# Table of Contents

## Original Articles

- Obesity and High Risk Pathological Features of Papillary Thyroid Carcinoma: A Retrospective Analysis of a University Hospital in Pakistan .................................................................06  
  Shakeel Uz Zaman, Mohammad Sohail Awan, Mohammad Ahsan Sulaiman
- Quantification of circulating plasma cell free DNA fragments in patients with oral cancer and precancer ..........................................................11  
  Ami Desai, Shreenivas Kallianpur, Abin Mani, Manisha S. Tijare, Samar Khan, Megha Jain, Vidhi Mathur, Rinky Ahuja, Vijay Saxena
- Clinical and microbiological profile of infections during induction phase of acute myeloid leukemia ..........................................................18  
  Sonia Parikh, Parijat Goswami, Asha Anand, Harsha Panchal, Apurva Patel, Rahul Kulsharni, Bhadresh Shastri
- Breast Cancer Risk factor awareness and utilization of screening program: A cross–sectional study among women in the Northern Emirates ........................................................................24  
  Prashanth Hegde, Jyothi Pande, Hanaa Hosny Adly, Padma V. Shetty, Jayakumari
- BRCA1 and BRCA2 Germline Mutation Screening in Western Algeria using High Resolution Melting Analysis (HRM) ........................................31  
  Amina Chami Sidi Boulenouar, Florence Coulet, Farida Mesli Taliab, Fatima Zahra Boudina, Rachid Senhadji
- Colon Cancer in Patients below Age of 50 Years: Kuwait Cancer Control Center Experience ...........................................................................38  
  Mohamed Salah Fayaz, Gerges Attia Demian, Heba El–Sayed Elisa, Sadeq Abu–Zlouf
- Awareness, understanding, attitude, and barriers toward prescribing modern cancer immunotherapies in the Arabian Gulf countries ..................................................................................45  
- The Need for Regulatory Reforms in the Use of Opioids for Pain Management and Palliative Care in the Middle East ........................................52  
  Bassim Jaffar Al Bahrami and Itrat Mehdi
- Sporadic colon cancer in Lebanon: A clinicopathological study ........................................................................................................60  
  William A. Nehmeh, Marc Rassy, Claude Ghorra, Pamela Abdayem, Cyril Tohmè.

## Case Reports

- Malignant Phyllodes tumor in a young female: Report of a rare case .................................................................................................64  
  Priyanka Anand, Namrata Sarin, Amul K. Butti, Sompal Singh
- Cutaneous Metastasis of Sigmoid Adenocarcinoma to Face and Scalp at Initial Diagnosis: Case Report ..............................................70  
  Mariam Aloitaibi, Jaroslav Nemec
- Cervical metastasis of testicular cancer: Case report and review of literature ..........................................................................................73  
  Guhan Kumarasamy, Anusha Balasubramanian, Baharudin Abdullah
- Metachronous Testicular Seminoma After Testicular Tumor ........................................................................................................78  
  Xh. Çuni, I. Haxhiu, Sh. Telegrafi, M. Berisha, N. Rexha, M. Myftari, P. Nuraj, S. Mehmeti, A. Fetahu, R. Dervishi, S. Manxhuka, F. Kurshumliu

## Conference Highlights/Scientific Contributions

- Highlights of the International Conference on Genitourinary and Gynecological Cancers, Kuwait Conference (GUG–KC): Recent Updates, 14–16 April 2018, State of Kuwait ...........................................82
- News Notes .................................................................................................................................87
- Advertisements ............................................................................................................................91
- Scientific events in the GCC and the Arab World for 2018 ........................................................92
Original Article

The Need for Regulatory Reforms in the Use of Opioids for Pain Management and Palliative Care in the Middle East

Bassim Jaffar Al Bahrani and Itrat Mehdi
National Oncology Center, The Royal Hospital, Muscat – Sultanate of Oman

Abstract

Palliative Care (PC) is an evolving oncology subspecialty in the Middle East (ME). Justified opioid use is an integral part of palliative care. Often, morphine consumption is taken as a quality indicator of palliative care services, but is it a reliable indicator to reflect the status of palliative care in current Middle East setting?

