D.4 Multidisciplinary teams

Item	Details
Key issue in the scope	Models for delivery of care and multidisciplinary teams.
Review question in the scope	What is the most effective model for delivery of care for people with CF (including multidisciplinary teams of various compositions, shared care, centre care, community care, home care and telemedicine)?
Review question for the protocol	What is the clinical and cost-effectiveness of multidisciplinary teams of various compositions? [This issue in the scope has been divided into 2 review questions. See protocol D.3 for service configuration]
Objective	CF is a multi-system chronic disease that affects the respiratory tract and lungs, digestive system, sweat glands and reproductive organs. The condition is typically identified in infancy and care is required throughout an individual's lifetime through to end of life. The care aims to address the biological and psychosocial needs of the patient and their families/carers and, in the UK, is primarily provided by a specialist CF Centre. As CF is associated with poor quality of life and clinical outcomes, it is important that care adequately addresses the needs of patients by allowing flexibility for individual circumstances.
Language	English
Study design	• SRs • RCTs • Comparative prospective and retrospective cohort studies • Registry and audit data (UK only) • Conference abstracts of RCTs (Only if RCTs unavailable and the quality assessment of abstracts will conducted based on the available information and if necessary the authors of abstracts will be contacted).
Population and directness	Infants, children, young people and adults with CF, diagnosed clinically and by sweat test or genetic testing. Population size and indirectness: • No sample size specification. • Studies with indirect populations will not be included • To include RCTs and observational studies from Western countries.
Stratified, subgroup and	The following groups will be assessed separately if possible: • Children

Item	Details
adjusted analyses	• Adults Sensitivity analysis: • Sensitivity analysis: including and excluding studies with a high risk of bias
Intervention	Studies which include any combination of the individual working together working as a MDT listed below either as a core or extended MDT. Core MDT • Specialist CF Clinician • Specialist nurse • Specialist dietician • Specialist physiotherapist • Specialist pharmacist • Specialist Psychologist • Specialist Social worker Extended MDT • Diabetologist • Obstetrician • ENT surgeon • General surgeon • Gastroenterologist/hepatologist
Comparison	• Any combination of the individuals working together working as a MDT listed above.
Outcomes	• Lung function: FEV1 • LCI • Time to next pulmonary exacerbation • Mortality • Nutritional status (BMI, Height , weight, SDS) • Quality of life (CF-QOL, CFQR) • Patient and carer satisfaction • Frequency of cross-infections (pseudomonas, B..Cepacia) • Staff experience • Adherence to treatment Note: change from baseline will be priorised over absolute values
Importance of outcomes	Critical outcomes for decision making: • Mortality • Lung function: FEV1 • Patient satisfaction
Setting	Any healthcare setting where NHS care is delivered (primary, secondary, tertiary or community).
Search strategy	Sources to be searched: Medline, Medline In-Process, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Cochrane Database of Abstracts of Reviews of Effectiveness, Health Technology Database, Embase, CINAHL Limits (e.g. date, study design): All study designs. Apply standard exclusions and English language filters. Supplementary search techniques: No supplementary search techniques will be used. See appendix E.3.2 for full strategies
Review strategy	Appraisal of methodological quality:

Item	Details
	• The methodological quality of each study will be assessed using an appropriate checklist as per NICE guidelines manual and the service guidance methods guide 2014 (The Cochrane Risk of Bias tool for RCTs and the Newcastle and Ottawa scale for observational studies). • The quality of the evidence will be assessed by GRADE for each outcome according to the process described in the NICE guidelines manual (2014). Synthesis of data: • Meta-analysis will be conducted where appropriate. • If comparative cohort studies are included, the minimum number of events per covariate to be recorded to ensure accurate multivariate analysis. • Final and change scores will be pooled and if any study reports both, change scores will be used in preference over final scores. • If studies only report p-values from parametric analyses, and 95% CIs cannot be calculated from other data provided, this information will be plotted in GRADE tables, but evidence may be downgraded. • If studies only report p-values from non-parametric analyses, this information will be plotted in GRADE tables without downgrading the evidence, as imprecision cannot be assessed for non-parametric analyses MIDs: • FEV1: 5 percentage points • LCI: GRADE default • Time to next pulmonary exacerbation: any change will be considered clinically significant • Mortality: any change will be considered clinically significant • Nutritional status (BMI, Height , weight, SDS): GRADE default • Quality of life: CF-QOL = 5; CFQ-R = 8.5 • Patient and carer satisfaction: GRADE default • Frequency of cross-infections (pseudomonas, B. Cepacia): GRADE default • Staff experience: GRADE default • Adherence to treatment: GRADE default Default MIDs: 0.8 and 1.25 for dichotomous outcomes; 0.5 times SD for continuous outcomes. Review process: • A list of excluded studies will be provided following weeding. • Evidence tables and an evidence profile will be used to summarise the evidence.
Equalities	• Psychological and behavioural issues are more likely in people with a lower socioeconomic status • Gender- outcomes are worse for women although there is no evidence that this is a consequence of difference in care • Geographical issues – care is given through specialist centres and this may be a problem if a person with CF is living in an isolated location.
Notes/additional information	• 2012, Telehealth in cystic fibrosis: a systematic review (adults and children services) www.ncbi.nlm.nih.gov/pubmed/22198961 • Full, shared and hybrid paediatric care for cystic fibrosis in South and Mid Wales – be mindful of responses to this article: www.ncbi.nlm.nih.gov/pubmed/21317431 • Service guidance methods guide 2014 https://www.nice.org.uk/article/pmg8/chapter/1%20introduction