

CHAPTER 17 IMPLEMENTING, EVALUATING AND MAINTAINING THE GUIDELINES

N. Saxby, J. Anderson, N. van der Haak & S. Kumar

Evidence-based practice in health care is the integration of best research evidence with the clinical expertise of health professionals while respecting patients' moral values and beliefs. The generation of best research evidence, through systematically developed best practice statements and evidence-based recommendations, is merely the first step in achieving best practice in nutritional care for Cystic Fibrosis. With the emergence of implementation science, it is evident that evidence-based recommendations should be supported with evidence-based dissemination and implementation strategies. Once the '2017 Nutrition Guidelines for Cystic Fibrosis in Australia and New Zealand' are published, the guidelines must be disseminated to all those stakeholders who are involved in Cystic Fibrosis care. The implementation of the guidelines within individual health care contexts will be led by local health professionals, who will determine how best to implement the guidelines.

Planning for implementation of the '2017 Nutrition Guidelines for Cystic Fibrosis in Australia and New Zealand' has been undertaken in parallel with guideline development. Additionally, the members of the authorship and interdisciplinary expert groups represent over 95% of specialist CF centres in Australia and NZ. Thus, the creators of the guideline are themselves the target users, a unique situation that offers several implementation advantages. Benefits include an already high awareness of, and agreement with, the guideline recommendations. To further aid uptake of the guideline recommendations a multi-component implementation strategy is also planned.

Dissemination and Implementation Plan

A multi-faceted strategy will be used by which the guidelines can be disseminated and implemented. These include:

- **Distribution of educational materials** – The guidelines will be made available to target users via posting on websites of TSANZ, CFA and CFNZ. The guidelines will be registered with Australian (NHRMC clinical guideline registry) and international (Guideline International Network) guidelines registries. Under the auspices of TSANZ, the guideline authorship group will send written notification of the '2017 Guidelines' availability to all CF centres in Australia and NZ. All correspondence will be addressed to CF centre director and the specialist CF dietitian, where details are known. As means of engaging with the wider community, a link to the guidelines will be disseminated to relevant universities, colleges, societies, associations and other professional organisations. A publication in a peer-reviewed journal is also proposed which will highlight any recommended changes to nutritional care in Cystic Fibrosis. A media release and notification in CFA/CFNZ newsletters will also be undertaken.
- **Patient-mediated** – Key guideline chapters will be accompanied with resources targeted at patients, their families and communities. This will ensure the guidelines and its recommendations can be readily consumed by patients, their families and communities and will assist in shared decision making between health professionals and the consumer.
- **Educational meetings** – Educational meetings in the form of interdisciplinary working groups, conferences and workshops, including virtual options such as webinar, could be considered. Educational meetings can be particularly useful in local health care contexts when implementing guidelines to identify and address local barriers and enablers. A tool kit for implementation could be developed which may assist local implementation initiatives.
- **Use of opinion leaders** – Local opinion leaders could be used to facilitate local implementation initiatives. Opinion leaders could utilise the educational resources to facilitate local implementation and practice change initiatives. Local opinion leaders could also act as mentors to assist in and support other health care professionals during the implementation and practice change process. Resources such as accompanying outpatient clinic, inpatient and nutritional assessment forms may also be used by opinion leaders during this process.
- **Audit and feedback** – Audit and feedback could be used as part of local implementation initiatives to assess and describe practice and behaviour. Findings from the audit can then be used to reinforce and change practice and behaviour, as required. Key indicators on organisation of care and clinical care should be made available which will underpin audit and feedback initiatives.
- **Reminders** – Reminders for health care professionals, patients and other health care stakeholders through posters, emails, messages, leaflets, stickers, coloured charts, and newsletters should be considered. If and where possible electronic reminders may also be considered, embedded as part of processes of care, once areas for quality improvement have been identified at local health care contexts.

With the emergence of implementation science, the evidence base on “how to” implement evidence into practice is growing at a rapid pace. However, much of the literature on dissemination and implementation strategies suffers from serious methodological flaws. While there is some evidence to support the multi-faceted strategies outlined above, which strategy works for whom, when and how continues to be a “*black box*”. The gains achieved by these multi-faceted strategies could be described as modest at best and this can be explained by the fact that a number of contextual factors at the individual, organizational and system level exist, resulting in additional challenges to implementation. Therefore when considering implementation, it is imperative to consider local and contextual issues and select targeted strategies that are likely to meet local requirements.

