.7.1.1 Description of the correct product

A clear description of the product needed is required to ensure correct ordering of the needed products. Product descriptions of finished items can be based on either external or buyer descriptions.

**External descriptions** include brand names, market grades and commercial grades.

- **The brand name** is a sufficient way of describing quality when ordering from a supplier to whom that brand name is unique, for example specific complex homoeopathic remedies from specific homoeopathic laboratories. The advantages of using brand names are that it is easy to administer and communicate even when ordering by telephone. This is also useful if the complex is registered or if the ingredients are not made known. The disadvantage is that it is often more expensive due to the cost of product research and marketing of the product.

- **Market grades** are used to classify the quality of raw material as plant (Class 1 onions), animal (Class A beef) and mineral substances (24 carat gold). However, substances intended for use in homoeopathic remedies are not usually bought from the open market, but have to comply with certain homoeopathic quality standards.

- **Commercial grades** describe the form in which a specific substance is usually available (Cavinato 1984:49-50), for example amber glass containers taking 100 ml, 250 ml or 500 ml. This is also applicable to the size of the container of complex remedies or final products.

**Buyer descriptions** in general include the following five options: blueprints, the method of manufacturing, a physical description, performance specification and sample testing. This will be explained briefly.
• **Blueprints** in the homoeopathic set-up can be explained as a specific complex of certain remedies that is prescribed by the practitioner on a regular basis for a specific condition. This complex can be the homoeopath's own recipe which is prepared specifically for him by a laboratory. This will take some negotiation, as the firm may want to commercialise that specific complex to sell it at a profit.

• A **specific method of manufacturing** can be requested by the buyer firm. Therefore the buyer can prescribe whether he prefer a hand-potentised remedy in any potency he requires or a machine potency. This may often result in an increased price if the manufacturing process is very involved and time consuming.

• A **physical description** of the form in which the homoeopath would like his remedies is also important. Homoeopathic remedies are available in several different forms: powders, granules, pillules, tablets, liquids (drops or syrups), ampules (drinking ampules or injectables) or suppositories. The purchaser should state clearly in what form the remedies are desired.

• **Performance specifications** are used when the purchaser is uncertain which specific complex or single remedy is needed. He will state the minimum requirement expected of the product and then leave the decision of a specific product to the supplier, for example ordering of a malarial prophylactic.

• **Sample testing** is another way by which the purchaser can order products. The supplier leaves samples to be tested by the practitioner. After using these and it is found acceptable, an order can be made with the expectation that the quality of the purchase will be equal to that of the samples (Cavinato 1984:50-52).

*The purpose of these descriptions is that the buyer and the seller agree on what is being ordered. When the product is delivered, the homoeopath must make sure that he has received what he has ordered. That would eliminate embarrassment and unnecessary costs when he realises that the wrong materials have been delivered when he actually needs the real remedy.*
2.7.1.2 Description of the correct quantity

To determine the correct quantity of products to be purchased, the practice needs a good inventory-holding system that can display the current inventory status at any time. Such a system enables the purchaser to identify what should be purchased in what quantity, and what should not be purchased because of sufficient quantity in hand (Cronje et al. 1997:383). An easy technique to determine the quantity of inventory needed by the enterprise is by calculating the economic order quantity (EOQ). More attention will be given to inventory control and techniques involved in the control process in chapter 3.

2.7.1.3 Description of the correct quality

Quality in purchasing is important because the quality of the final product sold by a firm is largely determined by the quality of the raw materials.

When using the term quality, it refers to the attributes or characteristics of a product or service (Cavinato 1984:148). It is also the degree to which the totality of properties of a product or service meets the requirements set for its practical purpose (Van Weele 1995:148). Another definition is continuous conformation to the expectations of the client (Cronje et al. 1997:347).

Quality control is necessary to ensure that set requirements are satisfied. Thus both the supplier and purchaser should agree on the basic requirements of the transaction and the way in which these requirements are to be met. They should agree on the method of checking that these are fulfilled and lastly, on what measures should be taken if these are not met (Van Weele 1995:149-150).

Quality assurance is necessary to keep up the methods and procedures of quality control (Van Weele 1995:150). Several methods are available for this way of assessing suppliers, including products audit, process audit and systems audit (Van Weele 1995:57-58). Based on the results of the verification process a decision can be made to either renew the contract with the present supplier or to look for an alternative (Van Weele 1995:60). It is nonetheless advisable to hedge oneself by having more than one supplier for a specific item, wherever possible.
The purchaser must know that changes in quality can occur during an economic downturn when cost reduction programmes are implemented, as well as during supplier management changes (Cavinato 1984:53). In some cases these changes would not substantially affect the final product, but in other cases it could be crucial.

The homoeopathic practitioner is dependent on the correct quality of the purchased products that the desired results are obtained when treating a patient. When a patient's symptoms remain unchanged, the homoeopath may need to question the quality of the products received from the supplier.

2.7.1.4 **Description of the correct timing**

The purchaser must determine the correct timing for purchasing of inventory (Cavinato 1984:152-159; Lee & Dobler 1977:230-236). There are several factors influencing this timing, namely business cycles, price cycles, production capacity, lead times (order cycle times), labour negotiation cycles, corporate constraints and public policy constraints. These are briefly explained.

- **Business cycles** are of varying length and consist of four periods. Firstly, recession is the period of low activity. It is often referred to as a buyer's market due to low prices and the many concessions available. This is also a time of many bankruptcies. The recession is followed by a period of increased activity with a rise in sales and production. Prices are firmer and concessions are not as easily granted. In general, order cycle times lengthen and buyers want long-term contracts to fix a purchase at the current price. The peak of the order cycle with the highest overall activity is during the boom period. This is referred to as the seller's market. Suppliers show high profits and often cannot keep up with production. The final period in a business cycle is the contraction when economic activities are dropping again. Sales and production decrease, prices are lower and order cycle times shorter. Often buyers purchase smaller quantities, as with each purchase the cost is lower than the previous purchase and has shorter lead times.

- **Price cycles** are often related to business cycles. If these are regular a purchaser can calculate the most effective time to buy a set amount of inventory. In a time of an increase in prices the
purchaser buys more inventory, while in a time of decreasing inventory, he will buy less.

- **Production capacity** refers to the ability of the supplier to supply inventory. During upswings in price, production capacity becomes utilised quickly resulting in higher sales rates. Inventory will be depleted faster than production can supply, leading to longer order cycle times.

- **Lead times** or order cycle times are the total length of time needed for the receipt of goods from the original order transmission. It includes the processing of the order, production, shipping and transportation and even the inspection of the received inventory. Generally speaking, the lead time will increase as vendor sales increase, leaving their inventories depleted and it will decrease with decrease in sales.

- **Labour negotiation cycles** are important as new labour contracts can cause an increase in costs, while pending labour negotiations may result in a strike and disrupt supplies.

- **Corporate constraints** involve the capacity of the purchaser to store purchased goods; cash flow fluctuations preventing favourable purchases; and the accounting fiscal cycle when the enterprise wants lower inventories for the annual balance sheet.

- **Public policy constraints** pertain to important regulations and taxes set by the government, and the interest rate set by the Reserve Bank.

Although the orders made by the homoeopathic practitioner may not be as large and may not involve as much money as those of large international companies, it might still be worth the effort to investigate the factors influencing the timing of an order. There may be definite business cycles and price cycles at the laboratories that may favour purchases made during certain times. The laboratories’ production capacity can also play an important role that may affect the lead times of products. The cycles mentioned can suggest times of possible reduced prices at the suppliers. Keeping these factors in mind, the best time for orders can be determined.

To ensure reliable performance from the supplier, the homoeopathic purchaser needs to prepare
sound purchase order specifications. These will prevent many problems of incorrect deliveries and the resultant time-delays.

2.7.2 Phase 2: Order phase

The inventory sold or used in services by the enterprise makes a direct contribution to the success of the enterprise (Dobler & Burt 1996:212). Therefore it is necessary to select the best possible products from the best possible suppliers. One should remember that supplier selection is a continuing process with changing circumstances and needs (Cronje et al. 1997:387).

The order phase includes supplier selection (2.7.2.1), negotiations (2.7.2.2), placing of an order (2.7.2.3), receipt and inspection of a purchase order (2.7.2.4), and expediting an order (2.7.2.5). These aspects are briefly explained.

2.7.2.1 Supplier selection

Literature identifies and describes four stages in supplier selection: survey; inquiry; selection and negotiation; and experience and evaluation (Cavinato 1984:27; Heinritz et al. 1991:150).

Survey stage

During this stage, all relevant sources should be identified regarding their logistical and financial feasibility. The sources could be identified by using the following:

- industrial registers- these do not always contain complete lists of suppliers;
- city directories - listing the supplier's name, address, telephone number and products sold;
- supplier catalogues - printed by supplier, listing products and price list;
- yellow pages;
- Internet;
- Electronic yellow pages;
- mail advertising sent by suppliers, including promotional literature;
- trade shows and exhibitions;
- sales representatives;
During this stage, the purchaser can consider international sourcing. This method is, however, subject to some advantages as well as some disadvantages. Some advantages of international sourcing are a broader market, lower prices and better quality (Cavinato 1984:207-208). The disadvantages of international sourcing include the unpredictable fluctuations in currency levels, governmental legal constraints and trade regulations, import and customs duties, increased costs of communication and transport, high initial costs to investigate the potential of international suppliers, language barriers, as well as longer lead times and higher insurance costs (Cavinato 1984:101,211; Dobler & Burt 1996:268-269; Heinritz et al. 1991:35).

**Inquiry stage**

During this stage the purchaser should evaluate the suppliers' relative quotations, qualifications and advantages (Cavinato 1984:27). The purchaser should note the suppliers' sense of responsibility, including their financial fitness and their willingness to meet the set quality, price and delivery requirements. The buyer should give attention to the suppliers' responsiveness, their reaction to inquiries by the buyer and the degree to which they meet the specifications of purchase orders and other buying arrangements. Finally, the purchaser should see how well they meet expectations, including long-term factors, and their helpfulness in developing alternatives or solving problems experienced, or concerns that they may have (Cavinato 1984:90).

In the *inquiry phase* a self-assessment questionnaire can be sent to the suppliers to supply some of the basic information on the supplier. A list of issues to be addressed in this questionnaire is set up by Lisa Ellram (Saunders 1997:265). Other authors also discuss some of these aspects. The most important issues include the following:

**Financial issues.** These include the acquisition costs as well as the economic performance and financial stability of the supplier (Cavinato 1984:93-94; Dobler & Burt 1997:240-242; Heinritz et al. 1991:132; Kreitner 1986:621; Saunders 1997:266). The acquisition costs are more than merely the price of the supplier, but it includes taxes,
transportation costs, inventory carrying cost, inspection and cost of rectification if the product is not satisfactory (Baily et al. 1994:10; Block 1988:63-64). Even insignificant price differences can amount to a great saving when a large purchase is made (Kreitner 1986:622).

**Organisational culture and strategic issues.** These aspects include a feeling of trust and reliability exhibited by the supplier. Their management attitude and outlook on the future, their strategic fitness, and their top management’s compatibility across levels and functions of buyer and supplier firms are also important aspects. Referral lists of customers, as well as their general business policy, will give an estimate of the reliability one can expect of them (Heinritz et al. 1991:132; Kreitner 1986:622; Saunders 1997:266).

