EPEC©
Pediatrics
Education in Palliative & End-of-Life Care

What is EPEC-Pediatrics?

Education in Palliative and End-of-Life Care (EPEC)-Pediatrics is now the most comprehensive Pediatric Palliative Care (PPC) curriculum and education dissemination project worldwide. Funded by a US$ 1.6 million National Institutes of Health (NIH) / National Cancer Institute (NCI) grant from 2010-2017, this extensive curriculum was designed to address the needs of seriously ill children, their families, pediatric hematology/oncology providers, and other pediatric clinicians.

What is the Curriculum Content?

The curriculum is now comprised of 24 pediatric palliative care modules, delivered in a combination of online learning and in-person, face-to-face conference sessions. These "Train-the-Trainer" conferences provide the "Trainers" (pediatric clinicians) with all PowerPoint presentations, all trigger-tape videos, and a teaching handbook for each module for teaching interdisciplinary teams. (see table 1)

There are 3 levels of training we offer through EPEC-Pediatrics

LEVEL 1: "End-user training". This is basically the traditional (however far more interactive) training of clinicians in PPC. The participants are there to learn, they are NOT expected to teach the material. This can be done for 10 or for 1000 people in one room, and we can teach just 1 module or all 24 modules. If we add break-out rooms to practice role-play and communication (recommended), then we would need 1 breakout room for each 15-20 participants

This is basic (or advanced) training for interdisciplinary clinicians (e.g. physicians, nurse practitioners, nurses, social workers, psychologists, chaplains, administrators etc.) who want to learn (but NOT necessarily teach) the content. They will NOT receive the EPEC-Pediatrics curriculum teaching material like the PowerPoint presentations, videos and teaching guides.

LEVEL 2:"Become an EPEC-Pediatrics-Trainer" Conference: This is what we offer most often. The participants of this course have already background in PPC and attend this conference to **learn how to teach** the EPEC-Pediatrics Curriculum. After finishing all 24 training modules (which can be all done at a face-to-face conference, and/or most are also available as an online-curriculum) and the face-to-face Become an EPEC-Pediatrics-Trainer" Conference (depending on the background of the participants: minimum 2 days - maximum 5 days) the participants are "EPEC-Pediatric Trainers" and will receive all the PowerPoint presentations, videos and teaching guides. EPEC-Pediatrics Trainer can then teach **"LEVEL 1 "End-user training", either at their own home institution or at PPC Training conference or somewhere else.**

LEVEL 3: Professional Development Workshop (PDW): To become a "Master Facilitator" (someone, who teaches new "Trainer" at LEVEL 2) you need to be (1) an EPEC-Pediatrics Trainer, (2) participated in a EPEC-Pediatrics PDW (1-day course), and (3) has taught at a LEVEL 2:"Become an EPEC-Pediatrics-Trainer" Conference as a "Junior-Master Facilitator" under supervision and with feedback of a "Senior-Master Facilitator" (we can offer this in collaboration with "level 2"

Teaching how to teach: "Hook", "Attitude", "Knowledge" and "Skill"

A common mistake in medical teaching appears to be the misconception that a large amount of "knowledge" (i.e., large number of PowerPoint slides during a presentation) will convince the audience to change their behavior (e.g. a physician will decide to administer morphine to a child with terminal dyspnea the day after hearing the talk). Unfortunately, this approach has not been shown effective, and Dixon (1978) postulated that in order to change clinicians' behavior, and thereby patient outcomes, one needs to address "attitudes" and "skills" in addition to "knowledge".

EPEC-Pediatrics creates "Trainers" and "Master Facilitators"

The key teaching modalities both "Trainers" (participants who completed all online modules and participated in a Train-the-Trainer conference and then receive all material to teach end-users) and future "Master Facilitators" (MFs) (EPEC-Pediatric trainers who underwent an additional "Professional Development Workshop" [PDW} practicing adult-teaching strategies and taught successfully under supervision of senior MFs) experience and practice during EPEC-Pediatrics are: (a) interactive lecture, (b) role play, and (c) case study. Experience in medical teaching has shown that nothing will more likely lose the audience's attention quickly than a presenter clicking through far too many PowerPoint slides and reading from them in a monotonous voice without engaging the participants at all. As a result, EPEC-Pediatrics teaches Trainers and MFs to use an interactive lecture with case examples and/or role play. We strongly discourage the use of too many slides and encourage making use of small group discussion, and/or facilitated discussion with all participants, using flip charts, etc.

In teaching one of the EPEC-Pediatrics "Accordion" modules (i.e. as there is deliberately too much material for a 1-hour session in each modules and trainers have to choose which parts are appropriate for the audience and have gained explicit permission to change the EPEC-Pediatrics slides or material for their individual teaching needs) we recommend and practice the following components:

- Consider starting with a "Needs Assessment". Engage the audience what they would like you to cover in your teaching.
- Consider using a "Hook". Identify a "hook" for the educational program can be a powerful lead-in. This might be a compelling patient story that underscores the need for change, a video, a review of common myths and misconceptions, statistics about inadequate pain control, or the incidence of suffering in certain situations. The goal is to heighten the participants awareness and motivation for the need to change, and as such learning.
- Address "Attitude"/Myths/Misconceptions and how to overcome them. [Example: "Identify and address common myths preventing opioid prescription for children with severe pain."]
- Provide "Knowledge". [Example: "Discuss the 4 WHO principles of acute pain management"] – Make the presentation interactive with cases, videos, etc., and reduce the number of slides. The maximum attention span of audiences is about 10 minutes.
- Teach a "Skill" [Example: "Practice morphine prescription in small groups using a case example"]

How many clinicians have been trained through EPEC-Pediatrics?

