

**Supplementary Document 1: Study advertisement**

## **Research opportunity in Spinal Muscular Atrophy (SMA):**

Dear Potential Participant,

We are writing to invite you to participate in a research study, consisting of an interview involving parents/caregivers and individuals affected by SMA. Interviews are being conducted by Modus Outcomes, a patient-centred outcomes consulting research firm, on behalf of a pharmaceutical sponsor. The goals of this research are to:

- Understand the impact of SMA on the daily activities of patients who can stand or walk
- Develop a questionnaire to measure independence with daily activities that can be used in future clinical trials and practice to assess the level of assistance required to complete daily activities

### **What does it involve?**

One 60-minute telephone interview will be conducted to discuss the impact of SMA on daily activities.

Interviews will be divided into three waves. Interviews in the first wave will comprise of an open discussion on the impact of SMA on daily activities, whereas waves 2 and 3 will comprise of both an open discussion and review of some draft questionnaire items for your feedback.

This is an observational study only. No treatments are provided in this study. Current treatments will not be discussed.

### **Who is eligible to participate in the interviews?**

#### **PATIENTS** who...

- have a confirmed genetic diagnosis of SMA
- are aged between 12 and 60 years of age
- are able to:
  - Walk for 5 independent steps without support OR:
  - Walk for 5 steps with support (holding a stable object with one or both hands)

OR:

- Stand alone for at least 10 seconds without support of a person or object<sup>a</sup>

#### **CAREGIVERS** of individuals who...

- have a confirmed genetic diagnosis of SMA
- are aged between 2 and 12 years of age
- are able to:
  - Walk for 5 independent steps without support OR;
  - Walk for 5 steps with support (holding a stable object with one or both hands) OR;

- Stand alone for at least 10 seconds without support of a person or object<sup>a</sup>

### **I am interested. What next?**

If you fulfil the above eligibility criteria and are interested in taking part or have any questions regarding this research project, please email Mr Paul Williams.

If you are eligible to take part in the study, you will be emailed a consent form to sign electronically prior to taking part.

If you meet the eligibility criteria but contact us after we have reached our quota of interviews for wave 1, you will be asked to take part in subsequent interviews for waves 2 and 3 (A total of 3 waves of interviews will take place for this study).

If you have any questions or wish to discuss this study further please contact Modus Outcomes on + 1 781 608 3871 or email [paul.williams@modusoutcomes.com](mailto:paul.williams@modusoutcomes.com) and a trained researcher will be able to discuss the study with you.

<sup>a</sup>This category was subsequently removed as the way patients were responding indicated that this category was not mutually exclusive and the expert panel confirmed that this did not make sense clinically to retain.

**Supplementary Document 2: Interview guides**

**Development of an Ambulatory Module  
for the  
Spinal Muscular Atrophy  
Independence Scale**

**ROC2161**

**Wave 1 Caregiver Interview Guide**

(Version 5.0; 09/06/2020)



# CONTENTS

---

<b>CONTENTS .....</b>	<b>2</b>
<b>WAVE 1 INTERVIEW OBJECTIVES &amp; OVERVIEW .....</b>	<b>3</b>
INTERVIEW OBJECTIVES.....	3
INTERVIEW OVERVIEW .....	3
INSTRUCTIONS FOR THE INTERVIEWER (TRAINED STUDY SITE PERSONNEL) .....	3
WHAT SHOULD THE INTERVIEWER DO IF AN ADVERSE EVENT IS MENTIONED? .....	4
<b>INTRODUCTION (5-7 MINUTES).....</b>	<b>8</b>
INTRODUCE YOURSELF AND THE PURPOSE OF THE STUDY (3-5 MINUTES) .....	8
INTERVIEW PROCEDURE .....	8
AUDIO RECORDING .....	8
REASSURE PARTICIPANTS OF CONFIDENTIALITY .....	9
ENCOURAGE PARTICIPANTS TO BE OPEN AND HONEST .....	9
ADVERSE EVENT REPORTING .....	9
DEMOGRAPHIC INFORMATION .....	9
<b>CONCEPT ELICITATION (45-50 MINUTES) .....</b>	<b>10</b>
<b>CLOSING THE INTERVIEW (3-5 MINUTES).....</b>	<b>12</b>
<b>APPENDICES.....</b>	<b>13</b>
<b>APPENDIX A: CAREGIVER SOCIODEMOGRAPHIC FORM .....</b>	<b>13</b>

# WAVE 1 INTERVIEW OBJECTIVES & OVERVIEW

---

## Interview objectives

Explore the independence or level of support needed when carrying out activities for daily living in individuals with SMA who are ambulant or able to stand without support (i.e. standers and walkers) in order to better understand the level of independence these individuals have in these activities.

## Interview overview

Wave 1 will consist of 20 interviews, 12 will involve participants diagnosed with SMA aged between 12 and 60 years old and another 8 will involve caregivers of individuals with SMA aged between 2 and 12 years old.

Interviews will focus primarily on concept elicitation; they will explore issues relevant to the experience of living with SMA and the impact of the condition on participants ability to perform activities for daily living. The interview will be divided into the following sections:

Interview Stage	Objective	Approximate duration
1 Interviewer introduction (not recorded)	Set the context and disclaimers & collect demographic details	5-7 minutes
2 Concept elicitation	Discuss issues relevant to the experience of living with SMA, specifically the impact of the condition on patients` independence in relation to daily activities	45-50 minutes
3 Closing remarks	Allow the participant to add any relevant information at which point the interviewer will close the session with a brief explanation of what we are going to do with the information	2-3 minutes

Using the schedule above, the interview process should take approximately **60 minutes**. The time allocated for each section is an indication where the duration of the interview may vary between participants.

## Instructions for the interviewer (trained study site personnel)

It is very important that you avoid leading the participant. Ask all questions in as open-ended a manner as possible in order to allow the participant enough time to answer and make sure not to bias their responses.

Once a participant has mentioned a disease symptom or disease impact, you can ask questions to clarify their experience.

Examples of non-leading questions:

- *You mentioned [impact / experience]. Can you tell me more about what that is like?*
- *I am not sure I completely understand [impact / experience]. Can you give me an example?*
- *How long does [impact] last? How often does that happen? How bothersome is that?*

Example of a non-leading clarification when a patient gives a brief or single-word response

- *Can you elaborate a bit on this, for the sake of the recording?*

Expect patients to take a significant amount of **time** to respond to some questions. Please allow them enough time to answer even if this means there are “uncomfortable silences.” Sometimes, this indicates that the patient is taking time to search for the right words or think about responses.

**Probes** have been added for several topics. These are questions/issues that should be covered in the interview. However, in **all** instances, participants must be given the opportunity to respond to a question in their own way before any probes are used.

It is important for **all of the main areas of the interview guide** to be covered; however, they do not need to be covered in the order presented in the interview guide. If a topic comes up earlier, you may discuss it at that time. The interviewer should be familiar with the interview guide so that it is easy to “switch gears” as the patient naturally moves from topic to topic.

The **questions in italics** and **displayed in boxes** do not need to be asked exactly as written, or in the order presented below. The goal of this interview is to learn as much as possible about the range of symptoms and impacts that people experience. Use your best judgment and knowledge of the participant to help them share this information with you.

If the participant asks you questions of a medical nature, you should explain that you are not qualified to offer medical advice in this context and direct the patient to their physician.

### **What should the interviewer do if an adverse event is mentioned?**

An Adverse Event (AE) is defined as **“Any untoward medical occurrence in a person administered a medicinal product and which does not necessarily have to have a causal relationship with this treatment. An adverse event can be any unfavourable and unintended sign (e.g. an abnormal laboratory finding), symptom, or disease temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product.”**

An Adverse Event is a response to a medicinal product which is noxious and unintended. This includes adverse reactions which arise from the use of a medicinal product within the terms of the marketing

authorization; or the use outside the terms of the marketing authorization, including these Special Situations:

**Overdose.** This refers to the administration of a quantity of a medicinal product given per administration or cumulatively, which is above the maximum recommended dose according to the authorised product information.

**Off-label use.** This relates to situations where the medicinal product is intentionally used for a medical purpose not in accordance with the authorised product information.

**Misuse.** This refers to situations where the medicinal product is intentionally and inappropriately used not in accordance with the authorised product information.

**Abuse.** This corresponds to the persistent or sporadic, intentional excessive use of a medicinal product, which is accompanied by harmful physical or psychological effects.

**Medication errors.** This refers to any unintentional error in the prescribing, dispensing, or administration of a medicinal product while in the control of the healthcare professional, patient, or consumer.

**Occupational exposure.** This refers to the exposure to a medicinal product as a result of one's professional or non-professional occupation.

In addition, the following Reports considered as Special Situations (referred hereinafter to as "Special Situation Reports") should be collected and transmitted to Roche:

- Data related to product usage in a paediatric or elderly population
- Data related to suspected transmission of an infectious agent via a medicinal product
- Suspected Adverse Reaction related to quality defect or falsified medicinal products (whether suspected or confirmed)
- Reports from class action lawsuits

Please note that the following Special Situations Reports should be collected and transmitted to Roche even in the absence of an Adverse Event:

- Data related to product usage during pregnancy or breastfeeding
- Data related to overdose, abuse, misuse, medication error or occupational exposure
- Lack of therapeutic efficacy

A product quality complaint (PQC) is any discrete concern that questions the identity, quality, durability, reliability, safety, efficacy, or performance of a product. The complaint may allege an adverse event, side effect, and injury or malfunction associated with the use of a product. It may also involve the design, packaging, or promotion of a product.

This is a non-interventional study with no study drug. However, if the individual with SMA mentions an adverse event that they have experienced while taking a medicinal product, you should make a note of it and at the end of the interview go through the ‘Adverse Event/Product Complaint Form’ (Appendix B of this interview guide). At this time please state the following to the individual with SMA (Please note that this is only necessary if the information provided did not cover the bare minimum for what is required for the AE form):

- 💡 “During the interview you mentioned a problem that you experienced while taking a medicinal product. I would like to spend a couple of minutes with you now to collect some more details about the problem. Is that OK with you?”
- 💡 **If yes and the AE is related to a Roche product:** “Thank you. The information you provide will be sent to the study sponsor, who may wish to contact your doctor for further information. If you agree to provide your doctor’s name, this will not be linked in any way to your other responses given during the interview. Are you happy to provide the name of your doctor?” (If a Roche product, complete the form in Appendix R).
- 💡 **If yes and the AE is related to a non-Roche product:** “Thank you. The information you provide will be sent to the [relevant authority] who are responsible for keeping record of any problems experienced whilst taking a medication in [Country]”
- 💡 **If no:** “OK that’s fine. However, as the information you were given about this study explained, we do have to report this problem [if Roche product: to the sponsor] [if non-Roche product: to the (relevant national authority)]. This will be done anonymously, and none of your personal details will be shared with them.”

“Completed ‘**Adverse Event/Product Complaint Forms**’ should be sent to the sponsor’s pharmacovigilance team via email within 24 hours, contact details below.

