

No part of this digital document may be reproduced, stored in a retrieval system or transmitted commercially in any form or by any means. The publisher has taken reasonable care in the preparation of this digital document, but makes no expressed or implied warranty of any kind and assumes no responsibility for any errors or omissions. No liability is assumed for incidental or consequential damages in connection with or arising out of information contained herein. This digital document is sold with the clear understanding that the publisher is not engaged in rendering legal, medical or any other professional services.

Chapter 12

PALLIATIVE CARE IN OMAN

*Zakiya Al-Lamki, M.B., Ch.B, DCH, MRCP, FRCP (UK),
FRCPCH, FRCP^{1*}*

and Shah Mohammed Wasifuddin, M.D., DCH, FRCPCH²

¹ College of Medicine & Health Sciences, Sultan Qaboos University, Muscat,
Sultanate of Oman, Ireland

² The National Oncology Center, Royal Hospital, Muscat, Sultanate of Oman, UK

ABSTRACT

Background

The Oman Ministry of Health was able to establish a modern national health system that offers all its citizens accessible services free of charge. The rapid developments brought a significant decline in communicable diseases thus earning a global recognition. With the ageing population and changes of lifestyle, there is a rising trend of non-communicable diseases including cancer. The climbing rates further complicated by the advanced stage presentation of the disease and patients' late reporting of pain thus drew attention to the need for palliative care services. These efforts have been complimented by National Association for Cancer Awareness (NACA). Prior to that, there were patchy distribution of services mainly localized at the two tertiary institutions. Treatment of pain was mainly by traditional methods until the introduction of morphine after the early 1980s. The ministry of health has legislative control and restrictive regulations on use of narcotics.

Framework Development

There was a paradigm shift from only curative to palliative services. In year 2008 a workshop was held during a pediatric conference. In 2012, NACA jointly with the Middle

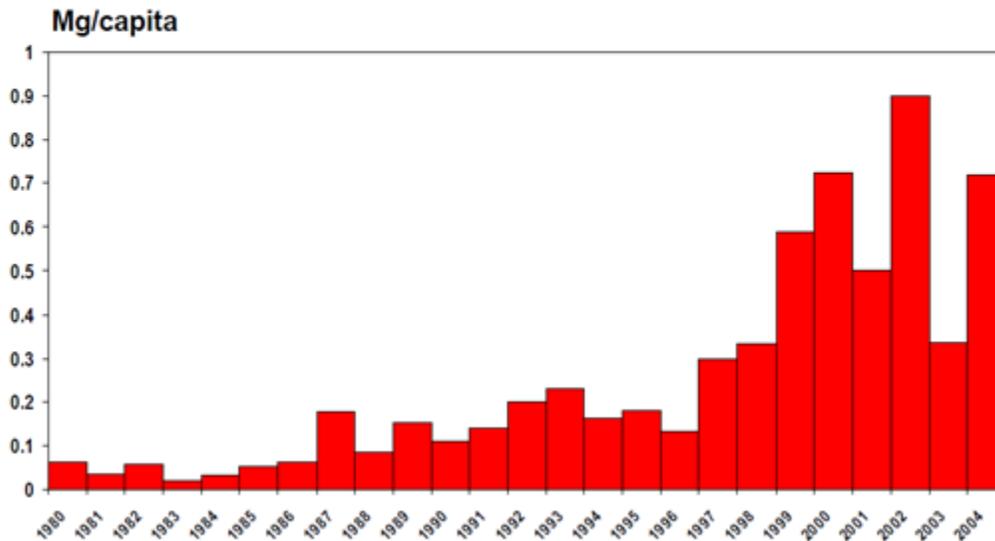
* Address for correspondence: zakiya.allamki@gmail.com

East Cancer Consortium (MECC), launched an introductory course in palliative care for nurses followed by a symposium in 2013. As part of capacity building two nurses from national oncology center were sent to North America for training.

Pain Management

Small teams of palliative care are established at the tertiary hospitals. The WHO Ladder for pain management is used as a guide. Pain management is family-centered, non-pharmacological measures, pharmacological and adjuvant therapy are used. Spiritual healing is widely applied by patients and education is important part of the management. Most analgesics drugs are available in Oman. Morphine consumption is 0.66mg/capita. (Figure 1)

Mg/capita Consumption of Morphine, Oman, 1980-2004



Source: International Narcotics Control Board, United Nations Demographic Yearbook.

