

Quality Assessment of the Collaboration and Experiences of General Practitioners and Allied Healthcare Providers Supported by a Liaison Team in Pediatric Palliative Care: A Single-centre Survey

Kato Dens ^{a*}, Marlien Torfs ^{a*}, Linde Vanhessche ^b, Ilse Ruysseveldt ^c, Marleen Renard ^d, Veerle Labarque ^{d,e}

* These authors are shared first authors

^a Department of Paediatrics, University Hospitals Leuven, Leuven, Belgium

^b Faculty of Medicine, KU Leuven, Leuven, Belgium

^c Coordinator, Kites Team, University Hospitals Leuven, Leuven, Belgium.

^d Department of Paediatric Haemato-oncology, University Hospitals Leuven, Leuven, Belgium

^e Department of Cardiovascular Sciences, KU Leuven, Leuven, Belgium

veerle.labarque@uzleuven.be

Keywords

Paediatric palliative care; Primary care; Home-based care; Liaison team

Abstract

Background

Paediatric palliative care is a holistic approach to the care for children with life-limiting or life-threatening conditions and involves collaboration among general practitioners, home care nurses, and physiotherapists. However, many of these healthcare providers lack experience in paediatric palliative care. In our centre, this care is coordinated by the liaison team KITES.

Aim

To evaluate the quality of collaboration between primary healthcare providers and KITES, and to identify perceived needs and opportunities for improvement.

Design

A cross-sectional survey study using a validated questionnaire.

Setting/participants

General practitioners, home care nurses, and physiotherapists who provided palliative care to a child (< 18 years) in collaboration with the palliative liaison team KITES in the past three years.

Results

Response rate was 38%. Overall, only 3% had received training in paediatric palliative care. Almost all health care providers considered symptom control and emotional support very important. Bereavement care was more important for general practitioners than for allied health care providers. Support provided by KITES was mainly focused on symptom management and organization and coordination of care. Psychological support provided was more constrained. Collaboration and communication between general practitioners, nurses and KITES was well-established, while contact with the treating paediatrician was limited.

Conclusions

Health care providers lack training in paediatric palliative care. Support by the liaison team focused mainly on symptoms and organization of care. The psychological support provided by the liaison team and the involvement of the treating paediatrician could be improved.

Introduction

Palliative care is a well-known concept in adult medicine, defined by the World Health Organisation (WHO) as 'an approach that improves the quality of life of patients (adults and children) and their families who are facing problems associated with life-threatening illness. It prevents and relieves suffering through the early identification, correct assessment and treatment of pain and other problems, whether physical, psycho-social or spiritual' (1). Although children are considered in the definition, paediatric palliative care (PPC) presents additional challenges, such as the wide range of cognitive abilities and emotional maturity in the paediatric population (2). Therefore, this WHO definition

has been adopted by the International Meeting for Palliative Care in Children, Trento (IMPaCCT), defining palliative care in children as 'the active total care of the child's body, mind and spirit'. PPC should start at the time of diagnosis and should continue throughout the course of the disease, which may lead to long trajectories, coinciding with treatment directed at the disease (3). PPC should also involve giving support to the family, including siblings. Moreover, as parents are central to the child's well-being, they should be involved in all aspects. In 2022, the IMPaCCT standards were revised through the Global Overview – Paediatric Palliative Care Standards (GO-PPaCS), taking into account different settings and resources (4). Complex chronic conditions – grouped by Chris Feudtner

TABLE 1: Degree of importance of certain care aspects scored by GPs and allied HCPs.

