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Education in pain and palliative care in the low- and middle-income countries of the Asia Pacific region

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1. Introduction

There is a woeful lack of access to pain relief and palliative care in many low- and middle-income countries (LMIC) across the world. Measured in terms of distribution of opioids, out of the 298.5 metric tonnes of morphine-equivalent distributed in the world (average distribution in 2010-2013), only 0.1 metric tonne is distributed to low-income countries.[4] According to the Lancet Commission report on access to palliative care and pain relief, the annual distribution of morphine-equivalent opioids in Haiti is 5 mg per patient in need of palliative care. This contrasts with 55,000 mg per patient in need of palliative care in the United States and over 68,000 mg per patient in need of palliative care in Canada,[5] countries that are presently facing an opioid crisis because of inappropriate prescribing and use of opioids.

According to the World Health Organisation (WHO) Global Atlas, which maps palliative care needs worldwide, just over 50% of the palliative care needs reside in Asia. Although some high-income countries such as Japan and Singapore have palliative care services integrated into the health system, such services are lacking in the vast majority of LMIC.[3]

Against this backdrop, this presentation reports on efforts to improve education in pain management and palliative care in LMIC in the Asia Pacific region to improve access to pain relief and palliative care.

2. Education in pain

2.1. The IASP in Asia

Out of the 90 country chapters of the IASP, 18 are to be found in the Asia Pacific and South Asia regions. They include New Zealand and Australia; the East Asian countries such as Japan, South Korea, Kazakhstan, Mongolia, and People's Republic of China; the 2 territories such as Hong Kong and Taiwan; Southeast Asian countries such as the Philippines, Indonesia, Singapore, Malaysia, Thailand, and Myanmar; and the South Asian countries such as India, Bangladesh, Pakistan, and Sri Lanka. Although countries such as Australia, New Zealand, and Japan have well-established pain management services and training programs, these are lacking in many places in Southeast Asia and South Asia.

The IASP formed a Developing Countries Working Group in 2002 under the leadership of former IASP president, Michael Bond, which nurtured the formation of multidisciplinary pain management units as centres for training in Bangkok (Thailand), Bogota (Colombia), and Cape Town (South Africa).[1] It provided grants for pain education to individuals, Visiting Professor Grants for travel to chapter events in LMIC, and grants for education initiatives. For example, at the Interdisciplinary Pain Clinic at Siriraj Hospital in Bangkok, it developed an International Pain Fellowship program that gives clinical training in pain management to participants from LMIC. This is cofunded by the IASP and the World Federation of Societies of Anaesthesiologists (WFSA). Between 2006 and 2017, 15 trainees from Indonesia, Laos, Malaysia, Mongolia, Myanmar, Nepal, and Vietnam completed the 1-year fellowship and 7 completed a 3-month fellowship.

Former IASP President Troels Jensen was appointed IASP liaison for Southeast Asia from 2008 to 2016. He travelled the region, teaching and meeting with hospital administrators, deans of medical schools, and Ministers of Health to advocate for pain services and opioids for the treatment of cancer pain. He encouraged countries such as Laos, Cambodia, Vietnam, Nepal, and Bhutan to form IASP chapters. Although these are still a work-in-progress, a notable success was Myanmar, which formed its IASP chapter in 2011.

2.2. The Association of South-East Asian Pain Societies

The original 5 Association of Southeast Asian Nations (ASEAN) countries, namely, Indonesia, Malaysia, Philippines, Singapore, and Thailand, all had IASP chapters and an intermediate level of the development of pain services. After a meeting of the chapter presidents of these countries at the World Congress of Pain in San Diego in 2002, a confederation of IASP chapters for the Southeast Asian region was formed, with the aim to improve pain service provision, education, and research. Membership was restricted to IASP chapters from ASEAN countries, which all had similar needs, different from countries with advanced pain services and large pain societies, such as Australia and Japan. The new entity, called the Association of South-East Asian Pain Societies (ASEAPS), was inaugurated at a meeting of the Pain Association of Singapore in 2004. Biennial regional conferences linked to existing national conferences were organised by ASEAPS members on a rotational basis. Thus, the first ASEAPS Congress was held in Manila, Philippines, in 2006; the second in Malaysia in 2007; and the third in Indonesia in 2009. By 2011, ASEAPS had a sixth member, when the Myanmar Society for the Study of Pain became an IASP chapter.