By: Pain & Policy Studies Group, University of Wisconsin WHO Collaborating Center, 2006.

Figure 1. Mmg/Capita Morphine consumption.

Barriers and Future Reforms

Cost in Oman is not considered as a barrier to palliative care. Tradition, beliefs and culture are main barriers. Pain management is considered a luxury with worries about addiction and lack of awareness. There is late reporting of pain and highly restrictive policies

for prescriptions. Analgesics are not readily available, palliative care training programs are limited and there is very little of support services. However, Oman is taking major steps to improve cancer care, addressing the need of palliative care and developing framework to integrate into a wider health service within the reach of the community. There is an urgent need of capacity building, educating and training both the professionals and the public.

INTRODUCTION

The Sultanate of Oman is the second largest country on the southeastern corner of the Arabian Peninsula. It covers a total area of approximately 309,500 square kilometers and a mid-year population (by the National Center for Statistics and Information) in 2012 of 3,623,001. More than 80% of the government revenues come from oil and gas with a GDP of about 78 billion United States dollars (USD).

To emphasize the importance of health and social development, the ministry of health was established soon after the renaissance in 1970. It was able to build from scratch through proper health planning, a modern national health system that offers all its citizens universally accessible health services free of charge. Directing the expansion of its services to primary health care and public health, brought a decline in preventable diseases and dramatic drop in infant and child morbidity and mortality rates. The improvements occurred at a high speed and much less time than in many other countries to the extent that the World Health Organization (WHO), in its analysis of health system documented in its Year 2000 Report, ranked Oman first among all 191 WHO member states on health level and 8th as regards health system performance. In 2010, the United Nations Development Program listed Oman as one among the world's ten leading countries for putting up the best performance in public health. [1,2]

CURRENT STATE OF AFFAIRS

Health statistics revealed that communicable diseases accounted for 43.2% of the total outpatient visits in 1996 compared to 31.5% in 2011 and non-communicable diseases was 42.5% in 1996 compared to 49.9% in 2011. During 1990, inpatient morbidity of communicable diseases had constituted 21.4% of the total discharges and this was reduced to 17.9% in 2011. Cancer ranges between the first to the third cause of mortality in the inpatients depending on the age group. [3]

The 2011 figures from the Oman Population Based Cancer Registry which was established in 1996 showed that the crude incidence rates for all cancer among Omanis were 55.2 per 100,000 for males and 56 per 100,000 for females. The age standardized rate, adjusted to the world standard population was 123.2 per 100,000 for males and 103.7 per 100,000 for females. Cancer among children aged 14 years and below, constituted 7.3% of the total cancers reported. Although the age adjusted incidence rates appear lowest in comparison to industrialized countries, it has been shown from the ageing population and increasing cancer risks due to lifestyle changes as observed elsewhere, that Oman is facing an upward trend in cancer incidence.[4] It is therefore witnessing a growing shift of its health

problems, from communicable to non-communicable diseases. This led to the need of strengthening its secondary and tertiary care activities directed towards control of non-communicable diseases including cancer. This was complimented by the work of a Non-Governmental Organization (NGO), National Association for Cancer Awareness (NACA), founded in 2004, by a cancer survivor whose aim was to educate, train the public and support cancer patients and research. The climb in cancer rates further complicated by the advanced stage presentation of the disease and patients' late reporting of pain has restored attention of the health caregivers. For those patients the only realistic treatment option is pain relief and thus the need for palliative care services have emerged. Prior to that, attention to palliative care has been minimal with patchy distribution of services mainly localized at the two tertiary institutions namely the Royal Hospital in the Ministry of Health and the Sultan Qaboos University Hospital (SQUH) each with a total bed capacity of about 700 and a 550 respectively.

