

Supplementary Material 14 – Implementation factor synthesis

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Table 1. PROGRESS-plus characteristics for included studies reported in Chapter 9

Abbreviations: CF: cystic fibrosis; F: female; M: male; N: no; NR: not reported; RCT: randomised controlled trial; SD: standard deviation; SR: systematic review

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Aboumarzouk (2011) (1)	Level 1	SR	N	NR	NR	NR	72/68	NR	NR	NR	NR	Range: 1.5-18 years	NR	NR	NR
Afzal / Thomson (2011) (2)	More than one level	Narrative review	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ahmed (2012) (3)	Level 1	SR	N	NR	NR	NR	NR	NR	NR	NR	NR	< 3years	NR	NR	Children younger than 3 years
Aquino (2017) (4)	Complementary	Other primary	Partial. Examined intervention in a child with a disability.	NR	Caucasian	NR	1/0	NR	NR	NR	NR	10 years	Yes (diagnosed with Pitt-Hopkins Syndrome)	NA	NR
Athanasakos (2020) (5)	Service delivery	Other primary	N	NR	NR	NR	66/46	NR	NR	NR	NR	Median 9 years (17 months to 16 years)	NR	NR	NR
Bekkali (2009) (6)	Level 2	RCT	N	NR	NR	NR	60/30	NR	NR	NR	NR	Enema group: mean (SD) 7.9 (2.9) years; PEG group: mean (SD): 7.2 (2.6) years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Berg (1983) (7)	Psychosocial	RCT	N	NR	NR	58% mothers were employed	NR	NR	NR	Mean social class based on Registrar General classification was 3.0 (SD:0.7)	20% parents were separated or divorced	Mean (SD): 7.9 (2.6) years	NR	NR	NR
Boles (2015) (8)	Level 1	Other primary	N	NR	Yes. Caucasian: 17; African American: 30; Hispanic: 2; Other: 2	NR	32/19	NR	NR	NR	NR	PEG-3350: mean age (SD): 8.7 (5.5) years; PEG-ES: mean age (SD): 9 (4.8) years	NR	NR	NR
Bongers (2007) (9)	Level 0	RCT (cross-over)	N	NR	NR	NR	19/19	NR	NR	NR	NR	Range: 0.7-5 years	NR	NR	Positive family history: 23/38
Bonilla (2013) (10)	Level 3	Other primary	N	NR	NR	NR	7/5	NR	NR	NR	NR	Mean (SEM): 14.7 (1.2) years	NR	NR	NR
Borowitz (2002) (11)	Level 0	RCT	N	NR	NR	NR	72/15	NR	NR	NR	NR	Mean (SD):8.6 (2.0) years; Range:5–13 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Bromley (2014) (12)	Complementary	Other primary	Partial	NR	NR	NR	NR	NR	NR	NR	NR	Age range: 3 months - 19 years	Yes. To be included in the service development, children had to have an identified disability	NR	NR
Candy (2006) (13)	Level 1	RCT	N	NR	NR	NR	39/19	NR	NR	NR	NR	Mean (SD): 5.7 (2.6)	NR	NR	NR
Cascio (2004) (14)	Level 3	Other primary	N	NR	NR	NR	24/25	NR	NR	NR	NR	Mean age at surgery was 9.9 years (range 3–18 years) for the MACE patients and 9.8 years (range 3–15 years)	NR	NR	NR
Castillejo (2006) (15)	Level 0	RCT	N	NR	NR	NR	NR	NR	NR	NR	NR	Age range: 3 -10 years	NR	NR	NR
Chaney (2017) (16)	Level 3	Other primary	N	NR	NR	NR	2/1	NR	NR	NR	NR	Age range: 9 -16 years	NR	NR	NR
Dehghani (2014) (17)	Level 1	RCT	N	NR	NR	NR	61/44	NR	NR	NR	NR	PEG+placebo: mean age (SD): 5.4 (3.1) years; PEG+domperidone mean age (SD): 4.7 (2.4) years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Dupont (2005) (18)	Level 1	RCT	N	NR	NR	NR	51/45	NR	NR	NR	NR	PEG 4000 median age range (25th-75th percentiles): 28 (19.5–33.7); Lactulose median age range (25th-75th percentiles): 25.8 (12.3–33)	NR	NR	NR
Dziechciarz (2015) (19)	Level 1	SR	N	NR	NR	NR	NR	NR	NR	NR	NR	Age range: 1-17 years	NR	NR	NR
Dziechciarz (2015) (20)	Level 1	RCT	N	NR	NR	NR	46/44	NR	NR	NR	NR	Mean age (SD): 3.7 (2.1)	NR	NR	NR
Eicher (2007) (21)	More than one level	Other primary	N	Yes (NICU/Home)	NR	NR	1/0	NR	NR	NR	Yes (Description of family provided)	4 years	NR	NR	NR
Eisenberg (2009) (22)	Level 2	Other primary	N	NR	NR	NR	12/10	NR	NR	NR	NR	Mean age of children using the HW device (SD): 6.1 (2.1) years; Mean age of control group (SD): 6.7 (1.6) years	Yes (Severe CP)	NR	Attended special education school in the hospital area
Erickson (2009) (23)	Level 1	Other primary	N	NR	NR	NR	35/11	NR	NR	NR	NR	Age range: 4.4 - 11.2 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups	
Esmailidooki (2016) (24)	Level 1	RCT	N	NR	NR	NR	63/46	NR	NR	Partial ("This Hospital serves 1.9 million local residents in locations across the Caspian Sea with three large cities (Amol, Babol and Ghaemshahr) and the corresponding urban regions in the provinces of Mazandaran and Golestan . Fortunately, due to the developing socioeconomic conditions of the people in these regions in recent years, we were	NR	Mean age Cassia Fistula group (SD): 64.6 (25.2) months; Mean age PEG group: 55.2 (31.2) months	NR	NR	NR	6