Degree of importance	Irrelevant (n)		No importance (n)		Very low importance (n)		Low importance (n)		Moderate importance (n)		High importance (n)		Paramount importance (n)	
	GP	HCP	GP	HCP	GP	HCP	GP	HCP	GP	HCP	GP	HCP	GP	HCP
Pain - and symptom control	0	0	0	0	0	1	0	1	1	1	14	3	11	20
Other comfort care	0	1	0	0	0	0	0	1	3	1	14	4	9	20
Emotional support of the child	1	1	0	0	0	1	1	0	3	0	13	6	8	19
Emotional support of the parents	0	0	0	0	0	0	0	1	2	0	11	7	13	19
Emotional support of the siblings	0	3	0	0	0	0	3	0	5	4	11	9	7	11
Bereavement care after the child has died *	0	5	0	0	0	1	0	4	3	5	14	7	9	5
Domestic help	2	7	3	4	6	1	5	4	5	7	5	2	0	2
Assistance with administration	0	9	1	2	3	3	2	3	12	6	8	4	0	0
Organization and start-up of care	0	4	0	0	0	2	1	2	11	3	7	7	7	9
Coordination of care	0	4	0	0	0	1	3	2	8	3	12	8	3	9
Providing medical equipment**	0	5	0	1	1	0	4	2	10	3	8	9	3	7
Providing other equipment	0	3	1	0	2	0	8	0	9	0	4	0	4	1

GP: general practitioner; HCP: health care professional; n: number of GPs or number of allied HCPs;
 *Comparison high or paramount importance versus others between GPs and HCPs: p-value 0.011; **p-value 0.045

according to the affected organ system (neuromuscular, cardiovascular, respiratory, renal, gastrointestinal, haematologic or immunologic, metabolic, congenital or genetic, malignant, premature/neonatal, or other conditions), were further classified into 3 categories: i.e. life-threatening conditions (with high probability of premature death), life-limiting conditions (with no reasonable hope of cure and expected premature death), and terminal illness (when death is inevitable for a life-threatening or life-limiting disease) (5). Although PPC may seem rare, its importance becomes evident when considering that children aged 1–18 represent over 30% of the world's population, and life-threatening illnesses such as cancer cause roughly 2.5 million deaths among children each year (6, 7). Curative treatment is not always the most beneficial for a child's well-being; sometimes pain relief and supportive care become more important to enhance quality of life (8–9). Early integration of PPC for children diagnosed with a progressive and/or life-limiting condition, rather than waiting until curative options are exhausted, is therefore recommended (3, 10). Home-based PPC is particularly important since it is associated with improved quality of life, and with a reduced symptom burden (11). In Belgium, home-based PPC is coordinated through eight liaison organizations that connect hospital services with home care: KITES (UZ Leuven), KOESTER (UZ Ghent), Oever (UZ Antwerpen), ComfortKIDZ (UZ Brussel), Globul'home (UZ Brussel), Equipe Interface pédiatrique (UCL Saint-Luc), Equipe

Luciole (CHC MontLégia), and the paediatric liaison team (CHR-CHU Citadelle, Liège) (12). These liaison teams comprise specialized nurses, doctors, and sometimes psychologists and social workers, all trained to guide families and healthcare providers (HCPs) in PPC. Although most HCPs including home care nurses and general practitioners (GPs) lack specialized training in PPC and have only limited experience in the field, their frequent contact with children and families in PPC places them in a unique position in this unique and difficult care (13, 14). Therefore, liaison teams aim to support them with knowledge, practical training, and ongoing guidance (12). Between 2010 and 2014, a total of 3,607 children and adolescents were cared for by the Belgian liaison teams. Fifty percent of these patients had an oncological condition, while 27% were diagnosed with a neurological or metabolic disorder. During this period, 428 of the patients passed away, 51% of whom died at home (15). In recent years, the proportion of children with neurological disorders has increased to 38% in 2023, while the relative proportion of oncological patients has decreased (25% in 2023) (16). Research on HCP experiences with PPC is limited, often involving small study groups, few prospective data. Additionally, studies mainly focus on GPs while underrepresenting other HCPs such as home care nurses (17–19). Using a retrospective survey, we evaluated both the experience of GPs and allied HCPs with PPC, and the quality of collaboration between them and KITES, the liaison

TABLE 2: Prevalence of symptoms during palliative and terminal phases, and which symptoms were difficult to control according to GPs and allied HCPs.