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2.3. Status of pain as a specialty in Southeast Asia

There is a dearth of skilled health care workers trained in pain management and of training opportunities in the countries of Southeast Asia, and lack of awareness among academia and health ministries. In Thailand, pain was recognised as a subspecialty of Anaesthesia by the Royal College of Anaesthetists in 2008. A 2-year training course for Thai anaesthetists was approved by the Medical Council of Thailand, and run at 3 teaching hospitals in Bangkok: Ramathibodi Hospital, Siriraj Hospital, and Chulalongkorn Hospital. Meanwhile, efforts are being made for pain to be recognised as a subspecialty of the Royal College of Physical and Rehabilitation Medicine Physicians in Thailand.

In the Philippines, Pain Medicine is not recognised as a specialty. However, the Philippine Board of Pain Medicine conducts biennial examinations for doctors who have completed the 2-year pain fellowship training at 3 accredited institutions: St. Luke's Medical Center-Quezon City, University of Philippines-Philippine General Hospital, and St. Luke's Medical Centre-Global City. Since 2008, the University of Santo Tomas in Manila, in collaboration with the University of Sydney, runs the only postgraduate degree program in Pain Medicine in Southeast Asia, a part-time distance education program that provides advanced knowledge on pain but not recognised clinical training.

In Malaysia, pain is recognised as a subspecialty of anaesthesiology by the Ministry of Health, but anomalously, not by the Academy of Medicine Malaysia. The 3-year subspecialty training program, started in the mid-2000s, is available at 5 Ministry of Health Hospitals in Ipoh, Kuala Lumpur (Selayang Hospital), Johor Bahru (Hospital Sultan Ismail), Melaka, and Penang.

In Singapore, pain management services are available at most public and private hospitals, provided by pain specialists trained at accredited centres in Australia, United Kingdom, and North America. Pain Medicine is not recognised as a subspecialty in Singapore. The College of Anaesthesiologists of the Academy of Medicine Singapore has a Section of Pain Medicine, which will obtain Chapter status only when pain is recognised as a subspecialty. The Pain Management Centre at Singapore General Hospital is accredited by the Faculty of Pain Medicine of the Australian and New Zealand College of Anaesthetists (ANZCA), and provides a 1-year Pain Fellowship training for both local and regional candidates.

2.4. The IASP Pain Management Camps in Southeast Asia

In 2008, IASP President Gerald F. Gebhart decided to form a Task Force to look into pain education and research in the LMIC, along the lines of the highly successful European Pain Summer School, which IASP has run at Siena since 2003, where young researchers are mentored by experienced pain researchers for a week in an idyllic location. The Task Force, chaired by C.R.G. from Singapore, included Maged S. El-Ansary from Egypt, the late German Ochoa of Colombia, and later, Jose M. Castro-Lopes from Portugal. This Task Force soon realized that the priorities for LMIC lie in the basic pain education and service development, with research to follow. A pilot project was started in Asia, linked to the next ASEAPS congress in Thailand in 2011. Planning was done by a team from ASEAPS, consisting of Husni Tanra (Indonesia), Ramani Vijayan and Mary Cardosa (Malaysia), Jocelyn Que (Philippines), C.R.G. (Singapore), and Pongparadee Chaudakshetrin (Thailand). The latter, who headed the Pain Relief Unit at Siriraj Hospital, Mahidol University in Bangkok, was to host the first course. The IASP provided a grant of $50,000 USD. The team named the venture "the IASP Pain Management Camp," as the younger sister of the Siena Summer School. A 5-day residential course was designed, covering basic clinical pain management and how to setup pain services. For sustainability, it was linked to the biennial ASEAPS conference, so speakers invited to the conference could contribute to the teaching. The conference host would handle registration and local facilities such as venue, accommodation, catering, and transport. To generate funds to support the Camp, the 5th and last day of the Camp doubled as a Refresher Course, open to paying participants of the main conference. The IASP grant supported travel and accommodation of participants from LMIC with no IASP chapters. The 5 (later 6) ASEAPS members were each allowed 2 places for trainees supported by each country chapter. Each camp had capacity for 20 to 30 young clinicians from various disciplines. Six to 8 faculty taught on the course. Teaching was kept very interactive. Highlights included demonstration of neuropathic pain clinical examination by a neurologist, patients telling their own stories, and role play by faculty as patients with pain for participants to practise taking a pain history. An afternoon was spent visiting an interdisciplinary pain clinic to see patients with different pain conditions. Recreational time was provided in the late afternoon. Participants often worked late into the night on team projects to be presented the following morning. Feedback from the participants has been very positive.