	Address	Tel	Fax	Email	Non-Roche product reporting system
<b>USA</b>	Genentech Drug Safety 1 DNA Way MS 258A South San Francisco, CA 94080 USA	+1 888 835 2555	+1 650 225 4682	<a href="mailto:us_drug_safety@gene.com">us_drug_safety@gene.com</a>	MedWatch <a href="https://www.fda.gov/safety/med-watch-fda-safety-information-and-adverse-event-reporting-program">https://www.fda.gov/safety/med-watch-fda-safety-information-and-adverse-event-reporting-program</a>
<b>UK</b>	Roche Products Limited 6 Falcon Way Shire Park Welwyn Garden City AL7 1TW United Kingdom	+44 1707 367554		<a href="mailto:welwyn.uk_dsc@roche.com">welwyn.uk_dsc@roche.com</a>	MHRA <a href="https://yellowcard.mhra.gov.uk/">https://yellowcard.mhra.gov.uk/</a>

Remember, an Adverse Event must be reported when the following are present:

**PREP – Patient, Reporter, Event, Product**

**1. A Patient or group of patients**

Identifiers such as age, age group, birth date, gender, role, profession should be collected if available, if not the event should still be reported.

**2. An identifiable Reporting source**

Information that identifies the reporter, establishing knowledge of the reportable event in an identifiable consumer. The reporter could be a patient, doctor, patient's parent, friend, colleague, or caregiver.

**3. An adverse Event**

Description of at least one event or product complaint.

**4. A suspect Product**

Patient must mention taking one of the products being marketed by the company that we are doing research for.

An AE can also include a complaint specific to the product itself, or packaging, as opposed to its effect on the patient. Examples include damaged or missing tablets; wrong strength or colour of tablets; damaged packaging; a label that cannot be read; a liquid that should be clear but is cloudy or contains unexpected particles; a bent needle, a broken syringe; a missing patient information leaflet or the identification of a potentially counterfeit medicine

## INTRODUCTION (5-7 MINUTES)

---

Wave 1 Interviews will be used to explore the impact of SMA on daily activities with patients (n=12) and caregivers of paediatric patients (n=8). Interview data will be used to generate potential items for an ambulatory version of the SMAIS which will then be the focus of wave 2 and 3 interviews.

### Introduce yourself and the purpose of the study (3-5 minutes)

*Good morning, my name is [Interviewer name] and I work for Modus Outcomes. Modus Outcomes is a health research consulting firm that works with pharmaceutical companies to learn about as well as report on patients' experiences in various health conditions. Currently, Modus Outcomes is working with Roche Pharmaceuticals to understand the impact on daily life for individuals with SMA who can stand and/or walk. This information will inform the development of questionnaires that may be used in future clinical trials and in clinical practice to measure patients' independence when completing daily activities.*

### Interview procedure

*During this interview, you will have the opportunity to tell me about your personal experience of taking care of a child with SMA. We are particularly interested in the impact of SMA on individuals' daily activities.*

*This interview should last about one hour. You can stop the interview at any time. Feel free to ask me questions about anything that you do not understand. You can also choose not to answer a question if you do not want to.*

### Audio recording

*These interviews will be audio recorded to ensure that we capture the information you share with us. Please try to speak clearly to ensure that the recorder can pick up what you are saying. If you need to take any breaks, please do not hesitate to let me know. I can pause the recording at any time.*

*Do you agree to have this interview audio recorded? [Yes/ No]*

*If the participant answers 'No', thank the participant for their time and remind them that they will subsequently be removed from the study and that any information previously collected can still be used, unless the participant request otherwise.*

## Reassure participants of confidentiality

*Any information you share with me today will be reported in a way that protects your privacy. A participant identification number will be assigned to the interview transcript that will be made available to Modus Outcomes, the company analysing the interview data. When the interview is transcribed, references to your name or names of family, friends, healthcare professionals, and other people, as well as specific place names or any other information that could specifically identify you will be removed from the transcript.*

## Encourage participants to be open and honest

*We appreciate any information you can share with us today. Please be open in your responses and do not be afraid to share any of your opinions. We are hoping to learn from you and remind you that any information you share with us will remain strictly anonymous.*

## Adverse event reporting

*If you happen to report any medical event you experienced while on a pharmaceutical drug and mention it during this interview, we are required by law to report this to the company even if it has already been reported by you directly to the company or the regulatory authorities. You will remain anonymous and you will only be identified by your participant ID number on all relevant research documents.*

## Demographic Information

Complete the sociodemographic (Appendix A) before starting the next section of the interview: concept elicitation.

## CONCEPT ELICITATION (45-50 MINUTES)

---

**Objective: to learn about the impact of SMA on daily activities**

Note: the following questions do not need to be asked exactly as written, or in the order presented below. The goal of this section of the interview is to learn as much as possible about the concept of independence and the level of assistance required to complete daily activities (*suggested text appears in italics*).

*We will start our conversation today by discussing the impact SMA has on your child's life, specifically the impact on their daily activities.*

- *How does SMA impact your child's life on a daily basis? What is an average day like?*
  - *What is a 'good' and a 'bad' day like*
  - *Does the condition impact your child differently at different times during a typical day?*
- *Are there functions or activities your child has difficulties with?*
- *Are there functions or activities your child finds easy?*
- *Are there functions or activities your child tends to avoid because of his/her condition?*
- *Are there activities your child could only do or attempt with yours or someone else's support?*
- *Are there activities that your child does completely independently without support from someone else?*

For each activity mentioned, if they have **NOT** discussed the following spontaneously, please **PROBE**:

- *What kind of support does the child/patient require?*  
Probe specifically on **practical support** including any equipment that may be used for support as well as **physical, practical, and emotional support** that may be needed

If NOT spontaneously mentioned by the participant, **PROBE** about the following issues:

- *Physical functioning/Mobility*
  - *Walking indoors*
  - *Walking outdoors*
  - *Climbing up or down the stairs*

- *Jogging/running*
- *Crawling*
- *Fatigue*
- *Occasional Falls*
- *Frequent Falls*
- *Physical functioning / Upper limb*
  - *Lifting or carrying things*
  - *Reaching / pulling things*
  - *Gripping / holding objects*
  - *Moving / lifting limbs*
  - *Pushing / pulling objects*
  - *Applying pressure*
  - *Fatigue*
- *Physical functioning / Posture & Complex*
  - *Bending over*
  - *Lifting head*
  - *Stand unaided*
  - *Sitting upright without support*
  - *Sitting down from standing up*
  - *Standing up, independently, from a sitting position*
  - *Standing up, with assistance, from a sitting position*
  - *Pulling up to standing/duration of standing*
  - *Standing on one leg*
  - *Rolling over*
  - *Occasional Falls*
  - *Frequent Falls*
  - *Problems with balance*
  - *Getting up from the floor (particularly with reference to falling and getting back up again)*
- *Instrumental, recreational, and social activities*
  - *Going to school*
  - *Mobility at school*
  - *Completing schoolwork/keeping up with peers*
  - *Playing at home or with friends*
  - *Writing / coloring / typing*
  - *Using computer for work or entertainment*
  - *Exercising/sports (if age appropriate for patient)*
  - *Tidying up / cleaning or house chores (if age appropriate for patient)*
- *Basic activities of daily living (adjusted for patients age)*
  - *Eating (Self-feeding)*
    - *Swallowing*
    - *Chewing food*
  - *Bathing/showering*
  - *Toileting*
  - *Moving about indoors*
  - *Moving about outdoors*

Before closing the section please **ASK**:

- ***Are there activities your child/the individual you care for can complete without any support/independently?***

*If so, please list...*

*For all activities mentioned here please further ask whether this has always been the case...*

- ***Was your child always able to complete these activities independently, if not what brought about this increased independence?***

## CLOSING THE INTERVIEW (3-5 MINUTES)

---

### **Closing the interview:**

*Those are all the questions I have for you today. Is there anything else you want to tell me? Follow up as appropriate.*

*The information you shared with us today – together with information from other patients and caregivers of children with SMA will help us learn more about the impact of SMA on patients` daily lives and inform the development of questionnaires to be used in upcoming clinical trials to measure patients` independence with daily activities. Thank you again for helping us with this research!*

**Conclude audio recording and close the interview.**

## APPENDICES

### Appendix A: CAREGIVER SOCIODEMOGRAPHIC FORM

---

1. What is your relationship to the individual you care for?
  - Parent
  - Grandparent
  - Other Relative
  - Professional Caregiver
  - Other: \_\_\_\_\_
2. Do you live with this individual?
  - Yes
  - No
3. If you do not live with the individual, how many hours per week, approximately, do you spend with the patient? \_\_\_\_\_
4. What is your age? \_\_\_\_\_
5. What is the individual's age? \_\_\_\_\_
6. At what age was the individual diagnosed with SMA? \_\_\_\_\_
7. What is your gender?
  - Male
  - Female
8. What is the individual's gender?
  - Male
  - Female
9. What is your ethnicity?
  - White
  - Black
  - Asian
  - Biracial / Mixed (specify): \_\_\_\_\_
  - Other (specify): \_\_\_\_\_

10. What is your marital status?

- Married
- Single
- Divorced\separated
- Widowed
- Other: \_\_\_\_\_

11. How would you describe your employment status?

- Employed, full- time
- Employed, part-time
- Volunteer, full-time
- Volunteer, part-time
- Homemaker
- Student, full-time
- Student, part-time
- Unemployed
- Retired
- Disabled

12. What is the highest level of education you have completed?

- Elementary/primary school
- Secondary/high school
- Some college
- College degree
- Some graduate work
- Graduate degree
- Postgraduate degree
- Technical or vocational degree
- Other: \_\_\_\_\_

13. How much assistance does the individual you care for need for completing daily activities within the home?

- He/she cannot do any activities without help
- He/she needs a lot of help

- He/she needs a moderate amount of help
- He/she needs a little bit of help
- He/she does not need any help

14. How much assistance does the individual you care for need for completing daily activities outside the home?

- He/she cannot do any activities without help
- He/she needs a lot of help
- He/she needs a moderate amount of help
- He/she needs a little bit of help
- He/she does not need any help

**Development of an Ambulatory Module  
for the  
Spinal Muscular Atrophy  
Independence Scale**

**ROC2161**

**Wave 1 Patient Interview Guide**

(Version 5.0; 09/06/2020)



## CONTENTS

<b>WAVE 1 INTERVIEW OBJECTIVES &amp; OVERVIEW .....</b>	<b>3</b>
INTERVIEW OBJECTIVES.....	3
INTERVIEW OVERVIEW.....	3
INSTRUCTIONS FOR THE INTERVIEWER (TRAINED STUDY SITE PERSONNEL) .....	4
WHAT SHOULD THE INTERVIEWER DO IF AN ADVERSE EVENT IS MENTIONED? .....	5
<b>INTRODUCTION (5-7 MINUTES).....</b>	<b>8</b>
INTRODUCE YOURSELF AND THE PURPOSE OF THE STUDY (3-5 MINUTES) .....	8
INTERVIEW PROCEDURE .....	8
AUDIO RECORDING .....	8
REASSURE PARTICIPANTS OF CONFIDENTIALITY .....	8
ENCOURAGE PARTICIPANTS TO BE OPEN AND HONEST .....	9
ADVERSE EVENT REPORTING .....	9
DEMOGRAPHIC INFORMATION .....	9
<b>CONCEPT ELICITATION (45-50 MINUTES) .....</b>	<b>10</b>
<b>CLOSING THE INTERVIEW (3-5 MINUTES).....</b>	<b>12</b>
<b>APPENDICES.....</b>	<b>13</b>
APPENDIX A: PATIENT SOCIODEMOGRAPHIC FORM .....	13

# WAVE 1 INTERVIEW OBJECTIVES & OVERVIEW

---

## Interview objectives

Explore the independence or level of support needed when carrying out activities for daily living in individuals with SMA who are ambulant or able to stand without support (i.e. standers and walkers) in order to better understand the level of independence these individuals have with regards to these activities.