Symptom	Palliative phase (n)		Terminal phase (n)		Difficult to control (n)	
	GP	HCP	GP	HCP	GP	HCP
Pain	15	18	9	10	4	6
Decreased general condition caused by disease progression	15	17	10	11	6	8
Dyspnoea	13	10	11	11	7	8
Anorexia	12	12	5	5	0	0
Nausea	7	10	4	6	2	2
Constipation	4	7	4	3	0	0
Fear	7	12	3	8	5	7
Asthenia	9	18	5	12	4	6
Skill loss	7	11	5	12	7	7
Dysphagia	4	7	2	7	1	2
Rattling breath*	4	7	3	12	0	5
Sadness	4	9	2	7	1	4
Mental decline	2	2	3	3	2	2
Anger	2	6	1	3	2	2

GP: general practitioner; HCP: health care professional; n: number of GPs or number of allied HCPs;
 *Comparison between GPs and HCPs in terminal phase: p-value 0.0411

team our hospital partners with, aiming at identifying areas for improvement.

Methods

A retrospective cross-sectional survey was performed using the questionnaire developed and published by van der Geest et al. (19). The study was approved by the Onderzoek Begeleidings Commissie of KU Leuven (MP010652 for GPs in 2019 and MP19227 for allied HCPs in 2022). HCPs were invited to participate if they had provided palliative care to a child under the age of 18 years, with assistance from KITES in the 3 years before the survey. The questionnaire was sent to the HCPs by KITES via email and regular post, and was distributed in two stages: August–November 2019 for GPs and March 2023–November 2024 for allied HCPs. Paper questionnaires were returned anonymously to KITES, online questionnaires were collected via Google Form (GPs) and Qualtrics (allied HCPs). After one month, both groups received a reminder to complete the survey. Analysis was performed by the first authors (KD and MT). The questionnaire inquired about a) general information and training in PPC; b) HCPs' role in PPC including responsibilities and challenges; c) collaboration with other HCPs and communication with families; d) support from KITES and 5) personal reflection on the palliative care process. We used descriptive statistics for all variables and to present the answers provided. Median age of HCPs and patients were compared using a Mann-Whitney U test. Percentages were calculated based on the number of HCPs who answered to the specific question. To evaluate differences between GPs and allied HCPs, we

compared the proportion of professionals who rated items as being of “high” or “paramount” importance to those rating them as of “very low” or “low” importance. For categorical data (Yes/No or present/absent), we compared the proportion of “yes” or “present” responses relative to the total number of responses. Ratios were compared by the Fisher's exact test. A p-value < 0.05 was considered statistically significant.

Results

1. Population

In total, 74 GPs met the inclusion criteria and were contacted. Twenty-six (12 men, 14 women) responded, resulting in a 38% response rate. Their ages ranged from 30 to 68 years, with a median of 24.5 years of professional experience. Sixteen GPs (62%) had completed training in palliative care, though none had received training specifically focused on PPC. They had collectively cared for 30 children in the past three years, with a median of one and a maximum of three patients per physician, which was at least 10 times less than adult patients. The underlying pathology was cancer in 53% of the patients. Their median age at death was 11 years (ranged from 5 days to 18 years). In the second part of the survey 85 allied HCPs were contacted. Thirty-four (30 women, 4 men) completed the questionnaire (response rate 40%): 23 nurses, 9 physiotherapists, and 1 social worker; one did not specify his profession. The median age was 44 years, with a median of 20 years of experience. Twelve allied HCPs (35.3%) had training in palliative care, of whom 2 specifically in PPC. They had treated 43 patients in the preceding three years, which

TABLE 3: Collaboration with different professionals and its importance according to GPs and allied HCPs.

	Collaborated with this professional (n)		Considered as one of the most important partners (n)		Collaboration wanted but did not take place (n)	
	GP	HCP	GP	HCP	GP	HCP
KITES	24	20	21	21	1	2
Home nurse	19	6	19	8	0	2
Treating specialist	17	6	11	9	6	8
(Other) general practitioner	11	15	7	14	1	3
Physiotherapist	6	7	3	4	1	1
Paediatrician	5	4	3	2	1	2
Pharmacy	4	5	3	3	0	0
General practitioner in training	1	0	0	0	0	0
Social worker	1	0	1	0	0	0
Occupational therapist	1	0	0	0	0	0
School	0	0	0	0	1	0
Educator	1	1	1	0	0	0

GP: general practitioner; HCP: health care professional; n: number of GPs or number of allied HCPs

was for most allied HCPs at least 10 to 20 times less than adult palliative patients they had cared for. Although this survey included another group of patients, the underlying diagnosis was again cancer in 52% of the patients. The median age at death was 7.5 years (ranged from 3 months to 25 years). Five allied HCPs were present at the time of death. Five patients were still alive at the time of this questionnaire. GPs were mostly contacted by the family (38%), KITES (38%) or the treating specialist (35%). Similarly, allied HCPs were almost equally contacted by the family (56%) or by KITES (59%) but less frequently by the treating specialist (21%).