Four IASP Pain Management Camps have been held so far, in Thailand (2011), Singapore (2013), Philippines (2015), and Myanmar (2017). The next Camp is planned for the ASEAPS congress in Kuching, Malaysia, in 2019.

The impact of the first 2 IASP Pain Management Camps was reported in a poster at the World Congress of Pain in Yokohama in 2016.[2] Of the 57 participants, 43 (74%) responded to the survey. Half were anaesthetists; 79% worked in the public sector. The knowledge acquired was used "moderately" or "a lot" by 93%, and 67% were involved in pain education in their countries. Of 43, 25 had attended an ASEAPS or IASP conference, and 11 had presented a poster. The majority of participants also kept in touch with one another, mainly through social media. Further research is necessary to fine-tune these efforts and improve their effectiveness.

3. Education in palliative care

3.1. Pain and palliative care

In many western developed countries, the fields of pain and palliative care developed separately. Pain services tend to develop from the field of Anaesthesia, extending from acute postoperative pain to chronic pain of diverse aetiology. Palliative care services, on the other hand, originated from the international hospice movement started in the 1960s by Cicely Saunders at St. Christopher's Hospice, London.[6] By contrast, in LMIC, much of the pain that is encountered is cancer pain, where lack of knowledge, skills, and medications engendered a vast sea of human suffering. The physician treating pain, whether anaesthetist or not, also has to provide palliative care for these patients, and the 2 fields are often merged.

3.2. The Asia Pacific Hospice Palliative Care Network

Registered in Singapore in 2001 as a nongovernmental organisation and a charity, the Asia Pacific Hospice Palliative Care Network (APHN) is a network of some 1500 individuals and 240 organisations involved in palliative care in the Asia Pacific region.

Its objective is to promote the development of hospice palliative care in the Asia Pacific region.

In 2012, the APHN worked with the Lien Foundation, a family foundation based in Singapore, to conceptualize a program to develop palliative care services in countries lacking such services in the Asia Pacific region. Named the Lien Collaborative for Palliative Care, it used APHN members to provide an interdisciplinary specialist faculty. Those worked as volunteers or were supported for their time by their employing institutions.

A 3-pronged approach was used. The first was to work in the main government training hospitals and tertiary referral cancer centres to build a corps of doctors, nurses, and allied health professionals capable of starting palliative care services, which will become training centres for palliative care for the country. The second was to engage government policy makers and hospital administrators to establish palliative care services within the health system from tertiary to primary care. The third was to make essential medicines, particularly oral morphine, available and accessible for effective pain and symptom control. A 3- to 4-year period of engagement was planned for each country.

3.3. Training of trainers in palliative care

Tertiary institutions that were willing to develop palliative care services were identified as partners to host the training. An interdisciplinary team from each institution was selected for training. Doctors had to have completed their postgraduate qualifications and be permanent staff in the institution. Experienced nurses who were likely to stay with the institution were selected. Social workers, psychologists, and pharmacists, when available, were included. The team would undergo training together over a period of 3 years. About 25 to 30 individuals were targeted for training in each country.

The training was delivered in 6 modules of 1 week each, twice a year for 3 years. The curriculum covered palliative care assessment, management of pain and major symptoms, communication skills, social and spiritual support, care planning, and legal and ethical issues. It included how to start palliative care services and how to obtain, store, and dispense controlled drugs. To prepare them to be future trainers, principles of adult learning, teaching, and presentation techniques were also included.

Case-based discussions, role play, large and small group discussions, and a minimum of didactic teaching were used. Clinical bedside teaching mentored communication and analytic skills, as well as attitude and behaviour. The faculty demonstrated team behaviour to breakdown the hierarchy among the disciplines.

The faculty consisted of an interdisciplinary team of 5 to 7 trainers, doctors, nurses, and a social worker. To provide continuity, the same group of overseas faculty taught in each country whenever possible.

Between teaching modules, the trainees used the knowledge and skills they acquired on cancer patients with palliative care needs, reinforcing what they learned. A lively group conversation among the trainees and faculty was maintained by electronic texting and email.

Two to 3 years into the project, selected trainees with potential to become champions for palliative care were sent to established palliative care units in the region for clinical attachments of 1 to 3 months, to broaden and deepen their knowledge and experience, and to develop a vision of the services they want to build.

