Palliative Care Development in Mongolia

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Abstract

Context. Since the year 2000, Mongolia has established the foundation measures for a national palliative care program and has made several significant achievements.

Methods. Systematic reviews and observational studies on palliative care development in Mongolia have taken place over the past 16 years.

Results. Mongolia began palliative care development in 2000 with the creation of the Mongolian Palliative Care Society and the Palliative Care Department. Palliative care is included in the Mongolia’s Health Law, Health Insurance Law, Social Welfare Law, National Cancer Control Program, and the National Program for Non-Communicable Diseases, and has approved Palliative Care Standards and Pain Management Guidelines. Palliative care education is included in the undergraduate and postgraduate curriculum in all medical universities. Six hospice units in Ulaanbaatar have 50 beds; each of the nine districts and all 21 provinces have up to four to five palliative beds, and there are 36 palliative care units, for a total 190 beds for three million people. In 2014, a pediatric palliative care inpatient unit was established with five beds. Essential drugs for palliative care have been available in Mongolia since 2015. The pharmaceutical company IVCO produces morphine, codeine, pethidine, and oxycodone in Ulaanbaatar.


Key Words
Mongolia, palliative care, morphine, policy

Background

Mongolia had no palliative care services, education programs, policies, or essential medications for pain management until 2000. Most hospitals in Mongolia had only analgesics on the first step of the World Health Organization (WHO) Analgesic Ladder, and no analgesics for moderate or severe cancer pain were available. Medical professionals and the general public feared opioids and believed that morphine would kill patients. There was no reference to palliative care in the Mongolian or Russian textbooks. The Mongolian people were not aware of palliative care, patients’ right, or quality-of-life issues. The terminologies of “palliative care” and “quality of life” were new to the Mongolian healthcare policymakers and health professionals.

Two palliative care policy development conferences were held in 2002 and 2004. Participants included parliamentary members, presidential consultant N. Lkhagva, the Vice-Minister of Health N. Udval, WHO consultant Dr. Jan Sjernswärd, officers of the Ministry of Health (MoH), health directors from all 21 provinces, health directors from the nine districts of Ulaanbaatar, directors of all medical, nursing, social work schools, media, and members of the Mongolian Palliative Care Society (MPCS). Following the recommendations from these conferences and the palliative care policy development workshops and by order of the MoH, the MPCS formed eight palliative care...
### Table 1  
**Development of Palliative Care in Mongolia: A Chronology**