2. Symptoms, symptom control and other aspects of care

All HCPs expressed a strong sense of responsibility throughout the child's palliative trajectory. Both, GPs and allied HCPs considered pain and symptom control extremely important, as well as emotional support of the child, the parents and in most cases also the siblings (table 1). They felt quite confident providing this support. Bereavement care after the child's death was valued more by GPs ($p = 0.0111$). On the other hand, there was less agreement between HCPs on the importance of logistic help (such as organization of care, domestic help, etc.). The most frequently reported symptoms in the palliative phase were pain, decreased general condition, dyspnoea, and anorexia. Allied HCPs also reported fear, skill loss, and sadness (table 2). In the terminal phase, these symptoms persisted. Additionally, rattling breath was reported significantly more often by allied HCPs than by GPs in this phase ($p = 0.04$). Skill loss was most frequently identified as a difficult to manage symptom (by all GPs who reported skill loss as an important symptom, and 60% of allied HCPs). Decreased general condition, dyspnoea and fear were also reported as

difficult to control by more than half of the professionals. In contrast, only 30% of them considered pain as difficult to control (table 2).

3. Collaboration and communication

Most participants identified KITES, the GP and home nurses as highly important partners. This collaboration was perceived as well-established (table 3) and of good or excellent quality. On the other hand, collaboration with treating specialists was also considered important but was sometimes lacking (table 3). Collaboration with physiotherapists, occupational therapists and social workers seem much less important to non-existing. Support provided by KITES focused mainly on symptom management and organization/coordination of care, while the psychological support was rated as limited. Additionally, allied HCPs were supported more for technical skills and were assisted more directly in giving care ($p=0.0014$ and $p=0.0468$ respectively). Of note, these results should be interpreted with caution, since the response rate by allied HCPs for this section was extremely low (32%).

4. Experienced feelings

The most prominent feeling of HCPs was powerlessness, both during the palliative and terminal phase (table 4). Allied HCPs reported sadness during the terminal phase more often and acceptance after death less frequently than GPs. With time evolving, the feeling of acceptance grew in both groups and had become the most frequently reported feeling at the time of completing the questionnaire.

TABLE 4: Experienced feelings during different phases of care by GPs and allied HCPs.

Experienced feelings	Palliative phase (n)		Terminal phase (n)		After death (n)		At the moment of the questionnaire (n)	
	GP	HCP	GP	HCP	GP	HCP	GP	HCP
Fear	2	4	4	2	0	0	0	0
Sadness	5	7	8	13	12	12	1	5
Powerlessness	15	16	14	14	3	7	4	3
Anger	1	2	0	0	1	2	0	1
Combativeness	1	3	0	1	0	0	0	1
Acceptance	7	4	6	4	15	9	18	11
Fatigue	2	3	2	1	3	2	0	0
Other: Frustration	1	-	1	-	0	-	0	-
Other: Insecurity	1	1	0	0	0	0	0	0
Other: Supportive	1	-	0	-	0	-	0	-
Other: "Feeling of wanting to do it very well"	1	-	0	-	0	-	0	-
Other: Relief	0	-	0	-	1	1	0	-
Other: Gratitude	0	1	0	-	0	1	1	-
Other: Doubt	-	0	-	0	-	0	-	1
Other: Resignation	-	0	-	0	-	0	-	1

GP: general practitioner; HCP: health care professional; n: number of GPs or number of allied HCPs

