ABSTRACT
Hospitals and health centers in Oman utilize a variety of organizational structures and committees to provide health care services. These committees are necessary and useful when different disciplines or management sectors must agree upon and collaborate on necessary outcomes, when open and critical review of hospital activities is necessary, and when efforts are needed to support quality control through peer review. An evaluation of the effectiveness of hospital committee structure suggests areas for improvement in Oman’s hospitals. Current structures are identified and compared to a new model to increase operational efficiency and effectiveness. A survey of the hospital administration literature suggests areas for improvement in types of committees, functions, and size. This research provides an overview of current problems in Oman hospital organizations, identifies areas for improvement, and recommends a new model for administration and medical staff committee structure.

INTRODUCTION
Hospitals and health centers in Oman utilize a variety of organizational structures and committees to provide health care services. Hospitals represent a challenging form of human organization. Many professions and disciplines work side-by-side in complex facilities, competing for scarce resources needed to sustain a myriad of alternative, as well as, complementary programs. While firm leadership is essential in this complex environment, collaborative models for decision-making and information exchange must be also be established and respected as integral components of the institutions management system (9).

Established hospital management structures, in both the developed and developing world, rely upon multi-disciplinary committee structures to advise institutional management on issues arising from the operation of designated functions (6). Committees are an essential adjunct to the hospital’s managerial mechanism for introducing a participative style of management in the hospital and enhancing the commitment of the staff to the hospital’s goal and mission. Over three decades, Oman has built a healthcare infrastructure in the form of various regional and referral hospitals and health centers. Presently, the Oman healthcare system needs to focus on the quality of the organizational structure in specific healthcare facilities. Expansions of the health services, growing awareness and demands of the public, and heavy burdens on the
public funds have necessitated the further enhancement of an effective and efficient health care delivery system. The purpose of the study is to assess the current situation of hospital committee structures in Oman hospitals and identify areas for improvement so that these committees can promote the quality of healthcare services needed to serve citizens of Oman.

HEALTH SERVICES AND HOSPITALS IN OMAN
Background of Health Services in Oman
Health services in Oman have seen exemplary development and expansion in the last three decades, evident from the effectively operational organization and infrastructure of health services. A network of primary health care health centers, polyclinics, Wilayat (district) hospitals, secondary health care regional referral hospitals, and tertiary health care hospitals form the backbone of this infrastructure. A well-placed referral system interlinks these health facilities into an effective and efficient health care delivery system, emphasizing both preventive and curative health care nationwide. The health services in Oman have been acknowledged and appreciated internationally, placing the primary health care services at the very top of the list by WHO (14). Like most of the developing countries, and majority of developed countries, health services in Oman are primarily sponsored by the public sector offering preventive and curative services free of cost to the public. Table 1 summarizes the organization of health services in Oman.

Table 1. Health services and health workforce in Oman (2003)

<table>
<thead>
<tr>
<th>Service/workforce</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Hospitals</td>
<td>49</td>
</tr>
<tr>
<td>Gov. Health Centers</td>
<td>131</td>
</tr>
<tr>
<td>Polyclinics</td>
<td>12</td>
</tr>
<tr>
<td>Private Hospitals</td>
<td>3</td>
</tr>
<tr>
<td>Private Clinics</td>
<td>640</td>
</tr>
<tr>
<td>Physicians</td>
<td>3700</td>
</tr>
<tr>
<td>Nurses</td>
<td>8600</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>650</td>
</tr>
<tr>
<td>Dentists</td>
<td>350</td>
</tr>
<tr>
<td>Total Hospital Beds</td>
<td>4550</td>
</tr>
</tbody>
</table>

Hospitals in Oman
Oman has made a dramatic improvement in its healthcare services. For example, the number of hospitals has grown from 2 small hospitals in 1970 to 51 public hospitals in 2004. Over last 10 years, 13 regional referral hospitals were build in the country and to date there are 49 public hospitals, 3 private, and 131 health centers in Oman(Table 2). Hospitals are categorized as follows:

- **Local hospital**: A small hospital with 6-28 beds that provides PHC services to inhabitants in nearby villages. In addition, it provides inpatient services to those patients who are in need of continuous medical care and/or observation.