**Technical issues.** These issues include an assessment of current and future manufacturing facilities and capabilities, the suppliers’ design capabilities and their speed in development (Dobler & Burt 1997:241; Heinritz et al. 1991:132; Saunders 1997:266). This also includes the quality of the products supplied by a specific company (Kreitner 1986:622).

**Other factors.** These factors include the safety record (uninterrupted production), business references, the supplier’s customer base and geographical location (Cavinato 1984:95; Saunders 1997:266). It is also important to note what their policy is regarding minimum orders and payment arrangements (Block 1988:64).

Some of this information could be obtained through plant visits at laboratories, by an evaluation of samples, or by presentations done by the suppliers. Plant visits are necessary to evaluate the equipment, quality control, the technical competence of the employees and management and to strengthen relationships (Cavinato 1984:28; Dobler & Burt 1996:242).

The information collected during the *survey and inquiry stages* should be kept systematically in a purchasing library or filing system for future information (Cavinato 1984:27). The library should contain the name of each supplier, the telephone (contact) number, a list of material or products available from each, the delivery history, the quality record, each suppliers’ overall desirability and
finally, general information on the plant and its management as experienced by the investigator (Dobler & Burt 1996:215).

Selection stage
This stage follows when all information collected during the survey and inquiry stages can be compared. The purchasing agent should consider all the collected data before making a decision on the most suitable supplier. This decision is not fixed, but can be changed with changing circumstances in the practice or outside environment.

Experience and evaluation stage
The final stage in the decision to select suppliers is the experience and evaluation stage. The purchase agent should evaluate the supplier on all the aspects that were investigated. A report of this evaluation should be included in the purchasing library.

It is important to note that supplier goodwill can be quite an asset to an enterprise. The supplier will go to great lengths to give supreme performance and extra service, to assist the purchaser with product development, with value analysis and with timely delivery, especially of an urgent need (Dobler & Burt 1997:212-214, Saunders 1997:252). One should remember that good relationships are built over many years and it will improve with experience and growth in mutual understanding.

There are some basic guidelines to ensure good buyer-supplier relationships. Communication concerning the desired product should be complete and clear. There should be mutual understanding of the conditions and problems of both the usage and production of a certain product. Each party should have confidence in the statements and intentions of the other. There should be mutual consideration of each other, which entails no unreasonable demands, as well as mutual fairness in discussion of differences. A genuine interest in mutual problems should enhance suggestions for cost reduction in the product itself, as well as in packaging, shipping, usage and accounting.

Co-operation to fulfil contract obligations is important. This includes prompt shipment by the supplier to minimise the need for inquiries and expediting actions. On the other hand, the purchaser should process the invoices promptly to speed up the payment process. As the
opportunity arises, there should be continued improvement of ordering methods and supplier service. Finally, it is worthwhile to cultivate personal contact for better liaison and goodwill (Heinritz et al. 1991:169).

2.7.2.2 Negotiations

After a shortlist of feasible suppliers is identified, some negotiations can take place in selecting a single or a number of suppliers (Hugo et al. 1997:242; Lee & Dobler 1977:146-147; Van Weele 1995:240-241). Negotiations result in the compilation of some type of purchasing contract of which the most common ones include a purchase order and a purchase order draft. A purchase order is a document that has legal implications for both supplier and purchaser. It constitutes an offer to buy. It is usually for non-routine purchases, of which the relationship with the supplier is terminated upon delivery and payment of goods. A variation of this is the purchase order draft which entails a signed bank draft which the supplier may deposit in his bank account upon shipment of the purchase (Cavinato 1984:28-29; Cronje et al. 1997:380).

Other types of negotiated contracts are standing orders and systems contracting or blanket ordering. Standing orders are also called open-ended ordering. It is the delivery of goods at fixed, agreed to prices over a defined period. This is also applicable to maintenance services. Systems contracting or blanket ordering are used for large volumes of standardised products, for example MRO items. It is generally an agreed-to volume of purchasing goods between the buyer and supplier over a given time period. However, a specific quantity is not fixed in the contract (Cavinato 1984:29,30; Dobler & Burt 1996:80). In essence, a blanket ordering system is an expression of the intention of the buyer to purchase all or part of the company’s requirements of repetitive items from a specific supplier in a given time period (Heinritz et al. 1991:82).

A purchase order only becomes legally valid when the supplier “accepts” the buyer’s offer. This could take place either by formal notification or simply the performance of the contract (Dobler & Burt 1996:71).

There are a number of issues that should be stipulated in the purchasing agreement. In this regard the buyer has a very important role in the negotiation process (Lee & Dobler 1977:147-154).
General identification of both buyer and supplier is needed. This includes the names and addresses of buyer and supplier, the order number and the date that the order is placed. The financial obligations should be defined. This includes the negotiated price and any discounts and terms of payment. Other information includes the quantities of specific products, the quality required, delivery dates, and customs and exchange rate clearances for international purchases. Some general terms and conditions to protect the buyer and supplier should be sent with the order or contract. This includes the policy regarding payment, delivery and acceptance of the purchased goods, transfer of risks, compliance with quality requirements, over- and under-deliveries, statutory regulations and patent rights (Cronje et al. 1997:380; Heinritz et al. 1991:74; Van Weele 1995:49).

Each of the few suppliers in this field has an own set purchasing agreement that is used for most purchasers. It includes their general terms and conditions regarding payments and discounts. However, some negotiations with the supplier can result in less strict application of these terms and conditions under certain special circumstances and may result in discounts on purchasing prices. There are several different types of discounts available at suppliers. The following is a brief summary of discounts.

- **Trade discounts.** These are determined by the supplier for specific clients, for example exporting agents and wholesalers (Dobler & Burt 1996:309-310; Heinritz et al. 1991:215-216; Lee & Dobler 1977:112-113).

- **Quantity discounts.** These are based on reduced costs for selling, shipment, accounting detail and added business assurance by larger orders (Heinritz et al. 1991:216; Lee & Dobler 1977:113; Van Weele 1995:224). It could be granted on a specific quantity of items, a specific monetary total amount at a specific time, or a specific monetary total over an agreed period (Block 1988:63; Dobler & Burt 1996:30). It can be considered to pool orders with other practitioners to obtain substantial savings (Block 1988:63).

- **Cash discounts.** These are offered to ensure prompt payment of invoice charges (Dobler & Burt 1996:311, Heinritz et al. 1991:216-217; Lee & Dobler 1977:113-114; Van Weele 1995:224). The purchasers could calculate the saving with the discount and compare it with
the interest that the money would draw in a bank. Most cash discounts are two percent if payment is made within ten days and no interest is raised if payment is made within thirty days (Dobler & Burt 1996:311).

Special sales and promotions can be valuable even if you do not need stock at the moment (Block 1988:62; Van Weele 1995:224), however these sales could influence inventory negatively if the so-called bargains are accepted indiscriminately.

Other issues to be found in the purchasing agreement are the terms of delivery (Van Weele 1995:50), transfer of title (Pickle & Abrahamson 1990:428-430; Van Weele 1995:54); insurance and safety regulations (Van Weele 1995:54) and penalty clauses and warranty conditions (Van Weele 1995:51).

Each party should take certain responsibilities regarding penalty clauses and warranty conditions. The supplier must guarantee good quality products that meet the requirements, specifications, conditions and other aspects agreed to, to fulfil their intended purpose. They should ensure that all legal and governmental regulations are met and that the product does not contain any risk regarding the health or security of the user (Van Weele 1995:51).

If the agreed performance is not met, this contract should state the corrective measures and the resulting costs should be recovered from the supplier (Van Weele 1991:51). The warranty period is usually twelve months. The contract should state when the warranty comes into effect (Van Weele 1991:34).

2.7.2.3 Placing of an order

The next stage in the order phase is the actual placing of the order. When ordering specific products, the purchasers should double-check the purchasing order to ensure fast and faultless delivery. Postal ordering methods have been outdated by fast developing electronic technology. Telephone/fax ordering systems reduce paper work, but are suitable for small orders only. Both parties should be trustworthy and reliable to ensure correct ordering (Dobler & Burt 1996:83; Heinritz et al. 1991:81).
Electronic Data Interchange (EDI) is a form of Electronic Commerce. It refers to the electronic transfer of computer data from one firm to another. It eliminates many paper forms and achieves a level of speed and accuracy that is far beyond the written and oral media. EDI is excellent for achieving a competitive advantage (Baily et al. 1994:272-273; SAICA 1995:3). It is at present not widely facilitated by the Internet due to the perceived lack of sufficient security, confidentiality and guaranteed delivery. These problems are addressed at present. It is projected that EDI on the Internet will soon also be a reliable method.

There are basically two methods to accomplish the transfer of EDI transactions, namely sending the data directly from one computer to another, or sending the data to a third party that consolidates the data and sends it to the proper location. In both methods there are two important considerations, namely establishing the physical links between the contracting parties, and transferring the data in a format compatible for all users.

The main advantages of EDI are the reduced human error rate, lower production cost per transaction and reduced time from placing an order to completing it (Baily et al. 1994:272-273; Dobler & Burt 1996:83-84, 104; Heinritz et al. 1991:82; Hugo et al. 1997:34-38; SAICA 1995:3).

2.7.2.4 Receipt and inspection of the purchased goods

Another issue in the ordering phase is the receipt and inspection of the purchased goods, followed by acknowledgement of the receipt of the purchase. Receipt of the purchased goods can take place in various ways: by collection, delivery by delivery person from supplier, by courier services or by post. Upon receipt the buyer should check the quantities and condition of the purchased goods against the packaging slip which itemises and describes the contents of the parcel. The packaging slip should furthermore be used with a copy of the purchasing order to verify that the correct material is delivered (Cronje et al. 1997:380; Dobler & Burt 1996:77).

2.7.2.5 Expediting

A dictionary explanation of expediting would refer to assist the progress of something. In the
manufacturing industry, operations may be subjected to expediting. In order to achieve the purchasing responsibilities of delivery on time, expediting is frequently undertaken (Baily et al. 1994:110-111).

If any discrepancies occur, the invoice should be returned for corrections. If the material is rejected, authorisation should be obtained from the supplier for return and replacement. Any corrections made on the invoice should be accompanied by a change in the transaction date in order that the buyer can still qualify for purchase discounts and warranties (Pickle & Abrahamson 1990:422). The delivery note should be signed as proof of receipt (Cronje et al. 1997:380).

2.7.3 Phase 3: Post-order phase

The final phase in the purchasing cycle is the post-order phase. Any discrepancies in ordering arising from and not dissolved during the previous phase are attended to in this phase. All documentation (purchase order, invoice) should be crosschecked and calculations should be checked for accuracy. This should be done as soon as possible and also be communicated to the supplier (Dobler & Burt 1996:74).

Payment of invoices should be done promptly to qualify for purchasing discounts as well as to strengthen buyer-supplier relationships. Many suppliers work on a cash on delivery (COD) system. This payment can be done from petty cash when the amount is small enough, or by a departmental cheque for larger sums (Dobler & Burt 1996:84; Heinritz et al. 1991:82). Some companies have a corporate purchase credit card to be used for cash purchases. This is only practical if the delivery person has a facility to take a credit card or when the buyer is collecting the purchased material from a company. The advantage of a credit card is that it reduces the purchasing cycle and improves purchasing relations. It has the disadvantage that there is limited control over the usage of the card and thus provides opportunity for fraud (Dobler & Burt 1996:84-85).