Discussion

Main findings

This study assessed how primary care providers experienced support from the liaison team KITES when delivering PPC at home. Consistent with previous reports documenting limited education, both GPs and allied HCPs reported very limited exposure and training (18, 20-21). None of the physicians and only 3% of allied HCPs had received PPC-specific training. However, lack of training may contribute to challenges in symptom management and comprehensive care, emphasizing the importance of support by a liaison team. The value of multidisciplinary collaboration between GPs, specialized nurses, physical therapists, psychologists, and social workers to ensure high-quality PPC is well known but GPs often struggle to align with specialized teams and hospitals (12, 19, 22-24). However, previous research indicated that poor communication could lead to misunderstandings and fragmented care, while clear information exchange reduces uncertainty and anxiety among parents and caregivers and is essential for high-quality PPC (17, 24-26). Nonetheless, guidelines and standardized protocols to improve communication are lacking (18). Telehealth and eHealth can improve accessibility and coordination in PPC, while video consultations and mobile applications may reduce hospital visits and facilitate communication among HCPs and families (23, 27-29). Yet, the implementation of these tools faces challenges such as limited training, resistance among some HCPs, and unequal access (27, 28). Our survey

showed that collaboration between KITES, families, and care providers generally worked well, but confirmed that communication with treating specialists was more difficult, even though a specialized liaison team was involved. Pain and symptom management, comfort care, and emotional support were identified as central components of PPC. Although some HCPs reported uncertainty, most felt comfortable providing care. Support from KITES centred on symptom management, organizational aspects, and assisting allied HCPs with technical skills and giving care. This aligns with literature indicating that GPs typically coordinate care, while nurses provide daily care and physical therapists promote physical well-being through mobility promotion and pain management (12, 21, 23, 30, 31). On the other hand, psychological support by KITES for HCPs - although crucial - was often perceived as insufficient. This disparity may reflect limited resources related to psychological care, contributing to challenges in addressing the emotional needs of patients and their families. Emotional stress among HCPs is also widely documented and was evident in our survey too (11, 12, 15, 17-19, 20, 21, 32). After the child's death, emotions often shifted from sadness towards acceptance, but allied HCPs, particularly nurses, reported more intense grief. This may be explained by several factors: the death of a child is inherently experienced as highly unnatural, and nurses are frequently more closely involved in the child's direct care, sometimes even with the child at the time of death. Psychological care for patients, families, and HCPs should therefore be strengthened within KITES, and would be according to the IMPaCCT standards. This

could consist of continued care by the psychologist known to the patients and families and specialized in the child's underlying condition, as well as involving a psychologist as member of the KITES team.

What this study adds

This study validates and extends the existing literature on PPC. Multidisciplinary collaboration is well valued but our survey adds new insights into how primary care providers feel supported by a liaison team, demonstrating that such a team mitigates knowledge gaps, strengthen symptom management, and enhance coordination. The liaison team KITES was perceived as a key intermediary, coordinating care and facilitating communication between GPs, allied HCPs, and the child's family. Psychological care, however, remains an unmet need for both families and caregivers (17, 22, 33). Integrating psychologists into liaison teams could address this critical gap in emotional and psychological care.

Strengths and limitations

A key strength of our study is the relatively large study population within the field of PPC, an area in which research data are often limited. Furthermore, a multidisciplinary perspective on the provision of care was achieved by including two essential professional groups, GPs and allied HCPs. This approach enhanced the analysis by integrating insights from both medical and supportive care disciplines. Interestingly, the opinions of GPs and allied HCPs did not differ much on the various topics. Several limitations must be acknowledged. The extensive questionnaire led to incomplete responses and potential loss of data. Besides, the monocentric retrospective design limits generalizability but previous publications from other centres and countries support our observations. Moreover, parents' perspectives – central figures in PPC – were not included, resulting in a missing dimension of the experience. Additionally, although the sample size is relatively large for PPC research, it remains small compared to broader primary care or other paediatric studies. Furthermore, despite an acceptable response rate, the use of a voluntary questionnaire may have introduced non-response bias and self-selection bias, as professionals with a particular interest in or strong opinions about paediatric palliative care may have been more likely to participate. This could have influenced our results and have led to existing gaps being underestimated or overlooked. Recall bias cannot be excluded either, given the retrospective nature of the survey and the reliance on participants' memory of previous experiences. However, as the death of a child after a long disease is very impactful, these events are likely well remembered by health professionals. Interpretation bias may also have occurred, as respondents might have understood certain concepts or questions differently despite efforts to ensure clarity. Finally, some topics could have been

explored more, to better understand the need of GPs and allied HCPs, e.g. what kind of training they would like, whether or not the identified gaps were similar to those in adult palliative care,.... This could be a topic for future research.