We need to understand that data on morphine consumption, represent the amount distributed of morphine per person in a country and does not refer the actual justified amount utilization of opioids. In addition, the currently used consumption data is not reflective of product and dosage employed. It includes opioid use in other conditions like post-operative pain, traumatic pain, and drug abuse as well. The population and cancer incidence is highly variable amongst countries. The opioid consumption reported at present in Oman is very low 0.5474 mg/person.

The opioid prescription must have an appropriate validated policy, well administered and enforced effectively. The policy must be balanced in such a way to eliminate the barriers of availability on one hand, and limit the probability of abuse on the other. Ideally there should be a national empowered competent control authority which should estimate the needs, license, distribute, monitor and report opioid use. There is an additional need to train health care workers in adequate pain assessment, effective pain management, and validated opioid prescribing practices.

The issues in the Middle Eastern (ME) countries are erratic and undependable cancer data, limited palliative care programs, non–effective or no palliative care/ pain management policies, and almost non–existent prescription policies of controlled drugs. There is an urgent and essential need to work for comprehensive and integrated palliative care programs encompassing the subspecialties. It must include and care for local perspectives of psychological, social, spiritual, and religious issues in PC in addition to pain management. There remains a need for health education for population, advocacy for policy makers, and a political will at the appropriate levels to meet these challenges.

Keywords: Palliative care, PC, Opioids, pain, Oman, Royal hospital, GCC, Middle East

Cancer in the Middle East

Middle East (ME) is a distinct geographic region with several exceptional features. There are many resemblances and yet diversities in ME countries in many aspects like social development, political growth, religious affiliations, economics, technical expertise, population size, quality of cancer care services and availability of updated management facilities and palliative care. Cancer is 4th leading cause of death in ME countries. The population and cancer incidence is highly variable amongst countries, for example incidence is 507.1 in Australia and 51.4 in Oman. It is expected to increase due to population ageing, smoking, unhealthy diet, physical inactivity and environmental issues. The available resources, often inadequate, are mainly directed to active cancer management which is not the ideal investment as most cases of cancer are diagnosed at an advance incurable stage in the region.

Cancer Pain

Pain is often regarded as 5th vital sign in clinical practice. It is the commonest symptom experienced by cancer patients, up to 30–60% in patients on active treatment and up to 70–90% with advanced incurable disease. Nearly 88% patients experience pain in their last year of life, and 47% complain of inadequate pain control.
Effective and prompt pain management is crucial as it causes distress and impairs the quality of life, functionality, and productivity. Persistent pain not only affects quality of life but also erodes one’s will to live, even leading to suicide (9). Neuropathic and skeletal pains in cancer are more challenging to treat. Gross and unacceptable disparities exist in access to pain management measures in developing and developed countries (10). Even in the world’s most developed countries only 24% patient’s pain is adequately and optimally relieved (11). Ineffective pain management is often due to improper assessment, knowledge of physicians about opioids, and patient’s acceptance of opioids.

Pain Management and Palliative Care in the Middle East

Nearly 77.6% of global cancer associated deaths occur in developing countries. About 60% (27 million) of these patients in developing countries are likely candidates to have potential benefit from palliative care programs (6, 6). Palliative care programs are not well developed in majority of ME countries with the exception of Jordan, Saudi Arabia, Oman and Qatar (12, 13). Though opioid consumption has increased in developing countries, 79% of global consumption is in 6 developed countries and only 6% is consumed in developing countries (8, 14).

Human Rights watch surveyed 40 developing countries in 2010 (15). In 14 countries, there were no medicines to treat severe pain, and 3.5 million cancer patient die without effective pain control (PC) each year. Of these 180,000 patients die with pain each year in ME and North Africa. Only 11 countries have a formal effective PC policy, except Jordan. There is no palliative care training or education in health care curriculum. Opioid are not optimally available and multiple restrictive regulations are in place in most countries.