All documentation of the purchasing process should be recorded. A logical system of recording is to keep files for each of the following categories: open orders, closed orders, purchase order logbook, supplier record, commodity record and contract record (for long-term contracts). The
information should be kept in a specific order, for example alphabetically according to the product or supplier’s name, or in numerical sequence by the order number or date (Dobler & Burt 1996:75).

Finally, the buying process for each purchase should be evaluated (Cronje et al. 1997:380). Product analysis, process analysis and systems analysis could be important in this analysis. The result of the evaluation should indicate strengths and weaknesses in the purchasing process. The necessary action must be taken to improve the achievement of the purchasing objectives.

2.8 Purchasing management process

Purchasing management entails the planning, organising, leading and control of all the activities in the purchasing process for optimum performance in maintaining and increasing profitability. Management aids, like benchmarking, purchasing budgets and purchasing policy, could facilitate the management process (Cronje et al. 1997:358, 362). Each one of the purchasing management functions will be considered briefly.

2.8.1 Purchasing planning

This function entails the following aspects:

• the setting up of objectives, aims and goals for purchasing,
• the drawing up of plans to attain these objectives, and
• the optimal application of resources, including human resources, physical facilities and funds.

It is important to note that the objectives and plans of purchasing are subordinate to those of the enterprise and these should be supporting those of the enterprise (Bartol et al. 1997:13; Cronje et al. 1997:362).

Planning in large companies is done on three levels: strategic, tactical and operational (Cronje et al. 1997:363). The owner of the homoeopathic enterprise usually attends to the requirements of
all three these levels.

Strategic planning is usually a long-term scenario with annual control and evaluation of the proceedings. It contains development features and is involved with setting out of goals and policies, for example profitability and market penetration, return on capital, customer satisfaction and total quality. Some other elements usually considered are purchasing research and forecasting availability (Baily et al. 1994:19-20, 38; Baird et al. 1994:109-110; Bartol et al. 1997:27, 170; Cronje et al. 1997:364; Mondi et al. 1986:86, 104-122, 603, 625).

Tactical or medium-term planning is also controlled annually, but in a more comprehensive manner. It consists of the development of buying and selling plans, forecasting cyclical fluctuations, identifying problems and opportunities involved in negotiation and contracting, in preparing a budget, developing cost reduction techniques and it provides support for capital expenditure decisions. It also identifies the need for policy decisions, personnel development and interface development (Baily et al. 1994:19, 38, 40; Baird et al. 1994:111; Cronje et al. 1997:364; Mondi et al. 1986:86).

The tactical plan provides a basis for an annual plan that confirms the details of levels of sales, production, purchasing and capital expenditure activities. It should allow rapid analysis of variances to indicate changes and the reasons for those changes (Baily et al. 1994:40).

The tactical plans support the implementation of strategic plans. These plans are generally developed by middle managers and outline the steps for particular departments to reach tactical goals. Generally, they are more specific and concrete than strategic plans (Bartol et al. 1997:171).


There are several factors that should be taken into account for effective integrated planning. These include the external environment, market research, the supply strategy and policy, and the
implementation thereof, as well as product development and source selection.

The external environment can be considered by doing a macro economic analysis (Baily et al. 1994:33-34; Bartol et al. 1991:78-84; Cronje et al. 1997:58-60; Hellriegel & Slocum 1996:78-80). Some authors refer to it as the PEST analysis looking into Political, Economical, Social, and Technological factors influencing the enterprise. Other authors identify more sub-environments affecting the enterprise. Examples of PEST are:

**Political / legal**
- world changes
- instability in various countries - especially for imports

**Economic**
- interest rates
- recession
- exchange rate fluctuations
- per capita income

**Social**
- populations
- demographics
- social mobility
- lifestyles
- income distribution

**Technological**
- new discoveries and inventions
- rate of obsolescence
- technology transfer of information (Baily et al. 1994:34).
2.8.2 Purchasing organisation

It is necessary to organise purchasing to create a structure of responsibilities and authorities and to organise the purchasing activities to ultimately reach both the purchasing and enterprise objectives (Cronje et al. 1997:364-365).

No purchasing organisation can be applicable to all enterprises, but it should be tailored for the specific requirements of the enterprise including the homoeopathic practice. These requirements are according to the objectives, strategies, resources available, information systems, the functions performed within the enterprise and the dominant cultures displayed (namely steady state, innovation, crises or policy) (Baily et al. 1994:42, 45). The homoeopathic practitioner might have to fulfil all these in the practice.

2.8.3 Purchasing leading

Leading as a management function involves motivation of employees to reach the enterprise’s goals (Bartol et al. 1996:13). Very little attention is given in literature to this function of management related to purchasing. It also loses most of its application in an enterprise where the purchasing department consists mainly of a single individual, which may be applicable to the homoeopathic practice.

2.8.4 Purchasing control

Purchasing control is a function that ensures that purchasing objectives are achieved within the standards as specified in the policy. This control includes the setting and assessment of criteria and norms, the measuring of actual performance of the purchasing function and comparing it with the norms, the studying of deviations and taking of corrective measures. The factors of note are price proficiency, supplier performance, timeliness, cost saving, workload, purchasing costs, inventory holding and relationship performance with suppliers (Cronje et al. 1997:371-373).

There are certain aids to assist the purchaser in the control process. Benchmarks can be used to smooth out problem areas. This involves the comparison of the performance of the purchasing function in two related enterprises (Cronje et al. 1997:373-374). Purchasing budgets are written reports on the allocation of an enterprise’s resources for a specific time period. It plays a role in
both the planning of purchases and in the control thereof. There are usually two sides to a purchasing budget. On the one hand is the administrative budget that includes salaries, ordering costs, stationery, telephone costs, travelling and hotel costs, and renting of office space. On the other hand is a materials budget that involves planning of purchasing quantities and inventory levels, timing of purchases and purchase prices (Cronje et al. 1997:363).

The purchasing policy and procedures manuals prescribe the actions to be taken in handling specific purchasing issues. Some policies are related to ethical purchasing practices, to internal purchasing matters and policies related to suppliers (Cronje et al. 1997:374-375).

2.9 Conclusion

In the literature used for this review, no author made any recommendations on purchasing in a homoeopathic practice as such, they mainly concentrated on corporate, industry or retail enterprises. All the principles discussed, however, are applicable to the homoeopathic practice as well.

Most homoeopaths dispense and sell their own remedies to their patients. This retail of remedies forms a significant portion of their total income. Since the remedies have to be purchased in some form (whether as raw material, semi-finished material or as the final product), purchasing forms an integral part of the homoeopathic practice as well. The practitioner needs to know how to generate return on his net assets and to increase his profit without exploiting the patient. The homoeopath should set some objectives that he wants to achieve with the purchases he makes and then buy wisely to do so.

The make or buy decision is very pertinent to the homoeopath. Although it is a very personal decision considered in the light of the homoeopathic philosophy, the considerations discussed are very valuable and could benefit the practice.

The purchasing process sets out in logical sequence some actions in the purchasing of supplies. It outlines need detection, supplier selection, negotiations, placing of an order, receiving of the purchase, expediting actions and lastly the post-order phase.
Since purchasing forms such an integral part of the homoeopathic practice, the purchaser should carefully manage this function of the enterprise. Purchasing should be planned, organised and controlled well to obtain the most efficient results.

In a similar way one has to view the enterprise function of inventory holding. In the next chapter this will be done to emphasise the importance thereof in the homoeopathic practice.
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3.1 Introduction

Inventory and inventory management in different enterprises are discussed at great length in management literature. This indicates the importance thereof for any enterprise (Bartol et al. 1996:653-656; Hellriegel & Slocum 1996:662-666; Koontz et al. 1984:382-384). Inventory, the purchase thereof, as well as the costs to store and control it, often form the single major cost item of the enterprise (Bounds et al. 1995:651).

A similar situation as was found in the literature search for information on purchasing management, was found regarding inventory management. The information given is applicable to inventory keeping and management in general and is not related to any type of enterprise in particular. Although none of the authors made any specific reference to the homoeopathic practice, all of the principles outlined in the literature would to some extent be applicable, since the homoeopathic practice is also an enterprise.

In this chapter the basic concepts of inventory keeping and inventory management will be discussed, with specific reference to the homoeopathic practice. The terms inventory and inventory management will be defined (3.2) and the role and importance of inventory keeping and management will be discussed (3.3). The overall objective, as well as sub-objectives to reach the overall objective, will be considered (3.4), followed by the classification of inventory items in the homoeopathic practice (3.5). The different cost factors regarding inventory will be discussed (3.6), as well as some guidelines regarding the optimal size of the inventory (3.7). Finally, attention will be devoted to the inventory management process (3.8) with regards to inventory planning (3.8.1), inventory organising (3.8.2), inventory leading (3.8.3) and inventory control (3.8.4), as well as to poor inventory management (3.8.5).

3.2 Definition of inventory and inventory management

Different authors give different definitions to the term inventory (Bartol et al. 1996:722; Hellriegel & Slocum 1996:662; Kreitner 1986:625). Basically it can be summarised as all the goods that are acquired, used, manufactured and/or sold by an enterprise (Cavinato 1984:279).
The homoeopathic practice is a service as well as a retail enterprise and will need inventory for both these aspects. The service inventory will include diagnostic equipment, such as a stethoscope, a sphygmomanometer and urine dipsticks, administrative supplies like stationery; and furniture for the consulting room, the dispensary and the reception area. The main point of focus of this study, however, is on the retail aspect of the enterprise. The retail inventory will comprise all homoeopathic remedies in the various stages of manufacturing as well as supplementary therapeutic substances.

Inventory management in an enterprise comprises the monitoring of the inventory levels of all items to determine the need for replenishment of certain items and the quantity needed for these. It also comprises the management and security of all the items (Cavinato 1984:281).

Lancioni & Howard (1978:387) already stated 20 years ago, that inventory control (being part of management) can be described as all the techniques that are used to maintain inventories at predetermined levels sufficient for planned production schedules and forecast sales requirements. It could be summarised as a situation in which customer satisfaction is assured. At the same time profitability is achieved with minimum inventory investment and maximum utilisation of facilities and manpower.

Hugo et al. (1997:181) compares the traditional with the contemporary approaches to inventory management. The traditional approach seeks a balance between a large inventory which is capable of a continual supply to clients, and a small inventory that keeps the investment costs as low as possible. Contemporary management, on the other hand, implies that efficient inventory management of the supply pipeline may nullify the need for the inventory. This implies the application of just-in-time (JIT) principles. An ideal situation would be somewhere between these two extremes and would also be applicable to the homoeopathic practice.

Inventory control in the homoeopathic practice will comprise the determination of what remedies need to be ordered at what times to ensure sufficient availability when needed. The manager needs to keep the costs of the inventory as low as possible without putting a single patient at risk due to insufficient supplies of the indicated remedy. The role and importance of inventory management in the homoeopathic practice will be explored further.
3.3 Role and importance of inventory management in a homoeopathic practice

Daft (1993:728) uses a Japanese analogy of a boat sailing in a stream with rocks protruding from the water to illustrate the importance of inventory management. The boat resembles the management of the enterprise, the water resembles the inventory in the enterprise, and the rocks in the water resemble problems the manager may encounter. The higher the level of the water (inventory), the less the sailor needs to be concerned about the rocks (problems); the lower the level of the water, the more rocks protrude from beneath, suggesting many problems the manager can come across.