<table>
<thead>
<tr>
<th>Year</th>
<th>Activities/Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>Odontuya Davasuren attended workshops, basic and advanced courses, visited palliative care centers abroad, translated guidelines and manuals into Mongolian, started advocacy and educational courses, registered the MPCS in 2001. Palliative care department was opened in the National Cancer Center with 10 beds.</td>
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<tr>
<td>2002–2005</td>
<td>MPCS worked with palliative care champions and key nationals to establish WHO foundation measures: necessary policy changes, education, drug availability, and institutionalization.</td>
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<tr>
<td>2002</td>
<td>Leadership Conference on Palliative Care was sponsored by Ministry of Health (MoH)/WHO/OSI/IPCI. Reached agreement to establish palliative care as part of Mongolia’s health care service; started addressing WHO key components for a National Palliative Care Program. Basic courses on palliative care and advocacy activities held by MPCS.</td>
</tr>
<tr>
<td>2003</td>
<td>Eight palliative care working groups established. Basic courses on palliative care and advocacy activities held by MPCS.</td>
</tr>
<tr>
<td>2005</td>
<td>Odontuya Davaasuren and Gantuya Tserendorj selected as international palliative care fellows at Institute of Palliative Medicine at San Diego Hospice.</td>
</tr>
<tr>
<td>2006</td>
<td>Eight palliative care working groups established. Basic courses on palliative care and advocacy activities held by MPCS.</td>
</tr>
<tr>
<td>2007</td>
<td>The State University in Ulaanbaatar included palliative care as a subject in their undergraduate training of doctors. Palliative medicine was recognized as a medical specialty and approved three month program to educate palliative care doctors with professional index D720410. Palliative nursing was recognized as a nursing subspecialty and approved three month program to educate palliative care nurses with professional index N 720320. Started education of specialized palliative care doctors and nurses in the Palliative Care Resource Training Center by MPCS. Increased National INCB morphine quota granted and export/import licenses for generic morphine tablets established, MoH Order 246/2005 on Development of Palliative Care 2006–2009 in National Program for Non-Communicable Diseases. Palliative Care Department of the National Cancer Center received funding from the health budget (in 2000–2002, it was supported by charity; 2003–2005, patients needed to pay).</td>
</tr>
<tr>
<td>2008</td>
<td>National trainers on non-communicable diseases received palliative care training supported by the Millennium Challenge Account.</td>
</tr>
<tr>
<td>2009</td>
<td>Odontuya Davasuren and Gantuya Tserendorj selected as international palliative care fellows at Institute of Palliative Medicine at San Diego Hospice.</td>
</tr>
<tr>
<td>2010–2015</td>
<td>Up to five palliative care beds were established in all 21 provinces of Mongolia and nine districts of Ulaanbaatar’s hospitals, supported “Cancer Free Mongolia” Foundation (established by first lady of Mongolia Khajisuren Bolormaa) during 2010–2015. Doctors and nurses of these units completed a one month palliative care course organized by Gantuya Tserendorj at the NCC. Patients from all districts and provinces can receive inpatient palliative care in own province.</td>
</tr>
<tr>
<td>2010</td>
<td>Only three medical licenses are approved by MoH: general practitioner, nurse, and pharmacist. This means all medical students have to pass a licensing examination that includes 500 palliative medicine questions to receive their license to work. Palliative care is included in core curriculum of education of general practitioners. Twenty-one National Trainers in Palliative care from 21 provinces of Mongolia educated with support of Millennium Challenge Account.</td>
</tr>
<tr>
<td>2011</td>
<td>Specialization of palliative care doctors increased from three months to six months and recognized as a medical subspecialty.</td>
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<tr>
<td>2012</td>
<td>New Social Welfare Law approves some social insurance coverage for home care. The Pain Management Guidelines were approved by the MoH. Palliative care was included in Health Insurance Law, but was not successfully implemented because the funding from health insurance (about 40 USD) was insufficient.</td>
</tr>
<tr>
<td>2013</td>
<td>Odontuya Davasuren completed OSF/IPCI Leadership Development Fellowship, Columbus, OH.</td>
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<tr>
<td>2014</td>
<td>Pediatric palliative care unit opened in the Pediatric Oncology and Hematology Center as part of the National Center for Child and Mother with support from Ajia Geegen.</td>
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<tr>
<td>2015</td>
<td>Renewed Health Law of Mongolia, which included palliative care. Palliative care included in Health Insurance Law of Mongolia and palliative treatment covered by health insurance in all levels of health care. Approved 596 palliative and nursing care beds (3% of total hospital beds) in the new order of the MoH and sport no. 250 in June 2015 about hospital beds in 2016–2017. Palliative care beds will not just be for cancer patients, secondary and tertiary hospitals will have non-cancer palliative care beds.</td>
</tr>
<tr>
<td>2016</td>
<td>Health Care Law approved with palliative care as a part of health care and approved possibility to establish palliative care center.</td>
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**MPCS** = Mongolian Palliative Care Society; **WHO** = World Health Organization; **MoH** = Ministry of Health; **OSI** = Open Society Institute; **IPCI** = International Palliative Care Initiative; **MNS** = Mongolian National Standard; **IRM** = immediate release morphine; **SRM** = sustained release morphine; **NCC** = National Cancer Center; **OSF** = Open Society Foundation.
working groups to develop palliative care policy for Mongolia. Each group had the responsibility for one of the following areas:

- **Group 1**: ensuring oral morphine availability
- **Group 2**: updating the prescription regulations for opioids
- **Group 3**: preparing national palliative care standards
- **Group 4**: including palliative care education in the postgraduate training programs for doctors
- **Group 5**: including palliative care in the teaching programs for social workers
- **Group 6**: including palliative care in the teaching programs for nurses
- **Group 7**: establishing the palliative care specialist education programs for doctors and nurses
- **Group 8**: including palliative care in the undergraduate curriculum of medical students.

As a result of MPCS’s activities, these working groups with the assistance of WHO consultant Dr. Jan Stjernswärd began the development and implementation of the four palliative care foundation measures (policy, education, drug availability, and implementation; Table 1).

**Mongolia Today**

Mongolia is a large country, extending 1,564,116 km², with a population of 2,923,1. The country is divided into 21 provinces, and each province is divided into 15 soums. The Capital is Ulaanbaatar and is divided into nine districts. Life expectancy at birth is 72 years for women and 64 years for men. The Gross National Income per capita (PPP USD $2013) is $10,729.4.

In 2014, 16,495 deaths were registered (60.2% men and 39.8% women). The leading causes of mortality were circulatory diseases (34.3%), cancer (24.3%), injuries and poisonings (16.8%), digestive system (7.7%), and respiratory system (3.5%).

In 2014, 5500–6000 died from circulatory disease, over 3500 from cancer, and 2700 from injuries and poisoning. Figure 1 illustrates the five leading causes of mortality in men: liver, stomach, lung, esophagus, and pancreatic; and in women: liver, stomach, cervix, esophagus, and breast. In 2014, 77.8% of cancer patients were diagnosed with late stage disease (III or IV), and 84.5% of cancer cases survived for less than a year after the diagnosis (Fig. 2). Compared with the data of 2010, the percentage of patients diagnosed in the late stages of cancer decreased by 1.3%. In 2014, the people who survived up to one year after diagnosis increased by 23.1%.