Information and statistics gathered from 21 ME countries, representing 82% of population, shows that the observations are inconsistent with recommendations put forward by WHO and INCB (International narcotics control board), in the following aspects (12):

- Opioids were available in 11 ME countries either free or <25% of actual cost
- Fifteen countries have considerable regulatory restrictions where opioids are available only as inpatient or a permit is required
- In most countries only limited number of physicians have authority/license to prescribe opioids excluding family physicians, nurses, and pharmacist
- Special and restricted access opioids prescription forms were required to prescribe
- There was a maximum time limit of two weeks for which a prescription of opioids can be written in half of ME countries (Interference with dosing and duration)
- Opioids were available only in few designated pharmacies
- There was no definite process of opioid prescription in emergency situations (night, out of hours, off days), where a physician having a right to prescribe is not physically available. There was no acceptance of telephonic or electronic prescriptions
- Pharmacist did not have privilege to correct a prescription error (address, spelling, numerical value)
- Increased bureaucracy obstacles (Complex forms, prescriptions, access to forms)
- Fifty percent of ME countries have negative descriptions on opioid prescriptions like driving is forbidden
- Intimidation of health care providers (Pressures of legal actions/sanctions)

Opioid Availability and Integration of Palliative Care in Cancer Care Services in the Middle East

Palliative care programs are directed to improve quality of life of cancer patients, and their families through the prevention and relief of suffering through the treatment of pain, physical disability, psychosocial and spiritual issues (10). In the Middle East, there is an emerging and urgent need of early integration of palliative care in cancer management as most of the cases are diagnosed at an advanced stage (1). The palliative care programs should be developed not only to relieve patient’s pain but also to address the suffering of family around. Pain relief is an essential component of palliative care, and must be an utmost priority. Despite increased understanding of pain pathophysiology, there still is inadequacy in its management (8). Countries in ME have same barriers to PC (myths, cultural bias and irrationality), as experienced by other developing countries (12). These are:

- Healthcare Policies restricting the opioid access due to concerns of abuse
- Poorly developed Palliative care programs, with insufficient quality
- Patient’s perceptions and cultural bias
- Higher cost of opioids in developing countries (16)
- Lack of awareness and acknowledgement in terms of being a human right to have adequate pain relief and a right to dignified death

Opioids consumption has increased in last decade yet they are available in just half of ME countries, only on prescription by an oncologist, with a duration of
prescription only from one week to one month \(^{(12)}\). Opioid consumption globally is taken as surrogate marker of quality of PC, and an indicator of effective pain relief. In ME it is 0.2–1.2 mg/capita compared to 50 mg/capita in developed countries. The opioid consumption reported at present in Oman is as low as 0.5474 mg/person. These low rates are regarded as reflection of ineffective pain relief and poorly developed PC in ME \(^{(1,17)}\). The opioids abuse compromise availability. In 2009, 14 million heroin users consumed 375 metric tons of heroin while 83% of world population did not have legitimate access to opioids for an effective pain control \(^{(18)}\). There is a need to have a balance between availability of opioids for medical and research purposes and preventing its diversion for abuse.

It is the government’s obligation to address unnecessary wide spread suffering by providing effective PC. It is under international human rights law to provide equal and essential access to pain relief, PC and relieve the suffering. Failure to do so is a violation of right to health \(^{(15)}\).

The International Narcotics Control Board (ICNB) and Middle Eastern cancer consortium has set the priorities in pain management and palliative care in the ME as:

1. Ensuring access to affordable low cost opioids in legitimate pain relief. Countries always attempt to minimize the availability of opioids (Resources, Access). Countries should revisit their policies, and take guidance from international organizations
2. Human resource development, training and education (especially pain assessment skills), should be done for palliative care.
3. Alleviate physicians’ personal biases
4. Address patient’s perceptions (opioids being used at death time, addiction)
5. There should be efforts to develop home care programs, as end of life care. This is especially important in ME where family bonds are stronger, and home care is feasible and cost effective \(^{(19,20)}\).