This illustrates that management needs sufficient inventory to keep the enterprise operating. If the inventory level is too low (in the case of a stock out) the services may become ineffective. The minimum water level needed to keep the boat floating indicates the level of the safety stock. More than enough inventory will make it easy to sail and would not need skilful management to avoid problems.

The following figure would illustrate this analogy:

Inventory control is an important aspect of the small business in order to reduce costs while promoting sound customer relations (Pickle & Abrahamson 1990:443). As inventory is an idle resource in an enterprise, it should be carefully managed to improve the overall performance of
the enterprise and to prevent major financial losses (Bounds et al. 1995:651). Efficiently controlled inventories can contribute to the effective operation of the enterprise and in this manner increase the profits of the enterprise. On the other hand, poorly controlled inventories result in poor turnover due to too large inventories of the incorrect items and/or too little of the correct items (Dobler & Burt 1996:518; Wright & Phillips 1989:77).

Since the homoeopathic practice relies on the retail aspect of the enterprise to increase profits, it should be managed well to attain the desired income. From the viewpoint of the practitioner wanting to do the best for his patient, inventory is also very important. If the patient needs a specific remedy for the disease condition he presented and it is not available, the practitioner will not be able to get the curing results. Besides, the patient may judge the practitioner as incompetent rather than judging the management of the retail enterprise as insufficient. For a practitioner to be judged as incompetent, is threatening for his total career and may lead to failure of the practice.

3.4 Objectives of inventory control

The overall objective of inventory control is to have the right products or materials available at the time needed, while minimising the total cost spent on supplies (Bounds et al. 1995:651; Heinritz et al. 1996:273). This main objective can be reached through aiming at different other sub-objectives. These include the following:

- to determine the time and quantity to order;
- to control and reduce overall operating costs;
- to increase the enterprise’s return on investments;
- to provide protection against unpredictable demands;
- to improve efficiency in operations;
- to provide customer service; and
- to know the value of the inventory

These sub-objectives support the main objective. Action plans to implement these in practice, will ensure that the manager is in full control of management of the inventory.

According to Bounds et al. (1995:651) it was common in the past to have large inventories. Lately the focus lies more on having smaller inventories, while increasing the rate of flow through the production system, thereby reducing the costs. These two approaches will also have to be tested in the homoeopathic practice.

The main objective in the homoeopathic practice is to cure the patient of the disease condition he presents. To reach this objective the practitioner will need the indicated remedies on hand to prescribe to the patient. Therefore, in the homoeopathic practice, the inventory needs to be large enough to satisfy the needs, but as small as possible for the best cost effectiveness, and furthermore the profitability of the enterprise.

### 3.5 Classification of inventory goods

An effective system is necessary to manage inventory successful. Classification of inventory items is a good guideline for a successful system. Inventory is classified mainly into four categories namely finished goods, MRO inventories, work-in-process inventories, and production inventories. These four will be explained briefly.

- **Finished goods**
  Finished goods as part of inventory are those items that need no more processing and are ready for retail. In the homoeopathic practice this includes complex OTC homoeopathic remedies and other supplementary therapeutic substances (Bartol et al. 1995:722; Heinritz et al. 1991:276).

- **MRO inventories**
  MRO inventories contain items that are consumed in the production process, but do not become part of the finished product. It may also be referred to as supply inventories (Heinritz et al. 1991:276). The items that are classified as MRO inventory include stationery, cleaning supplies and refreshments. This category will not be discussed in detail.
in this study as the management of these is not of the same vital importance for the rendering of services.

• **Work-in-process inventories**

For work-in-process inventories only some, but not all transformation of the product is completed to make it ready for retail. These inventories are also referred to as processing inventories (Bartol *et al.* 1995:722; Bounds *et al.* 1995:652; Daft 1993:728, 729; Dobler & Burt 1996:519; Heinritz *et al.* 1991:276; Hugo *et al.* 1997:184). This type of inventory is commonly found in homoeopathic practices. It consists of unmedicated lactose base, various laboratory potencies of different remedies, dispensing alcohol and glass containers. The practitioner completes the production of the desired remedy at the time it is required.

• **Production inventories**

Production inventories include all raw materials, parts and components in the enterprise that are needed for the production process. The material has not undergone any transformation yet. (Refer chapter 2.5 and 2.6.) (Bartol *et al.* 1995:722; Bounds *et al.* 1995:652; Daft 1993:728, 729; Dobler & Burt 1996:519; Heinritz *et al.* 1996:276; Hugo *et al.* 1997:184). Only very few homoeopathic practitioners purchase raw materials to produce their own remedies.

### 3.6 Cost of inventory

The estimation of the value of inventory is important for the enterprise to guarantee that the enterprise is working towards its stated objectives. The manager needs to take all the costs into account, including the inventory holding costs (3.6.1), inventory acquisition costs (3.6.2) and the costs involved when a shortage of inventory occurs (3.6.3) (Hugo *et al.* 1997:184). These costs will be discussed briefly.
3.6.1 Inventory holding costs

Inventory holding costs can amount to a high percentage of the total of investments made by an enterprise. It includes all expenses required to maintain the inventory (Lancioni & Howard 1978: 390). These costs are often referred to as ISR costs referring to cost elements of interest on the value of the inventory, space and handling costs of the inventory, and risk costs, including the cost of obsolescence and damages to the inventory. The different kinds of inventory holding costs are briefly summarised:

- **costs of financing the inventory** which are also referred to as opportunity costs as it refers to money that could have been spent in a different way; it includes interest paid on borrowed capital and the loss of interest on equity that is tied up in inventory;

- **costs of storage of the inventory** which implies the extra money spent to store large amounts of inventory and include land with property tax, building and/or rental costs as well as maintenance (including water and electricity) of the storage area and any specific requirements for the storage of items for example refrigerator or shelves;

- **costs of handling the inventory** including equipment and wages paid to staff handling the inventory, as well as the costs to replace damaged goods;

- **insurance costs**, which increase with the size of the inventory, paid to reduce the risk of loss due to damage like fire, or theft;

- **costs as a result of depreciation, deterioration or obsolescence**, when products, especially perishables, remain unsold or become technically inferior to newer products, and the value of the inventory decreases;

- **shrinkage costs** are the result of theft or other kinds of loss of inventory; and

- **costs of the managerial control system**, refering to costs incurred to control the inventory system.
Inventory holding costs are also referred to as inventory carrying costs. It is expressed as a percentage of the monetary value of the inventory per unit of time (Lancioni & Howard 1978:390). It is found that inventory holding costs are relatively stable per unit irrespective of the amount of inventory that is kept (Hugo et al. 1997:185), that is, the inventory holding costs rise proportionally with the total inventory kept (Dobler & Burt 1996:524). These costs are important in the homoeopathic practice as well, as the practice needs to be profitable.

### 3.6.2 Inventory acquisition costs

All actions taken place to acquire inventory, incur costs. These costs include administrative costs for creating, processing, tracking and paying for an order (for example stationery, telephone or fax), follow-up costs and receipt of the order, the costs of salaries of the personnel handling the inventory acquisition, as well as payment of the supplier’s invoice (Bodenstab 1993:84; Dobler & Burt 1996:524). The cost of the item itself is referred to as item cost (Bartol et al. 1995:723). (Also refer to the purchasing process 2.7.)

The total costs for the acquisition of inventories, referred to as ordering costs, are important, as the frequency of re-ordering depends thereupon (Hugo et al. 1997:185). The cost per order can be fixed, irrespective of the size of the order, or a supplier may grant a discount for larger orders. The total annual cost of ordering depends on the number of orders placed per year as well as on the amount of stock ordered. The total ordering costs will be reduced if single larger orders are placed (Cronje et al. 1997:384; Hugo et al. 1997:186). This concept will be discussed later in further detail in 3.8.2.1.
3.6.3 Cost of inventory shortages

It is very difficult to determine the costs of inventory shortages. It includes a chain reaction of delays and backordering as well as with the loss of orders, loss of cash flow opportunities, and loss of return on capital not received. It also refers to loss of profit if a substitute is supplied at a lower profit margin, or if the sale is lost to a competitor, which implies loss of customer goodwill that affects future sales. It also includes additional administrative costs to reverse the inventory shortage (Bartol et al. 1995:723; Bounds et al. 1995:655; Cavinato 1984:284; Hugo et al. 1997:186).

Inventory shortages occur when inventory is not available when needed. There are several causes for these shortages:

- longer than planned expected delivery times;
- too short lead times due to lack of constant monitoring to detect critical reorder points;
- too late placing of an order; and
- shortages at the supplier.

(Cavinato 1984:283).

Inventory shortage incidences can be reduced through higher inventory holdings, using more reliable suppliers, or making use of principles of inventory management. Within the homoeopathic practice, faster need detection and order processing, as well as faster receiving and recording of deliveries can reduce these risks (Cavinato 1984:284).

All these above-mentioned aspects are applicable to the homoeopathic practice as well and should therefore be investigated. The inventory holding costs and inventory acquisition costs should be kept as low as possible, while stock outs should be avoided. This could be reached by finding the optimal inventory size.

3.7 Optimal inventory size

The manager of the enterprise should consider all the costs incurred to hold inventory and then
determine the optimal size for the inventory. This is achieved when an optimal balance is reached between the total costs of inventory holding and ordering costs. Larger inventory size means higher inventory carrying costs, but also lower total ordering costs (Hugo et al. 1997:187). This is particularly true of the homoeopathic practice where the inventory (in the form of remedies available) is directly coupled to the success of the treatment.

It is found that measures taken to reduce one of the three cost factors involved in inventory holding, will result in an increase of one of the other factors. A larger safety stock will reduce chances of stockouts, but increase holding costs. A smaller safety stock has lower holding costs but pose an increased risk of stockouts. Larger, less frequent orders will reduce the ordering costs, but will initially increase holding costs and later increase the risk of stockouts. A balance should be found to minimise the total of these costs (Bounds et al. 1995:656). This is also very important in the homoeopathic practice where treatment of patients relies on the supply of remedies.

There are several advantages and disadvantages in holding large and small inventories. These are listed briefly:

### 3.7.1 Advantages of large inventories

The advantages of keeping large inventories can be listed as follows:

- immediate and continuous supply of remedies as required to customers;
- protection from disruption of material flow for example as in the case of semi-manufactured remedies;
- protection from mis-forecasting demand, or unexpected events, for example a flu or other epidemic;
- a hedge against higher prices in future due to inflation;
- reduction of the purchasing price by buying in larger quantities, thus qualifying for quantity discounts; and
- a reduction in ordering costs per unit

3.7.2 Disadvantages of too large inventories

Keeping too large inventories causes several negative effects on the enterprise. The following represent some examples:

- inflated inventories that will tie up company funds longer than necessary when it could have been used to finance other activities;
- aggravation of storage space needs, and increased storage and insurance costs; and
- potential losses in terms of possible depreciation, obsolescence, damage and theft.


3.7.3 Advantages of small inventories

There are various advantages in keeping the inventory level low. The following are some examples:

- a reduction of investment in assets, mainly in terms of current assets (value of inventories), but also in terms of fixed assets (storage facilities);
- easier inventory keeping and reduced inventory holding costs; and
- improved return on investment by saving on inventory holding costs and a reduced capital investment.