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Firestone (2013) (25)	Level 3	Other primary	N	NR	NR	NR	261/149	NR	NR	NR	NR	Mean age: 7.6 years, Range: 0.25 to 26 years	Mixed population with 59/410 cases diagnosed with Hirschsprung disease which is listed as an organic cause of constipation and not with scope for the current review.	NR	NR
Fujii (2019) (26)	Level 1	Other primary	N	NR	NR	NR	3/3	NR	NR	NR	NR	Age range: 8-13 years	NR	NR	NR
Gardiner (2005) (27)	Complementary	Other primary	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Gomes (2011) (28)	Level 1	RCT	N	NR	NR	NR	23/15	NR	NR	NR	NR	PEG group mean age (SD): 4.37 (2.78) years; Magnesium hydroxide group mean age (SD): 5.05 (3.11) years	NR	NR	NR
Gordon (2016) (29)	Level 1	SR	N	NR	NR	NR	NR	NR	NR	NR	NR	Age range: 6 months - 16 years	NR	NR	NR
Gremse (2002) (30)	Level 1	RCT (cross-over)	N	NR	Yes (29 Caucasian; 8 African American)	NR	23/14	NR	NR	NR	NR	Mean age (SD): 7.8 (3.7) years; Range: 2-16 years	NR	NR	NR
Habib (2019) (31)	Level 1	Other primary	N	NR	NR	NR	1/0	NR	NR	NR	NR	9 year old	NR	NR	NR
Hahn (2015) (32)	Level 1	Narrative review	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Hallagan (2019) (33)	Level 3	Other primary	N	NR	NR	NR	187/116	NR	NR	NR	NR	Median age 5.24 years, range 3 weeks - 19 years	Mixed population with 50.2% diagnosed with Hirschsprung disease which is listed as an organic cause of constipation and not with scope for the current review.	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Hankinson (2018) (34)	Level 1	Other primary	Yes. "particular focus on previous treatments and the relative effectiveness of these approaches; moreover, the social validity of past treatments"	NR	NR	NR	72/90	NR	NR	NR	NR	Mean age (SD): 6.18 (3.24) years; Range 1-15 years	Authors note that "patients were not excluded because of other comorbid medical and developmental conditions" but do not report whether any children with disabilities were included in the cohort.	NR	NR
Har (2013) (35)	Level 3	Other primary	N	NR	NR	NR	10/5	NR	NR	NR	NR	Mean age at time of surgical intervention was 9.8 years; Range 7.0–11.1	NR	NR	NR
Hardikar (2007) (36)	Level 1	RCT	N	NR	NR	NR	34/44	NR	NR	NR	NR	Mean age (SD): 4.9 (2.6)	NR	NR	NR
Harris (2019) (37)	Level 0	SR	N	NR	NR	NR	NR	NR	NR	NR	NR	Age range: 0 - 18 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Heemskerk (2018) (38)	Level 3	RCT (ongoing)	N	NR	NR	NR	NR	NR	NR	NR	NR	Planned: adolescents (14-17 years); adults (18-80 years)	NR	NR	NR
Iacono (1998) (39)	Level 0	Other primary	N	NR	NR	NR	29/36	NR	NR	NR	NR	Mean age (SD): 34.6 (17.1) months	NR	NR	NR
Iacono (2006) (40)	Level 0	Other primary	N	NR	NR	NR	16/20	NR	NR	NR	NR	Multiple food intolerance mean age (SD): 49.8 (21.1) months; no food intolerance mean age (SD): 54.1 (15.2) months	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Inoue (2019) (41)	Level 0	Other primary	Partial. Aim to evaluate the effect of prebiotics in children with ASD who have a higher incidence of chronic constipation	Partial ("living in similar geographic regions in Japan")	NR	NR	12/1	NR	NR	NR	NR	Mean age (SD): 5.9 (2.2) years	Yes. ("children were pre-categorized by the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) criteria(10) and then diagnosed according to the Pervasive Developmental Disorders Autism Society Japan Rating Scale (PARS)(11) and Modified Checklist for Autism in Toddlers (M-HAT)")	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Jang (2019) (42, 43)	More than one level	Other primary	N	Partial. ("distribution was consistent with the national population distribution (43.3% live in metropolitan areas)")	NR	Paediatricians	NR	NR	Paediatricians: years of experience after achieving paediatric certificate. 0-5 years: 19.7%; 5-10 years: 20.1%; 10-15 years: 29.3%, > 15 years: 31%	NR	NR	Partial. ("study population was pediatricians who manage children with FC aged 0–18 years.")	NR	NR	NR
Janssen (2018) (44)	Level 3	Other primary	N	NR	NR	NR	3/42	NR	NR	NR	NR	Mean age: 15.8 years; Range 10.4-17.9 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Jordan-Ely (2013) (45)	Level 1	Other primary	Partial. ("because of the large volume (2 litres) that needs to be taken, many patients have difficulty completing treatment. We have developed a program of patient education and engagement (called MOTIVATE) to enable compliance and obtain the highest efficacy"	NR	NR	NR	17/16	NR	NR	NR	NR	Age range: 2 - 17 years	NR	NR	NR
Jordan-Ely (2016) (46)	Level 1	Other primary	N	NR	NR	NR	NR	NR	NR	NR	NR	Age range: 4 - 17 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Karagiozoglou-Lampoudi (2012) (47)	Level 0	RCT	N	NR	NR	NR	44/42	NR	NR	NR	NR	Mean age 4.4 years, range 1 to 11 years	NR	NR	NR
Koppen (2017) (48)	Level 2	Other primary	N	NR	NR	NR	55% male	NR	NR	NR	NR	Mean age (SD):11.2 (3.8) years , range 4–19 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Koppen (2018) (49)	More than one level	SR	Partial. ("our tertiary aim was to assess how frequently physicians inquire about sexual abuse and perform perianal inspection and DRE in the evaluation of FC")	Partial. Survey of physicians in the Netherlands and USA	NR	American and Dutch physicians: field of practice - Paediatrics or Paediatric gastroenterology	NR	NR	Years of experience. 0-5 years: 23%; 5-10 years: 14%; 10-15 years: 13%; > 15 years: 49%	NR	NR	NR	NR	NR	The participants were not vulnerable but they were asked about vulnerable populations including sexual abuse. Perianal inspection was frequently (often or always on the 5-point Likert scale) conducted by 78% (CI 73%–82%) of responders in the evaluation of children with FC. DRE was frequently performed by 42% (CI 36%–47%) and inquiry about sexual abuse was frequently made by 18% (CI 14%–22%).