It is estimated that about 60% of the people who die, 9897, are in need of palliative care and pain control, and at least two family caregivers would benefit from palliative care support. It is estimated that 29,691 people need palliative care in Mongolia.

In 2014, 4172 new cases of tuberculosis were registered in Mongolia with a death rate of 1.9 per 100,000 population. HIV prevalence among the Mongolian population is <0.1%, and prevalence of HIV in vulnerable groups is <5%, which indicates Mongolia is a country with a low-risk population and at high-risk in vulnerable groups. Ever since the first registered case of HIV/AIDS in Mongolia in 1992, there have been a total of 181 cases registered by the end of 2014, of which 31 were registered in 2014.

![Fig. 1. Five leading causes of mortality per 10,000 population in Mongolia, 2014.](image)
The elderly population has grown from 139,100 in 2004 to 228,765 in 2014. A study conducted from 2008 to 2011 showed that 84.6% of elderly people in Mongolia suffer from three to four chronic diseases on average.\textsuperscript{5} Infant mortality (under one) is 26.4 per 1000 live births (2013). Under-five mortality was 31.6 in 2013.\textsuperscript{2} A study conducted in 2012 showed that 17,990 children were admitted to the National Center for Mother and Child Health, 141 children died in this center, 74 children (50%) died because of congenital malformations, 14 because of neurologic disorders, and 16 because of cancer. Eighty percent of children died because of incurable conditions.\textsuperscript{4,6}

These statistics demonstrate the need for continued palliative care development in Mongolia for cancer, non-cancer diseases, for the elderly and children.

**Developmental Highlights of the Mongolian National Palliative Care Program**

A chronological list of palliative care developmental highlights is presented in Table 1.

**Policies**

In 2005, palliative care was included in the National Program on Prevention and Control of Non-Communicable Diseases\textsuperscript{7} and included in the Health Law of Mongolia in 2006, which was updated in 2011.\textsuperscript{8} Palliative care was also included in the Social Welfare Law\textsuperscript{9} in 2005, and caregivers in low income families can receive social support every month, until the death of the patient, and this law was updated in 2010. The National Cancer Control Program for 2007–2017\textsuperscript{10} approved the plan to develop palliative care in 21 provinces.

In 2005, a Palliative Care Service Standard\textsuperscript{11} and Palliative Care Organization Standard\textsuperscript{12} were approved by the National Standardization Center, and Pain Management Guidelines\textsuperscript{13} were approved by the MoH in 2012. The Health Insurance Law of Mongolia was amended to include insurance for palliative care patients in 2012 and updated in January 29, 2015.\textsuperscript{14}

**Drug Availability/Access to Opioids**

In 2004, the MoH approved the National Standards for Prescribing Practices\textsuperscript{15} and changed the prescribing regulations to allow prescribing a seven-day supply of the amount of opioids required to treat the patient’s pain. Before this change, only 10 tablets could be prescribed. Generic immediate release morphine and sustained release morphine tablets were imported in 2006 from the West Coast Indian Company at an affordable price. This is currently covering most of the country’s opioid needs (Fig. 3). The IVCO company began manufacturing injectable morphine and pethidine in 2014, and is currently planning on manufacturing injectable oxycodone.

Because of these improvements, the consumption of opioids in Mongolia increased from 1.3 kg in 2005 to 10 kg in 2006. In 2014, Mongolia imported 14.840 kg morphine, 1.330 kg codeine, 1.040 kg fentanyl, and 4.350 kg pethidine.\textsuperscript{16,17}

**Education and Training**

In 2004, the MPCS established a Palliative Care Resource Training Center and began providing palliative courses. More than 3000 medical professionals participated in the short term (one to five days) palliative care courses. To date, the center has awarded palliative care diplomas to 216 doctors and 42 nurses (Table 2). In 2005, palliative care was included in the

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*Fig. 2. Leading causes of cancer morbidity by the stage of diagnosis, 2014. CIS = carcinoma in situ.*
Curricula of medical, social work, and nursing schools. In 2010, palliative care was included in the core curriculum of general practitioners; and since 2010, over 500 palliative care questions have been included in the licensing examination for general practitioners. Palliative care was recognized as a medical subspecialty and approved by the MoH and the Ministry of Education in 2011. Doctors have to complete six months training course to be certified in palliative care. In 2006 and 2010, training the trainers workshops were held for physician and nurse leaders from all 21 provinces and the nine districts of Ulaanbaatar.