Conclusion

Primary HCPs involved in PPC receive limited formal training, which contributes to ongoing insecurity regarding pain and symptom management, and providing psychosocial support. Introducing the fundamental concepts of PPC into palliative care training or general HCP training is needed. While liaison teams such as KITES offer valuable practical support and serve as a key collaborator alongside GPs and allied HCPs, optimizing communication tools and expanding psychological expertise in the liaison teams may help address an important gap. Strengthening these areas is essential to better equip HCPs and ultimately improve the quality of PPC.

Statements

Conflict of interest: there were no conflicts of interest. Funding: the authors received no financial support for the research, authorship, and/or publication of this article.

REFERENCES

- WHO. Palliative care. Geneva, Switzerland: World Health Organization; 2020 [cited 2026 March 4]. Available from: <https://www.belgijpaediatrics.com/index.php/bjp/workflow/index/472/1#workflow>.
- Nilsson S, Ohlen J, Hessman E, Brannstrom M. Paediatric palliative care: a systematic review. *BMJ Support Palliat Care*. 2020;10(2):157-63.
- Craig F, Abu-Saad Huijjer H, Benini F, Kuttner L, Wood C, Feraris PC, et al. [IMPaCCT: standards of paediatric palliative care]. *Schmerz*. 2008;22(4):401-8.
- Benini F, Papadatou D, Bernada M, Craig F, De Zen L, Downing J, et al. International Standards for Pediatric Palliative Care: From IMPaCCT to GO-PPaCS. *J Pain Symptom Manage*. 2022;63(5):e529-e43.
- Feudtner C, Feinstein JA, Zhong W, Hall M, Dai D. Pediatric complex chronic conditions classification system version 2: updated for ICD-10 and complex medical technology dependence and transplantation. *BMC Pediatr*. 2014;14:199-205.
- UNICEF. The State of the World's Children 2021. Interactive dashboard and statistical tables. New York, USA: United Nations International Children's Emergency Fund; 2021 [cited 2026 March 4]. Available from: <https://data.unicef.org/resources/sowc-2021-dashboard-and-tables/>.
- Knaul FM, Farmer PE, Krakauer EL, De Lima L, Bhadelia A, Jiang Kwete X, et al. Alleviating the access abyss in palliative care and pain relief-an imperative of universal health coverage: the Lancet Commission report. *Lancet*. 2018;391(10128):1391-454.
- Zhong Y, Cavolo A, Labarque V, de Casterle BD, Gastmans C. Chinese and Belgian pediatricians' perspectives toward pediatric palliative care: an online survey. *BMC Palliat Care*. 2024;23(1):106.
- Feudtner C, Beight LJ, Boyden JY, Hill DL, Hinds PS, Johnston EE, et al. Goals of Care Among Parents of Children Receiving Palliative Care. *JAMA Pediatr*. 2023;177(8):800-7.
- Weaver MS, Heinze KE, Kelly KP, Wiener L, Casey RL, Bell CJ, et al. Palliative care as a standard of care in pediatric oncology. *Pediatric blood & cancer*. 2015;62(S5):S829-S33.
- Hammer NM, Bidstrup PE, Brok J, Devantier M, Sjogren P, Schmiegelow K, et al. Home-Based Specialized Pediatric Palliative Care: A Systematic Review and Meta-Analysis. *J Pain Symptom Manage*. 2023;65(4):e353-e68.
- Belgian_Paediatric_Palliative_Care_Group, editor. Handboek Belgian Paediatric Palliative Care (BPPC): richtlijnen en aanbevelingen. 1st ed. Brussels, Belgium.
- Llop-Medina L, Garcia-Munoz P, Rodenas-Rigla F, Garces-Ferrer J. Enhancing the Adult and Paediatric Palliative Care System: Spanish Professionals' and Family Caregivers' Suggestions for Comprehensive Improvement. *Healthcare (Basel)*. 2023;12(1):65.
- Bertrand A, Veyet V, Goy F, Cervos M, Schell M. Pediatric palliative care at home by Home Care Unit: how home nurses feel? *Supportive Care in Cancer*. 2022;30(3):2091-9.