Use of Opioid Consumption Data

The INCB uses consumption statistics to:

1. Monitor compliance of governments
2. Identify trade discrepancies between importing and exporting countries
3. Identify trends in the worldwide availability of opioids and other drugs for medical needs, and
4. Monitor and maintain a global balance of supply and demand of opioids for medical and scientific needs.

Opioid consumption statistics also have several useful applications for advocates, lobbyists, human rights activists, health care administrators, policy-makers, or those interested in improving opioid availability. They can be used to ascertain whether a country has available opioids to relieve moderate to severe pain, learn whether the amounts indicate any substantial current consumption or progress over the years, and appraise the outcome of endeavors to improve opioid availability.

**Limitations of Opioid Consumption Data**

The opioid consumption statistics revealed by INCB reports \(^{(11,21)}\) have certain limitations to be considered when using them as an indicator of opioid availability for pain management:

- Some countries report late, do not report for a particular year or period, or provide inaccurate reports, which result in incomplete or invalid information for that year. These deficiencies may be corrected in subsequent years with receipt of more complete data
- Consumption statistics do not differentiate between clinical uses for opioids for treatment of pain, dependence syndrome, analgesia or anesthesia
- Consumption data do not distinguish between institutes that use opioid analgesics, whether hospitals or hospices
- Consumption statistics do not specify which products or dosage forms of an opioid are available within a country (oral, parenteral or transdermal form)
- Consumption statistics are not an authentic indicator on the quality of pain control in a country

**Morphine Equivalence Metric**

Historically, the WHO has relied on a country’s annual consumption of morphine as an indicator of the magnitude that opioids are used to treat severe cancer pain and an index to evaluate improvements in pain management. However, over the past 20 years, additional opioid analgesic medications and formulations, such as the fentanyl patch, hydromorphone, and sustained-release oxycodone, have been introduced and should be considered when studying opioid consumption in a country, region, and globally.

Using the INCB data \(^{(11,21)}\) it receives annually, and applying conversion factors from the WHO Collaborating Centre for Drugs Statistics Methodology, PPSG developed a Morphine Equivalence (ME) metric, adjusted for population, for 6 principal opioids used to treat moderate to severe pain (Fentanyl, Hydromorphone, Methadone, Morphine, Oxycodone, and Pethidine). The Equivalence (ME) metric allows for equianalgesic comparisons between countries of the aggregate consumption of these principal opioids (total ME), thereby providing a
more complete picture of a country’s capability to treat moderate to severe pain than is possible by analysing morphine consumption alone. ME data is now provided on the global, regional and all country profile pages and will be annually updated. The Oman data for 2013 as reported by EMRO is: Fentanyl 0.0166 mg/capita, morphine 0.5843 mg/capita, and pethidine 3.8915 mg/capita. There is no data reported for hydromorphone, methadone, and oxycodone.

Is Morphine Consumption Data Alone a Reliable Indication of Pain Control and Palliation Services?

Can we rely only on Morphine consumption as a good Quality Indicator for Palliative Care or do we need to lobby for more than this one domain which is Opioids availability? We must be more comprehensive about Total care, and Total suffering of terminal ill cancer patient. Annually, the Pain and Policy Studies group (PPSG) receives from the International Narcotics Control Board (INCB) the consumption data for 6 principal opioids used to treat moderate to severe pain (Fentanyl, Hydromorphone, Methadone, Morphine, Oxycodone and Pethidine). These data represent the amounts of opioids distributed legally in a given country for medical and scientific purposes. It does not reflect the amounts dispensed to or used by patients, but rather to amounts distributed at the retail level. Secondly the opioid consumption data are displayed in milligrams per capita or per person. This is calculated by first converting the raw consumption data received from INCB to kilograms to milligrams and then dividing by the population of the country for a given year.