UCSF Benioff Children's Hospitals
Oakland | San Francisco

From 2012-2022 Education in Palliative and End-of-life Care (EPEC) Pediatrics held 29 conferences and trained 1,774 clinicians from 114 countries/ territories

- **Level 1:** 670 participants in Advanced Pain & Pediatric Palliative Care End-user Conferences/ Workshops
- **Level 2:** 1,104 EPEC-Pediatrics Trainers (78 countries/territories)
- **Level 3:** 125 EPEC-Pediatrics Master Facilitators

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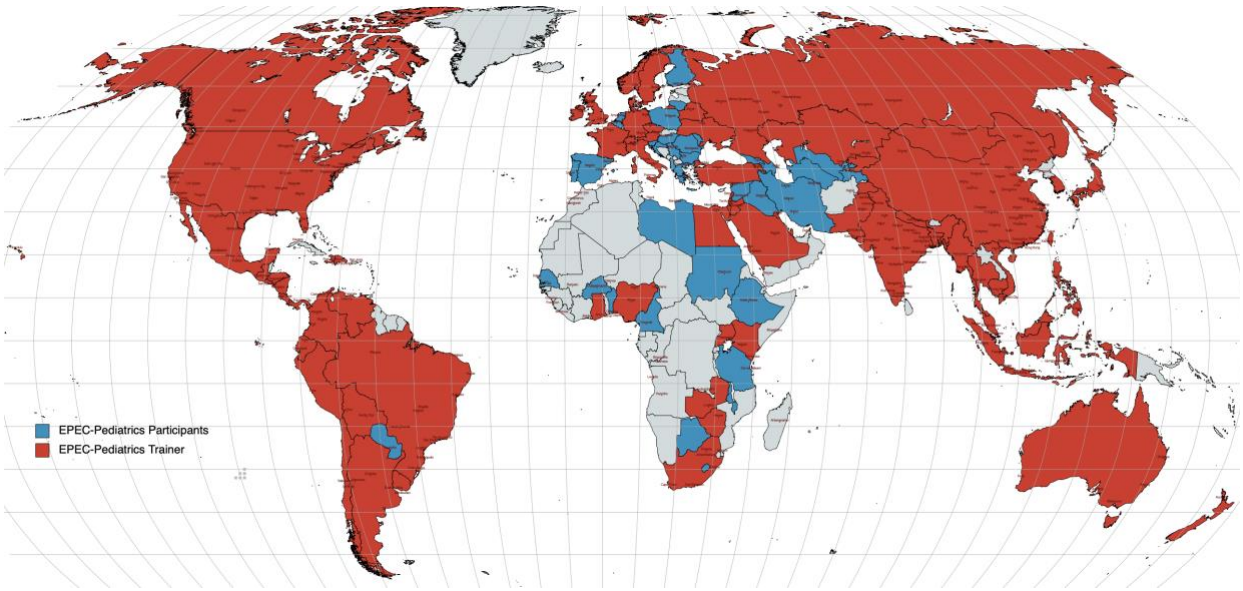

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Table 1: EPEC-Pediatrics Modules and Objectives

Module Title	Objectives
M1. What is Pediatric Palliative Care and Why Does it Matter: Palliative Care Overview	• Define PPC as a set of tasks • Identify predictable opportunities for palliative care intervention at different stages of disease • Describe when and how to utilize a subspecialty palliative care team • Evaluate myths and assumptions about PPC
M2: Child Development	• Learn typical phases of cognitive, psychosocial and spiritual growth • Learn how children of different developmental capacity understand concepts of illness and death and how this can impact care planning • Learn interventions that can be utilized when working with children of diverse ages along the illness continuum and at end of life
M3: Family Centered Care	• Define Family-Centered Care (FCC) • Learn the four key principles in FCC • Describe strategies for delivering effective FCC in pediatric palliative care • Understand and reduce barriers to the delivery of FCC
M4: Grief and Bereavement	• Review theories of grief • Assess grief in children • Use developmentally based strategies to address grief • Discuss grief related to the loss of a child and strategies to address family grief
M5: Self Care for Professionals	• Understand how self-care is a core competency in palliative and end of life care • Recognize what triggers stress and burnout • Develop a self-care plan that reduces stress and fosters personal growth and well-being
M6: Team Collaboration and Effectiveness	• Identify the conceptual basis for teamwork in palliative care • Describe different types of teams in palliative care • Name specific advantages and challenges of teamwork
M7: Communication & Planning	• Describe the 6 steps of the SPIKES model for giving bad news • Detail reasons for communicating prognosis • Learn methods for communicating prognosis • Understand ways to elicit goals of care and to discuss advanced care planning
M8: Ethical & Legal Issues	• Place ethics in pediatric palliative care • Clarify role of parents as surrogate decision makers • Describe basic tenets of pediatric end-of-life care