## Interview overview

Wave 1 will consist of 20 interviews, 12 will involve participants diagnosed with SMA aged between 12 and 60 years old and another 8 will involve caregivers of individuals with SMA aged between 2 and 12 years old.

Interviews will focus on concept elicitation; exploring issues relevant to the experience of living with SMA and the impact of the condition on participants ability to perform activities for daily living. The interview will be divided into the following sections:

Interview Stage	Objective	Approximate duration
1 Interviewer introduction (not recorded)	Set the context and disclaimers & collect demographic details	5-7 minutes
2 Concept elicitation	Discuss issues relevant to the experience of living with SMA, specifically the impact of the condition on patients` independence in relation to daily activities	45-50 minutes
3 Closing remarks	Allow the participant to add any relevant information at which point the interviewer will close the session with a brief explanation of what we are going to do with the information	2-3 minutes

Using the schedule above, the interview process should take approximately **60 minutes**. The time allocated for each section is an indication where the duration of the interview may vary between participants.

## Instructions for the interviewer (trained study site personnel)

It is very important that you avoid leading the participant. Ask all questions in as open-ended a manner as possible in order to allow the participant enough time to answer and make sure not to bias their responses.

Once a participant has mentioned a disease symptom or disease impact, you can ask questions to clarify their experience.

Examples of non-leading questions:

- *You mentioned [impact / experience]. Can you tell me more about what that is like?*
- *I am not sure I completely understand [impact / experience]. Can you give me an example?*
- *How long does [impact] last? How often does that happen? How bothersome is that?*

Example of a non-leading clarification when a patient gives a brief or single-word response

- *Can you elaborate a bit on this, for the sake of the recording?*

Expect patients to take a significant amount of **time** to respond to some questions. Please allow them enough time to answer even if this means there are “uncomfortable silences.” Sometimes, this indicates that the patient is taking time to search for the right words or think about responses.

**Probes** have been added for several topics. These are questions/issues that should be covered in the interview. However, in **all** instances, participants must be given the opportunity to respond to a question in their own way before any probes are used.

It is important for **all of the main areas of the interview guide** to be covered; however, they do not need to be covered in the order presented in the interview guide. If a topic comes up earlier, you may discuss it at that time. The interviewer should be familiar with the interview guide so that it is easy to “switch gears” as the patient naturally moves from topic to topic.

The **questions in italics** and **displayed in boxes** do not need to be asked exactly as written, or in the order presented below. The goal of this interview is to learn as much as possible about the range of symptoms and impacts that people experience. Use your best judgment and knowledge of the participant to help them share this information with you.

If the participant asks you questions of a medical nature, you should explain that you are not qualified to offer medical advice in this context and direct the patient to their physician.

## What should the interviewer do if an adverse event is mentioned?

An Adverse Event (AE) is defined as **“Any untoward medical occurrence in a person administered a medicinal product and which does not necessarily have to have a causal relationship with this treatment. An adverse event can be any unfavourable and unintended sign (e.g. an abnormal laboratory finding), symptom, or disease temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product.”**

An Adverse Event is a response to a medicinal product which is noxious and unintended. This includes adverse reactions which arise from the use of a medicinal product within the terms of the marketing authorization; or the use outside the terms of the marketing authorization, including these Special Situations:

**Overdose.** This refers to the administration of a quantity of a medicinal product given per administration or cumulatively, which is above the maximum recommended dose according to the authorised product information.

**Off-label use.** This relates to situations where the medicinal product is intentionally used for a medical purpose not in accordance with the authorised product information.

**Misuse.** This refers to situations where the medicinal product is intentionally and inappropriately used not in accordance with the authorised product information.

**Abuse.** This corresponds to the persistent or sporadic, intentional excessive use of a medicinal product, which is accompanied by harmful physical or psychological effects.

**Medication errors.** This refers to any unintentional error in the prescribing, dispensing, or administration of a medicinal product while in the control of the healthcare professional, patient, or consumer.

**Occupational exposure.** This refers to the exposure to a medicinal product as a result of one’s professional or non-professional occupation.

In addition, the following Reports considered as Special Situations (referred hereinafter to as “Special Situation Reports”) should be collected and transmitted to Roche:

- Data related to product usage in a paediatric or elderly population
- Data related to suspected transmission of an infectious agent via a medicinal product
- Suspected Adverse Reaction related to quality defect or falsified medicinal products (whether suspected or confirmed)
- Reports from class action lawsuits

Please note that the following Special Situations Reports should be collected and transmitted to Roche even in the absence of an Adverse Event:

- Data related to product usage during pregnancy or breastfeeding
- Data related to overdose, abuse, misuse, medication error or occupational exposure
- Lack of therapeutic efficacy

A product quality complaint (PQC) is any discrete concern that questions the identity, quality, durability, reliability, safety, efficacy, or performance of a product. The complaint may allege an adverse event, side effect, and injury or malfunction associated with the use of a product. It may also involve the design, packaging, or promotion of a product.

This is a non-interventional study with no study drug. However, if the individual with SMA mentions an adverse event that they have experienced while taking a Roche product, or a product you suspect is a Roche product, you should make a note of it and at the end of the interview go through the 'Adverse Event/Product Complaint Form' (Appendix B of this interview guide). At this time please state the following to the individual with SMA (Please note that this is only necessary if the information provided did not cover the bare minimum for what is required for the AE form):

- 🗣️ “During the interview you mentioned a problem that you experienced while taking a medicinal product. I would like to spend a couple of minutes with you now to collect some more details about the problem. Is that OK with you?”
- 🗣️ **If yes and the AE is related to a Roche product:** “Thank you. The information you provide will be sent to the study sponsor, who may wish to contact your doctor for further information. If you agree to provide your doctor’s name, this will not be linked in any way to your other responses given during the interview. Are you happy to provide the name of your doctor?” (If a Roche product, complete the form in Appendix R).
- 🗣️ **If yes and the AE is related to a non-Roche product:** “Thank you. The information you provide will be sent to the [relevant authority] who are responsible for keeping record of any problems experienced whilst taking a medication in [Country]
- 🗣️ **If no:** “OK that’s fine. However, as the information you were given about this study explained, we do have to report this problem [if Roche product: to the sponsor] [if non-Roche product: to the (relevant national authority)]. This will be done anonymously, and none of your personal details will be shared with them.”

Completed **'Adverse Event/Product Complaint Forms'** should be sent to the sponsor's pharmacovigilance team via email within 24 hours, contact details below.

	Address	Tel	Fax	Email	Non-Roche products reporting system
<b>USA</b>	Genentech Drug Safety 1 DNA Way MS 258A South San Francisco, CA 94080 USA	+1 888 835 2555	+1 650 225 4682	<a href="mailto:us_drug.safety@gene.com">us_drug.safety@gene.com</a>	MedWatch  <a href="https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program">https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program</a>
<b>UK</b>	Roche Products Limited 6 Falcon Way Shire Park Welwyn Garden City AL7 1TW United Kingdom	+44 1707 367554		<a href="mailto:welwyn.uk_ds@roche.com">welwyn.uk_ds@roche.com</a>	MHRA  <a href="https://yellowcard.mhra.gov.uk/">https://yellowcard.mhra.gov.uk/</a>

Remember, an Adverse Event must be reported when the following are present:

**PREP – Patient, Reporter, Event, Product**

**1. A Patient or group of patients**

Identifiers such as age, age group, birth date, gender, role, profession should be collected if available, if not the event should still be reported.

**2. An identifiable Reporting source**

Information that identifies the reporter, establishing knowledge of the reportable event in an identifiable consumer. The reporter could be a patient, doctor, patient's parent, friend, colleague, or caregiver.

**3. An adverse Event**

Description of at least one event or product complaint.

**4. A suspect Product**

Patient must mention taking one of the products being marketed by the company that we are doing research for.

An AE can also include a complaint specific to the product itself, or packaging, as opposed to its effect on the patient. Examples include damaged or missing tablets; wrong strength or colour of tablets; damaged packaging; a label that cannot be read; a liquid that should be clear but is cloudy or contains unexpected particles; a bent needle, a broken syringe; a missing patient information leaflet or the identification of a potentially counterfeit medicine.

## INTRODUCTION (5-7 MINUTES)

---

Wave 1 Interviews will be used to explore the impact of SMA on daily activities with patients (n=12) and caregivers of paediatric patients (n=8). Interview data will be used to generate potential items for an ambulatory version of the SMAIS which will then be the focus of wave 2 and 3 interviews.

### Introduce yourself and the purpose of the study (3-5 minutes)

*Good morning, my name is [Interviewer name] and I work for Modus Outcomes. Modus Outcomes is a health research consulting firm that works with pharmaceutical companies to learn about as well as report on patients' experiences in various health conditions. Currently, Modus Outcomes is working with Roche Pharmaceuticals to understand the impact on daily life for individuals with SMA who can stand and/or walk. This information will inform the development of questionnaires that may be used in future clinical trials and in clinical practice to measure patients' independence when completing daily activities.*

### Interview procedure

*During this interview, you will have the opportunity to tell me about your personal experience of living with SMA. We are particularly interested in the impact of SMA on individuals' daily activities.*

*This interview should last about one hour. You can stop the interview at any time. Feel free to ask me questions about anything that you do not understand. You can also choose not to answer a question if you do not want to.*

### Audio recording

*These interviews will be audio recorded to ensure that we capture the information you share with us. Please try to speak clearly to ensure that the recorder can pick up what you are saying. If you need to take any breaks, please do not hesitate to let me know. I can pause the recording at any time.*

*Do you agree to have this interview audio recorded? [Yes/ No]*

*If the participant answers 'No', thank the participant for their time and remind them that they will subsequently be removed from the study and that any information previously collected can still be used, unless the participant request otherwise.*

### Reassure participants of confidentiality

*Any information you share with me today will be reported in a way that protects your privacy. A participant identification number will be assigned to the interview transcript that will be made available to Modus Outcomes, the company analysing the interview data. When the interview is transcribed, references to your name or names of family, friends, healthcare professionals, and other*

*people, as well as specific place names or any other information that could specifically identify you will be removed from the transcript.*

### **Encourage participants to be open and honest**

*We appreciate any information you can share with us today. Please be open in your responses and do not be afraid to share any of your opinions. We are hoping to learn from you and remind you that any information you share with us will remain strictly anonymous.*

### **Adverse event reporting**

*If you happen to report any medical event you experienced while on a pharmaceutical drug and mention it during this interview, we are required by law to report this to the company even if it has already been reported by you directly to the company or the regulatory authorities. You will remain anonymous and you will only be identified by your participant ID numbers on all relevant research documents.*

### **Demographic Information**

Complete the sociodemographic before starting the next section of the interview: concept elicitation (See Appendix A).

## CONCEPT ELICITATION (45-50 MINUTES)

---

**Objective:** to learn about SMA`s impact on daily activities

Note: the following questions do not need to be asked exactly as written, or in the order presented below. The goal of this section of the interview is to learn as much as possible about the concept of independence and the level of assistance required to complete daily activities (*suggested text appears in italics*).