- **Wilayat hospital**: A district hospital with 29-100 beds that provides both primary and secondary health care services.
Regional hospital: A hospital with more than 100 beds that provides both secondary and tertiary health care services distributed over the 10 regions of the country. Regional hospitals of Muscat Governorate (the capital region) act as national referral hospitals for critical cases from other regional hospitals.

COMMITTEES IN OMAN HOSPITALS
Hospitals are difficult to manage because of the diverse skills and background of their work forces, complex organizational structures, and the delicate nature of the services they render. Therefore, hospital administrations must involve various committees to help in efficiently performing hospital’s functions. Currently hospitals in Oman utilize various committees, the effectiveness of which is questionable. Figure 1 shows the organizational structure of a secondary hospital in Oman which closely resembles the other secondary and tertiary hospitals in the country.

Types of Committees
The following table is a review of the current status of committee structures in a tertiary hospital in Oman which closely resembles the existing structure in secondary hospitals.

Table 2. Number of hospitals and health centers per region

<table>
<thead>
<tr>
<th>Region</th>
<th>Local</th>
<th>Wilayat (District)</th>
<th>Regional</th>
<th>Health Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscat</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>Dhofar</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>Dhakhiliya</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>North Sharqiya</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>South Sharqiya</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>North Batinah</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>South Batinah</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Dhahira</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Musandam</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Wusta</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Total Hospitals/Centers</td>
<td>30</td>
<td>6</td>
<td>13</td>
<td>131</td>
</tr>
</tbody>
</table>

- Problems Facing the Committees
In reviewing the committee structures of various hospitals in Oman, based on telephonic and online interviews with several hospital administrators and professionals who are serving members of various hospitals in Oman, and based on previous work experiences in a hospital setting, the following problems may impede the achievement of the desired outcomes from the current organization, structures, and functions of hospital committees:

1. Although many committees are in existence according to hospital bylaws, in reality they do not perform functions as stated.
2. In most of the committees regular meetings as stated in the hospital bylaws are not held.
3. Committee membership is redundant in composition.
4. Decision making in committees is not democratic but rather unilateral decisions are made by the chairman of the committee.
5. There are dual representations from a department on several committees.
6. Most of the members are permanent members on the committee and there is no system...
of replacement or rotation of committee membership.

7. The agenda for the meetings are distributed to the members with short notice, usually one day notice, resulting in limited contributions or preparation for meetings.

8. There are no clear objectives for the issues discussed in many committees and a time frame for resolution of matters discussed in these committees.

9. On many occasions conflict of interest exists between various departments.

10. Committee issues are not resolved in a timely manner.

11. Committee size is too large with 10-14 members (on the average).

12. Some of the established committees are not necessary and new committees are needed.

13. There is no feedback from the chairperson on the performance of the members who participate on the committees.

14. There is no evaluation or assessment of committee performance or outcomes.

15. Decisions and actions of the committee are not implemented and outcome assessed.

LITERATURE REVIEW OF EFFECTIVE HOSPITAL COMMITTEES

One of the reasons that hospitals as organizations are so complex lies in the relationship among three major sources of power within the institution: the governing body, the CEO and his administration, and the physicians and their formal medical staff organization. Therefore, committees are required in hospital structure to enable more dynamic links and formal relations between the board and the medical staff especially through the executive and the joint conference committees (13). Effective committees foster shared decision making and participative style of management and facilitate better communication, team building, and interdepartmental cooperation (4). Hospitals are devising innovative ways through committees to involve physicians in all levels of the strategic decision-making process.