M9: Teaching with EPEC-Pediatrics in the Face-to-Face Setting	• Describe how education can promote practice and systems change • Describe why it is important to identify the tension point for learners • Name three principles of adult learning • Design a training session using EPEC-Pediatrics curriculum materials
M10: Multi-Modal Analgesia	• Review assumptions about opioid use in children • Evaluate the 4 WHO-Principles of acute pediatric pain management • Discuss the concept of Multimodal Analgesia • Calculate morphine requirements for a child in severe pain
M11: Opioid Selection and Opioid Rotation	• Review opioids commonly used in pediatric palliative care o Pharmacology o Routes of administration o Common adverse effects • Review opioids not recommended for pediatric use • Practice opioid rotation in a case example
M12: Management of Neuropathic Pain Management and Adjuvant Analgesia	• Appreciate the high prevalence of neuropathic pain in pediatric palliative care • Define neuropathic pain and describe main causes in pediatric patients • Emphasize the role of opioids as a first-line agent in neuropathic pain management • Develop a step-by-step treatment approach for neuropathic pain, including pharmacologic (opioids, non-opioids, adjuvants), procedural and integrative medicine approaches
M13: Procedural Pain Management Strategies	• Describe the evidence for the importance of managing procedural pain • Review the 4 essential pain management strategies for needle procedures • Identify pharmacologic agents including dose, route of administration, monitoring, and adverse effects • Identify behavioral and integrative strategies that facilitate coping with procedures
M14: Chronic Complex Pain *	• Discuss the prevalence of chronic pain and underlying pathophysiology in children • Appreciate that different chronic pain syndromes are often considered manifestations of an underlying vulnerability rather than separate disorder • Review the limited role for pharmacotherapy in children with chronic pain o Opioids are usually not indicated! • Stress the importance of a rehabilitative, interdisciplinary team approach in managing chronic pain

	• Discuss management of children who have both acute pain, such as vaso-occlusive crisis in sickle-cell disease, and chronic daily musculoskeletal pain
M15: Management of Gastrointestinal Symptoms	• State the spectrum and impact of gastrointestinal symptoms • Recognize pathophysiology involved in nausea and vomiting, and learn to prescribe appropriate antiemetic therapy • Diagnose and treat diarrhea and constipation • Explain the diagnosis and treatment of anorexia-cachexia syndrome • Discuss weight changes and loss of appetite with caregivers
M16: Management of Respiratory Symptoms	• Appreciate the high prevalence of dyspnea, excess respiratory secretions and cough in pediatric palliative care and often inadequate treatment by clinicians • Discuss pathophysiology of common respiratory symptom in pediatric palliative care • Describe the role of opioids as a first-line agent in dyspnea • Develop a step-by-step approach in managing dyspnea and other respiratory symptoms
M17: Management of Emotional and Behavioral Symptoms	• Describe approaches to emotional and behavioral aspects of palliative care • Discuss “phenotypes” of psychological and behavioral pathology in seriously ill children • Review the assessment and potential treatments for each phenotype • Identify thresholds for referral to mental health clinicians
M18: Management of Neurological Symptoms	• Review neurological complications of children with serious illnesses, including advanced pediatric hematology/oncology conditions, and treatment strategies • Identify causes of pain behaviors in children with neurological impairment • Develop step-by-step approach to manage distressing neurological symptoms in pediatric palliative care
M19: Management of Refractory Distress	• Describe persistent myths about palliative sedation • Explain the circumstances under which palliative sedation may be indicated • Describe recommended dosing for palliative sedation in children • Review the potential alternatives to palliative sedation
M20: Preparation for Imminent Death	• Define the end-of-life period • Describe the tasks necessary for managing pain and distress at end of life • Identify important issues that require careful communication and planning • Describe the essential components of good care at the very end of life
M21: Integrative Medicine	• Describe how integrative medicine strategies can enhance care for children with life-threatening conditions.

	• Practice a relaxation and mental imagery (RMI) exercise. • Review importance of safe and effective integrative medicine modalities to improve pain and symptom management as well as quality of life for seriously ill children
M22: Introducing Quality Improvement in PPC	• Discuss why quality improvement methodology is an important approach for integrating pediatric palliative care into services • Describe the basic concepts of quality improvement approaches • Describe the first steps to improving quality • Complete a performance improvement project
M23: Teaching Pain and Symptom Management	• Describe the goals of education • Explain how adults learn best • Use personal style and presentation skills to make teaching more effective • Cope with 'challenging' participants • Experience different presentation modalities
M24: Methadone	• Review advantages and disadvantages of methadone use • Evaluate potential adverse effects of methadone • Explain difference of half-life compared to other opioids • Practice opioid rotation to methadone

[included M24: Methadone* in the online version until 2016]