3.4. Engaging government policy makers and hospital administrators

Hospitals had to be persuaded to set up palliative care services, requiring additional manpower from the Ministry of Health. At every in-country visit, faculty made efforts to meet with key Ministry of Health officials to discuss how services might be setup, initially in the training institutions, but eventually to include care in the community.

3.5. Making oral morphine available and accessible

A severe lack of strong opioids to treat moderate to severe pain was found in all the countries involved. The commonest medications used for pain were nonsteroidal anti-inflammatory drugs, tramadol, and sometimes codeine. Injectable morphine, if available, was severely restricted. National opioid seminars that brought together drug regulators, Ministry of Health officials, hospital administrators, clinical heads of departments, and pharmaceutical companies were held to create awareness and seek solutions to make oral morphine available in the tertiary hospitals, and for patients to use at home. Persistent advocacy by the overseas faculty was necessary at every visit.

3.6. Projects in Myanmar, Sri Lanka, and Bangladesh

The Lien Collaborative for Palliative Care has been active in these 3 countries since 2013. **Table 1** gives the background and context in these countries. **Table 2** summarizes the training programmes.

3.7. Myanmar

Myanmar, formerly known as Burma, is a former British colony with a population of 55 million, bordered by Bangladesh, India, China, Thailand and the Bay of Bengal. Five decades of military rule since World War II had impoverished the country. Since the suspension of European sanctions in 2012 and subsequent lifting of sanctions as the country transitioned to democracy with the election of Aung San Suu Kyi's government in November 2015, rapid development has ensued. Yet, 26% of the population remains below the poverty line, and infrastructure for health is severely deficient. Our project coincided with this period of rapid change.

The professional institution that facilitated the project was the Myanmar Medical Association. A memorandum of understanding was signed with the Ministry of Health and Sports for training to take place at Yangon General Hospital, the main tertiary referral hospital of the country, where we were hosted by the Radiation Oncology Department. Six teaching modules were completed between June 2013 and January 2016. Twenty-eight trainees from 10 Ministry of Health hospitals, 1 military hospital, and 1 hospice started the training. The 25 trainees who completed the training included 16 doctors, 7 nurses, and 2 medical social workers. Many more observers attended parts of the training. Eleven participating faculty include 6 doctors, 3 nurses, 1 medical social worker, and 1 pharmacist from Australia, Malaysia, Singapore, and the United States.

Three-month clinical fellowships in Singapore were provided for 6 doctors from 4 different hospitals, whereas 7 nurses and 3 social workers did 1-month clinical fellowships.

Positive outcomes include the starting of palliative care services in Yangon General Hospital and Mandalay General Hospital, the 2 largest teaching hospitals in the country. A Stakeholders' Meeting was organised to introduce palliative care into the undergraduate medical curriculum in July 2017. No oral morphine was available in Myanmar at the beginning of the project. After a national opioid seminar in October 2013, the main government-owned pharmaceutical factory started producing

Table 1

Lien Collaborative for Palliative Care: background and context.

	Myanmar	Sri Lanka	Bangladesh
Population (millions)	55.1	22.4	157.8
Land area (km^2)	676,578	65,610	148,000
Religions (%)	Buddhist 87.9 Muslim 4.3 Christian 6.2	Buddhist 70.2 Hindu 12.6 Muslim 9.7 Christian 7.4	 Hindu 10 Muslim 89
Urban population (%)	35.2	18.5	35.8
Population in major urban areas (millions)	Yangon 4.8	Colombo 0.7	Dhaka 18
Income group*	Low	Lower middle	Low
Gross domestic product (USD per person)	6300 (2017 est)	13,000 (2017 est)	4200 (2017 est)
Poverty level (%)	26	6.7 (2012 est)	31.5 (2010 est)
Literacy rate (%)	75.6	92.6	72.8
Internet user (%)	25.1	32.1	18.2
Mobile phone subscriber (%)	86	116	81
Life expectancy at birth	68.2	76.9	73.4
Maternal mortality (per 100,000 live births)	178 (2015 est)	30 (2015 est)	176 (2015 est)
Infant mortality (per 1000 live births)	35.8	8.4	31.7
Doctors per 1000 population	0.57	0.88	0.47
Hospital beds per 1000 people	0.9	3.6	0.8
No. of new cancer cases†	63,633	23,665	122,715
No. of cancer deaths†	49,163	13,950	91,339
5 most frequent cancers (mortality)†	Lung Liver Stomach Oesophagus Cervix uteri	Lung Breast Oesophagus Stomach Lip and oral cavity	Oesophagus Lung Other pharynx Breast Cervix uteri
Total radiotherapy centres*	4	7	14
Total high-energy teletherapy units/million inhabitants*	0.1	0.1	0.1
Radiation/clinical oncologists*	23	18	25