According to Hanlon (1985), the limited success of quality committees in hospitals, especially on patient care units, relates largely to the inability of hospitals to incorporate physicians into these efforts and an inability of the hospital administration to delegate decision making authority pertinent to the particular quality problems the group is solving at a given time. Therefore, hospital administration should encourage wider physician involvement and should allow more delegation on particular issues. These efforts will allow the quality committee to be more beneficial.

Hospital safety management is one area where the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is concentrating on and looking to
safety compliance requirements. Hospitals should have an effective safety committee that devotes time and effort to assure a safe hospital environment. JCAHO and most states also require a radiology safety committee to be present in the hospitals.

Ethics committees exist in most hospitals in response to a 1991 mandate by JCAHO for the establishment of a “mechanism” to consider ethical issues in patient care and to educate health care professionals and patients in these issues. According to Fletcher (1994), a survey of ethics committees showed that the three most common tasks were educating clinical staff and patients about ethical issues in patient care, developing institutional policies, and providing consultative services on request. Despite this general agreement on tasks, little consensus exists about standards for education and skills necessary for membership on a committee, or for the internal operations of committees, for providing consultation as a committee member, or for procedural guidelines for the conduct of consultations (3). Therefore, ethics committee members need to receive a thorough orientation to the history and literature of ethics committees and to the specific mission and duties of the committee. Members should also engage in a course of study of ethical concepts, types of ethical problems most frequently faced by clinicians and patients, and methods of ethical decision making. Relevant health law and differences between legal and ethical considerations need to be stressed (3).

One of the primary goals in today’s medical environment is to find treatments that provide positive clinical outcomes but also satisfy pressures on healthcare professionals and hospitals to deliver care as cost effectively as possible. To attain this goal, a hospital must have a pharmacy and therapeutics (P&T) committee that is both scientifically and economically sound. The purpose of the P&T Committee is to evaluate the relative safety, efficacy, and effectiveness of prescription drugs within a class of prescriptions drugs and make recommendations to the hospital administration. Quintiliani (2003) stated that ideally, the chair of this committee should be a physician, who is economically independent from referrals from other physicians, and therefore he should be a full time hospital salaried employee and the membership should include those departments that directly deal with drugs and therapeutics.

Going through the composition of committee structure in various hospitals in United States, Europe, and Asia with similar size and settings to Oman hospitals, the following committees seems to be ideal and more commonly occurring in the hospital organization structures for the effective and
efficient functions of the hospitals (Table 4).

A review of the literature and comparison of committees among several hospitals suggest opportunities for Oman hospitals as follows:
- There are various areas for improvement in the organizational structure of the committees in Oman hospitals including the types of committees, size of committees, and roles and functions of committees.
- The number of committees and their purpose changes according to the hospital’s strategic priorities.
- Top management must create a climate in which committee work is viewed as important by management taking into consideration performance evaluation, assessment of outcome, and expected outputs.
- Committee purpose, function, scope of activity and authority must be clearly stated.
- Participants must be carefully chosen, providing the expertise

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theater Users'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Utilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Record</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy &amp; Therapeutic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.M.E.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Assurance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accreditation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiation Protection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilization Review</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credentials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint Conference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be concluded from the table, the following are the most occurring committees:
1. Executive committee
2. Infection Control
3. Quality Assurance
4. Medical Record
5. Ethics
6. Pharmacy & Therapeutics
7. Theater Users
8. Utilization Review
9. Blood Utilization
10. Continuing Medical Education
11. Safety & Risk Management
12. Cancer Committee
needed to address the functions of the committee and objectives for performance.
- The size must be manageable, allowing for discussion and healthy disagreement without becoming too unwieldy in the process, ideal is 5-10 members.
- Periodic rotation of membership of committees is needed so that new members are routinely recruited to participate and to add expertise.
- The hospital should annually review the structure and performance of the hospital committees.
- The Management Board should involve members from the community, business sector, clergy, etc.
- Chairpersons of committees should be appointed or elected annually based on performance.
- Reducing the number of committees by reassigning committee functions.
- Executive committee should include chairpersons of major standing committees.