Palliative care textbooks have been published in Mongolian and more than 10 international palliative care books and guides have been translated into Mongolian.

### Palliative Care Research

To develop evidence-based palliative care policy many studies were completed, published, and presented during palliative care conferences. Starting in 2005, the MPCS has organized palliative care research conferences every year. Two palliative care physicians have gone on to complete PhDs and eight physicians have completed master degrees in palliative care.

### Clinical Service Availability

Up to five palliative care beds in all 21 provinces and nine districts were approved by order of the MoH (N 306 in 2003), but without an approved budget, services remain limited.

### Table 2

<table>
<thead>
<tr>
<th>Date</th>
<th>Number of Graduated Doctors by Three Months Course on Palliative Care</th>
<th>Number of Graduated Nurses by Three Months Course on Palliative Care</th>
<th>Number of Specialized Doctors and Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>2005</td>
<td>14</td>
<td>6</td>
<td>20</td>
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<tr>
<td>2006</td>
<td>13</td>
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<td>13</td>
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<td>2007</td>
<td>26</td>
<td>11</td>
<td>37</td>
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<tr>
<td>2008</td>
<td>60</td>
<td>11</td>
<td>71</td>
</tr>
<tr>
<td>2009</td>
<td>57</td>
<td>2</td>
<td>59</td>
</tr>
<tr>
<td>2010</td>
<td>20</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td>2011</td>
<td>5</td>
<td>5</td>
<td>10</td>
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<td>2012</td>
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<td>2014</td>
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</tr>
<tr>
<td>2015</td>
<td>5</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>216</td>
<td>42</td>
<td>258</td>
</tr>
</tbody>
</table>

Fig. 3. Morphine consumption in Mongolia (mg per capita), 1980–2013. Sources: International Narcotics Control Board; World Health Organization population data by: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2015.
In 2004, the inpatient palliative care program at the National Cancer Center received funds from the national health budget and went on to open the outpatient palliative care service in 2011.

During 2010–2015, with the support of “Cancer Free Mongolia Foundation,” established by the first lady of Mongolia, Khajidsuren Bolormaa, all 21 province hospitals and all the nine districts hospitals in Ulaanbaatar established up to five palliative care beds; and doctors and nurses of these units completed a one month palliative care course at the National Cancer Center. Patients in all districts and provinces can now receive inpatient palliative care in their own region (Fig. 4). A pediatric palliative care unit was opened in 2014 in the Pediatric Oncology Hematology Center in the National Center for Child and Mother Health by financial support and donation of Ajaa Gegeen—Mongolian Buddhist leader.

With greater understanding and appreciation for the benefits of palliative care to patients, families, and health care officials, the MoH approved 596 additional palliative and nursing care beds (3% of total hospital beds) for cancer and non-cancer patients in 2015.

**Challenges and Future Direction**

The sustainability of palliative care policy, drug availability, and education pose a serious challenge because of unstable health policy environment in Mongolia. The production of injectable forms of opioids in Mongolia can decrease use of oral opioids, and this would be a serious problem for patients with advanced cancer.

Our future goal is to develop palliative care for non-cancer patients; palliative and nursing care for the elderly and children; home care services; educate all medical professionals and social workers; and develop a volunteer program from the society.

Mongolian palliative care leaders continue to contribute to palliative care development in Eastern Europe and Central Asia by providing technical assistance and learning opportunities for visiting health care professionals, government officials, and policy makers who are interested in developing palliative care, and these activities will continue.

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Fig. 4. PC services in 21 provinces of Mongolia. PC = palliative care.
**Conclusion**

According to a survey completed in 2007, Mongolia ranked 35th in the world in palliative care development and integration into the health system. In addition, Mongolia was ranked as the 28th country on the quality of death index by the Economist Intelligence Unit in 2015 (Fig. 5). Palliative care development continues to improve the quality of life of patients and families in Mongolia.

![Fig. 5. 2015 Quality of Death Index—overall scores by the Economist and Intelligent Unit.](image-url)
Disclosures and Acknowledgments

The authors acknowledge with gratitude Dr. Jan Stjernswärd, Former Chief, Cancer Unit, World Health Organization, the Open Society Foundations’ International Palliative Care Initiative, Help the Hospices, Asia Pacific Hospice Network, International Association for Hospice and Palliative Care, Dr. Kristina Krijanova, Palliative Care Department of the National Cancer Center, Bratislava, Slovakia, World Hospice Palliative Care Alliance, Institute for Palliative Medicine at the San Diego Hospice, Leadership Development Program, Ohio Health, Lien Foundation, National Hospice Palliative Care Organization, Cancer Free Mongolia Foundation, and members of Mongolia Palliative Care Society, and our patients and families for teaching, sharing, and supporting the development of the integrated palliative care in Mongolia.

References