Global consumption has increased substantially over the past two decades, and yet 80% of the world’s population is inadequately treated for moderate to severe pain (23). These consumption statistics have several limitations when using them as an indicator of opioid availability for pain management:

1. This does not distinguish between clinical uses for opioids, as in methadone for treatment of pain or dependence syndrome, or fentanyl for analgesia or anaesthesia
2. Does not differentiate between programs that use opioid analgesics
3. Does not indicate which products or dosage forms of an opioid are available within a country
4. Consumption statistics are not a valid indicator of the quality of pain control in a country
5. It cannot be used as an indicator between countries with very different total population and incidence rates of cancer unequivocally

The ME allows for equianalgesic comparisons between countries of the aggregate consumption of these principal opioids (total ME), thereby providing a more complete picture of a country’s capability to treat moderate to severe pain than by analysing morphine consumption alone. Misuse or diversion of opioid analgesics take place, the sources of diversion should be identified quickly and directly, without affecting opioid availability or patient care.

Discussion

Cancer is a significant and increasing issue in all countries of the ME. A majority of these cancer patients are diagnosed at a relatively advanced stage of disease in ME. Many of the ME countries have shown an increase in opioid consumption since 2000, but this is inadequate indicator to ensure an effective pain management of cancer patients. All ME countries have < 10% of the anticipated adequacy of consumption measure (ACM) for opioids as defined by INCR (200 mg per day per million S-DDD).

There is an undeniable need to ensure availability of opioids for cancer patients in need, balanced with opioids not becoming a source of abuse (Cherny 2010). Most states permit physicians to prescribe opioids for cancer pain, regulations within ME countries are inconsistent and interfere with availability. Opioid abuse is a global issue but most of abused opioids are procured from illicit channels. A proportion of prescription medicines are diverted by fraud, theft, forged prescriptions and illegal pharmacies. The approach to optimize opioid consumption for effective pain management should be guided by WHO policy guidelines, “Ensuring Balance in National Policies on Controlled Substances, Guidance for availability and accessibility of controlled medicines” (WHO). The PC strategy of WHO also advocates that medication availability, education and government policy must all be addressed and implemented if adequate pain relief and PC are to be provided. The partners involved in manufacturing, distribution, prescription and dispensing must be cautious of potential abuse.

Even in EU, not all 7 essential opioids are consistently available. The opioid access for advanced cancer is as follows: Western Europe 86%, Eastern Europe 71%, Middle East 22%, Asia 61%, Africa 53%, and Latin America 48% (10, 23). Pharmaceutical companies and importers do not effectively invest in registration and promotion of non-profitable products like oral morphine or oxycodone. On the other hand, there is commercial motivation to promote transdermal fentanyl due to profitability. There obviously is a need to increase knowledge, understanding and perceptions of both patients and clinicians in palliative care and pain management. It is also required to ensure
that knowledge is translated into practice to benefit the patients.

There is also need to review and possibly modify high level restrictive regulations in the ME countries which limits the availability and accessibility of pain management medications \(^{(12, 22, 23)}\). Middle East cancer consortium is making efforts to improve the availability of opioids for cancer patients in ME countries \(^{(23)}\). There is some progress in palliative care services in ME, but pain management and early integration of PC in management is far from ideal.

IAPC (Indian Association of Palliative Care) started an advocacy campaign in media, and as a result Supreme Court issued a directive to ensure availability of opioids in Indian states \(^{(10)}\). In the ME, frequent refills are allowed in 50% of the countries (90% in EU), and 67% population gets subsidized medication (95% in EU).

Important and needful precautions must be taken to prevent misuse of opioids by enforcing balanced policies \(^{(10, 23)}\). Over half a century ago, the international community has strongly supported the rational and responsible use of opioids to treat pain. The United States, with 4.6% of the world’s population, uses 80% of the world’s opioids. Since the signing of the single convention on narcotic drugs in 1961, narcotics control and international public health agencies, led by INCB, commission on narcotic drugs and UN office on drugs and crime and the WHO, have established policies and programs to encourage the responsible use of these medicines. Challenged to develop reasonable systems to regulate these medicines, governments in many developing countries have limited the availability and supply of these medicines and enforced strict policies to regulate their prescriptions, dispensing and consumption. This has limited the legitimate and rightful access to patients in need, and there is need to implement innovative approaches. The INCB and WHO are engaged with governments of developing countries to expand cooperation facilitating better balancing efforts to ensure access with regulatory and legal frameworks for prevention of misuse. The WHO global action plan for NCDs 2013–2020 calls for greater governmental commitment to pain relief, call for pain relief, and integration of PC within the continuum cancer care. It is time that governments, NGOs, civil society, and international agencies to collaborate closely and develop new models, policies and approaches in pain relief. No single approach is likely to be successful across all countries as the historical, legal and social reasons influencing the use of these opioids are country specific.