*We will start our conversation today by discussing the impact SMA has on your life, specifically the impact on your daily activities.*

- *How does SMA impact your life on a daily basis?*
- *What is an average day like?*
  - *What is a ‘good’ and a ‘bad’ day like*
  - *Does the condition impact you differently at different times during a typical day?*
- *Are there functions or activities you have difficulties with?*
- *Are there functions or activities you find easy?*
- *Are there functions or activities you tend to avoid because of SMA?*
- *Are there activities you can only do or attempt with someone else`s support?*
- *Are there activities that you do completely independently without support from someone else?*

For each activity mentioned, if they have **NOT** discussed the following spontaneously, please **PROBE**:

- *What kind of support do you need?*

Probe specifically on **practical support** including any equipment that may be used for support as well as **physical, practical, and emotional support** that may be needed

If NOT spontaneously mentioned by the participant, **PROBE** about the following issues:

- *Physical functioning/Mobility*
  - *Walking indoors*
  - *Walking outdoors*
  - *Climbing up or down the stairs*
  - *Fatigue*
  - *Occasional Falls*

- *Frequent Falls*
- *Jogging/running Physical functioning / Upper limb*
  - *Lifting or carrying things*
  - *Reaching / pulling things*
  - *Gripping / holding objects*
  - *Moving / lifting limbs*
  - *Pushing / pulling objects*
  - *Applying pressure*
  - *Fatigue*
- *Physical functioning / Posture & Complex*
  - *Bending over*
  - *Lifting head*
  - *Stand unaided*
  - *Sitting upright without support*
  - *Sitting down from standing up*
  - *Standing up, with assistance from a sitting position*
  - *Pulling up to standing (for 5 sec, 10 sec?)*
  - *Standing on one leg*
  - *Rolling over*
  - *Occasional Falls*
  - *Frequent Falls*
  - *Problems with balance*
  - *Getting up from the floor (particularly with reference to falling and getting back up again)*
- *Instrumental, recreational, and social activities*
  - *Going to school or work*
  - *Mobility at school or at the workplace*
  - *Mobility at school or at the workplace*
  - *Playing at home or with friends*
  - *Socializing with friends or family*
  - *Writing / coloring / typing*
  - *Using computer for work or entertainment*
  - *Exercising/sports*
  - *Cooking or preparing food*
  - *Tidying up / cleaning or house chores*
- *Basic activities of daily living*
  - *Eating (Self-feeding)*
    - *Swallowing*
    - *Chewing Food*
  - *Bathing/showering*
  - *Toileting*
  - *Grooming*
  - *Moving about indoors*
  - *Moving about outdoors*

Before closing the section please **ASK**:

- ***Are there activities you can complete without any support/independently?***

*If so, please list...*

*For all activities mentioned here please further ask whether this has always been the case...*

- ***Were you always able to complete these activities independently?***
  - ***if not, what brought about this increased independence?***

## **CLOSING THE INTERVIEW (3-5 MINUTES)**

---

### **Closing the interview:**

*Those are all the questions I have for you today. Is there anything else you want to tell me? Follow up as appropriate.*

*The information you shared with us today – together with information from other patients and caregivers of children with SMA will help us learn more about the impact of SMA on patients` daily lives and inform the development of questionnaires to be used in upcoming clinical trials to measure patients` independence with daily activities. Thank you again for helping us with this research!*

**Conclude audio recording and close the interview.**

## APPENDICES

---

### APPENDIX A: Patient Sociodemographic Form

Please answer the following questions.

1. What is your age? \_\_\_\_\_
2. At what age were you diagnosed with SMA? \_\_\_\_\_
3. What is your gender?
  - Male
  - Female
4. What is your ethnicity?
  - White
  - Black
  - Asian
  - Biracial / Mixed (specify): \_\_\_\_\_
  - Other (specify): \_\_\_\_\_
5. With whom do you live?
  - Parent(s) (check this box whether you live with only parent(s) or parent(s) and siblings)
  - Spouse/Partner
  - Other Family Member
  - Alone
  - Other: \_\_\_\_\_
6. How would you describe your employment status?
  - Employed, full- time
  - Employed, part-time
  - Volunteer, full-time
  - Volunteer, full-time
  - Homemaker
  - Student, full-time
  - Student, part-time

- Unemployed
- Retired
- Disabled, full time
- Disabled and able to work, part-time
  - If employed part-time, is this due to your disability  Y/  N?
- Disabled and unable to work due to my disability

7. What is the highest level of education you have completed?

- Elementary/primary school
- Secondary/high school
- Some college
- College degree
- Some graduate work
- Graduate degree
- Postgraduate degree
- Technical or vocational degree
- Other: \_\_\_\_\_

8. How much assistance do you need for completing daily activities within your home?

- I cannot do any activities without help
- I need a lot of help
- I need a moderate amount of help
- I need a little bit of help
- I do not need any help

9. How much assistance do you need for completing daily activities outside your home?

- I cannot do any activities without help
- I need a lot of help
- I need a moderate amount of help
- I need a little bit of help
- I do not need any help

**Development of an Ambulatory Module  
for the  
Spinal Muscular Atrophy  
Independence Scale**

**ROC2161**

**Waves 2&3  
Caregiver Interview Guide**

(Version 7.0; 15/03/2021)



## CONTENTS

<b>1. WAVES 2&amp;3 INTERVIEW OBJECTIVES &amp; OVERVIEW</b>	<b>3</b>
INTERVIEW OBJECTIVES	3
INTERVIEW OVERVIEW	3
INSTRUCTIONS FOR THE INTERVIEWER (TRAINED STUDY SITE PERSONNEL)	4
WHAT SHOULD THE INTERVIEWER DO IF AN ADVERSE EVENT IS MENTIONED?	5
<b>2. INTRODUCTION (5-7 MINUTES)</b>	<b>9</b>
INTRODUCE YOURSELF AND THE PURPOSE OF THE STUDY (3-5 MINUTES)	9
INTERVIEW PROCEDURE	9
AUDIO RECORDING	9
REASSURE PARTICIPANTS OF CONFIDENTIALITY	10
ENCOURAGE PARTICIPANTS TO BE OPEN AND HONEST	10
ADVERSE EVENT REPORTING	10
DEMOGRAPHIC INFORMATION	10
<b>3. CONCEPT ELICITATION (15-20 MINUTES)</b>	<b>11</b>
<b>4. COGNITIVE DEBRIEFING (25-30 MINUTES)</b>	<b>12</b>
MOBILITY QUESTIONS (APPENDIX B)	13
<i>Instructions to Participants</i>	13
<i>REAL TIME PROBES, SPECIFIC TO MOBILITY QUESTIONS (Appendix B)</i>	13
<i>REAL TIME RESPONSE OPTION PROBES (Appendix B)</i>	18
<i>GENERAL FEEDBACK ON MOBILITY QUESTIONS INSTRUCTIONS (Appendix B)</i>	20
FEEDBACK ON RESPONSE OPTIONS (Appendix B)	21
FEEDBACK ON MOBILITY QUESTIONS (Appendix B)	22
<b>5. CLOSING THE INTERVIEW (3-5 MINUTES)</b>	<b>23</b>
<b>6. APPENDICES</b>	<b>24</b>
APPENDIX A: CAREGIVER SOCIODEMOGRAPHIC FORM	24
APPENDIX B – MOBILITY QUESTIONS	28

# 1. WAVES 2&3 INTERVIEW OBJECTIVES & OVERVIEW

---

## Interview objectives

- Explore the independence or level of support needed when completing daily activities in individuals with SMA who are able to walk with or without support.
- To cognitively debrief a set of newly generated questions to assess their relevance, appropriateness, clarity, ease of completion and relative importance within the context of use (COU) of ambulant or transitioning to ambulatory status SMA patients.

## Interview overview

Both wave 2 and 3 interviews (n=30) will consist of approximately 20 caregivers of paediatric patients under 12 years of age and 10 patients aged between 12 and 60 years of age with SMA.

Interviews will consist of a short concept elicitation section to explore issues relevant to the experience of living with SMA and the impact of the condition on participants ability to perform activities of daily living followed by a cognitive debriefing section where participants will be asked to complete and feedback on newly generated questions using a ‘think aloud’ process. The interview will be divided into the following sections:

<b>Interview Stage</b>	<b>Objective</b>	<b>Approximate duration</b>
1 Interviewer introduction (not recorded)	Set the context and disclaimers & collect demographic details	5-7 minutes
2 Concept elicitation	Discuss issues relevant to the experience of living with SMA, specifically the impact of the condition on patients` independence in relation to daily activities	15-20 minutes
3 Cognitive debriefing	Evaluate the relevance, appropriateness clarity and ease of completion of the newly generated questions.	25-30 minutes
4 Closing remarks	Allow the participant to add any relevant information at which point the interviewer will close the session with a brief explanation of what we are going to do with the information	2-3 minutes

Using the schedule above, the interview process should take approximately **60 minutes**. The time allocated for each section is an indication where the duration of interview time may vary between participants.

## Instructions for the interviewer (trained study site personnel)

It is very important that you avoid leading the participant. Ask all questions in as open-ended a manner as possible in order to allow the participant enough time to answer and make sure not to bias their responses.

Once a participant has mentioned a disease symptom or disease impact, you can ask questions to clarify their experience.

Examples of non-leading questions:

- *You mentioned [impact / experience]. Can you tell me more about what that is like?*
- *I am not sure I completely understand [impact / experience]. Can you give me an example?*
- *How long does [impact] last? How often does that happen? How bothersome is that?*

Example of a non-leading clarification when a patient gives a brief or single-word response

- *Can you elaborate a bit on this, for the sake of the recording?*

Expect patients to take a significant amount of **time** to respond to some questions. Please allow them enough time to answer even if this means there are “uncomfortable silences.” Sometimes, this indicates that the patient is taking time to search for the right words or think about responses.

**Probes** have been added for several topics. These are questions/issues that should be covered in the interview. However, in **all** instances, participants must be given the opportunity to respond to a question in their own way before any probes are used.

It is important for **all of the main areas of the interview guide** to be covered; however, they do not need to be covered in the order presented in the interview guide. If a topic comes up earlier, you may discuss it at that time. The interviewer should be familiar with the interview guide so that it is easy to “switch gears” as the patient naturally moves from topic to topic.

The ***questions in italics*** and **displayed in boxes** do not need to be asked exactly as written, or in the order presented below. The goal of this interview is to learn as much as possible about the range of symptoms and impacts that people experience. Use your best judgment and knowledge of the participant to help them share this information with you.

If the participant asks you questions of a medical nature, you should explain that you are not qualified to offer medical advice in this context and direct the patient to their physician.

## What should the interviewer do if an adverse event is mentioned?

An Adverse Event (AE) is defined as **“Any untoward medical occurrence in a person administered a Roche medicinal product and which does not necessarily have to have a causal relationship with this treatment. An adverse event can be any unfavourable and unintended sign (e.g. an abnormal laboratory finding), symptom, or disease temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product.”**

An Adverse Event is a response to a medicinal product which is noxious and unintended. This includes adverse reactions which arise from the use of a medicinal product within the terms of the marketing authorization; or the use outside the terms of the marketing authorization, including these Special Situations:

**Overdose.** This refers to the administration of a quantity of a medicinal product given per administration or cumulatively, which is above the maximum recommended dose according to the authorised product information.

**Off-label use.** This relates to situations where the medicinal product is intentionally used for a medical purpose not in accordance with the authorised product information.

**Misuse.** This refers to situations where the medicinal product is intentionally and inappropriately used not in accordance with the authorised product information.

**Abuse.** This corresponds to the persistent or sporadic, intentional excessive use of a medicinal product, which is accompanied by harmful physical or psychological effects.