- Friedel M, Brichard B, Fonteyne C, Renard M, Misson JP, Vandecruys E, et al. Building Bridges, Paediatric Palliative Care in Belgium: A secondary data analysis of annual paediatric liaison team reports from 2010 to 2014. *BMC Palliat Care*. 2018;17(1):77.
- Friedel M, Aujoulat I, Brichard B, Fonteyne C, Renard M, Degryse JM. The Quality of Life of Children Facing Life-Limiting Conditions and That of Their Parents in Belgium: A Cross-Sectional Study. *Children (Basel)*. 2023;10(7): 1167-82.
- Straatman L, Miller T. Paediatric palliative care: a survey of paediatricians and family practitioners. *BMJ Support Palliat Care*. 2013;3(3):366-71.
- Neilson SJ, Kai J, MacArthur C, Greenfield SM. Caring for children dying from cancer at home: a qualitative study of the experience of primary care practitioners. *Family practice*. 2011;28(5):545-53.
- van der Geest IM, Bindels PJ, Pluijm SM, Michiels EM, van der Heide A, Pieters R, et al. Home-Based Palliative Care for Children With Incurable Cancer: Long-term Perspectives of and Impact on General Practitioners. *J Pain Symptom Manage*. 2017;53(3):578-87.
- Chong L, Abdullah A. Community palliative care nurses' challenges and coping strategies on delivering home-based pediatric palliative care: A qualitative study. *American Journal of Hospice and Palliative Medicine*. 2017;34(2):125-31.
- Jennings PD. Providing pediatric palliative care through a pediatric supportive care team. *Pediatric nursing*. 2005;31(3): 253-8.
- Beavis J, Davis L, McKenzie S. Clinical Supervision for Support Workers in Paediatric Palliative Care: A Literature Review. *Clin Child Psychol Psychiatry*. 2021;26(1):191-206.
- Armitage N, Trethewie S. Paediatric palliative care - the role of the GP. *Aust Fam Physician*. 2014;43(4):176-80.
- Hynson JL, Sawyer SM. Paediatric palliative care: distinctive needs and emerging issues. *J Paediatr Child Health*. 2001;37(4):323-5.
- Imler I. Palliatieve thuiszorg voor mind-erjarigen: onderzoek naar de ervaringen van ouders en zorgverleners met de palliatieve thuiszorgequipe van het UZ Leuven. Brussels: VUB; 2009.
- Straus SE, Tetroe J, Graham ID. Knowledge translation in health care: moving from evidence to practice. Chichester, UK: John Wiley & Sons; 2013.
- Weaver MS, Shostrom VK, Neumann ML, Robinson JE, Hinds PS. Homestead together: Pediatric palliative care telehealth support for rural children with cancer during home-based end-of-life care. *Pediatr Blood Cancer*. 2021;68(4):e28921.
- Holmen H, Riiser K, Winger A. Home-Based Pediatric Palliative Care and Electronic Health: Systematic Mixed Methods Review. *J Med Internet Res*. 2020;22(2):e16248.
- Niswander LM, Cromwell P, Chirico J, Gupton A, Korones DN. End-of-life care for children enrolled in a community-based pediatric palliative care program. *J Palliat Med*. 2014;17(5):589-91.
- Eskola K, Bergstraesser E, Zimmermann K, Cignacco E. Paediatric end-of-life care in the home care setting (PELICAN HOME)--a mixed methods study protocol. *J Adv Nurs*. 2015;71(1):204-13.
- Bergstraesser E, Zimmermann K, Eskola K, Luck P, Ramelet AS, Cignacco E. Paediatric end-of-life care needs in Switzerland: current practices, and perspectives from parents and professionals. A study protocol. *J Adv Nurs*. 2015;71(8):1940-7.
- Beringer AJ, Eaton NM, Jones GL. Providing a children's palliative care service in the community through fixed-term grants: the staff perspective. *Child Care Health Dev*. 2007;33(5):619-24.
- St-Laurent-Gagnon T. Paediatric palliative care in the home. *Paediatrics & Child Health*. 1998;3(3):165-8.