3.7.4 Disadvantages of too small inventories

The disadvantages can be summarised as follows:

- a possible disruption of supplies with consequent loss of customer goodwill and support to other enterprises;
- higher unit prices paid as result of smaller orders and loss of quantity discounts; and
- increased costs for more urgent orders and deliveries.

From the above it is clear that the advantages of small inventories correlate with the disadvantages of large inventories, and vice versa. The holding cost of inventory should be compared to the cost of inventory shortage to determine an inventory shortage acceptance point (Cavinato 1984:285). The main objective as well as the policies of the enterprise should be kept in mind in determining this point. It must be noted, however, that it is not easy to calculate exactly what the costs are of running out of stock. It is not always possible to put a monetary value on the fact that a remedy is not available when it is needed for a patient. The different factors should be investigated to find the optimal inventory size for the specific homoeopathic practice as well.

Having looked at the basic concepts of inventory, the definition, importance, classification, cost and optimal size, attention will be devoted to the management process of inventory keeping.

3.8 Inventory management process

As with purchasing, the management process for inventory management includes planning, organising, leading and control (refer Glossary). It should be emphasised that these management functions are not sequential, separate phases that follow one after the other, but all are inter-linked and the implications on all the other management functions should be kept in mind when management makes decisions regarding any one of them.

In summary, planning is concerned with the setting of objectives; organising with setting of work structures; leading with work execution; and control with the achievement of the objectives.

It is seen in many sources of literature that authors do not differentiate between the different functions of management. Some authors do not clearly emphasise that inventory control is only part of inventory management. Inventory management and purchasing management are only two functional aspects of the total management of the enterprise. None of the sources used for this study mentioned the four management functions in relation to the homoeopathic practice. Therefore the division of activities as it is described in this study may differ from other sources of literature. The planning, leading, organising and control functions will be discussed in that order.
3.8.1 Inventory planning

There are several techniques or instruments that the manager can use to analyse and classify the full range of inventory items in a systematic and scientific way. From information gathered, an estimation of the real demand of different stock items can be made in the organising and leading functions (Hugo et al. 1997:189). Inventory planning is mainly concerned with the analysing of the inventory available and with the forecasting of inventory consumption with a view to replenishment.

3.8.1.1 Inventory analysis

For the successful management of the different types of inventory (3.5), the manager should have a thorough knowledge of the inventory items needed in the enterprise. Inventory analysis will be discussed according to the compilation of an inventory catalogue and the application of either the ABC analysis (Pareto analysis, 80-20 concept) or D system of classification to it. Furthermore, the dependent and independent demand system will also be discussed as a possible method in inventory planning.

- Inventory catalogue

An inventory catalogue or list is a systematic record system where inventory items are listed according to a unique inventory code to create an information source that is orderly and easy to use (Hugo et al. 1997:190). It may also be referred to as an authorised stock list (Bodenstab 1993:22). The information contained within this catalogue includes the inventory-item number, description of the item, current inventory levels and the cost and selling price of every item (Hugo et al. 1997:190).

This catalogue serves as a source of information on inventory items currently on hand and it facilitates easy selection of materials needed or substitutes for such when the desired products are not available. It also serves as a control system over inventory by reducing duplication of administration of inventory items. Where different companies supply the same item, it is necessary that the items from all the suppliers should have the same inventory item number to avoid unnecessary ordering of items that are already in stock.
Purchasing and inventory management in a homoeopathic practice


An inventory catalogue will serve the same purpose in the homoeopathic practice. Complex remedies would be organised according to the specific manufacturer, while simplex remedies, as well as lactose base available from various suppliers, would rather be listed in alphabetical order.

- **ABC analysis / Pareto analysis / 80-20 concept**

The aim of the ABC analysis or stratification is to indicate the importance of different inventory items in terms of monetary value (Cavinato 1984:281; Hugo et al. 1997:190). Every item in stock is evaluated according to different aspects and grouped together to be managed in a specific way.

The stratification analysis may be used to plan inventory and to set purchasing priorities (Heinritz et al. 1991:288; Hugo et al. 1997:191). Typically, an analysis of this kind includes a thorough investigation in respect of unit purchase price, volume in units, the lot size and volume discounts, total rand requirement, as well as holding costs. Demand, order cycle times, penalty costs if a stockout occurs and other particular considerations related to the purchasing process of different inventory items are also some factors that should be included in this analysis (Cavinato 1984:282-283).

According to the stratification analysis, inventory can be divided into three categories: Class A, B and C (Cavinato 1984:281; Hugo et al. 1997:190). Class A contains the most important items that receive a higher degree of attention and control. Theory states that it represents about 10 per cent of the total number of inventory items, but about 70 per cent of the rand demand. Class B usually represents 40 per cent of the total items with only about 20 per cent of the rand demand. Class C is the least important items that need the least attention and control. It includes about 50 per cent of the items, but only 10 per cent of the demand (Hugo et al. 1997:190-191). The actual percentages are not the real issue, but the division into three groups of priorities.

The steps in the classification of the inventory by the ABC analysis consist of compiling
a list of inventory items according to inventory item numbers. The annual consumption and rand value of every item is determined and multiplied with one another to determine each item's percentage share of the total inventory in terms of annual consumption. The top 10 per cent of the items will be classified as Class A, while the next 20 per cent forms Class B and the remainder forms Class C (Hugo et al. 1997:190-191). However, the exact A/B and B/C cut-off points are determined by the manager, taking various macroeconomic conditions and organisational strategies into consideration (Cavinato 1984:281; Heinritz et al. 1991:288).

This classification enables the manager to prioritise control over the three groups. The Class A items will receive much closer control and management time than Class C. It will require more frequent revisions and less safety stock due to the frequent reviews, and a higher turnover will be expected from this inventory. Management for Class C will involve minimising acquisition costs, maximising service and reliability, minimising inventory investment and/or minimising indirect costs associated with inventory (Heinritz et al. 1991:289). However, availability and reliability for these slow moving items may be as important as it is for the items in Class A (Dobler & Burt 1996:521).

In addition to the ABC analysis, items could be classified according to a three-point scale, where: 1 = critical; 2 = medium; and 3 = non-critical. Herewith an item rated as C1 may require more management time and attention than one classified as A3 (Dobler & Burt 1996:521).

The Pareto or 80-20 concept is based on the same principle: 20 per cent of the items in stock account for 80 per cent of the value of the total inventory, while 80 per cent of the items account for only 20 per cent of the value (Dobler & Burt 1996:522). These figures can vary between 70-30 and 90-10 depending on the specific enterprise (Bodenstab 1993:22). The law governing the Pareto principle is "the vital few and the trivial many" (Dobler & Burt 1996:522). Basically this is the same concept as the ABC analysis, but divides inventory into two tiers instead of three.

The homoeopath uses simplexes, complexes, tissue salts, organos, gemmos and other
supplementary therapeutic remedies. Hundreds of simplex remedies are described and discussed in the homoeopathic Materia Medica. These remedies are not all used with the same frequency. The polycrests are used much more frequently as these are indicated in a larger variety of disorders, while other remedies are only indicated for a single condition. Therefore, the polycrests would most probably fall into class A. Tissue salts are also widely used and may fall in class A as well. Another item in class A is lactose base as it is used with most remedies that are prepared from stock potencies.

Complex remedies are usually indicated for very specific complaints and would therefore rather fall into the B class with some of the less frequently used remedies. Some rarely used simplex remedies would be classified as C class.

- **D system of classification**

  The D system is a descriptive system of classification of inventory that is a refinement of the ABC system. It includes “problem items” that require judgement type of decisions, but that do not reach the monetary value cut-off point to be classified in Class A. This system has five classes: planned stocked items, stocked items with regular probability, stocked items with reserved probability, commercial stocked items, and non-stocked items (Lancioni & Howard 1978:395).

  The planned stocked items overlap with the Class A items of the ABC analysis. It also includes other items which share some of the following characteristics: items with high unit cost, items being phased into or out of use, items with short shelf life, items in critical short supply or items with single end use. These items require the greatest amount of time and control and usually represent only a small percentage of the total number of inventory items (Lancioni & Howard 1978:395).

  The class of stocked items with regular probability includes most inventory items. These items are usually only reviewed when the reorder level is reached. These items have a moderately to low unit cost, relative frequent usage and more than one end use (Lancioni & Howard 1978:395).
The **stocked items with reserved probability** demand a minimum amount of time input and usually have a very low unit cost, low frequency usage and multiple end usage (Lancioni & Howard 1978:395).

The **commercial stocked items** are similar to the planned stocked items, except that it is stocked for a particular customer (Lancioni & Howard 1978:395).

Lastly, the **non-stocked items** are all items not classified as stocked and thus not stocked by the enterprise. The result is that the material record and the inventory record are the same (Lancioni & Howard 1978:395).

The D system of classification allows for more effective control of the capital investment in inventory of the enterprise.

This system is suitable to classify homoeopathic inventories. Very few homoeopathic inventory items would be classified as **planned stocked items** as most remedies do not have a very short shelf life and is not extremely expensive. Most of the homoeopathic inventory classified by the previous system as class A and class B will fall under **stocked items with regular probability**. The items of the C class will generally fit into **items with reserved probability**. Some specially ordered items for specific patients with unusual complaints will fall under **commercial stocked items**. Complex remedies available, but not in stock, will be classified as **non-stocked items**. All the simplexes will not be included in the **non-stocked item** list as it will result in many empty pages as all of these cannot be kept in stock.

- **Demand for inventory**

Inventory demand for a specific item is the total amount required of that item over a specific time period. Inventory demand differs from sales demand in that sales demand only measures sales made and not the demand lost due to stock outs. Forecast is therefore required that is based on the total historical demand - both sales and the amount back-ordered or sales lost due to stock outs (Lancioni & Howard 1978:388-389).
The nature of demand can be classified as either dependent or independent demand. Dependent demand for items refers to a demand in which the timing and quantity of the output is dependent on decisions of the enterprise holding the items (Bounds et al. 1995:653). This is seen especially in enterprises that operate according to a specific schedule. Management can decide on the materials needed and calculate the optimal time to order these.

Independent demand refers to a demand that is controlled by the customer and not the enterprise (Bounds et al. 1995:653). Management cannot accurately forecast the customer's demands and therefore more inventory will be needed to ensure customer satisfaction. It is important to know what type of demand the items in the enterprise have as some control systems are better applicable to the one type than the other (Dobler & Burt 1996:521).

In the homoeopathic practice one finds a combination of the two demand systems: The patient presents certain symptoms which give rise to a specific diagnosis and therefore will need a specific simplex remedy to treat the condition with (independent demand). On the other hand the homoeopathic practitioner can prescribe one of a few similar OTC remedies depending on what is available (dependent demand).

3.8.1.2 Forecasting of inventory consumption

The correct forecasting of expected inventory consumption is very beneficial in the anticipation of future influences of uncertainties in inventory requirements. There is a great risk involved in the forecasting of future demand.

Two forecasting techniques were found in literature namely: statistical techniques and external indicators. These will be discussed briefly:

- Statistical techniques

  Statistical techniques are based on historical data, estimates and the opinions of sales staff.