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Kuizenga-Wessel (2015) (50)	More than one level	SR	N	NR	NR	NR	48.5% male	NR	NR	NR	NR	371 infants	NR	NR	NR
Kuizenga-Wessel (2016) (51)	More than one level	SR	N	NR	NR	NR	2086/2124	NR	NR	NR	NR	Range: 1 to 18 years	NR	NR	NR
Li (2018) (52)	Level 3	SR	N	NR	NR	NR	NR	NR	NR	NR	NR	Mean age across the three included studies: 13 years; range: 1.67 - 67 years	"In two of the studies the most common diagnoses were spina bifida and anorectal malformation" *These are outwith the scope of this review.	NR	NR
Loening-Baucke (2002) (53)	Level 1	Other primary	N	NR	NR	NR	20/8	NR	NR	NR	NR	Mean age (SD): 8.7 (3.6) years	NR	NR	NR
Loening-Baucke (2006) (54)	Level 1	RCT	N	NR	NR	NR	20/8	NR	NR	NR	NR	Age > 4 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Lomas Mevers (2020) (55)	Level 0	RCT	Partial. ("To evaluate the preliminary efficacy of this multidisciplinary intervention of encopresis in children with ASD") relative effectiveness of these approaches; moreover, the social validity of past treatments"	NR	Yes. White: 8/20, Black: 10/20, Asian: 2/10. Ethnicity: Hispanic: 17/20; Non-Hispanic: 2/20; Unknown: 1	NR	15/5	NR	NR	NR	All participants had a "caregiver" who was trained to deliver the intervention. No details reported	Mean age (SD): 7.6 (3.46) years, range: 5-16 years	Yes. Study only included children with a diagnosis of ASD ("To be eligible participants had to have an ASD diagnosis from a community provider, a current history of encopresis, urine trained, not require the use of an interpreter for caregiver training, and clearance for suppository use by the study pediatric gastroenterologist")) Autism Rating Scale II (CARS II; Schopler	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
MacGeorge (2019) (56)	Level 3	Other primary	N	NR	NR	NR	160/166	NR	NR	NR	NR	Age category: 0-1 year: 18%, 2-4 years: 25%, 5-9 years: 31% 10-17 years: 26%	NR	NR	NR
Mahon (2017) (57)	More than one level	SR	Partial. Review aimed to "estimate the cost of FGIDs and related signs and symptoms in infants to the third party payer and to parents."	NR	NR	NR	Not able to judge as only 4 studies appear to included CFC (based on data available in Suppl. Files)	NR	NR	NR	NR	Infants < 12 months	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Mallon (2015) (58)	Service delivery	Other primary	N	Characteristics of Paediatric Physicians Organization: large fringe metropolitan 42/46 and 23/24 chart review. The remaining were small metro 1/46; or ; large central metro: 3/46 or 1/24 chart review	NR	NR	47/43 before Shared Care; 46/15 After Shared care	NR	NR	NR	NR	Participants included in the structured chart review: median age before shared care implemented: 8.2 years and after Shared Care was implemented: 6.7 years	NR	NR	NR
Medaer (2019) (59)	Level 3	Other primary	N	NR	NR	NR	15/21	NR	NR	NR	NR	Mean age (SD): 8.5 (4.9) years, range 2-17 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Modin (2018) (60)	Level 1	RCT	N	NR	NR	NR	57/45	NR	NR	NR	NR	PEG median age: 6.2 years, range 2.5-12.3 years. Placebo group median age: 6.1 years, range 2.0-15.1 years	NR	NR	Positive family history: 10/102
Mosca (2013) (61)	Service delivery	Other primary	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Moser (2014) (62)		Other primary	Yes. ("aim of the psychology service is to identify psychological factors that influence medical status and to administer brief, problem-focused therapy using evidence-based practices. Treatment concentrates on GI-related problems and psychological factors that may perpetuate or exacerbate those GI presentations. For complex psychological phenomena (e.g., abuse/neglect, comorbid Asperger's disorder), patients who need services closer to home, and those whose insurance does not cover the services of the GI psychologists, the GI psychologist typically facilitates referrals to outpatient mental health clinics and remains available as an adjunct treatment provider or consultant to the outside provider and the gastroenterologist")	Yes. 21% participants with encopresis lived in an urban setting	Yes. 74.77% participants with encopresis were Non-Hispanic White	NR	69.3% participants with encopresis were male	NR	NR	Partial. ("During the time period of the study, less than 8% of children in the state had no health insurance. Approximately 29% of children were receiving Medicaid coverage in the 3-year period from 2007 to 2009 (Rhode Island Kids Count analysis of the U.S. Census Bureau, 2010; Current Population Survey, 2007–2009, RI 3-year average).	NR	Mean age participants with encopresis (SD): 7.16 (3.22)	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Ng (2016) (63)	Level 2	SR	N	NR	NR	NR	NR	NR	NR	NR	NR	Range: 8-18 years	NR	NR	NR