HISTORICAL PERSPECTIVES

Prior to 1970 cauterization by the colloquial Arabic name of "wassam" was used as a form of traditional medicine to treat pain. This was similar to the Chinese old therapy of "moxibustion" but instead of using a fire heated dried herb, it uses metal sticks or iron nails that are heated red hot and applied at the site of the pain. Dry and wet Cupping was also used successfully as a form of local pain relief. Severe cases of pain were treated in hospitals with intramuscular pethidine (meperidine hydrochloride) whenever necessary. SQUH approved the use of both parenteral and oral narcotics in 1989 and started pain management after receiving its first consignment in the same year. The Ministry of Health has a legislative control of narcotic drugs thus preventing their misuse and illegal acquirement. Slow release oral morphine was only obtainable from the Royal Hospital Oncology department with special prescription signed by a senior consultant oncologist. In 1996, the central drug committee on the recommendation of the national cancer committee took the decision to allow oral morphine usage in some regional hospitals with oncology units.[5] Until 2006, SQUH was the only hospital, besides the Royal Hospital, allowed to procure, stock, and dispense oral narcotics. Health institutions are required to submit their annual opioid consumption to the regulatory authority, the Directorate General of Pharmaceutical Affairs and Drug Control in Ministry of Health who process the import authorization by providing country's detailed annual estimates and reports on the requirements to the International Narcotic Control Board. WHO assist access for permission to the country's requirements of narcotics and psychotropic drugs. Illegal possession or non-medical consumption of these controlled drugs is closely monitored by the local police. The country's total consumption of morphine is 0.66mg./capita (the global mean is at 5.57mg/capita). [6,7] Fully licensed Doctors (and not nurses) are allowed to prescribe for inpatients as well as for ambulatory cases. Special prescription forms are in use, signed and stamped along with an electronic request (figs. 1,11).

EDUCATION AND TRAINING

It was not until the year 2008 when the first initiative was undertaken by a palliative care workshop held during the pediatric cancer conference (5th SIOP-Asia) under the umbrella of International Network for Cancer Treatment and Research (INCTR). In January 2012, ministers of the six Gulf Cooperation Countries (GCC) met in Muscat to respond to the call from United Nations General Assembly on political declaration and control of non-communicable diseases. One month later, the Middle East Cancer Consortium (MECC), American National Cancer Institute (NCI) and Oncology Nursing Society (ONS) in collaboration with the Oman National Association for Cancer Awareness (NACA) organized the first palliative care course for Omani nurses. As a direct follow up of that course, in February 2013 MECC jointly with NACA, ONC and the American Society of Oncology (ASCO) organized a training course which was followed by a research day in palliative care in the community as well as two international workshops in the geriatrics and pediatrics oncology respectively. Besides local health care professionals, a number of participants from regional countries as well as North America and Europe participated in those events.[8,9]

While palliative care is often associated with cancer, a much wider circle of patients with health conditions that limit their ability to live a normal life can benefit from it. It gradually became recognized by health care providers that palliative care is an integral part of health care system for cancer and therefore there is a paradigm shift from curative services to palliative care. Both medical and nursing staff is eager to make changes. As part of capacity building, two nurses from the national oncology center were sent to Calvary in United States of America for few weeks training in palliative care where they learnt on how to address the medical, psychological and mental needs of advanced cancer care patients and their families. They sat in on bereavement groups with social workers, and visited the hospice.

EXISTING SERVICES

There are pain management teams in both tertiary care centers namely the SQUH and the Royal Hospital. These were built gradually through the past few years and consist of a small multidisciplinary group of motivated nurses and physicians, mainly from the oncology and hematology units led by a senior anesthetist. The teams conduct independent joint clinics for the follow up of adult patients with chronic pain as well as newly referred cases internal and outside the hospitals. These are held twice and thrice weekly for cancer patients and all other types of pain. At SQUH, in addition, there is an interventional pain management clinic once a week. The team is responsible for answering inpatient calls on patients with intractable pain not responding to conventional treatment. It is also responsible for initiating patient control analgesia (PCA) give epidural, peripheral nerve blocks, articular joint blocks with steroids and occasionally permanent blocks with radiofrequency ablation. The Royal Hospital team provides training in pain management and conduct end of life courses for nurses quarterly around the year. Staff from other hospitals around the country also attends these courses thus extending training to the regions. Irregular meetings of the team members are being held. There is a continuous effort to develop national educational guidelines for cancer treatment, pain management, and palliative care. Pain control guidelines and standard protocols are in

place at SQUH which are regularly updated. Clinical audits and peer reviews are conducted. [10] There are also minimal services rendered by a small team of two nurses and anesthetists established at the main trauma center, Khoula hospital. It mainly provides support for acute pain in cases that need postoperative analgesia and occasionally answers inpatient calls for interventional analgesia such as epidural blocks or PCA. They do not follow up patients with chronic pain and do not hold formal meetings or educational activities.