**Medication errors.** This refers to any unintentional error in the prescribing, dispensing, or administration of a medicinal product while in the control of the healthcare professional, patient, or consumer.

**Occupational exposure.** This refers to the exposure to a medicinal product as a result of one’s professional or non-professional occupation.

In addition, the following Reports considered as Special Situations (referred hereinafter to as “Special Situation Reports”) should be collected and transmitted to Roche:

- Data related to product usage in a paediatric or elderly population
- Data related to suspected transmission of an infectious agent via a medicinal product
- Suspected Adverse Reaction related to quality defect or falsified medicinal products (whether suspected or confirmed)
- Reports from class action lawsuits

Please note that the following Special Situations Reports should be collected and transmitted to Roche even in the absence of an Adverse Event:

- Data related to product usage during pregnancy or breastfeeding
- Data related to overdose, abuse, misuse, medication error or occupational exposure
- Lack of therapeutic efficacy

A product quality complaint (PQC) is any discrete concern that questions the identity, quality, durability, reliability, safety, efficacy, or performance of a product. The complaint may allege an adverse event, side effect, and injury or malfunction associated with the use of a product. It may also involve the design, packaging, or promotion of a product.

This is a non-interventional study with no study drug. However, if the individual with SMA mentions an adverse event that they have experienced, you should make a note of it and at the end of the interview go through the 'Adverse Event/Product Complaint Form' (Appendix B of this interview guide) for any Roche product or for non-Roche products report it to the concerned authorities via the national spontaneous reporting system. At this time please state the following to the individual with SMA:

(Please note that this is only necessary if the information provided did not cover the bare minimum for what is required for the AE form):

- ☐ “During the interview you mentioned a problem that you experienced while taking a medicinal product. I would like to spend a couple of minutes with you now to collect some more details about the problem. Is that OK with you?”
- ☐ **If yes and the AE is related to a Roche product:** “Thank you. The information you provide will be sent to the study sponsor, who may wish to contact your doctor for further information. If you agree to provide your doctor’s name, this will not be linked in any way to your other responses given during the interview. Are you happy to provide the name of your doctor?” (If a Roche product, complete the form in Appendix R).
- ☐ **If yes and the AE is related to a non-Roche product:** “Thank you. The information you provide will be sent to the [relevant authority] who are responsible for keeping record of any problems experienced whilst taking a medication in [Country]”
- ☐ **If no:** “OK that’s fine. However, as the information you were given about this study explained, we do have to report this problem [if Roche product: to the sponsor] [if non-Roche product: to the (relevant national authority)]. This will be done anonymously, and none of your personal details will be shared with them.”

Completed **'Adverse Event/Product Complaint Forms'** should be sent to the sponsor's pharmacovigilance team via email **within 24 hours, contact details below.**

	Address	Tel	Fax	Email	Non-Roche product reporting system
<b>USA</b>	Genentech Drug Safety 1 DNA Way MS 258A South San Francisco, CA 94080 USA	+1 888 835 2555	+1 650 225 4682	<a href="mailto:us_drug.safety@gene.com">us_drug.safety@gene.com</a>	MedWatch <a href="https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program">https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program</a>
<b>UK</b>	Roche Products Limited 6 Falcon Way Shire Park Welwyn Garden City AL7 1TW United Kingdom	+44 1707 367554		<a href="mailto:welwyn.uk_dsc@roche.com">welwyn.uk_dsc@roche.com</a>	MHRA <a href="https://yellowcard.mhra.gov.uk/">https://yellowcard.mhra.gov.uk/</a>

Remember, an Adverse Event must be reported when the following are present:

**PREP – Patient, Reporter, Event, Product**

**1. A Patient or group of patients**

Identifiers such as age, age group, birth date, gender, role, profession should be collected if available, if not the event should still be reported.

**2. An identifiable Reporting source**

Information that identifies the reporter, establishing knowledge of the reportable event in an identifiable consumer. The reporter could be a patient, doctor, patient's parent, friend, colleague, or caregiver.

**3. An adverse Event**

Description of at least one event or product complaint.

**4. A suspect Product**

Patient must mention taking one of the products being marketed by the company that we are doing research for.

An AE can also include a complaint specific to the product itself, or packaging, as opposed to its effect on the patient. Examples include damaged or missing tablets; wrong strength or colour of tablets; damaged packaging; a label that cannot be read; a liquid that should be clear but is cloudy or contains unexpected particles; a bent needle, a broken syringe; a missing patient information leaflet or the identification of a potentially counterfeit medicine.

## 2. INTRODUCTION (5-7 MINUTES)

---

Waves 2 and 3 of the interviews (n=30) will be used to further explore the impact of SMA on daily activities and evaluate the relevance, appropriateness, clarity, and ease of completion of the newly generated questions.

### Introduce yourself and the purpose of the study (3-5 minutes)

Good morning, my name is [Interviewer name] and I work for Modus Outcomes. Modus Outcomes is a health research consulting firm that works with pharmaceutical companies to learn about as well as report on patients' experiences in various health conditions. Currently, Modus Outcomes is working with Roche Pharmaceuticals to understand how SMA impacts the daily life of patients with the condition and develop a questionnaire for assessing this impact in upcoming clinical trials.

### Interview procedure

*During this interview, you will have the opportunity to tell me about your personal experience of caring for a child with SMA. We are particularly interested in the impact of SMA on individuals' daily activities.*

*We would also like to discuss and get your feedback on a newly developed questionnaire which I understand has been emailed to you [**confirm they have received this and ask them to have this email at hand during the interview**]. You will be asked to complete the questionnaire as well as read the questions aloud and give your feedback on its relevance, clarity, and appropriateness for SMA.*

*This interview should last about one hour. You can stop the interview at any time. Feel free to ask me questions about anything that you do not understand. You can also choose not to answer a question if you do not want to.*

### Audio recording

*These interviews will be audio recorded to ensure that we capture the information you share with us. Please try to speak clearly to ensure that the recorder can pick up what you are saying. If you need to take any breaks, please do not hesitate to let me know. I can pause the recording at any time.*

*Do you agree to have this interview audio recorded? [Yes/ No]*

*If the participant answers 'No', thank the participant for their time and remind them that they will subsequently be removed from the study and that any information previously collected can still be used, unless the participant request otherwise.*

## Reassure participants of confidentiality

*Any information you share with me today will be reported in a way that protects your privacy. A participant identification number will be assigned to the interview transcript that will be made available to Modus Outcomes, the company analysing the interview data. When the interview is transcribed, references to your name or names of family, friends, healthcare professionals, and other people, as well as specific place names or any other information that could specifically identify you are removed from the transcript.*

## Encourage participants to be open and honest

*We appreciate any information you can share with us today. Please be open in your responses and do not be afraid to share any of your opinions. We are hoping to learn from you and remind you that any information you share with us will remain strictly anonymous.*

## Adverse event reporting

*If you happen to report any adverse event while on a pharmaceutical drug and mention it during this interview, we are required by law to report this to the company even if it has already been reported by you directly to the company or the regulatory authorities. You will remain anonymous and you will only be identified by your participant ID numbers on all relevant research documents.*

## Demographic Information

Complete the sociodemographic form before starting the next section of the interview: concept elicitation (See Appendix A).

### 3. CONCEPT ELICITATION (15-20 MINUTES)

---

**Objective: to learn about SMA`s impact on daily activities**

Note: the following questions do not need to be asked exactly as written, or in the order presented below. The goal of this section of the interview is to learn as much as possible about the range of impact on independence with regards to daily activities (*suggested text appears in italics*).

***We will start our conversation today by discussing the impact SMA has on your life, specifically the impact on your daily activities.***

- How does SMA impact your child`s life on a daily basis?
- Thinking about how SMA impacts your child, are there any functions or activities your child has difficulty with on a daily basis?
  - *What activities can your child only do or attempt with yours or someone else`s support?*
  - *What kind of help would your child need from you or another person?*
    - *[Ask them to provide an example]*
- Thinking about your child and their ability to complete everyday activities, what does the word `independence` mean in this context?
  - *Does independence include activities that your child does on their own without support from someone else?*
  - *Does independence include the use of supportive aids in order to carry out activities independently?*
    - *Which activities does your child do that uses supportive aids?*
- Are there functions or activities your child tends to avoid because of SMA

## 4. COGNITIVE DEBRIEFING (25-30 MINUTES)

---

**Objective:** cognitive debriefing of the newly developed questions.

Start by noting that you are moving to the next section of the interview and ask them to retrieve the email link shared with them prior to the interview.

**Note to interviewers:** Each participant will be given a unique survey link that will be emailed to the respondent prior to the interviews. During the interview, interviewers will provide participants with their unique ID to insert in the link before they can proceed to completing it.

**Note to interviewers:** Ask participants to complete all relevant questionnaire questions using the 'think aloud' process (**spontaneous feedback**). Specific item level **probes** are provided below for each section.

Ask the participants to access the link of the online survey shared with them via email.

**Note to interviewers:** If the participants are having problems accessing the link please email it to them again and stay on the line for 15 minutes whilst attempting to troubleshoot. If the issue is not resolved the interview will need to get rescheduled.

*I am interested to hear your views on a set of newly developed questionnaire questions developed to assess independence with daily activities in SMA. We would like to get your feedback on their relevance and appropriateness to caregivers. We will go through the questions one by one and I would like you to share your feedback and thoughts on the relevance and clarity of the questions and response options. There are no right or wrong answers, we are just interested in your honest impression of these questions. First, I will ask that you complete each question and I will then follow up with some specific questions. Please read the questions aloud as you are completing them and let us know what goes through your mind as you are picking a response.*

## Mobility Questions (Appendix B)

### Instructions to Participants

**N.B: INTERVIEWERS TO MARK PARTICIPANTS RESPONSE ON EXCEL SHEET (PROVIDED TO INTERVIEWERS)**

Ask participants to read aloud each question and to discuss their thinking process in choosing a response option.

Ask participants to **verbalize their thinking process** ('think aloud'), whilst completing the questions, including their rationale for choosing a response option and to draw your attention to anything that seems unclear, difficult to understand or respond to as well as anything that is not relevant to their experience.

**Encourage participants to think of the issues we are interested in getting feedback on when they are completing the questionnaire; specifically:**

- Relevance of questions
- Clarity of instructions, questions and response options
- Overlap between questions
- Ease of choosing a response option
- Questions are appropriate for self-administration

### REAL TIME PROBES, SPECIFIC TO MOBILITY QUESTIONS (Appendix B)

Please **specifically investigate** the following topics in relation to the mobility questions whilst the participants are completing them (Appendix B).

#### **Q3 & Q6:**

- (Compare Q3 and Q6) Do you find your child experiences any difference between standing up from, or sitting down into, a chair?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed? (Q3 and Q6)
    - If not, which of these questions (either Q3 or Q6) would you remove and why?

#### **Q4 & Q7:**

- (Compare Q4 and Q7) Do you find your child experiences any difference between standing up from a high/raised chair or sitting down into a high/raised chair?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed? (Q4 and Q7)
    - If not, which of these questions (either Q4 or Q7) would you remove and why?