A MODEL FOR OMAN HOSPITALS
Hospitals in Oman operate with the same essential organizational structure that existed in the 1970's with professional, support and nursing departments as the organizing elements. The current organizational model does not enable the hospital to meet the increasingly complex needs of patients, quality of care, patient safety, and financial issues. The historical process for system change has been an incremental change of processes in various areas of the hospital system in Oman. Understanding the unique care delivery processes in Oman hospitals and the creation of systems and processes to insure that the performance in these hospitals is successful is required to develop a new model. This new model can create more effective interdepartmental relationships, improve communication, improve the relationship between hospital administration and the medical staff, improve healthcare quality outcomes, and increase hospital performance. Taking into consideration the transition phase of hospitals in Oman to a more autonomous status, the proposed model will involve more vital committees, relevant committees, and eliminate some of the current committees that are not needed and/or functional.

Proposed Committees
The following table shows the new proposed model for committees in Oman hospitals (Table 5).

<table>
<thead>
<tr>
<th>Proposed Committee Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hospital Management Board. The board is chaired by director general of health of the region; the hospital director is the</td>
</tr>
</tbody>
</table>
secretary. Other members are 2 heads of clinical department replaced every 2 years with other clinical departments, in addition to director of administration, director of nursing, director of pharmacy, and a community leader.

2. Executive Committee. The chairman of this committee will be the hospital director and its members will be the chairpersons of all of the hospital’s standing committees.

3. Ethics Committee. CEO, 2 physicians with at least one head of department (hod), a social worker, a senior nurse, a clergy, and a community representative

4. Continuing Medical Education Committee. Three physicians (at least one hod), head of nursing, and a staff development coordinator.

5. Information Systems Committee. Two physicians (at least one hod), hospital information officer/statistician, medical records officer, and computer officer.

6. Quality Improvement Committee. Three senior physicians (including at least one hod), one senior nurse, quality control officer, and a medical record office.

7. Operation Theater (OT) Committee. Four surgeons, a senior anesthesiologist, a senior OT nurse, and a quality assurance officer.

8. Drug & Therapeutics Committee. Three physicians (at least one hod), a pharmacist, and a senior nurse.

9. Tumor Board. Head of medical oncology, head of surgical oncology, a radiologist, and a histopathologist

10. Safety & Risk Management. A senior physician, biomedical engineer, radiologist, nursing administrator, safety officer, and a senior administrative staff member.

11. Utilization Management. Two senior Physicians, quality control officer, nursing administrator, head of laboratory, and head of medical laboratories.

Functions of Standing Committees
A standing committee should enhance the entire managerial
process in a hospital for planning, implementation, monitoring and evaluation of activities. It is impossible to specify all the numerous ways a committee can and should contribute in the smooth running of an autonomous hospital. Some of the specific contributions a committee can make are:

- Developing mechanisms and protocols for effective and efficient execution of policies and plans.
- Resolving conflicts/obstacles to effective implementation of adopted plans, underlying processes, and the health care delivery system as a whole.
- Overseeing the implementation of accepted policies and procedures, and preparing status reports on the progress (or lack of progress) in their implementation.
- Detecting and reporting on deviations from goals/objectives and policies/plans, taking corrective actions if possible, or recommending higher authorities for managerial action, to resolve deviation.
- Recommending ideas for further progress and improvement through policy reforms or revisions to existing policies/plans/procedures.
- Ensures that a committee operates within the framework of established policies, standard conventions and rules.
- Encourages active participation by the members.
- Generates team spirit among the committee members.
- Attempts sincerely to make decisions mostly through consensus (or majority vote in extreme cases).
- Maintains high ethical and disciplinary standards.
- If and when appropriate, forms sub-committees or adhoc committees.
- Revise and analyze committee outcomes.
- Authorize studies, assessments, and evaluations as needed.
- Provides feedback to members about their performance, recognizes their valuable contributions, and offers constructive suggestions to specific members for improving performance when necessary.
- Cooperates with the CEO in eliminating or mitigating the inadequacies (if any) in the functioning of a committee.
- Prepare an annual report.