O'Connor (2012) (64)	Service delivery	Other primary	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Orhan (2018) (65)	Complementary	RCT	Partial. "to establish the effects of CTM and KT on quality of life in children with CP"	NR	NR	NR	21/19	NR	NR	NR	NR	CTM group median age: 10 years; KT group median age: 10 years; Control group median age: 8 years	Yes. Children with Cerebral Palsy	NR	NR
Parnell Prevost (2019) (66)	Complementary	SR	N	NR	NR	NR	NR	NR	NR	NR	NR	Included one study of CFC. Children age range: 2-16 years	Yes. Children with Cerebral Palsy	NR	NR
Pashankar (2003) (67)	Level 1	Other primary	N	NR	NR	NR	48/35	NR	NR	NR	NR	Mean age: 7.4 years, range. 2-16.9 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Radwan (2015) (68)	Level 1	Other primary	N	"majority of patients (83.33%) came from urban areas of the greater Cairo"	NR	NR	70.83% M	NR	NR	NR	NR	Mean age (SD): 6.3 (3.33) years	NR	NR	NR
Ratanmongkol (2009) (69)	Level 1	RCT	N	NR	NR	NR	36/53	NR	NR	NR	NR	PEG group mean age (SD): 2.58 (0.84); MOM group mean age (SD): 2.58 (1.01)	NR	NR	Family history of CFC reported
Ritterband (2003) (70)	Level 0	RCT	Partial (evaluated barriers)	NR	21 White, 3 Black	NR	19/5	NR	NR	NR	NR	Web group mean age (SD): 8.57 (1.72), No-web group mean age (SD): 8.34 (1.97) years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Ritterband (2005) (71)	Level 0	RCT	Partial. "barriers to accessing the prescribed Web site were identified" but "families had to have access to the Internet in their home and have an active e-mail account"	NR	NR	NR	NR	NR	NR	NR	NR	Mean age (SD): 94 (38) months	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Ritterband (2013) (72)	Level 0	RCT	Partial. The intervention is designed to address "social isolation and other related difficulties (i.e., problems at school")	NR	85% White in UCanPoopToo group; 95% White in standard care group	NR	81% M in both groups	NR	High school degree or less (Parent): 53% in UCanPoopToo group and 50% in standard care group.	NR	NR	UCanPoopToo group mean age (SD): 8.47 (1/92); Standard care group mean age (SD): 8.66 (1.72) years	No	NR	Median number of previous visits related to encopresis for mental health (range): 0 (0-120) in the UCanPoopToo group and 1 (0-24) in standard care group
Rodriguez (2013) (73)	Level 3	Other primary	N	NR	NR	NR	19/21	NR	NR	NR	NR	Mean age (SD): 8.8 (3) years, range 3-16 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Rogers (2014) (74)	More than one level	Other primary	Yes. "Children and young people with disabilities should enjoy the same access to mainstream continence services as their non-disabled peers"	NR	NR	NR	NR	NR	NR	NR	NR	NR	Yes. Specifically focussed on children with disability	NR	NR
Romano (2017) (75)	More than one level	Guideline	Yes. Specifically aimed at children with neurological impairment	NR	NR	NR	NR	NR	NR	NR	NR	NR	Yes. Focus on children with neurological impairment	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Russell (2015) (76)	Service delivery	Other primary	Partial ("the most severe cases, children with constipation have often failed dietary and medical management from primary care providers and gastroenterologists")	NR	NR	NR	24/20	NR	NR	NR	NR	Median age: 8.6 years, range 2.6 - 16.8 years	Yes. Neurological diagnosis : 17/44; 5/44 Cerebral Palsy; Autism 4/44, Depression/bipolar 3/44	NR	Consider adherence in terms of neurologic or psychiatric diagnosis: 12/28 adherent and 5/16 non-adherent
Sadjadei (2017) (77)	Level3	Other primary	N	NR	NR	NR	277/273	NR	NR	NR	NR	Mean age (SD): 6.8 (2.9) years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Sandweiss (2018) (78)	Service delivery	Other primary	N	NR	Baseline: White (79.8%), Non-white (6.6%), unknown (13.5%); Preintervention and intervention: White (77.7%), Non-white (8.5%), unknown (13.8%); Postintervention: White (85.1%), Non-white (8.6%), unknown (6.3%)	NR	Baseline: 1649 (48%) M; preintervention and intervention : 1505 (46.5%) M; postintervention: 537 (48%) M	NR	NR	Private insurance: ranged from 60.5-65.5%	NR	Median age: 7 years	NR	NR	NR