  The main techniques used are the regression analysis, time-series analysis, moving
averages and exponential smoothing. The most important aspects of these are average inventory consumption per period, trends, seasonal fluctuations and cyclical movement in the requirements. The information exhibited by these statistics can be used to compile an inventory and/or purchasing budget and can also be used for efficient co-ordination with the supplier system (Hugo et al. 1997:193).

• External indicators

External, or economic, indicators are based on the rate of growth in the economy, labour conditions and expansion or contraction of supply. Other indicators include population growth, interest rates and sales of commercial vehicles. Information on the economic indicators is published by institutions like the SA Reserve Bank, commercial banks and the Department of Statistics. These are especially useful for long-term (strategic) planning of the inventory requirements (Hugo et al. 1997:193).

Research of both the external and internal environment should be undertaken to identify the nature of the demand for the final product. The indicators used by the enterprise should be linked to the nature of the inventory requirements of that enterprise. All of these aspects mentioned above are applicable to the homoeopathic enterprise (Hugo et al. 1997:193).

The average usage of certain items per period will give an estimate of future consumption of those items. It would be useful to express monthly demand as demand per working day due to the fluctuation of working days per month (Lancioni & Howard 1978:405). The demand fluctuates according to different trends, seasonal demand, sales promotions and strikes (Bodenstab 1993:52; Hugo et al. 1997:193; Lancioni & Howard 1978:405).

Trends will play a definite role since articles and advertisements in popular magazines easily influence people and they will definitely question the homoeopathic practitioner regarding such advertisements. Some patients may even demand to have specific remedies as suggested by such a magazine. Unless one acknowledges seasonal changes, the statistical techniques used for forecasting, will miss turning points when the season hits peaks and bottoms. Seasonal changes include school years and holidays, public holidays and long weekends, the tax season, as well as temperature changes (Bodenstab 1993:52; Eckert et al. 1993:184; Kreitner 1986:627).
Bodenstab (1993:11) states that effective planning of inventory by analysis, followed by reliable forecasting, can reduce the size of inventory, improve the order fill rate and release working capital in any enterprise. Therefore, it is seen as an important aspect of the homoeopathic practice as well.

The forecasting of the consumption of a new product on the market would be very difficult. One could not make use of statistical techniques yet, while on the other hand, external indicators would just partially satisfy the need. It is suggested that a smaller initial order would be a better choice where after, if the demand materialises, larger orders can be made to replenish inventory (Bodenstab 1993:29).

### 3.8.2 Inventory organising

Inventory organising involves the setting of work structures in the enterprise. Thus it identifies actions (work) that have to take place for the successful achievement of the objectives set in planning. Management needs to place orders to replenish the inventory. This reordering demands a few decisions and actions which include the most economical order quantity to be calculated, the most efficient time for ordering has to be identified, the amount of safety stock needs to be determined, and a system for effective ordering should be decided on. These aspects will be discussed in the following pages.

#### 3.8.2.1 Economic order quantity

With inventory management, managers attempt to keep inventory costs as low as possible by estimating the quantity that needs to be ordered to minimise all costs related to the order (Daft 1993:727). This is called the economic order quantity (EOQ). The EOQ is an override of the needed inventory amount, by purchasing more items than needed to minimise ordering and holding costs, while avoiding stock out costs (Bartol et al. 1995:723; Bodenstab 1993:129). This is achieved when the annual inventory holding costs are equal to the annual acquisition costs (Dobler & Burt 1996:529).
The formula to calculate the EOQ can be written as follows:

\[
EOQ = \frac{2 \times (\text{annual consumption in units}) \times (\text{ordering costs in Rand per order})}{(\text{purchasing cost per unit in R}) \times (\text{inventory carrying cost as } \% \text{ of annual inventory investment})}
\]

Several assumptions regarding EOQ are found in the literature. These assumptions that restrict the application of the EOQ in some way include the following:

- the total demand for inventory for a given period is known in advance or estimated reasonably correctly;
- the inventory consumption is fairly constant and distributed evenly over time;
- the purchasing price is constant and independent of the quantity or time of the order;
- transport costs are constant and independent of the quantity or time of the order;
- suppliers are reliable and capable of supplying all orders, and no shortages of inventory occur;
- no inventory is on order or in transit and only one item is ordered at a time;
- there are no limitations on the availability of capital;
- the costs of inventory holding are constant and known.


The EOQ is used often with great success. However, it has some limitations that should be kept in mind, such as:

- reliable estimates of the cost components used in EOQ are often very difficult to obtain as purchasing prices of some items increase regularly during a year;
- the calculated EOQ quantity may not be easily available due to packaging in fixed containers;
- the EOQ gives no indication of the purchasing time;
- the EOQ could not be adapted to sudden changes in demand.


Due to these limitations some adaptations of this formula is made to provide for the influence of changes in purchasing prices, quantity discounts, standing orders and other factors (Dobler & Burt 1996:530; Hugo et al. 1997:195).
It is often assumed that any quantity other than the EOQ will greatly increase the total costs. This is not exactly true due to the many variables and estimated values used in calculating the EOQ (Lancioni & Howard 1978:402).

It is important to note that some suppliers have a minimum order quantity that has to be complied with. Other suppliers require that items are bought as a lot. Therefore, often the EOQ is calculated at a certain amount, but a different amount is ordered to comply with these factors (Bodenstab 1993:83).

In a homoeopathic practice, the EOQ should be calculated in respect of the specific circumstances of the practitioner. The requirements for free of charge delivery, discounts and other quantity limitations should be kept in mind.

3.8.2.2 Fixed ordering quantities

Although there are different applications for this system, the underlying principles of the fixed ordering system remain the same. This entails that whenever new stock is purchased, the same fixed quantity is ordered so that stock reaches the maximum inventory level. This quantity is usually the EOQ that is ordered when existing stock reaches the reorder level (ROL) (Cronje et al. 1997:384; Dobler & Burt 1996:536; Hugo et al. 1997:210).

This system is very useful for enterprises exhibiting an independent demand. The advantages of this system are that the EOQ is ordered and thus it reduces costs, staff only pays specific attention to those items that reached ROL and control over the average inventory level is easily kept as either the safety stock or the reordering quantity can be adjusted. The disadvantages include its unsuitability for unpredictable consumption and lead times, as well as faulty administration of inventory records that can slow down the reorder process. Another disadvantage is that this system relies on historical and not actual demand that results in the long run on a higher average inventory level (Cronje et al. 1997:385; Dobler & Burt 1996:538; Hugo et al. 1997:212).
The homoeopathic practice exhibits an independent demand and therefore the fixed ordering quantity is a suitable system. When stock reaches a specific predetermined level, the practitioner can reorder only that item. As a variation the ROL can be increased slightly to allow several items to be reordered at the same time from one supplier to reduce order frequency and costs.

A variation of the fixed ordering quantity is the Two-Bin system. This entails that stock is stored in two containers: the lower bin contains sufficient stock to supply the enterprise during the lead-time of the next order, thus it equals the amount of the ROL. The upper bin contains the remainder of stock to form the maximum inventory level. As the stock in the upper bin is depleted, the opening of the lower bin triggers a new order. When the new order arrives, the lower bin is filled to the ROL and the remainder of stock is placed in the upper bin. The advantage of this system is that there is no need for a perpetual inventory level. The disadvantage of this system may be additional storage space for the separate bins (Dobler & Burt 1996:539-540).

3.8.2.3 **Cyclical ordering quantities**

In an enterprise that has an independent demand for inventory, there is an uncertainty about the rate of retail of existing stock. Therefore a time-based model of reordering is often used.

The cyclical or fixed order interval system is mainly used in small or medium sized enterprises. It is a time-based system that demands a review of all items at predetermined times to determine if sufficient inventory is available. At these times an order is made to increase inventory to the maximum level. The manager places an order for the difference between the quantity of stock that is available and the predetermined target amount (maximum stock level) (Bounds et al. 1995:654).

The types of inventory hold in the enterprise determines the review cycles of inventory items: Class A is reviewed more often than Class C. Longer review cycles require higher maximum inventory levels resulting in higher inventory holding costs, while shorter review cycles mean higher ordering costs (Cronje et al. 1997:385; Dobler & Burt 1996:524; Heinritz et al. 1991:297; Hugo et al. 1997:212).
The inventory levels are reviewed by physical inspection or visual review, perpetual inventory record cards or by automatic computer surveillance for example point of sale systems. A perpetual inventory record can be maintained by checking outgoing inventory (sales) against incoming inventory (invoices) (Dobler & Burt 1996:531). It is also described as a continuing current record of receipts of material that balances physically and on order for every item in stock, showing a complete inventory position (Heinritz et al. 1996:277). This is often a computer-based system. Some specialised computer programmes are available to supply very comprehensive and up to date information together with historic data. All perpetual inventory systems should be checked periodically against actual stock for accuracy (Heinritz et al. 1996:277).

For the cyclical order interval system, a maximum inventory level should be determined for every item in the inventory. This level can be calculated from the following equation:

\[ Im = (Lt + Rp) Sd + Ss \]

where

- \( Im \) = maximum inventory level
- \( Lt \) = lead time
- \( Rp \) = duration of review cycle
- \( Sd \) = average inventory demand per time unit

It is characteristic in the cyclic ordering system that the order quantity varies with each order. This means that the demand in the previous time period is equal to the ordering quantity. On the review date a quantity equal to the difference between the fixed maximum level and the current inventory level is ordered (Hugo et al. 1997:212-213).

The advantage of this system is the low cost of inventory control. The disadvantages of this system are the larger number of items needed to buffer sudden increased demands, as well as more frequent small orders from distributors. To counteract the problem of frequent small orders, all
items ordered from a single supplier can be on the same review cycle or a combination of the
time- and quantity-based systems can be used (Bounds et al. 1995:654).

3.8.2.4 Safety stock

Safety inventory (or buffer stock) is kept to compensate for the uncertainty of future demand, for
supplier delivery delays and increased lead-time. Safety stock varies according to the
circumstances of different enterprises. It will usually be higher if uncertainties exist over expected
demand, if stock outs would have a major impact for the practice, or if there are real danger that
a delivery from a supplier may be delayed (Bodenstab 1993:63; Heinritz et al. 1991:298; Hugo
et al. 1997:196; Kreitner 1986:627). The higher the safety stock, the higher the inventory carrying
costs will be (Heinritz et al. 1991:298).

Two approaches to safety stock are discussed in literature. Firstly, a safety stock level could be
determined for all items equal to average consumption over a specific time period. This approach
will unnecessarily provide safety stock for slow moving items. Secondly, safety stock can provide
for the large number of items in Class B and C that have a low rand demand, while relying on
dependable forecasting methods for Class A that have higher rand demand (Hugo et al.

When calculating safety stock, the manager should look at past-inventory consumption trends as
well as at probable consumption during the lead-time. The costs of stockouts should be compared
to the costs of the additional inventory-holding costs (Hugo et al. 1997:196). The average total
inventory will consist of half the ordering quantity plus the safety stock (Hugo et al. 1997:196).

3.8.2.5 Reorder level

The time for reordering is determined by the reorder level (ROL). This is the most economic level
for each individual item to be reordered. The ROL is calculated in such a way that inventory will
not become depleted during the delivery time of that order (Dobler & Burt 1996:536; Heinritz

The ROL is calculated as follows:
ROL = safety stock + (lead-time * average inventory consumption) (Hugo et al. 1997:197).