#### **Q12 & Q13:**

- (Compare Q12 to Q13) Does your child experience any difference between getting into bed and getting out of bed?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

#### **Q14 & Q15:**

- (Compare Q14 to Q15) Does your child experience any difference between getting in and out of the bath?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

#### **Q16 & Q17:**

- (Compare Q16 to Q17) Does your child experience any difference between getting in and out of the shower?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q18 & Q19:**

- (Compare Q18 to Q19) Does your child experience any difference between getting on to the toilet and getting off the toilet?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q20 & Q21:**

- (Compare Q20 to Q21) Does your child experience any difference between getting into a car and getting out of a car?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q22 & Q23:**

- (Compare Q22 to Q23) Does your child experience any difference between stepping onto a bus/train compared to stepping off a bus/train?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q24 & Q25:**

- (Compare Q24 and Q25) Do you find your child experiences any difference between walking up or down a curb (i.e. on/off the pavement)?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q26 & Q27:**

- (Compare Q26 and Q27) Do you find your child experiences any difference between walking up or down a single step indoors?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q24 & Q25 Vs Q26 & Q27:**

- (Compare Q24&Q25 TO Q26&Q27) Do you find your child experiences any difference between stepping up or down a curb (i.e. on/off the pavement) compared to a step indoors)?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these questions i.e. stepping up or down a curb outside (i.e. on/off the pavement) compared to a step indoors)?
    - Do you think both sets of questions are relevant i.e. stepping up or down a curb outside (i.e. on/off the pavement) compared to a step indoors?
    - If not, which set of these questions i.e. stepping up or down a curb outside (i.e. on/off the pavement) OR up or down a step indoors is more relevant to you and why?
    - Do you think both sets of questions are needed?
    - If not, which of these questions would you remove and why?

**Q28 & Q29:**

- (Compare Q28 and Q29) Do you find your child experiences any difference between going up or down a flight of stairs?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q37:**

- Is walking in a busy or crowded place any different to walking in one which is not crowded for your child?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?

**Q38 & Q39:**

- (Compare Q38 and Q39) Do you find your child experiences any difference between walking on flat surfaces indoors compared to walking on flat surfaces outdoors?

- Is one more difficult than the other?
- Would your child require any more help for one compared to the other?
- Do you think there is overlap between these two questions?
  - Do you think both questions are relevant?
  - If not, which of these questions is more relevant to your child and why?
  - Do you think both questions are needed?
  - If not, which of these questions would you remove and why?

**Q40, Q41 and Q42:**

- (Compare Q40, Q41 and Q42) Do you find your child experiences any difference between walking on uneven surfaces compared to unstable surfaces (e.g. on sand or gravel) or slippery surfaces?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think all these questions are needed?
    - If not, which of these questions would you remove and why?

**REAL TIME RESPONSE OPTION PROBES (Appendix B)**

**N.B: INTERVIEWERS TO MARK PARTICIPANTS RESPONSE ON EXCEL SHEET (PROVIDED TO INTERVIEWERS)**

If participants select a response option suggesting needing help, please follow-up by considering the following;

- What type of 'help' are you thinking about when answering these questions?
  - Are you thinking about help from another person when answering this question?
  - Are you thinking of assistance such as the use of aids (e.g. a walking stick, wheelchair, hand rail)?
  - If the participant suggests that they are answering with both help from a person and/or aid in mind, how would the participant answer if the question

was only asking about help from another person (regardless of whether or not an aid was used)?

- Does the word 'help' seem appropriate to use in this context? If not, how would the participant advise rewording?
- Why did you choose the particular response option that you did?

**PROBES:**

- If the participant chose e.g. '**I need some help**', why did they not choose either '**I do not need help**' or '**I cannot do this at all without help**' ?
- If the participant chose '**Not applicable**', why did they choose that response option?
  - Is this because the child being too young to carry out the activity (e.g. Walk up a flight of stairs)?

## GENERAL FEEDBACK ON MOBILITY QUESTIONS INSTRUCTIONS (Appendix B)

### Please explore the following

- How clear were the instructions?
  - If they were not clear, why were they not clear?
  - How would you make them clearer?
  - (If not mentioned spontaneously) What are your thoughts on the examples of help in the instructions i.e. help from another person or from a supportive aid (e.g. a hand rail, walking stick, mobility scooter etc)?
- What does the word 'Independence' mean in this context?
  - Is the word independence appropriate for talking about SMA patients and the impact of the condition on daily activities?
  - Would you use a different word? If so, what would it be?
- What does the word 'assistance' mean in this context?
  - When you were answering the questions were you thinking of any aids (e.g. a walking stick, wheel chair, hand rail) your child may use?
  - Are there other words that you think would be better to use than 'assistance'?
  - Is it clear what 'assistance from another person' means?
  - Is the word assistance appropriate for talking about difficulties experienced by SMA patients?
  - Would you use a different word? If so, what would it be?
- Is it clear what aid and modification mean?
  - If not, why is it not clear?
  - Would you use a different word? If so, what would it be?
- If you could re-write the instructions, how do you think they could be improved or made clearer?
  - In what ways could they be improved?

## FEEDBACK ON RESPONSE OPTIONS (Appendix B)

**N.B: YOU MAY HAVE COVERED SOME OF THIS IN THE REAL TIME RESPONSE OPTION QUESTIONS, HOWEVER PLEASE EXPLORE THESE QUESTIONS FOR ANY ADDITIONAL FEEDBACK ON COMPLETION OF THE QUESTIONS.**

- How clear were the response options?
- How easy did you find it to select an answer? Did you find any of them difficult to understand?
  - [If yes, probe on why they found them difficult]
- What type of 'help' are you thinking about when answering these questions?
  - Are you thinking about help from another person when answering this question?
  - Are you thinking of assistance such as the use of aids (e.g. a walking stick, wheelchair, hand rail)?
  - If the participant suggests that they are answering with both help from a person and/or aid in mind, how would the participant answer if the question was only asking about help from another person (regardless of whether or not an aid was used)?
  - Does the word 'help' seem appropriate to use in this context? If not, how would the participant advise rewording?
- What does **'He/she does not need help'** mean to you?
  - [Ask them to provide an example]
  - Are you thinking about aids when answering this question?
- What does **"He/she needs some help"** mean to you?
  - [Ask them to provide an example]
  - Are you thinking about help from another person when answering this question?
  - Are you thinking about aids when answering this question?
- What does **"He/she cannot do this at all without help"** mean to you?
  - [Ask them to provide an example]
  - Are you thinking about help from another person when answering this question?
  - Are you thinking about aids when answering this question?
- What does **'Not applicable'** mean to you?
  - [Ask them to provide an example]

- Would you select this, for example, if the child you care for is too young to carry out the activity (e.g. brushing teeth)?
- There are four response options, do you think there are too many, too few or the right amount?
  - [Probe on what they would add or remove, as necessary]
- Is there anything you would change to make the response options clearer?

## **FEEDBACK ON MOBILITY QUESTIONS (Appendix B)**

- What was your overall impression of these questions?
- Was anything unclear in the questionnaire? Anything you did not understand?
- Which questions related to activities were most relevant to your child?
- Which questions related to activities were least relevant to your child?
- Were there any questions that were not at all relevant?
  - If so, why was the question not relevant?
    - Does the question relate to something that does not occur on a daily basis?
    - Does the question relate to something that your child avoids?
    - Some questions related to, for example: stepping on & off a curb and walking up or down a flight of stairs.
      - Do you think separate questions for each e.g. getting into/out of..., stepping on AND off a curb or e.g. walking up AND down a flight of stairs are relevant?
        - If yes, why?
      - Do you think the questions could be reduced to single questions?
        - If yes, how could this be done?
- Were there activities important to your child that were not included in these questions?
- Is there anything we could change to make the questionnaire better?

## 5. CLOSING THE INTERVIEW (3-5 MINUTES)

---

### **Closing the interview:**

*Those are all the questions I have for you today. Is there anything else you want to tell me? Follow up as appropriate.*

*The information you shared with us today – together with information from other patients and caregivers of children with SMA will help us learn more about the impact of SMA on patients` daily lives and inform the development of questionnaires for potential use in future clinical trials to measure patients` independence when completing daily activities. Thank you again for helping us with this research!*

**Conclude audio recording and close the interview.**

## 6. APPENDICES

---

### Appendix A: Caregiver Sociodemographic Form

1. What is your relationship to the individual you care for?
  - Parent
  - Grandparent
  - Other Relative
  - Professional Caregiver
  - Other: \_\_\_\_\_
2. Do you live with this individual?
  - Yes
  - No
3. If you do not live with the individual, how many hours per week, approximately, do you spend with the patient? \_\_\_\_\_
4. What is your age? \_\_\_\_\_
5. What is the individual's age? \_\_\_\_\_
6. At what age was the individual diagnosed with SMA? \_\_\_\_\_
7. What is your gender?
  - Male
  - Female
8. What is the individual's gender?
  - Male
  - Female
9. What is your ethnicity?
  - White
  - Black
  - Asian
  - Biracial / Mixed (specify): \_\_\_\_\_
  - Other (specify): \_\_\_\_\_
10. What is your marital status?
  - Married
  - Single

- Divorced\separated
- Widowed
- Other: \_\_\_\_\_

11. How would you describe your employment status?

- Employed, full- time
- Employed, part-time
- Volunteer, full-time
- Volunteer, part-time
- Homemaker
- Student, full-time
- Student, part-time
- Unemployed
- Retired
- Disabled

12. What is the highest level of education you have completed?

- Elementary/primary school
- Secondary/high school
- Some college
- College degree
- Some graduate work
- Graduate degree
- Postgraduate degree
- Technical or vocational degree
- Other: \_\_\_\_\_

**13. Supportive Aid Checklist**

Which of the following aids does your child use to carry out activities for daily living, please tick all that apply and if not listed please add to the free text option below;

- Grabbers (e.g. to help pick things up off the floor)
- Wear braces or orthotics (e.g. for walking, bending over)
- Walking stick, cane or crutch
- Walking frame or rollator
- Wheelchair, or mobility scooter
- Furniture walk (e.g. walk with help from furniture, walls, handrails)
- Handrail (e.g. for stairs, shower, bath)
- Raised/higher chair
- Bench in the shower
- Non-slip Mat (e.g. in the shower)
- Raised toilet seat
- Lift or Ramps to get wheelchair in and out of vehicle
- Stroller (e.g. for longer walks)
- Other – please indicate

14. How much assistance does the individual you care for need for completing daily activities within the home?

- He/she cannot do any activities without help
- He/she needs a lot of help
- He/she needs some help
- He/she needs a little bit of help
- He/she does not need any help

15. How much assistance does the individual you care for need for completing daily activities outside the home?

- He/she cannot do any activities without help
- He/she needs a lot of help
- He/she needs some help
- He/she needs a little bit of help
- He/she does not need any help

**Question 14 and 15 follow-up PROBES**

- What does the word 'help' mean in this context?
  - Does it mean help from another person OR
  - Does it mean help from supportive aids?
- If participant chooses 'I do not need any help': What does 'I do not need any help' mean to them

16. What is the furthest he/she can walk with support?

**PROBES**

- For example, can he/she walk across a room?
- From one room to another?
- If he/she know the distance then distance can be indicated

17. What is the furthest he/she can walk without support?

**PROBES**

- For example, can he/she walk across a room?
- From one room to another?
- If he/she know the distance then distance can be indicated

## Appendix B – Mobility Questions

We would like to learn about your level of independence for doing daily activities. Please select the option that best describes the **amount of assistance you need from another person or from a supportive aid (e.g. a hand rail, walking stick, mobility scooter etc)** to perform each activity. Please think about the **past 7 days** and pick only one answer per activity.