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Saneian (2012) (79)	Level 1	RCT	N	NR	NR	NR	NR	NR	NR	NR	NR	PEG mean age (SD) age:3.26 (1.5) years, Magnesium hydroxide mean age (SD): 3.11 (1.06) years, Lactulose mean age (SD): 3.19 (1.36) years	NR	NR	NR
Saneian (2013) (80)	Level 0	Other primary	N	NR	NR	NR	27/33	NR	NR	NR	NR	Probiotic group mean age (SD): 5.4 (2.7) years; Control group mean age (SD): 4.7 (3) years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Santucci (2020) (81)	Psychosocial	Other primary	N	NR	In the successful treatment group: 39% were white, 46% African American, and 15% belonged to other races. In the group that failed treatment 50% were White, 40% African American and 10% were other races.	NR	48/92 successfully treated	NR	NR	NR	NR	92/122 children (75%) achieved treatment success; age range (SD) of this group: 10.60 (2.75) years. The mean age (SD) of the children who failed treatment were 11 (2.85) years.	Children with additional support needs were excluded (i.e. excluded children with developmental delay, autism, chronic diseases, prior colorectal surgery, and those taking antipsychotic medications)	NR	30/130 children were reported to have a mental health disorder. Comorbidities: Attention deficit hyperactivity disorder 19 (15%); Anxiety disorder 17 (13%), Depression 11 (8%), Obsessive compulsive disorder 4 (3%) Oppositional defiant disorder 2 (2%). School absenteeism (>10 d/y) 23/130 (18%)
Savino (2012) (82)	Level 1	RCT	N	NR	NR	NR	46/42	NR	NR	NR	NR	PEG group age range: 2-14 years; PEG-EL group age range: 2-13 years	NR	NR	NR