The CIA World Factbook 2017, https://www.cia.gov/library/publications/the-world-factbook/. Accessed May 29, 2018.
* WHO Country Cancer Profiles 2014, http://www.who.int/cancer/country-profiles/en/. Accessed May 29, 2018.
† Globocan 2012, http://globocan.iarc.fr/Pages/fact_sheets_population.aspx. Accessed May 29, 2018.

immediate-release oral morphine 10 mg tablets, and 5 mg in 5 mL oral morphine syrup. These finally reached the wards of Yangon General Hospital in February 2018. An ongoing mentoring program involving smaller numbers of APHN faculty visiting every few months is in place for another year.

3.8. Sri Lanka

Sri Lanka, formerly known as Ceylon, gained independence from the British in 1948. Two decades of civil war between the Sinhalese majority and the Tamil separatists officially ended in 2009. Sri Lanka has a population of 22 million. It is classified as an LMIC with 6.7% below the poverty level and a literacy rate of 92.6%. A good primary health care system accounts for its maternal mortality rate of 30 per 100,000 live births and infant mortality rate of 8.4 per 1000 live births in 2016.

Our partner in Sri Lanka was the National Cancer Control Program of the Ministry of Health, which arranged for the training to take place at the National Cancer Institute, Maharagama, in Colombo. Six teaching modules were completed between March 2014 and March 2017. We started training with 50 persons from 17 hospitals and 12 universities and the Ministry of Health itself. Participants included 17 of the 23 oncologists in the country, and academics from medical and nursing colleges. Thirty-eight trainees completed the training, including 26 doctors, 7 nurses, 4 nurse tutors, and 1 social work tutor. Sixteen faculty, 8 doctors, 7 nurses, and 1 medical social worker from Australia, Malaysia, Singapore, and the United Kingdom participated in the teaching.

The training increased awareness of palliative care throughout the country and dovetailed well with the efforts of the Palliative Care Association of Sri Lanka, which ran 2-day courses for family physicians. A palliative care service was started at the National Cancer Institute, Maharagama. Trainees from the project also started several charitable community palliative care services. The Ministry of Health considered teaching palliative care to community midwives of the existing primary health care system, but now plans to include palliative care in a new, parallel system of community nurses to deal with all noncommunicable diseases. Oral morphine tablets 10 mg were already available in certain hospitals before the project started. Positive developments

Table 2

Lien Collaborative for Palliative Care training programmes.

	Myanmar	Sri Lanka	Bangladesh	Total
In-country training-of-trainers (TOT) modules				
Module 1	2013 June	2014 March	2013 July	18 modules
Module 2	2014 January	2014 December	2014 August	
Module 3	2014 July	2015 June	2015 September	
Module 4	2015 January	2016 February	2016 March	
Module 5	2015 July	2016 August	2017 September	
Module 6	2016 January	2017 March	2018 March	
National opioid seminar	**October 5, 2013**		**April 11, 2013**	**2**
No. of participants at start*				
Institutions	12	29	18	59
Total at start	28	50	50	128
Doctors	17	37	27	81
Nurses	9	11	19	39
Social workers	2	1	1	4
Psychologists	0	1	0	1
Pharmacists	0	0	3	3
Overseas clinical attachments†				
Institutions†	5	5	1	6
Total individuals	16	12	2	30
Doctors	6 (3 mo)	4 (2 wk)	2 (1 mo)	12
Nurses	7 (1 mo)	8 (1 mo)	0	15
Social workers	3 (1 mo)	0	0	3
Completion certificates awarded				
Institutions	12	19	9	40
Total completed	26	38	28	92
Doctors	17	26	19	62
Nurses	7	11	7	25
Social workers	2	1	0	3
Pharmacists	0	0	2	2
Faculty‡				
Countries	4	5	5	8‡
Institutions	8	10	12	22‡
Total	10	16	16	36‡
Doctors	6	8	6	17
Nurses	2	7	8	17
Social workers	1	1	1	1
Pharmacists	1	0	0	1

* Participants who started were not necessarily the same ones who completed. Completion certificates were awarded according to defined attendance criteria. Total participants, including those who were not awarded a certificate and who attended 1 or 2 modules or parts of modules are estimated to be 260.