All treatment modalities of cancer are available at the two treating centers, the National Oncology Centre (NOC) at the Royal Hospital and the Oncology Units at the Sultan Qaboos University Hospital (SQUH). These facilities offer state of the art Medical Oncology practice, Radiation Oncology, Bone Marrow Transplantation and modern diagnostic facilities. Besides provision of tertiary medical care both institutions offer teaching and training to undergraduate and postgraduate medical students and nurses. There are no hospices yet but home visits activities not specific for palliative purposes, are being initiated by community nurses.

PAIN MANAGEMENT

The WHO Ladder for pain management is used in Oman as a guide. Linear analogue pain scales are used for assessing pain intensity and in children, the 'faces' scale is usually used. Pain management is Family-Centered and therefore family is an integral part of the palliative care team. Non-Pharmacological measures, pharmacological and adjuvant therapy are used. Patient education is an important part of the management mainly carried out by nurses who explain on the cause of pain and symptoms. They emphasize on the importance of reporting pain early and address patients' concerns. Most analgesics drugs are available in Oman, non-opioids as well as opioids such as acetaminophen, non-steroidal anti-inflammatory drugs, codeine, tramadol, morphine, pethidine and fentanyl. Slow release morphine as well as the oral suspension form and fentanyl patches are generally prescribed for chronic pain. Anticonvulsants are sometimes used for neurogenic types of pain. Patient Control Analgesia (PCA) and epidural blocks are also used in acute and postoperative pain. Non-pharmacological measures used are mainly distraction therapy, physical exercise and positive reinforcement in children. Transcutaneous Electrical Nerve Stimulation (TENS) is sometimes applied. Although modern medicine is recommended, but traditional practices and spiritual healing are equally important forms of treatment. Reciting verses from the holy Qur'an is found very comforting and help patients cope with pain. Drinking the holy "zamzam" water also provides a soothing effect.

BARRIERS TO PALLIATIVE CARE

Oman has put in place a functioning drug supply system. Cost and availability of the palliative care drugs is not considered a barrier to palliative care. However treatment is not evenly distributed amongst the tertiary and the secondary hospitals in the various regions. Pain management teams are not yet established in many of the hospitals and in those few where they do exist, their operational functions are still limited. Pain management is

considered a luxury with fear of addiction equally among the health care professionals as well as the patients and that is why they are reluctant to take opioids. The lack of knowledge and awareness in both parties coupled by the unnecessarily restrictive drug control regulations and practices worsen the legitimate prescribing of narcotics. Tradition, public beliefs and culture are main barriers. As in the rest of the muslim community, when a bad event happens the Omanis believe that it is a divine fate. Because of their strong faith, they accept it better and they put all their trust in Allah. Pain is considered a test from God or spiritual trial which teaches understanding and better use of life. They tend to under report pain because they think it is part of the disease and believe that pain and suffering wipe away one's sins. They delay in seeking treatment and usually wait until pain and symptoms are severe before reporting. Care of the dying is considered an important responsibility of the family and friends. Death is preferred at home, surrounded by loved ones and prayers. Physicians avoid honest end of life conversations. Religious teachings say "Seek God's help with prayer and patience". The caring physician is therefore expected to strike a balance between alleviating the suffering while maintaining a level of consciousness that enables a patient to worship God till death. Another encountered barrier is the hectic schedules of the health care providers that rarely leave them time to focus on patients' and their families' well-being and there is very little in the way of support services. Palliative care in Paediatric Oncology is still in its infancy due to the highly specialized nature of the disease in this age group and also owing to bureaucratic restrictions. Most of the care is provided by the medical and nursing teams of the parent paediatric oncology teams. [11]