2. Secretary

- Schedules/reschedules and convenes committee meetings with the consent of the chairperson.
- Assists chairperson for preparation and prioritization of agenda.
- Ensures circulation of the agenda well in advance of the scheduled meeting.
- Collects and provides relevant information to members in regard
to the agenda items.
- Prepares draft minutes of the meetings, circulates among members, and finalizes these in consultation with the chairperson.
- Circulates approved minutes to all the members of the commit and the CEO.

3. Members
- Play a proactive role for improving the performance of the hospital by proposing relevant items for inclusion on the agenda.
- Collect all relevant information and come prepared for making effective contributions to the discussion on the items included on the agenda.
- Participate whole-heartedly and constructively in the committee’s deliberations and decision-making.
- Remain focused on the specific objectives and purpose of the committee.
- Offer opinions and suggestions with the sole aim of improving performance of the hospital in the committee’s specific field.
- Accept the decision of the committee as the final decision with collective responsibility, and refrain from criticizing it privately or in any other forum.
- Ensure decisions of the committee are implemented and evaluated.
- Give due importance and priority to tasks assigned by the Chairperson of the committee.
- Adhere to the relevant rules, conventions and practices in regard to participation, punctuality, ethics, and discipline.

CONCLUSION
Cost containment and increased efficiency in the financing and provision of health care have become major concerns of governments around the world, and this had led to the institution of major health sector reform efforts in a number of developing countries. Similarly, hospital reform has been an important component in healthcare transformation in Oman. Public hospitals are an important part of health system in Oman, and depending on their capacity, they act as first referral, secondary or last referral facilities. These hospitals are generally responsible for 50 to 80 percent of recurrent government health sector expenditure and utilize nearly half of the total national health expenditure (2). Therefore, hospitals in Oman need to improve their organizational structure and committees in order to enhance productivity, effectiveness, and efficiency of services given the constraint of scarce resources. A model for committee structure and process improvement is suggested. This model will promote the quality of health care services render by the hospital, establish a means of participative style of management, enhance the commitment of the staff to the hospital’s goals and mission, and improve overall patient care outcomes.
უფლებას და მართვის, მონაცემთა განთავსება.

თავისი სამუშაოსთან არ მოუყვალოთ პრობლემებში, მონაწილეობა ხელმძღვანელობის მომატბამის უწყებლობის სექტორში სხვადასხვა სახის ოფიციალური საქონელი, რომელშიც შეიძლება უნდა გაქონდეთ მომატბის სექტორში მომატბის სამმართველო გამოკვლევა და კონტექსტი. შეიძლება, რომ ბალანციმმა უდევებელი და საბრძოლო სექტორში მიმდინარე მომატბის სამმართველო გამოკვლევა. მომატბის სამმართველო გამოკვლევა შეიძლება განხორციელდოს, როდესაც სარგებლობის სამმართველო გამოკვლევა უდევებელ შეიძლება, ბალანცის უარყოფითი შესაძლო მომატბის სამმართველო ვერსიული გამოკვლევა. მომატბის სამმართველო გამოკვლევა შეიძლება გამოვიყენოთ ბალანცის უარყოფითი შესაძლო მომატბის სამმართველო ვერსიული გამოკვლევა. თავისი სამმართველო სამთავრობო სამმართველო გამოკვლევა შეიძლება გამოვიყენოთ საბრძოლო სამმართველო გამოკვლევა.

**REFERENCES**

7. Hospital & Health Services Administration, 36, (4), 545-558.
11. Quintiliani R. Quercia R. How to create a therapeutics committee that is scientifically and economically sound. Formulary, 2003, 38(10)594-596