



## The User's Guide to the Consensus Clinical Management Guidelines for Friedreich ataxia

### Introduction

There is significant progress in identifying and testing new treatments and disease modifying agents that will one day alter the progression and course of Friedreich ataxia; however, today there is still no treatment. The nature of Friedreich ataxia continues to challenge the capacity of affected individuals to participate in significant activities and roles in daily life and cause significant medical complications. Clinical management guidelines are required to identify and document clinical practice to guide clinicians in the management of people with Friedreich ataxia and also ensure people with Friedreich ataxia and their carers are fully informed as to the best possible care. It is anticipated that application of clinical management guidelines will provide consistency and improve health outcomes and thus quality of life for people with Friedreich ataxia and also identify gaps in evidence that will present opportunity for further research.

This guide has been developed to assist users of the document to obtain maximum benefit. Given this is the first of what we hope we will be many iterations of these guidelines we do plan to implement an evaluation of both the design and content of the guidelines. Whilst every effort has been made to keep these guidelines up to date during the guideline development process we understand that even at the time of publication new information will have come to light so we encourage clinicians and people affected by Friedreich ataxia to constantly keep seeking new information.

## **Background to the development of the guidelines**

These guidelines were developed by both an executive committee who oversaw the process of guideline development and thirty-nine clinicians with expertise in Friedreich ataxia. The final guidelines comprise 9 sections and 25 subsections. There are 146 recommendations related to:

1. overview of Friedreich ataxia including differential diagnosis,
2. the neurological components of Friedreich ataxia including: ataxia, weakness, spasticity and muscle spasm, restless legs, mobility, dysarthria, dysphagia, vision, bladder function, bowel function, sexual function, audiological function, cognition and rehabilitation,
3. the heart, cardiovascular and respiratory system including: sleep, pain management and anesthesia,
4. scoliosis,
5. diabetes mellitus,
6. genetic issues,
7. Friedreich ataxia due to *FXN* compound heterozygosity,
8. pregnancy issues,
9. quality of life issues including: mental health, wheelchairs and seating systems, independence issues, advance care planning, palliative care and potential medications for use in Friedreich ataxia.

The literature related to each topic was rated according to the level of scientific evidence available (for example level I, the highest level of evidence is evidence from a systematic review of all relevant randomized controlled trials whereas level IV, the lowest level of evidence, is evidence from a case series). It is important to rate scientific evidence to ensure the guidelines that arise from the literature are based on strong, robust evidence. This is where the process of grading comes in. Grading of evidence indicates the strength of the evidence underlying the recommendation and helps decide if applying the recommendation will improve a health outcome. Recommendations allocated Grade A were underpinned by a body of evidence that can be trusted to guide practice. Grade B recommendations include those for which a body of evidence can be trusted to guide practice in most situations. Grade C recommendations comprise

those for which the body of evidence provides some support but care should be taken in its application, whereas an allocation of Grade D indicate the body of evidence underlying the recommendation is weak and must be applied with caution. Where no clear Level I, II III or IV evidence is available but where there was sufficient consensus within the expert clinicians, good practice points (GPP) are provided. A GPP is the recommended best practice based on clinical experience and the expert opinion of the clinicians. Looking at the guidelines you will see sixty-two percent of recommendations are based on expert opinion or good practice indicating the lack of high-level quality clinical studies in the area of Friedreich ataxia. Whilst the development of these guidelines provides a critical first step in the provision of appropriate clinical care for people with FRDA, it also highlights the urgency of undertaking high-quality clinical studies that will ensure the delivery of optimum clinical management and intervention for people with FRDA.

### **Suggested ways to use the guidelines**

Friedreich ataxia affects people in different ways. Not all areas covered in this document will be relevant to all individuals with Friedreich ataxia. The document is designed to cover every aspect considered relevant to Friedreich ataxia in general so on reading this document do not think all aspects will be applicable to you, or the person you care for with Friedreich ataxia. It is designed as a guide for some aspects that may be relevant to you or the person you care for. The full document will be overwhelming to most individuals and clinicians however we hope that by making it available online that selected chapters can be identified as needed.

Examples of how you can use this document are as follows:

1. You can provide your cardiologist with Section 3.1
2. If you are seeing an orthopedic surgeon for scoliosis evaluation you can provide him/her with Section 4 and the section on anaesthesia and post-operative pain management. Your orthopaedic surgeon may also need to be familiar with the section on cardiology to ensure you have appropriate cardiac work up if surgery is indicated.
3. If an individual is having trouble with spasticity then this chapter can be reviewed by the individual and physician as guidance to better management of those symptoms.

4. It may be helpful for your physical therapist to be familiar with the section on mobility and rehabilitation.
5. If you are having trouble hearing in a noisy environment refer to Section 2.13.
6. It may be useful for your physician to be aware that people with Friedreich ataxia may need to be screened for sleep related breathing disorders. Show them Section 3.2.
7. It may be useful for you to understand the psychological issues that may or may not emerge following a diagnosis of Friedreich ataxia as indicated in Section 9.2.

We recommend that you put these guidelines on portable remote storage device (thumb drive, jump drive, CD, etc...). There are now bracelets available with medical alert insigna that can be useful to storing this information along with your other vital medical records. FARA and the Children's Hospital of Philadelphia have some of these bracelets available. We will be formally asking for feedback on both the design and content of these guidelines and will be working on the next update. We hope these guidelines are of assistance to you.

### **Publications arising from these guidelines**

1. Corben LA, Lynch DR, Pandolfo M, Schulz J, Delatycki MB. Consensus clinical management guidelines for Friedreich ataxia. *Orphanet Journal of Rare Diseases* (in press). This publication provides a summary of recommendations and gives a concise overview of the process of developing the guidelines.
2. Full document that reviews each symptom, system and quality of life issue in detailed chapters. Summarizes all the evidence (publications and clinical experience) for a given symptom or issue and shows why and how specific recommendations were reached.

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and Martin Delatycki for the vision and perseverance in bringing these guidelines to our community.

These guidelines will be reviewed and updated every three years. The larger document is meant to be a living and breathing document that is not static but rather gets updated on a regular basis.