Please think about the amount of help needed from <b>another person</b> or from a <b>supportive aid</b> to perform the activity during the <b>past 7 days</b> .		I do not need help	I need some help	I cannot do this at all without help	Not applicable
1	Turn over in bed				
2	Sit up from lying down				
3	Stand up from a chair				
4	Stand up from a high/raised chair				
5	Stand up from a low chair				
6	Sit down into a chair				
7	Sit down into a high/raised chair				
8	Sit down into a low chair				
9	Stand/Get up from the floor				
10	Bend over to pick something up from the floor				
11	Getting up from a squatting position				
12	Getting into bed				
13	Getting out of bed				
14	Getting in the bath				
15	Getting out of the bath				
16	Getting in the shower				
17	Getting out of the shower				
18	Getting on to the toilet				
19	Getting off the toilet				
20	Getting into a car				
21	Getting out of a car				
22	Step onto a bus/train				
23	Step off a bus/train				
24	Step up on a curb				
25	Step down off a curb				
26	Walk up a single step indoors				
27	Walk down a single step indoors				
28	Walk up a flight of stairs				
29	Walk down a flight of stairs				

Please think about the amount of help needed from <b>another person</b> or from a <b>supportive aid</b> to perform the activity during the <b>past 7 days</b> .		I do not need help	I need some help	I cannot do this at all without help	Not applicable
30	Walk across a room				
31	Walk from room to room				
32	Walk a short distance outside, e.g. from house to car (10-50 feet)				
33	Walk a short distance around your community, e.g. shop to shop				
34	Walk for a mile or more				
35	Walk quickly if needed, e.g. to cross a road				
36	Walk in an unfamiliar place/environment				
37	Walk in a busy, crowded place				
38	Walk on a flat surface indoors				
39	Walk on a flat surface outside				
40	Walk on an uneven surface outside				
41	Walk on an unstable surface outside, e.g. sand, gravel				
42	Walk on a slippery surface				



**Development of an Ambulatory Module  
for the  
Spinal Muscular Atrophy  
Independence Scale**

**ROC2161**

**Waves 2&3**

**Patient Interview Guide**

(Version 7.0; 15/03/2021)



## CONTENTS

<b>1. WAVES 2&amp;3 INTERVIEW OBJECTIVES &amp; OVERVIEW .....</b>	<b>3</b>
INTERVIEW OBJECTIVES.....	3
INTERVIEW OVERVIEW.....	3
INSTRUCTIONS FOR THE INTERVIEWER (TRAINED STUDY SITE PERSONNEL) .....	4
WHAT SHOULD THE INTERVIEWER DO IF AN ADVERSE EVENT IS MENTIONED? .....	5
<b>2. INTRODUCTION (5-7 MINUTES) .....</b>	<b>9</b>
INTRODUCE YOURSELF AND THE PURPOSE OF THE STUDY (3-5 MINUTES).....	9
INTERVIEW PROCEDURE.....	9
AUDIO RECORDING.....	9
REASSURE PARTICIPANTS OF CONFIDENTIALITY .....	10
ENCOURAGE PARTICIPANTS TO BE OPEN AND HONEST.....	10
ADVERSE EVENT REPORTING.....	10
DEMOGRAPHIC INFORMATION.....	10
<b>3. CONCEPT ELICITATION (15-20 MINUTES) .....</b>	<b>11</b>
<b>4. COGNITIVE DEBRIEFING (25-30 MINUTES) .....</b>	<b>12</b>
MOBILITY QUESTIONS (APPENDIX B) .....	13
<i>Instructions to participants</i> .....	13
<i>REAL TIME PROBES, SPECIFIC TO MOBILITY QUESTIONS (Appendix B)</i> .....	13
<i>REAL TIME RESPONSE OPTION PROBES (Appendix B)</i> .....	19
<i>GENERAL FEEDBACK ON MOBILITY INSTRUCTIONS (Appendix B)</i> .....	20
INSTRUMENTAL ACTIVITIES FOR DAILY LIVING (IADL) QUESTIONS (APPENDIX C) .....	23
<i>Instructions to participants</i> .....	23
<i>REAL TIME RESPONSE OPTION PROBES (Appendix C)</i> .....	23
<i>GENERAL FEEDBACK ON IADL INSTRUCTIONS (Appendix C)</i> .....	24
<b>5. CLOSING THE INTERVIEW (3-5 MINUTES).....</b>	<b>27</b>
<b>6. APPENDICES .....</b>	<b>28</b>
APPENDIX A: PATIENT SOCIODEMOGRAPHIC FORM .....	28
APPENDIX B – MOBILITY QUESTIONS.....	32
APPENDIX C – INSTRUMENTAL ACTIVITIES FOR DAILY LIVING QUESTIONS .....	34

# 1. WAVES 2&3 INTERVIEW OBJECTIVES & OVERVIEW

---

## Interview objectives

- Explore the independence or level of support needed when completing daily activities in individuals with SMA who are ambulant or able to walk with support.
- To cognitively debrief a set of newly generated questions to assess their relevance, appropriateness, clarity, ease of completion and relative importance within the context of use (COU) of ambulant on transitioning to ambulatory status SMA patients.

## Interview overview

Both wave 2 and 3 interviews (n=30) will consist of approximately 20 caregivers of paediatric patients under 12 years of age and 10 patients aged between 12 and 60 years of age suffering with SMA..

Interviews will consist of a short concept elicitation section to explore issues relevant to the experience of living with SMA and the impact of the condition on participants ability to perform activities for daily living followed by a cognitive debriefing section where participants will be asked to complete and feedback on newly generated questions using a ‘think aloud’ process. The interview will be divided into the following sections:

<b>Interview Stage</b>	<b>Objective</b>	<b>Approximate duration</b>
1 Interviewer introduction ( <b>not recorded</b> )	Set the context and disclaimers & collect demographic details	5-7 minutes
2 Concept elicitation	Discuss issues relevant to the experience of living with SMA, specifically the impact of the condition on patients` independence in relation to daily activities.	15-20 minutes
3 Cognitive debriefing	Evaluate the relevance, appropriateness clarity and ease of completion of the newly generated questions	25-30 minutes
4 Closing remarks	Allow the participant to add any relevant information at which point the interviewer will close the session with a brief explanation of what we are going to do with the information	2-3 minutes

Using the schedule above, the interview process should take approximately **60 minutes**. The time allocated for each section is an indication where the duration of interview time may vary between participants.

## Instructions for the interviewer (trained study site personnel)

It is very important that you avoid leading the participant. Ask all questions in as open-ended a manner as possible in order to allow the participant enough time to answer and make sure not to bias their responses.

Once a participant has mentioned a disease symptom or disease impact, you can ask questions to clarify their experience.

Examples of non-leading questions:

- *You mentioned [impact / experience]. Can you tell me more about what that is like?*
- *I am not sure I completely understand [impact / experience]. Can you give me an example?*
- *How long does [impact] last? How often does that happen? How bothersome is that?*

Example of a non-leading clarification when a patient gives a brief or single-word response

- *Can you elaborate a bit on this, for the sake of the recording?*

Expect patients to take a significant amount of **time** to respond to some questions. Please allow them enough time to answer even if this means there are “uncomfortable silences.” Sometimes, this indicates that the patient is taking time to search for the right words or think about responses.

**Probes** have been added for several topics. These are questions/issues that should be covered in the interview. However, in **all** instances, participants must be given the opportunity to respond to a question in their own way before any probes are used.

It is important for **all of the main areas of the interview guide** to be covered; however, they do not need to be covered in the order presented in the interview guide. If a topic comes up earlier, you may discuss it at that time. The interviewer should be familiar with the interview guide so that it is easy to “switch gears” as the patient naturally moves from topic to topic.

The ***questions in italics*** and **displayed in boxes** do not need to be asked exactly as written, or in the order presented below. The goal of this interview is to learn as much as possible about the range of symptoms and impacts that people experience. Use your best judgment and knowledge of the participant to help them share this information with you.

If the participant asks you questions of a medical nature, you should explain that you are not qualified to offer medical advice in this context and direct the patient to their physician.

## What should the interviewer do if an adverse event is mentioned?

An Adverse Event (AE) is defined as **“Any untoward medical occurrence in a person administered a Roche medicinal product and which does not necessarily have to have a causal relationship with this treatment. An adverse event can be any unfavourable and unintended sign (e.g. an abnormal laboratory finding), symptom, or disease temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product.”**

An Adverse Event is a response to a medicinal product which is noxious and unintended. This includes adverse reactions which arise from the use of a medicinal product within the terms of the marketing authorization; or the use outside the terms of the marketing authorization, including these Special Situations:

**Overdose.** This refers to the administration of a quantity of a medicinal product given per administration or cumulatively, which is above the maximum recommended dose according to the authorised product information.

**Off-label use.** This relates to situations where the medicinal product is intentionally used for a medical purpose not in accordance with the authorised product information.

**Misuse.** This refers to situations where the medicinal product is intentionally and inappropriately used not in accordance with the authorised product information.

**Abuse.** This corresponds to the persistent or sporadic, intentional excessive use of a medicinal product, which is accompanied by harmful physical or psychological effects.

**Medication errors.** This refers to any unintentional error in the prescribing, dispensing, or administration of a medicinal product while in the control of the healthcare professional, patient, or consumer.

**Occupational exposure.** This refers to the exposure to a medicinal product as a result of one’s professional or non-professional occupation.

In addition, the following Reports considered as Special Situations (referred hereinafter to as “Special Situation Reports”) should be collected and transmitted to Roche:

- Data related to product usage in a paediatric or elderly population
- Data related to suspected transmission of an infectious agent via a medicinal product
- Suspected Adverse Reaction related to quality defect or falsified medicinal products (whether suspected or confirmed)

- Reports from class action lawsuits

Please note that the following Special Situations Reports should be collected and transmitted to Roche even in the absence of an Adverse Event:

- Data related to product usage during pregnancy or breastfeeding
- Data related to overdose, abuse, misuse, medication error or occupational exposure
- Lack of therapeutic efficacy

A product quality complaint (PQC) is any discrete concern that questions the identity, quality, durability, reliability, safety, efficacy, or performance of a product. The complaint may allege an adverse event, side effect, and injury or malfunction associated with the use of a product. It may also involve the design, packaging, or promotion of a product.

This is a non-interventional study with no study drug. However, if the individual with SMA mentions an adverse event that they have experienced while taking a Roche product, or a product you suspect is a Roche product, you should make a note of it and at the end of the interview go through the 'Adverse Event/Product Complaint Form' (Appendix B of this interview guide). At this time please state the following to the individual with SMA (Please note that this is only necessary if the information provided did not cover the bare minimum for what is required for the AE form):

- 🗣️ “During the interview you mentioned a problem that you experienced while taking a medicinal product. I would like to spend a couple of minutes with you now to collect some more details about the problem. Is that OK with you?”
- 🗣️ **If yes and the AE is related to a Roche product:** “Thank you. The information you provide will be sent to the study sponsor, who may wish to contact your doctor for further information. If you agree to provide your doctor’s name, this will not be linked in any way to your other responses given during the interview. Are you happy to provide the name of your doctor?” (If a Roche product, complete the form in Appendix R).
- 🗣️ **If yes and the AE is related to a non-Roche product:** “Thank you. The information you provide will be sent to the [relevant authority] who are responsible for keeping record of any problems experienced whilst taking a medication in [Country]
- 🗣️ **If no:** “OK that’s fine. However, as the information you were given about this study explained, we do have to report this problem [if Roche product: to the sponsor] [if non-Roche product: to the (relevant national authority)]. This will be done anonymously, and none of your personal details will be shared with them.”