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Sobhani Shahmirzadi (2014) (83)	More than one level	Narrative review	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Sood (2018) (84, 85)	More than one level	Narrative review	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Steiner (2014) (86)	Level 1	Other primary	Yes. ("factors associated with adherence...questionnaires contained information about the patient's identification, parents' education, socioeconomic level, and family income").	Yes. On admission, 70% of children's families were homeowners and 63% of the children lived with both parents.	NR	NR	58% M	NR	Yes. Reported educational levels of caregivers	Yes. Range of distribution of the monthly family income of the studied population was <US \$200, \$200 to \$400, \$400 to \$600, and >\$600, in 6%, 26%, 49%, and 19% of the cases, respectively	Yes. Only 6 children (12%) had main caregivers other than their parents	Also reported age profile of carer	NR	NR	Yes. "6% percent of the patients were malnourished and 10% were obese, according to the criteria of the World Health Organization. Family history of CFC was reported in 56.5% of the cases... Emotional or family problems were observed in 12.2% of cases studied"

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Stephens (2018) (87)	?	Other primary	N	NR	Yes. Race/ethnicity: White: 54.1%, Black: 22.1%, Hispanic: 6% and other: 17.8%.	NR	424/354	NR	NR	NR	NR	Median age at admission was 8 years (IQR [4, 12]). Children aged 6 to 12 years were the largest age group represented (45.6%).	NR	NR	More than half (54%) of the children hospitalized for constipation had one or more complex chronic condition. "Children aged 1 to 2 and 3 to 5 years, male patients, black race, and children with 1 or more than 2 CCCs had a higher number of visits for constipation after admission"
Stewart (2013) (88)	Level 0	Narrative review	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

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Sullivan (2006) (89)	Service delivery	Mixed methods (RCT plus questionnaire)	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tabbers (2010) (90)	More than one level	SR	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Taitz (1986) (91)	Psychosocial	Other primary	Yes. "we wish to draw attention to social background as a prognostic indicator, a factor not previously reported"	Adverse social factors included poor housing (six cases),, parental separation (four) and unsupported single family (one).	NR	Adverse social factors included ... unemployment (five). Group 'A' (social classes 1, 2, and 3) comprised the children of nonmanual workers, group 'B' (social class 4) those of skilled manual workers, and group 'C' (social classes 5 and 6) those of unskilled or semiskilled manual workers and individuals whose social class was indeterminate because of long term unemployment and single parent families."	26/21	NR	NR	"Appreciable social disadvantage seems to be the most important factor mitigating against a successful outcome, associated with non-compliance with treatment. Failure to respond to treatment was associated with important psychological problems. These were more common in the socially disadvantaged groups"	Adverse social factors included ... Parental separation (four) and unsupported single family (one).	NR	NR	NR	Emotional problems included severe marital difficulties (five), excessive anxiety (four), overprotection manifesting as excessive medical consultation or unwarranted school absence with parental consent, or both (four), general parental inadequacy (four), and bereavement (one). There was evidence of previous child abuse in five cases, and in four cases the child had been assessed because of other problems.