† Individual participants were sponsored for clinical attachments for the time indicated at established palliative care services in the Asia Pacific region. Institutions indicate participating host institutions, which are: All India Institute of Medical Sciences (AIIMS), National Cancer Centre Singapore (NCCS), Assisi Hospice, Dover Park Hospice, HCA Hospice Care, and St. Joseph's Home and Hospice. The latter 4 institutions are community palliative care services in Singapore.

‡ Total excludes double counting of faculty who have served in more than 1 country, and institutions which have supported more than 1 faculty. The 8 countries from which faculty were drawn are Australia, Canada, India, Japan, Malaysia, Singapore, United Kingdom and United States.

include more outlets for supply of oral morphine and an increase in prescription from 7- to 30-day supply for patients going home. A Graduate Diploma in Palliative Care was launched in 2017 by the Postgraduate College of Medicine. Recognition of Palliative Medicine as a specialty is being discussed. Participants from the training started teaching Palliative Care in the nursing colleges and to social workers. A National Strategy for Palliative Care development is being finalized under the Directorate for Non-Communicable Diseases of the Ministry of Health.

3.9. Bangladesh

Bangladesh, formerly East Bengal province of India, then East Pakistan, became an independent nation in 1971. Its birth was traumatic, with the so-called genocide killing of 3 million of its inhabitants by Pakistani troops before intervention by India. Scars of this is still evident as trials of collaborators from this period are only now being completed, the sentencing of each criminal being accompanied by rioting and communal violence. Bangladesh has a population of 163 million, with 18 million in Dhaka, the capital, alone. With 30% of its population still below the poverty level, Bangladesh celebrated in March 2018 its promotion from least developed country to developing country status.

Bangladesh was the first country to be engaged with in this project and the last to complete. Our partners were the Bangabandhu Sheikh Mujib Medical University (BSMMU), the only postgraduate medical university in the country, and the National Institute of Cancer Research and Hospital (NICRH). Dhaka Medical College and Hospital (DMCH), the leading government hospital in Bangladesh, also participated. The

in-country teaching was repeatedly delayed by the civil unrest surrounding the trials of the 1971 independence war criminals, and the terrorist attack on the café in Dhaka that left 28 dead in July 2016. Six teaching modules were completed from July 2013 to March 2018. Fifty participants from 18 organisations started on the first training. This was tailored down to 35 persons from 9 organisations by the second module. A total of 24 trainees, 17 doctors, 7 nurses, and 2 pharmacists received completion certificates. Sixteen faculty, 7 doctors, 8 nurses, and 1 medical social worker, from Australia, Canada, India, Japan, and Singapore took part in the teaching.

There was already a Centre for Palliative Care (CPC) at BSMMU before the project started. Five of its doctors and 5 nurses completed the course. Over this period, the CPC expanded its services to include outpatient clinics and home care, and added 3 paediatric palliative care beds to its existing 17 beds. DMCH established a 12-bedded Palliative Care Unit in its Anaesthesia Department for adult and paediatric Haematology-Oncology patients. NICRH started a Palliative Care Unit in 2018. A National Opioid Seminar in 2013 and continued engagement with drug regulators and pharmaceutical companies have resulted in oral morphine being produced in Bangladesh by 3 private companies. Immediate-release 10 mg oral morphine tablets, sustained-release 15 mg oral morphine tablets, and oral morphine syrup preparations are now available at the 3 institutions involved in the training, and at several pharmacies in the city at very affordable prices. Palliative Medicine was recognised as a medical specialty in 2015, and Professor Nezamuddin Ahmad was appointed the first Professor of Palliative Medicine in Bangladesh at BSMMU. There have been 3 intakes of MD students in Palliative Medicine, 13 of whom are in training in 2018. An active public engagement program is in place in Bangladesh, centring on World Hospice and Palliative Care Day each year, with cooperation between the public, private, and charitable sectors. There is also collaboration with another international nongovernmental organisation, World Child Cancer, which is active in children's palliative care.