OPPORTUNITIES AND FUTURE DEVELOPMENTS

Combination of these barriers coupled by regulatory hurdles and the effect of the global war on drugs are largely to blame for the suboptimal palliative care offered to patients with cancer and other serious illnesses resulting in severe suffering and agonizing death. As part of best practices, there is need to address the existing barriers through comprehensive reform. Oman is taking major steps to improve cancer care and addresses the need of palliative care. In the anticipation of the rising numbers of patients with cancer, Oman requested the International Atomic Energy Agency (IAEA) imPACT review which was conducted under the WHO-IAEA joint program in collaboration with International Agency for Research on Cancer (IARC) and other partner agencies. In January 2013 a team of international experts in the areas of cancer control planning, carried out visits to various sites where cancer-related services are offered to get a fuller understanding of the organizational capacities, challenges and the quality of the services provided for the cancer patients and their families in order to assess the national cancer burden including palliative care. The imPACT Review Mission will submit a report to the Ministry of Health and provide recommendations to the Omani health authorities to better address the cancer burden and in the long term, give the Omani people increased chances of survival and a better quality of life. [12] The aim is to launch a national policy that integrates a palliative care program in the health care system and work on the need of developing policies and procedures for pain assessment and management. Development of palliative care curricula in nursing and medical schools is an essential requirement in addition to education and awareness of the public and professional community at large. The return

from abroad of well trained Omani specialized doctors will have positive effect on scaling up the provision of such care, Hospices movement should be expanded and introduction of mind-body exercises to distress nurses and physicians in the care of the suffering is an essential tool for the success of this new modality of care.

Oman's developments so far and the ongoing efforts by the government, earned recognition by the European Society of Medical Oncology (ESMO). It designated centres including Oman of integrated oncology and palliative care program in their 10th anniversary this year. This highlights the growing importance of palliative care in cancer treatment worldwide. The accreditation is valid for three years and centres can reapply. We will need to maintain the ESMO designation.

CONCLUSION

Palliative Care in Oman received late attention but in the short time since the awareness and capacity building phase began, a lot has been achieved. Health authorities have shown their resolve by supporting and facilitating efforts to plan an organized and structured service in the country based on future requirements. International organizations and local NGOs such as NACA are also playing an important role in these efforts.

CONFLICT OF INTEREST

We declare: No Conflict of Interest.

ACKNOWLEDGEMENT

We wish to acknowledge the Pain Management Teams at SQUH, Royal & Khoula Hospitals

All reasonable precautions have been taken to verify the validity of information contained herein.

REFERENCES

- [1] The Public Versus The World Health Organization On Health System Performance, Health Affairs; Robert J. Blendon, Minah Kim and John M. Benson 2001.
- [2] Healthcare earns global recognition; *Ministry of health Bulletin* 2012-2013.
- [3] Annual Health Reports; Department of Health Information & Statistics; Director General of Planning, Ministry of Health; Chapter 9, *Morbidity & Mortality* 2011.
- [4] Cancer Incidence in Oman, *Ministry of Health* 2011.
- [5] Community Health & Diseases Surveillance Newsletter by MOH Vol. VII No.1 Jan-Mar 98.

-
- [6] Oman Pharmaceutical Country Profile: Published by MOH in collaboration with WHO Sawsan Ahmed Jaffer.
- [7] Opioids in middle eastern population Silbermann M. *Asian Pac. J Cancer Prev.* Apr 11 Suppl 1: 1-5.
- [8] Impressions and Experiences of a Palliative Care Courses to Nurses in the Sultanate of Oman. Michael Silbermann *J Palliative Care & Medicine* 2012, 2-3.
- [9] Nurses Paving the Way to Improving Palliative Care Services in the Middle East; Michael Silbermann and Manal Al-Zadjali; *J Palliative Care Med* 2013; 3-4.
- [10] Historical perspectives and trends in the management of pain for cancer patients in Oman. Mahfudh SS *Asian Pac. J. Cancer Prev.* 2010 Apr, 11 Suppl 1: 93-6.
- [11] Middle East experience in palliative care. Zeinah GF, Al-Kindi SG, Hassan AA. *Am J Hosp Palliat Care*, 2013 Feb; 30 (1): 94-9.
- [12] Jennifer S. Temel, M.D., Joseph A. Greer, Ph.D., Alona Muzikansky, M.A., Emily R. Gallagher, R.N., Sonal Admane, M.B., B.S., M.P.H., Vicki A. Jackson, M.D., M.P.H., Constance M. Dahlin, A.P.N., Craig D. Blinderman, M.D., Juliet Jacobsen, M.D., William F. Pirl, M.D., M.P.H., J. Andrew Billings, M.D., and Thomas J. Lynch, M.D., Early Palliative Care for Patients with Metastatic Non-Small-Cell Lung Cancer *N Engl J Med* 2010; 363:733-742, August 19, 2010.