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Tamura (2020) (92)	Level 3	Other primary	N	NR	NR	NR	9/13	NR	NR	NR	NR	Mean age (SD): 13.7 (2.9) years	NR	NR	NR
Tappin (2013) (93)	Service delivery	Other primary	N	NR	NR	NR	84/89	NR	NR	Median deprivation (7 is most deprived): nurse-led clinic: 5.1 (range 1-7); consultant-led clinic: 4.6 (range 1-7)		Median age reported for symptom onset: 1.2 years and median age at first appointment: 3.5 years in the nurse-led clinic and 3.4 years in the consultant led clinic	NR	NR	NR
Tatsuki (2011) (94)	Level 1	Other primary	N	NR	NR	NR	57/63	NR	NR	NR	NR	Age range: 1-14 years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Torres (2015) (95)	More than one level	Other primary	N	Location of medical practice: primary care 86.2% and public hospital 74.2%. Location of residency : state capital 86.8%	NR	Specialty/sub specialty: General pediatrician 59.3%; Neonatologist 9.1%, Pediatric neurologist 7.1%, Pediatric intensivist 5.4%, Pediatric gastroenterologist 5.0% Other 14.1%	25.2% M	NR	Mean years (SD) since graduation was 20.2 (10) years, range 4–48 years.	NR	NR	Mean age (SD) of participating pediatricians was 44 (9.8) years	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Tran (2016) (97)	Level 3	Other primary	N	NR	NR	NR	285/240	NR	NR	NR	NR	Mean age (SD) at intake: Rectal bowel group: 6.7 (5.4) years; control group: 6.7 (5.4) years	NR	NR	Positive family history findings: Constipation 9% in Rectal Biopsy group; 15% in control group
Traslavina (2015) (98)	More than one level	Other primary	N	NR	NR	NR	0/1	NR	NR	NR	NR	6 years old	NR	NR	NR
Turner-Bowker (2015) (99)	More than one level	Qualitative	N	NR	NR	NR	NR	NR	NR	NR	NR	Children ages 6 months to < 6 years (CE, n= 18; CI, n= 11), and with children/ adolescents ages 6 to < 18 years and their parent/legal guardian (CE, n= 18; CI patient n= 21, parent n= 20)	NR	NR	NR
van Ginkel (2003) (100)	More than one level	Other primary	N	NR	NR	NR	279/139	NR	NR	NR	NR	Median age (at intake): 8 years	NR	NR	Positive family history: 13%

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
van Schaick (2016) (101)	Level 1	Other primary	N	NR	NR	NR	Two studies reported: 25/13 in study one; 95/118 in study two.	NR	NR	NR	NR	Two studies reported: children aged 4-12 years in study one; children aged 6 months - 18 years in study two.	NR	NR	NR
Voskuijl (2004) (102)	Level 1	RCT	N	NR	NR	NR	55/45	NR	NR	NR	NR	Mean age (SD): PEG 3350 group: 6.5 (3.2) years; Lactulose group: 6.5 (3.4) years	NR	NR	NR
Windell (2020) (103)	More than one level	Narrative review	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Wolfe (2019) (104)	Service delivery	Other primary	N	NR	"68% were from black and minority ethnic groups". NB: only 15/200 children reported in the abstract were referred for constipation; no breakdown of race/ethnicity	NR	NR	NR	NR	"Of the first 200 patients, most were from socially deprived areas"	NR	NR	NR	NR	NR

Author (year)	Level	Design	Specific aim to look at equity?	Place of residence	Ethnicity / Race	Occupation	Gender (M/F)	Religion	Education	SES	Social network and capital	Age	Disability	Sexual orientation	Other vulnerable groups
Yang (2015) (105)	More than one level	Other primary	N	NR	NR	NR	NR	NR	"97% of our respondents reported having been in practice for 0 to 5 years (100% for trainees, 88.9% for attendings),"	NR	NR	NR	NR	NR	NR
Yik (2012) (106)	Level 3	Other primary	N	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1 child with CF

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