If any of the components of the inventory system changes, the ROL will change as well.

The enterprise should keep record of items that are continually out of stock in order to recognize products of which the ROL is too low. This can be identified when the product appears on the out of stock list too often in a specific time period (Pickle & Abrahamson 1990:447).

3.8.2.6 Materials requirement planning

The materials requirement planning (MRP) entails logical procedures, decision rules and records to manage dependent demand inventories. It is a computer-supported system that records the supply of certain production materials in relation to the problems from production planning and scheduling. It is best suited for manufacturing companies that produce a large variety of products from the same raw materials (Bounds et al. 1995:657; Daft 1993:730; Hugo et al. 1997:198) and since it is not particularly applicable to the homoeopathic practice it will not be discussed further.

3.8.2.7 Manufacturing resource planning

The manufacturing resource planning (MRP II) is an extension of MRP to include the control of resources pertaining to all operations of the enterprise (Daft 1993:732). This model is equally not suitable for the average homoeopathic practice and will not be discussed in this study.

3.8.2.8 Just-in-time inventory

The concept of just-in-time inventory (JIT) is in essence not just an inventory concept, but a product-oriented management philosophy. This system is developed to eliminate waste of time, labour, raw material or final products by ensuring that products required are available in the desired quantities at the precise time needed (Hugo et al. 1997:53). The main directive of the philosophy is that inventory is harmful as it makes the enterprise vulnerable to risks. The objective of this system is to co-ordinate purchasing, the deliveries from suppliers, manufacturing and consumer demand with the time when these are needed. This will eliminate inventory of raw materials.

In practice this system will rely on short and reliable delivery times, high quality standards and extremely reliable workers and suppliers (Hugo et al. 1997:53).

The advantages of JIT that are applicable to the homoeopathic practice include the following:

- Lower inventory levels – this is obtained through more regular smaller deliveries. The time for inventory turnover is decreased leading to lower working capital and higher cash flow.
- Smaller buffer stock – this is achieved through shorter lead times. The ultimate is no buffer stock, but in South Africa the supply market is not reliable enough to do this.

The concept of JIT is best applicable to an enterprise where production schedules are established and planned in advance. This is not the case with a homoeopathic enterprise, as the practitioner cannot plan which remedies the patients will need. It can, however, be applicable to some extent in the homoeopathic practice where the homoeopath makes the remedies from semi-finished products, for example unmedicated granules and laboratory potencies. Thus the amount of finished goods inventory will be reduced, while work-in-process inventory may be higher.

3.8.2.9 Deciding on a model for inventory

Several different models for inventory organisation have been discussed. There is no one that will be perfectly fit for all homoeopathic practices. However, there are some guidelines to help with this decision:

- products with a low inventory-holding cost and low rate of sales need less frequent replenishment and the cyclical ordering system is best suited for such an inventory;
- for inventory with a seasonal demand, the cyclical ordering system would also be the best;
- a comprehensive product range with plenty items and high monetary values, need a fixed ordering system;
- when the rate of consumption and delivery is relatively constant, a fixed ordering system would be suitable.

A combination of the fixed and cyclical ordering systems could be used whereby inventory levels are reviewed in fixed cycles, but orders only result when stock reaches reordering level. It is then replenished to the maximum level by ordering the EOQ. The manager needs to calculate a level of maximum inventory, as well as a level of minimum inventory that will serve as reorder point. This is also referred to the min-max model (Bounds et al. 1995:654; Hugo et al. 1997:214).

The advantages of this model are that it reduces the number and costs of ordering and inventory monitoring. However, it requires a larger inventory size to protect against stock out occurrences (Bounds et al. 1995:654).

3.8.3 Inventory leading

The leading function of management is concerned with work execution that involves communication, motivation and leadership. Communication of the actions that should be taken to reach the set goals, motivation of the staff involved with those tasks and leadership to take responsibility for these tasks.

This function of management in relation to inventory as such is not discussed explicitly in literature.

3.8.4 Inventory control

Inventory control is the last function of inventory management. The manager of the enterprise monitors and evaluates inventory activities. These activities should be performed according to accepted criteria and standards in order to meet the inventory objectives (Hugo et al. 1997:210).

Poor inventory control can result in the loss of stock in the storage area when the storage area is unorganised, unstructured or overcrowded. If it is not discovered in time, the products may become spoiled or obsolete. It may also result in employee theft and may prevent the enterprise
from realising that stock is missing. This in turn can lead to problems with insurance claims in the case of a burglary or fire (Pickle & Abrahamson 1990:446). Therefore the homoeopathic practitioner needs to exert control over the inventory to prevent the mentioned pitfalls.

3.8.5 Poor inventory management

The effects of poor inventory management are often hidden throughout the enterprise, but may have a significant effect on the profit of the enterprise (Dobler & Burt 1996:540). It ties up cash due to slow moving, old and excessive stock (Wright & Phillips 1989:53).

3.8.5.1 Signs of poor inventory management

Listed below are some signs that point to poor inventory management:

- increased amounts of outstanding orders – indicates poor timing for inventory replenishment;
- increased Rand investment in inventory;
- increased amounts of stockouts on particular items during a fixed time period;
- decreased storage space;
- increased inventory carrying costs; and
- increased obsolete inventory.


Managers should be aware of these signs to be able to find the causes of such problems in order to remedy the situation where necessary. For the homoeopathic practitioner this is equally important for successfully running the business.

3.8.5.2 Causes of poor inventory management

A few of the causes of poor inventory management discussed in literature will be mentioned briefly.

- improper lot size that occur when the quantity ordered and received by the firm is not co-ordinated with the production and sales needs;
- large lot price discounts and transportation rate breaks that have advantages for the purchasing budget, but may cause an unnecessary high inventory;
- forward buying (also known as speculation), during a period of price increase or product shortage, may result in an increased inventory when prices stabilise or when the decline or shortage disappear;
- erratic vendor order cycle time occurs when managers increase planned order cycle times due to a pessimistic estimation of a worst case scenario for order cycle times which may result in too high product availability if orders are not de-expedited;
- deflated production yield factors which are the units of output obtained from each unit of input. An example in the homoeopathic field is the number of containers that can be filled from a 1kg packet of unmedicated granules can be estimated as fifty. This number is set as a standard to allow a comfortable margin for production to fall back upon in event of less than efficient production times. In a period of higher than standard production with a standard order the inventory will increase;
- inflated production scrap yields which are the ratio of final waste divided by the total required input. If the percentage of losses is lower than expected, the raw material and/or final product inventories will increase; and
- incorrect repair and maintenance unit usage, which, if not utilized as planned, will cause stockouts in some areas and oversupplies in others (Cavinato 1984:279-280).

These causes of poor inventory management can be equally applicable to the homoeopathic practice.

3.8.6 Remedies for poor inventory management

To find the remedies to improve on poor inventory management, one should investigate the causes of poor inventory management and address those. Research on the related aspects should be undertaken to ensure sound ordering procedures and the correct quantity and quality of products. One should take notice of discounts and the actual saving should be evaluated against the disadvantages related to other factors like loss of storage space and capital. The statistics and
trends of suppliers and market activity should be studied to ensure correct forecasting of orders, order cycles and other activities.

Apart from addressing the causes, the manager should remedy the effect that poor management to date had on the practice. In the case of excessive inventories, management needs to reduce it. There are several techniques to achieve this: The extra stock can be sold on a sale or be returned to the supplier. This should be followed by a revision of the inventory management methods and policies (Dobler & Burt 1996:540; Wright & Philips 1989:53).

3.9 Conclusion

According to all the sources used as reference for this study, inventory management is very important to all types of enterprises to maximise investment of time and money. This is also true for the homoeopathic practices, since in many homoeopathic practices, treatment of the patients rely on the availability of inventory items.

The homoeopathic practitioner should set inventory objectives and manage his inventory in such a way as to reach those objectives. As the cost of inventory can accumulate to a large amount, the homoeopathic practitioner should consider ways to decrease inventory holding and acquisition costs without giving rise to increased stock out costs. If all the advantages and disadvantages of small and large inventories are also taken into account, the optimal inventory size will be reached.

The inventory management process involves planning, organising, leading and control of inventory items and activities. In the planning stage, the homoeopathic practitioner should analyse and categorise the inventory items according to a specific system that is suitable for the needs of the practice and find a system to estimate future demand. The manager should then organise the inventory function by finding the EOQ and an applicable reorder time, and determine the reorder level as well as the amount of safety stock needed. There are certain pointers the manager should be aware of that indicate when management does not fulfil its intended purpose. The manager should control the whole process to ensure that the set objectives are reached in this process.
It is often seen that purchasing and inventory policies seek the same objective: the lowest ultimate costs of purchased materials. However, the inventory policy may determine or modify the purchasing policy (Heinritz et al. 1991:273).
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4.1 Introduction

In the research problem it has been stated that the homoeopathic practice is not only a medical service (consultation), but also it is also a specialised retail business (supplying remedies). If both these aspects are not managed well, the practice may fail. Two factors that are important in establishing and managing an enterprise have been highlighted and investigated in relation to the homoeopathic practice. These factors are purchasing management and inventory management.

A thorough literature study of both these factors was made and areas relevant to the retail homoeopathic practice were identified. Keeping the basic principles and practices of management in mind, some adaptations and applications have been made to fit the homoeopathic practice. A number of conclusions were drawn and some recommendations suggested. These were discussed with a number of practitioners to test the applicability of these guidelines in the homoeopathic practice.

4.2 Conclusions drawn from this study

In this research study various aspects of purchasing management and inventory management have been discussed as described in various sources of management literature. The literature search as well as interviews with some homoeopathic practitioners, forms the basis for some conclusions that have been drawn regarding general management in the homoeopathic practice with specific regard to purchasing management and inventory management.

4.2.1 Conclusions regarding the homoeopathic practice as business

Enterprises with the objective to make profit, need skilful management to reach its full potential. The manager of any business needs some training in the field of business management to ensure optimal efficiency of the enterprise. The homoeopathic practitioner is not only the homoeopathic clinician in the practice, but he is also the manager of the homoeopathic retail business, therefore fundamental training in business management principles will be of indispensable value to him.
Most homoeopathic practitioners have a dispensary from where the practitioner supplies remedies to the patients. Although these remedies are supplied at a profit and they contribute significantly to the profitability of the practice, the dispensary also serves as a buffer to ensure that sufficient supplies are available when needed. Herewith the practitioner ensures that his patients will get the remedies as and when needed. It also serves as an image builder to the practitioner. It is detrimental to the image of a practice when the practitioner can not supply the necessary remedies to his patients.

4.2.2 Conclusions regarding purchasing management

It was found that none of the sources of literature used relates purchasing as a management function to the homoeopathic practice. This attests to the fact mentioned in chapter 1 that few researchers have the exposure, training or experience in both the disciplines of homoeopathy and business management. However, it was found, both in the literature and in the practice, that the principles of purchasing and purchasing management are applicable to a wide area. The homoeopathic practice can also benefit by applying these principles.

Since the homoeopathic practice may also be regarded as a specialised retail business, purchasing of inventory items plays an important role in the homoeopathic enterprise. Management should set out some purchasing objectives to maximise purchasing value.