3.10. Lessons from the Lien Collaborative for Palliative Care

The Lien Collaborative for Palliative Care has shown that through collaboration, much can be achieved with relatively little financial outlay (**Table 3**). To achieve the outcome of services being developed within the health care system, the choice of partners for engagement is key. They should be leading government institutions or the ministries of health themselves.

The selection of clinicians for training is also essential. They should be permanent staff, not subject to transfer out of the unit during the period of training. Ideally, the team of doctors, nurses,

Table 3

Learning pearls from starting palliative care services in LMIC in Asia.

1	Political situation	Be aware that this can change and impact schedules, project feasibility, and safety of faculty and trainees
2	Ministries and Departments of Health	Understand the administrative system of the country and key players who will impact the project
3	Contacts	Develop key contacts able to open doors, make introductions, and help navigate various systems
4	Training institutions	Select leading tertiary institutions in the public sector, which will become training centres. Commitment to start a palliative care service in the institution is required.
5	Choice of discipline	This may be opportunistic. Anaesthesia may be a way in, as pain is under the purview of anaesthesia. On the other hand, oncology sees the great need, as most cancers are diagnosed at the advanced stage requiring palliative care. So, oncologists in LMIC are highly motivated to acquire palliative care skills.
6	Selection of trainees	Must be permanent staff, likely to stay in the institution for the duration of training and set up the service. Preferably early career, experienced staff, eg, junior consultants and registered nurses, who can be inspired by the vision.
7	Repeated teaching contact	Training should not be one-off, but repeated contact is needed, with time to practise and use what is learned in between. Values and habits have to be instilled over time.
8	Keeping in touch	Between teaching trips, maintain contact through a WhatsApp group, Facebook messenger, or email.
9	Interactive teaching methods	Avoid didactic teaching. Use interactive, case-based methods and role play for communication. Use local cases from ward work whenever possible. This goes down well at all the sites.
10	Team teaching	Faculty should work in a team during each session, stepping in to help each other out with questions, or if session is going awkwardly. Good mutual learning opportunities among faculty.
11	Mentoring behaviour	Values are taught both during classroom teaching and at the bedside. Behaviour towards patient and family is mentored during the bedside teaching. Interdisciplinary team behaviour and how team members support one another is also mentored through interfaculty interactions.
12	Cultural context	Listen to cultural concerns and discover solutions together with trainees. Try out different ways of putting things in the local language, what is acceptable and what is not. Learn about alternative systems of medicine and local folk remedies.
13	Identifying champions	Establish good relations with potential champions and get to know them and their needs. Look out for those who are willing to switch to the new field. Empower and open doors for them.
14	Drug availability	Needs repeated contact and advocacy with drug regulators and others, such as pharmacists, hospital administrators, Ministry of Health officials. Persistence is key.
15	Hospital authorities	Needs repeated contact to advocate for resources to start new services
16	Community stakeholders	Establish good relations with community players, such as family physicians, cancer societies, hospices, media, etc.

LMIC, low- and middle-income countries.

and social workers should be involved in care of patients with palliative care needs. Hence, oncology staff was targeted, with a view to task shifting. Despite initial worry that 6 modules spread over 3 years were too long, repeated short stints of teaching, followed by relevant clinical practice, was found to be effective in reinforcing learning, changing mindsets, and practice. Because volunteer faculty was used, it was difficult for them to leave their departments more often than a week twice a year.

A "bottoms up" approach is used, as the interpretation and outworkings of the palliative care approach are subject to local culture. Faculty and trainees explore together how to make things work in the local context. This is an enriching experience for all. For many of the trainees, this is the first time they have experienced interdisciplinary training. A new mindset and breakdown of hierarchies are required. The result is a learning community that can give peer support and encourage ongoing learning.

Providing training on its own, particularly one-off training, will not automatically lead to services being established and patients being cared for. Advocacy at department head, hospital superintendent, and Ministry of Health levels is needed to facilitate the establishment of new services with new headcounts. Just as important is recognition by peers that the new service is useful, beneficial to patients, and nonthreatening to the existing hospital hierarchy.

To provide the tools needed for pain and symptom relief, a concomitant program on drug availability is essential. This will require engagement with drug regulators, pharmaceutical companies, and others to get the medications to the patients in hospital and beyond to their homes.

Finally, for sustainability, a national policy for the development of palliative care is required, with recognition of palliative medicine as a specialty to provide the leadership for ongoing training, research, and advocacy.

Conflict of interest statement

The authors declare that there is no conflict of interest.

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