COMPLETE



NAN Complete 0-12 maanden, in geval van constipatie, kolieken en regurgitaties

Een unieke combinatie van ingrediënten

Prebiotica GOS/FOS
die de consistentie van
de stoelgang verbeteren.⁴

Low lactose 67%
vermindert krampen en kolieken.⁷

Magnesium
verbetert constipatie.⁵

Significante
verbetering van
de spijsverterings-
problemen
bij **87%**
van de baby's*

Aardappelzetmeel
verhoogt de viscositeit om
regurgitaties te verminderen.⁶

Partieel wei-hydrolysaat
zorgt voor vlottere maaglediging.⁷

L. reuteri
vermindert regurgitaties,
constipatie en kolieken.^{1,2,3}



Vermindering symptomen
na 3 dagen

1. Harb et al. Systematic review and meta-analysis confirm effectiveness of L. reuteri for infantile colic. J Pediatr Gastroenterol Nutr 2016; 2. Coccorullo et al. L. reuteri DSM 17938 in infants with chronic constipation: a double-blind, randomized, placebo controlled study. J pediatr 2010; 157:598-602. 3. Indrio et al. L. reuteri accelerates gastric emptying and improves regurgitation in infants. Eur J Clin Invest 2010. 4. Viatvakin et al. Effect of a whey-predominant starter formula containing LCPUFAs and oligosaccharides (FOS/GOS) on GI comfort in infants. Asia Pac J Clin Nutr 2010; 19(4): 473-80. 5. Infante et al. Modification of stool's water content in constipated infants: management with an adapted infant formula. Nutr J 2011; 10:55-8. 6. Chevalier B et al. Arch Pediatr 2009; 16(4):343-352. 7. Flittner et al. Feeding commercial soy formula or partially hydrolyzed, low lactose formula resolves symptoms in fussy infants. Pediatric research 2007; 62(4):520.

* Nutrients 2021; 13:3336, Vandenplas et al. An observational Real-life study with a new Infant formula in infants with Functional gastro-intestinal disorders.

Dit document is voorbehouden voor gezondheidsspecialisten.

Belangrijke informatie voor (para)medici: de Wereldgezondheidsorganisatie (WHO) heeft aanbevolen om zwangere vrouwen en moeders van zuigelingen te informeren over de voordelen en de superioriteit van borstvoeding. In het bijzonder dat borstvoeding de beste voeding is en de beste bescherming tegen ziektes biedt. Moeders moeten ook begeleid worden met de voorbereiding op en de verderzetting van borstvoeding, met de nadruk op het belang van de kwaliteit van hun eigen voeding tijdens de zwangerschap en na de geboorte. Onnodige introductie van gedeeltelijke flesvoeding of andere voedingsmiddelen of dranken zou ontmoedigd moeten worden omdat het een negatieve invloed op borstvoeding kan hebben. Bovendien moeten moeders gewaarschuwd worden dat zij niet terug kunnen komen op hun beslissing om geen borstvoeding meer te geven. Voordat een moeder besluit om flesvoeding te geven, zou ze geadviseerd moeten worden over de sociale en financiële gevolgen van haar beslissing, bijvoorbeeld als een baby exclusief flesvoeding krijgt, dan is meer dan 450 gram per week nodig, dus de familiale omstandigheden en de kosten moeten in overweging worden genomen. Moeders moeten eraan herinnerd worden dat borstvoeding niet alleen de beste voeding, maar ook de meest economische voeding is. Wanneer toch worden besloten om flesvoeding te geven is het belangrijk om de juiste instructies mee te geven omtrent het gebruik van deze voeding en erop te wijzen dat ongekookt water, niet-steriliseerde zuigflessen of een onjuiste bereiding de baby ziek kan maken. Met vriendelijke groeten, Nestlé Babyvoeding. VU: K. Desmedt, Nestlé Belgilux SA/NV, Rue de Birminghamstraat 221 - 1070 Bruxelles/Brussel, BCE/KBO 0402.231.383. PID4067 - September 2026.