Purchasing objectives include the following:

- the selection of suppliers who provide the best possible quality of goods or services at the lowest possible cost;
- building good relationships with these suppliers;
- maintaining a database of suppliers along with their purchasing information;
- minimising wastage; and
- reducing administrative costs in order to maintain the competitive position of the practice.

The four classes of purchasing goods as described in literature can be found in most dispensing practices. The management principles regarding purchasing have been applied to the purchasing
of supplies used in the homoeopathic practice. These supplies refer to supplies required in production, the supplies required for the production process, supplies for direct resale and supplies (consumables and office furniture) needed for the smooth operation of the practice.

One of the important decisions the homoeopathic practitioner needs to make is whether to make his own remedies either from the raw materials or from stock potencies, or to buy the finished products directly from suppliers. This decision has a definite impact on the profit margin of the enterprise, the requirements for infrastructure as well as production and quality control, to highlight only a few important aspects. The cost implication of this decision (whether or not it would contribute to the service quality and profitability of the practice) relates to cost considerations regarding raw materials, specialised equipment and processes, the quantity that is required, quality control, the reliability of the suppliers, inventory management and some other factors.

There are three different stages to the purchasing process, namely the need detection phase, the order phase and the post order phase. Each one of these phases requires specific attention and procedures, but also contributes in a specific way to ensure the availability of the required remedies. The homoeopathic practitioner needs to be aware of these phases and needs to plan within each one of them, while taking the overall objectives of the practice into consideration. If the purchasing process operates smoothly, costs and time input will be reduced, while ensuring constant availability of the required remedies.

As in any other business enterprise, all business management principles will be applicable in one form or another, to the homoeopathic practice. This entails planning, leading, organising and control, even in a single person practice or a small enterprise such as the homoeopathic practice, to ensure efficient management and achievement of objectives.

4.2.3 Conclusions regarding inventory management

Similarly to the case of purchasing management, none of the sources of literature used relates inventory management specifically to the homoeopathic practice. However, the principles of inventory management are applicable to the homoeopathic practice as well. This was determined
in the discussions with practitioners and observations in practices. The homoeopathic practitioner needs to monitor inventory to determine the need for replenishment and to control the flow of inventory items through the practice.

It has been found that inventory control is very important to any business. This is thus also applicable to a retail business as well as to the homoeopathic practitioner that values the health of his patients. This will ensure procurement of remedies and other requirements at lowest costs that would lead to cost reductions. These cost reductions could be passed on to the patients whereby sound customer (patient) relations will be promoted. Therefore, the practitioner needs to set inventory objectives to reach the full potential of the practice. The overall objective of inventory is to have the correct products available at the time needed while minimising the total cost of the inventory. This objective could be reached through sub-objectives such as determining the most efficient time and quantity to order, controlling the overall operating costs and providing against unpredictable demands.

From the literature, interviews and observations it can be stated that there are different cost aspects that should be taken into account on calculating the cost of inventory. These costs include inventory holding costs, inventory acquisition costs and the costs incurred as result of inventory shortages. By calculating these costs and comparing the advantages and disadvantages of smaller and larger inventories, the optimal inventory size can be estimated to minimise the total cost of inventory. The research indicated clearly that proper attention to these cost aspects is vital for the long-term survival of any enterprise. It is very likely that these costs and wrong purchases could get out of control easily, resulting in a real danger to the continued existence of the practice.

The inventory management process includes four functions, namely planning, organising, leading and control. The emphasis lies on the planning function through inventory analysis and forecasting, and the organising function through calculating the economic order quantity, the amount of safety stock needed and the most efficient time for reordering. In investigating inventory analysis both the ABC stratification and the D system of analysis have been found applicable to the homoeopathic practice. This is mainly due to the difference in frequency of use of different remedies.
A number of signs of and causes of poor inventory management have been identified from the literature. These are also applicable to the homoeopathic practice. When these are noticed in the practice it should be rectified promptly to avoid financial and patient losses.

The identification of these applications of business principles to the homoeopathic practice is important. It proves that the homoeopathic practice can benefit by being managed according to business principles and practices.

4.3 Recommendations on purchasing management and inventory management in the homoeopathic practice

From the research study it is clear that purchasing management and inventory management are very important aspects of any enterprise, including the homoeopathic practice. Various aspects of these two areas of management as discussed in the study, should be investigated to achieve optimal results in the business side of the practice. At the same time the medical side and patient care of the practice will also benefit. The most important areas to refer to are the purchasing process and purchasing management process as well as the cost of inventory, optimal inventory size and the inventory management process.

It is noticed that the two areas of purchasing and inventory are inter-linked and mutually dependent on one another. A number of objectives are shared and the management processes are similar, therefore integration of these areas is very important.

Following from this research study, a model for a homoeopathic practice can be compiled.

4.4 Model for purchasing and inventory management in the homoeopathic practice

A model is compiled to highlight some important aspects of the homoeopathic practice as a retail
business:

- The homoeopathic practice is both a medical service provider and a retail business;
- The homoeopathic practice, like most businesses, focuses on profit making, or at least survival, as one of its main objectives;
- The homoeopathic practice, like any other business, has to comply with the principles and practices of management and business;
- The management functions (planning, organising, leading and control) are applicable to the homoeopathic practice;
- The homoeopathic practitioner needs to be acquainted with the fundamentals of the management principles and should be able to apply these in his practice;
- The homoeopathic practitioner has to set out objectives for efficient management of the practice;
- The homoeopathic practitioner needs to have a structured system for purchasing;
- The purchasing process in the homoeopathic practice should be managed well;
- The homoeopathic practitioner needs to have a structured system for inventory holding; and
- The inventory holding process in the homoeopathic practice should be managed well.

The practitioner can use this model together with the background information as discussed in this dissertation, as a guideline to ensure efficient management of the purchasing and inventory. The discussions do not specify any one approach as the correct one, but rather give a little insight into various management scenarios found in the homoeopathic practice. Therefore the practitioner is allowed to make his own decisions from the various alternatives. However, this model suggests some aspects that should definitely be addressed in the practice to increase the profitability of the practice.
4.5 Conclusion

Much knowledge is gained through the research study on purchasing management and inventory management within the homoeopathic practice. This knowledge should be available to all homoeopathic practitioners who need some improvement of the management of the purchasing and inventory holding areas in their practices. It should also be available to newly qualified homoeopathic practitioners who would like to start their practices with a thorough knowledge of these aspects. They can use these as guidelines that can be tested practically during their internship year under the guidance of their supervisors. This can benefit homoeopathic students as well, who have to complete the practice management course offered by the training institutions.
For the sake of proper understanding of certain concepts that are referred to in this research report, a number of concepts and terminology needs to be clarified.

**Clinical training**
The training of students enrolled for the M Tech degree in Homoeopathy as it is offered by the Technikons Witwatersrand (Johannesburg) and Natal (Durban). This is a six-year study programme, involving five years of theory and one year of internship in an approved homoeopathic practice. The theoretical training comprises basic science subjects, applied diagnostic techniques and pathology, as well as homoeopathic materia medica, clinical homoeopathic theory and a short introductory management course (TWR 1997).

**Complexes / Complex remedies**
Homoeopathic remedies that are registered and marketed for a specific complaint by a specific homoeopathic laboratory and that are unique to that specific laboratory.

**Homoeopathic practices**
A medical-related practice where patients are treated according to homoeopathic principles. A homoeopath who is registered with the relevant professional council operates this practice. The council refers to the Chiropractors, Homoeopaths and Allied Health Service Professions Council of South Africa.

**Inventory**
Items acquired, used, manufactured and/or sold in a business enterprise and the management of these items to maximise the functionality of the enterprise while minimising costs. It consists of the supply of raw materials, work-in-process and finished products that an enterprise needs to maintain its operational needs (Bartol et al. 1996:735; Stoner & Freeman 1992:703).

**Laboratory**
A manufacturing plant (medical factory) specifically intended for the preparation of homoeopathic remedies. It often imports some of the raw material, semi-manufactured products or final products.
needed. These laboratories are specially equipped for quality control (Natura 1997; Pharma Natura 1997).

Management
Management refers to the art and science of achieving desired results utilising people and other resources. Management entails those human activities aimed at getting desired results (objectives of the enterprise) by utilising people and other resources. The four functions of management employed to achieve its stated goals are planning, organising, leading and control.

Planning entails the defining of objectives and proposing of ways to reach these objectives. Organising refers to creating a structure of relationships in order to co-ordinate actions to carry out the management’s plans. Leading is concerned with communication with and motivation of the employees in an enterprise in order to reach the objectives. Lastly, control refers to the actions taken to monitor the performance as well as possible corrective actions when necessary (Bartol et al. 1996:13-14; Hellriegel & Slocum 1996:8-9; Koontz et al. 1994:64-66; Mondi et al. 1986:6-8).

Materia Medica
Description of remedies proven by homoeopaths to be used on patients. This includes the toxicological effect of the remedy on different systems of the body, the results of provings of the remedy, as well as clinical observations. Examples of different materia medicas include Hahnemann’s Chronic Diseases, Allen’s Encyclopedia of Pure Materia Medica and Hering’s Guiding Symptoms (Vithoulkas 1980:155).

Mother tincture/Tincture
The final product after a process in which a soluble substance (usually a plant or animal extract) is dissolved in an alcohol/water mixture. The mixture is left to infuse for 2 to 4 weeks while shaken occasionally. The mother tincture is the liquid obtained from straining this mixture through a press (Lockie & Geddes 1995:20). The mother tincture is used as basis for the preparation of different potencies (Reader’s Digest 1994:184; TWR 1996a).

Polycrest
A homoeopathic remedy that exerts an action on many bodily systems, organs and cells. It can cure a variety of diseases.
Potency
A diluted form of a homoeopathic remedy. The potency indicates the strength of the remedy. A dilution can be done either according to the decimal (X) or centesimal (C) scale (Lockie & Geddes 1995:20; Reader's Digest 1994:191).

Potentise
This is the process of dilution and succussion (shaking vigorously) of remedies to release its energy (Lockie & Geddes 1995:20).

Purchasing
A function of the enterprise supplying materials, products and services so that input costs are optimised and the competitive advantage of the enterprise is enhanced (Baily et al. 1994:17; Hugo et al. 1997:7-10; Saunders 1997:34-37).

Remedy
A medicine prepared in accordance with homoeopathic principles. Homoeopathic remedies are made from plant, animal and mineral extracts and are diluted in varying degrees in order to avoid unpleasant side effects. Paradoxically, the more dilute the remedies are, the more effective they work (Lockie & Geddes 1995:20).

Simplex
A homoeopathic remedy that is described in the homoeopathic materia medica. It is used to treat patients who show certain symptoms.

Trituration
This is a process in which an insoluble crude substance intended for a homoeopathic remedy, is grounded together with lactose powder until it is soluble in water (Lockie & Geddes 1995:20). The equipment used on a small scale for this procedure is called a pestle and mortar (TWR 1996a).
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GKPV kyk Gesamentlike katalogus van proefskrifte en verhandelinge.


NISC see National Inquiry Services Centre.


PROFESSIONAL COUNCIL read The Chiropractors, Homoeopaths and Allied Health Services Professions Council of South Africa.

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SAICA see SOUTH AFRICAN INSTITUTE OF CHARTERED ACCOUNTANTS.


STEYN J. 1997. Practice loans. Interview. [Ms Steyn is a VIP personal banker at Nedcor Limited.]


TWR see Technikon Witwatersrand.