WHO considers palliative care as an inexpensive health service, an integral component of cancer care services and urge countries to improve its availability and accessibility. PC is a low priority and poorly funded due to perceptions among policy makers and physicians.

Human Right Watch in its report of 2011 recommends establishing working group on PC and Pain control. There is need to assess present availability and future needs, and to develop comprehensive plan of action. Countries should seek WHO assistance in their palliative care services development and implementation. National human rights commission should investigate obstacles in PC and pain management in their respective countries. All the countries should submit realistic estimates of controlled drugs to INCB, and ensure an effective distribution system by abolishing unnecessary limitations and reforming drug control laws. The countries should ensure minimum cost and affordability, and recognize a human right obligation for effective PC. All member countries should develop official policies for PC and pain relief and develop practicing guidelines for PC. There is an unmet need to educate doctors, nurses, and pharmacist in pain and PC and maintain PC as a live topic in CME programs.

There are many opioid analgesics (Fentanyl, hydromorphone, methadone, oxycodone and pethidine) used today in pain relief in different proportions in ME countries as well. A metric morphine equivalence (MME) was therefore defined for each principal opioid for proper statistical assessment. In 1986 morphine MME was 50% of opioid which was only 14% in 2005. Over the last 2 decades in the Middle Eastern countries, the consumption of morphine has remained same but that of oxycodone, fentanyl and methadone have increased \(^{(22, 23)}\).

We need to understand that the data on morphine consumption used as quality care indicator whether per person or per patient, represent the amount distributed of morphine per person or patient in a country and does not refer the actual justified utilization of opiates. In addition, the currently used consumption data is not reflective of product and dosage employed. The data also includes opioid use in other conditions like post-operative pain, traumatic pain, and drug abuse as well. Is morphine consumption a good Quality Indicator for Palliative Care? Do we need to work on one domain which is Opioids availability or should we focus on Total care, including total suffering?

- Structure and Processes of Care
- Physical Aspects of Care
- Psychological and Psychiatric Aspects of Care
- Social Aspects of Care
- Spiritual, Religious and Existential Aspects of Care
- Cultural Aspects of Care
- Care of the Imminently Dying Patient
- Ethical and Legal Aspects of Care
In 2006 the WHO EMRO Office conducted a survey of palliative care in the region. 7 countries have at least one palliative care service. However, none of these countries had a home care or hospice program. Pain management is at a low priority in health care systems, with greatly exaggerated fears of addiction causing overly restrictive national drug control policies limiting the quantity and duration of opioid prescriptions [25, 26].

The WHO revised discussion paper on the global monitoring framework includes a new palliative care indicator, morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer. However, the proposed indicator has several major limitations and weaknesses [25]. The quality and scope of the cancer registries in developing countries are inadequate. Using cancer mortality would distort the real need for opioids. In addition to treatment of cancer pain, strong opioids are also essential for the treatment of pain from other causes and of other symptoms such as dyspnea, anesthesia, and drug dependence syndrome. Even if this indicator would be appropriate, there are statistical weaknesses of such a combination: cancer population data (the denominator) are reported in periods of 5 or 10 years, while drug consumption (the nominator) is reported annually. An indicator based on the combination of such factors would result in inaccuracies and distortions about the actual status of palliative care. Opioid consumption is a weak indicator of access to palliative care. Data indicate that, in developed countries only about 0.4% of opioids are used in palliative care, while most are used for non-cancer pain. This proposed indicator may also imply the false idea that an increase in opioid consumption is suggestive of good palliative care. The International Association for Hospice and Palliative Care (IAHPC) and several palliative care organizations proposed to WHO a modification to improve the indicator to monitor the development and progress of palliative care, “Access to palliative care assessed by per capita morphine-equivalent consumption of strong opioid analgesics (excluding methadone)”.