It is strongly recommended that any implementation initiative is underpinned by a systematic and deliberate approach to improve nutritional care for Cystic Fibrosis. The systematic and deliberate approach could be informed by the following - identification of key stakeholders, adequate resource allocation, audit of current practice, identification of barriers and enablers to guideline implementation and use, development of implementation tools, determination of implementation strategies that are likely to affect practice and behaviour change, development of implementation plan and pilot testing to verify its appropriateness and feasibility and relevant modifications, as required. As evidence-based practice builds on shared decision making with patients, implementation strategies should also consider nutritional care for Cystic Fibrosis which builds on local cultural and geographical needs and requirements.

It is particularly important to consider barriers and facilitators to implementation of the guidelines. Potential barriers include

- Time and cost of implementation of the guidelines at a local level
- Lack of resources – both staffing and physical (e.g. certain medications listed)
- Disagreement among practitioners and people with CF around recommendations made
- Inadequate communication regarding the existence of the guideline

Potential facilitators to overcome these barriers are listed above.

WORKSHOP

An implementation workshop was held on the 20th of November 2016 in Melbourne, hosted by the TSANZ. It addressed guideline content, recommendations, feedback from public consultation and implementation into clinical practice.

Evaluation Plan

The effectiveness of the ‘2017 Guidelines’ will be assessed via a survey of dietetic practice and nutritional management of CF in Australia and New Zealand, similar to the 1998, 2005 and 2010 (unpublished) practice surveys^{179,180,822}, with the addition of items specifically addressing:

- Changes in clinical practice and health outcomes as a result of implementation of the guidelines
- Compliance with the guidelines

It is anticipated that this survey will be conducted within 1 to 2 years after the guidelines are approved by NHMRC, and will be completed by a post graduate research student. Evaluation support will be provided by the School of Allied Health staff at La Trobe University.

Guideline Review and Update

A full guideline update is planned for 2022. The TSANZ, DAA and DNZ will convene a group of experts to undertake the review. Until 2022, the co-chairs and project facilitators of the ‘2017 Guidelines’, via the Clinical Care and Resource Sub-Committee of the TSANZ, will be the contacts for major issues, events or practice changes.

Thoracic Society of Australia and New Zealand
Clinical Care and Resource Sub-Committee
Suite 405, Level 4, 5 Hunter Street, Sydney NSW 2000
Phone +61 (2) 9222 6200 www.thoracic.org.au



Recommendations for Future Research

Further research and/or the expert consensus is required to make recommendations for people with CF regarding:

- Use of behavioural modification strategies in adults (eating and mealtime)
- Enteral feeding – the most effective regimen and ideal timing for initiation of enteral feeding for someone who is undernourished
- The role of fibre in gastrointestinal health
- How to monitor vitamin A, E and K levels (both frequency and laboratory tests used) and the safe upper limits of vitamin A, E and zinc supplementation
- The appropriateness of routine supplementation of fat soluble vitamins in pancreatic sufficient patients
- The goal level of serum vitamin D with or without bone disease
- The ideal vitamin D dosing regimen to correct deficiency
- Appropriateness of high dose vitamin D (i.e. $\geq 50\,000\text{IU}$) supplementation to correct deficiency
- Long-term implications associated with phthalate exposure via PERT
- Nutritional considerations for colon cancer screening in CF
- Management of vitamin A and K supplementation in people with CF-related liver disease
- How to administer PERT with enteral feeds, including in those who are nil by mouth or have an oral aversion
- Optimal timing of PERT
- Use of proton pump inhibitors in conjunction with PERT to improve efficacy
- Specific PERT doses to support optimal fat absorption, and the safe maximum dose of PERT that can be administered, and ideal doses
- The best tests to assess PERT efficacy
- The role of gastrointestinal and other nutritional outcome measures in individuals with CF receiving genetic modulator therapies
- Long term nutritional considerations (e.g. energy, salt intake) for people on genetic modulator therapies
- Complementary nutritional therapies for CF (e.g. coconut, turmeric, antioxidant, probiotics)
- Potential long term effects of overweight and obesity in the CF population, including balance of fat intake
- New treatments targeting nutritional complications of CF (e.g. anti-osteoporotic agents, anti-inflammatory agents, anabolic therapies, appetite stimulants)

See [Chapter 2](#) for proposed consensus plans.