The morphine equivalent consumption per capita indicates that Canada, the United States, Germany, Australia, and the United Kingdom reported above 140 mg per capita in 2010, consistent with previous year trends. Other selected 12 countries (China, Peru, Georgia, Malawi, Guatemala, Kenya, Ukraine, Vietnam, Uganda, India, Romania, and Malawi) reported consumption of less than 2 mg per capita. In comparison, morphine equivalent consumption per cancer deaths would result in extremely large numbers. For example, every cancer patient who died in Canada would seem to have consumed more than 586,000 mg, almost 900 times the consumption per capita. In the same way, the indicator would imply that each cancer patient who died in Colombia consumed the equivalent of more than 18,000 mgs per year, almost 3,000 times the consumption per capita. Similar distortion would occur in data for all the countries.

More importantly, countries with lower socio-economic levels of development are at a further disadvantage, as they have a higher ratio. This means that the consumption per cancer death indicator for Jordan is higher than that for Serbia or even for Japan, even though the consumption per capita is only one-fourth and one-third, respectively. A denominator based on cancer mortality numbers would be extremely and erroneously small, overestimating the adequacy of opioid availability and negatively impact efforts to make strong opioids accessible to all patients in need. The consumption per cancer death indicator would further distort the situation in low socio-economic countries. Opioid treatment is required for other indications than cancer pain, including acute pain, pain in HIV/AIDS, postsurgical pain, pain in women during labor, dyspnea, and substitution therapy. Large consumption numbers with the consumption per cancer death indicator will also negatively impact the efforts to improve availability of opioids for these other indications. The palliative care community recognizes the importance of cancer registries and advocates for and supports appropriate disease monitoring and reporting systems. However, developing a palliative care indicator based on unreliable data will lead to a weak indicator.

**Future Directions**

In most of the ME countries there is a need to reform national policies, in line with standard guidelines and established practices. The ME countries need to be in conformity with essential medication list of WHO. Clinical efforts should be directed to simple dosage regimens, thus improving compliance and satisfaction among patients. There is a need to ensure the availability of extended release formulations where not available. The new transdermal, trans-mucosal and sublingual delivery system need to be worked on locally and if feasible, should be integrated in patient care. The concept of patient controlled analgesia (PCA) should be integrated in clinical practice. There is a need to address issues of safe storage, better yet simplified documentation of dispensed medication, and process of return of unused medicines. There is an essential need for palliative care at an early stage of management for swift transition from active care. There is a lot of room for improving education of patients, nurses, physicians and pharmacist, both in their curriculum and later as CME and patient education programs. The clinical practice need to be in line and compliant with known standard on care and established evidence based practices. There is a strong
need for advocacy and lobbying for policy makers, and health administrators. A strong committed government is required at the appropriate level to meet the challenges in the future.

There is also a need for competent National Authority which would estimate requirements, consolidate reports to generate statistics, license these products and importers of these products, and all other entities in the distribution chain and to approve their importation. Governments have two responsibilities, to control abuse of narcotics and to ensure availability of opioid analgesics for patients in need. Importers, Manufacturers, and Distributors should import sufficient amounts which would be distributed promptly at the retail level. Hospitals, pharmacies, and palliative care centers should train staff, purchase adequate stock to accommodate the needs and dispense these drugs according to prescription. Physicians and nurses must assess patients’ pain and prescribe according to need.

Acknowledgements

We acknowledge with gratitude the contribution of Dr. Essam Abdul Monem, Senior specialist in going through the proof for corrections and logistic support.

References

19. Kumar S. Learning from low income countries: what are the lessons? Palliative care can be delivered through neighborhood networks. BMJ 2004: 329, 1184