Completed **'Adverse Event/Product Complaint Forms'** should be sent to the sponsor's pharmacovigilance team via email within 24 hours, contact details below.

	Address	Tel	Fax	Email	Non-Roche products reporting system
<b>USA</b>	Genentech Drug Safety 1 DNA Way MS 258A South San Francisco, CA 94080 USA	+1 888 835 2555	+1 650 225 4682	<a href="mailto:us_drug.safety@gene.com">us_drug.safety@gene.com</a>	MedWatch  <a href="https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program">https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program</a>
<b>UK</b>	Roche Products Limited 6 Falcon Way Shire Park Welwyn Garden City AL7 1TW United Kingdom	+44 1707 367554		<a href="mailto:welwyn.uds@roche.com">welwyn.uds@roche.com</a>	MHRA  <a href="https://yellowcard.mhra.gov.uk/">https://yellowcard.mhra.gov.uk/</a>

Remember, an Adverse Event must be reported when the following are present:

**PREP – Patient, Reporter, Event, Product**

**1. A Patient or group of patients**

Identifiers such as age, age group, birth date, gender, role, profession should be collected if available, if not the event should still be reported.

**2. An identifiable Reporting source**

Information that identifies the reporter, establishing knowledge of the reportable event in an identifiable consumer. The reporter could be a patient, doctor, patient's parent, friend, colleague, or caregiver.

**3. An adverse Event**

Description of at least one event or product complaint.

**4. A suspect Product**

Patient must mention taking one of the products being marketed by the company that we are doing research for.

An AE can also include a complaint specific to the product itself, or packaging, as opposed to its effect on the patient. Examples include damaged or missing tablets; wrong strength or colour of tablets; damaged packaging; a label that cannot be read; a liquid that should be clear but is cloudy or contains unexpected particles; a bent needle, a broken syringe; a missing patient information leaflet or the identification of a potentially counterfeit medicine.

## 2. INTRODUCTION (5-7 MINUTES)

---

Waves 2 and 3 of the interviews (n=30) will be used to further explore the impact of SMA on daily activities and evaluate the relevance appropriateness, clarity, and ease of completion of the newly generated questions.

### Introduce yourself and the purpose of the study (3-5 minutes)

*Good morning, my name is [Interviewer name] and I work for Modus Outcomes. Modus Outcomes is a health research consulting firm that works with pharmaceutical companies to learn about as well as report on patients' experiences in various health conditions. Currently, Modus Outcomes is working with Roche Pharmaceuticals to understand how SMA impacts the daily life of patients with the condition and develop a questionnaire for assessing this impact in upcoming clinical trials.*

### Interview procedure

*During this interview, you will have the opportunity to tell me about your personal experience of living with SMA. We are particularly interested in the impact of SMA on individuals' daily activities.*

*We would also like to discuss and get your feedback on a newly developed questionnaire which I understand has been emailed to you **[confirm they have received this and ask them to have this email at hand during the interview]**. You will be asked to complete the questionnaire as well as read the questions aloud and give your feedback on its relevance, clarity, and appropriateness for SMA.*

*This interview should last about one hour. You can stop the interview at any time. Feel free to ask me questions about anything that you do not understand. You can also choose not to answer a question if you do not want to.*

### Audio recording

*These interviews will be audio recorded to ensure that we capture the information you share with us. Please try to speak clearly to ensure that the recorder can pick up what you are saying. If you need to take any breaks, please do not hesitate to let me know. I can pause the recording at any time.*

*Do you agree to have this interview audio recorded? [Yes/ No]*

*If the participant answers 'No', thank the participant for their time and remind them that they will subsequently be removed from the study and that any information previously collected can still be used, unless the participant requests otherwise.*

## **Reassure participants of confidentiality**

*Any information you share with me today will be reported in a way that protects your privacy. A participant identification number will be assigned to the interview transcript that will be made available to Modus Outcomes, the company analysing the interview data. When the interview is transcribed, references to your name or names of family, friends, healthcare professionals, and other people, as well as specific place names or any other information that could specifically identify you are removed from the transcript.*

## **Encourage participants to be open and honest**

*We appreciate any information you can share with us today. Please be open in your responses and don't be afraid to share any of your opinions. We are hoping to learn from you and remind you that any information you share with us will remain strictly anonymous.*

## **Adverse event reporting**

*If you happen to report any adverse event you experienced while on a pharmaceutical drug and mention it during this interview, we are required by law to report this to the company even if it has already been reported by you directly to the company or the regulatory authorities. You will remain anonymous and you will only be identified by your participant ID numbers on all relevant research documents.*

## **Demographic Information**

Complete the sociodemographic form before starting the next section of the interview: concept elicitation (See Appendix A).

### 3. CONCEPT ELICITATION (15-20 MINUTES)

---

**Objective:** to learn about SMA`s impact on daily activities

Note: the following questions do not need to be asked exactly as written, or in the order presented below. The goal of this section of the interview is to learn as much as possible about the range of impact on independence with regards to daily activities (*suggested text appears in italics*).

***We will start our conversation today by discussing the impact SMA has on your life, specifically the impact on your daily activities.***

- How does SMA impact your life on a daily basis?
- Thinking about how SMA impacts your life, are there any functions or activities you have difficulty with on a daily basis?
  - *What activities can you only do or attempt with yours or someone else`s support?*
  - *What kind of help would you need from you or another person?*
    - [Ask them to provide an example]
- Thinking about your ability to complete every day activities, what does the word ‘independence’ mean in this context?
  - *Does independence include activities you do on your own without support from someone else?*
  - *Does independence include the use of supportive aids in order to carry out activities independently?*
    - *Which activities do you do using supportive aids?*
- Are there functions or activities you avoid because of SMA?

## 4. COGNITIVE DEBRIEFING (25-30 MINUTES)

---

**Objective:** cognitive debriefing of the newly developed questions.

Start by noting that you are moving to the next section of the interview and ask them to retrieve the email link shared with them prior to the interview.

**Note to interviewers:** Each participant will be given a unique survey link that will be emailed to the respondent prior to the interviews. During the interview, interviewers will provide participants with their unique ID to insert in the link before they can proceed to completing it.

**Note to interviewers:** Ask participants to complete all relevant questionnaire questions using the 'think aloud' process (**spontaneous feedback**). Specific item level **probes** are provided below for each section.

Ask the participants to access the link of the online survey shared with them via email.

**Note to interviewers:** If the participants are having problems accessing the link please email it to them again and stay on the line for 15 minutes whilst attempting to troubleshoot. If the issue is not resolved the interview will need to get rescheduled.

*I am interested to hear your views on a set of newly developed questionnaire questions developed to assess independence with daily activities in SMA. We would like to get your feedback on their relevance and appropriateness to patients like yourself. We will go through the questions one by one and I would like you to share your feedback and thoughts on the relevance and clarity of the questions and response options. There are no right or wrong answers, we are just interested in your honest impression of these questions. First, I will ask that you complete each question and I will then follow up with some specific questions. Please read the questions aloud as you are completing them and let us know what goes through your mind as you are picking a response.*

## Mobility Questions (Appendix B)

### Instructions to participants

**N.B: INTERVIEWERS TO MARK PARTICIPANTS RESPONSE ON EXCEL SHEET (PROVIDED TO INTERVIEWERS)**

Ask participants to read aloud each question and to discuss their thinking process in choosing a response option.

Ask participants to **verbalize their thinking process** ('think aloud'), whilst completing the questions, including their rationale for choosing a response options and to draw your attention to anything that seems unclear, difficult to understand or respond to, or not relevant to their experiences.

**Encourage participants to think of the issues we are interested in getting feedback on when they are completing the questionnaire; specifically:**

- Relevance of questions,
- Clarity of instructions, questions and response options
- Overlap between questions
- Ease of choosing a response option,
- Questions are appropriate for self-administration

### REAL TIME PROBES, SPECIFIC TO MOBILITY QUESTIONS (Appendix B)

Please **specifically investigate** the following topics in relation to the mobility questions whilst the participants are completing them (Appendix B).

#### **Q3 & Q6:**

- (Compare Q3 and Q6) Do you find that there is any difference between standing up from or sitting down into a chair?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed? (Q3 and Q6)
    - If not, which of these questions (either Q3 or Q6) would you remove and why?

#### **Q4 & Q7:**

- (Compare Q4 and Q7) Do you find that there is any difference between standing up from a high/raised chair or sitting down into a high/raised chair?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed? (Q4 and Q7)
    - If not, which of these questions (either Q4 or Q7) would you remove and why?

#### **Q12 & Q13:**

- (Compare Q12 to Q13) Do you experience any difference between getting into bed and getting out of bed?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

#### **Q14 & Q15**

- (Compare Q14 to Q15) Do you experience any difference between getting in and out of the bath?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q16 and Q17:**

- (Compare Q16 to Q17) Do you experience any difference between getting in and out of the shower?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q18 & Q19**

- (Compare Q18 to Q19) Do you experience any difference between getting on to the toilet and getting off the toilet?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q20 & Q21:**

- (Compare Q20 to Q21) Do you experience any difference between getting into a car and getting out of a car?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q22 & Q23:**

- (Compare Q22 to Q23) Do you experience any difference between stepping onto a bus/train compared to stepping off a bus/train?

- Is one more difficult than the other?
- Would you require any more help for one compared to the other?
- Do you think there is overlap between these two questions?
  - Do you think both questions are relevant?
  - If not, which of these questions is more relevant to you and why?
  - Do you think both questions are needed?
  - If not, which of these questions would you remove and why?

**Q24 & Q25:**

- (Compare Q24 and Q25) Do you experience any difference between walking up or down a curb (i.e. on/off the pavement)?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q26 & Q27:**

- (Compare Q26 and Q27) Do you find you experience any difference between walking up or down a single step indoors?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q24 & Q25 Vs Q26 & Q27:**

- (Compare Q24&Q25 TO Q26&Q27) Do you find that there is any difference between stepping up or down a step indoors compared to a curb outside (i.e. on/off the pavement)?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?

- Do you think there is overlap between these questions i.e. stepping up or down a step indoors compared to a curb outside (i.e. on/off the pavement)?
  - Do you think both sets of questions are relevant i.e. stepping up or down a step indoors compared a curb outside (i.e. on/off the pavement)?
  - If not, which set of these questions i.e. stepping up or down a step indoors OR a step indoors compared a curb outside (i.e. on/off the pavement) is more relevant to you and why?
  - Do you think both sets of questions are needed?
  - If not, which of these questions would you remove and why?

**Q28 & Q29:**

- (Compare Q28 and Q29) Do you find that there is any difference between going up or down a flight of stairs?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed?
    - If not, which of these questions would you remove and why?

**Q37:**

- Is walking in a busy or crowded place any different to walking in one which is not crowded?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?

**Q38 & Q39:**

- (Compare Q38 and Q39) Do you find that there is any difference between walking on flat surfaces indoors compared to walking on flat surfaces outdoors?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?

- Do you think both questions are needed?
- If not, which of these questions would you remove and why?

**Q40, Q41 and Q42:**

- (Compare Q40, Q41 and Q42) Do you find that there is any difference between walking on uneven surfaces compared to unstable surfaces (e.g. on sand or gravel) or slippery surfaces?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the others?
  - Do you think there is overlap between these questions?
    - Do you think all of these questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think all these questions are needed?
    - If not, which of these questions would you remove and why?

## REAL TIME RESPONSE OPTION PROBES (Appendix B)

### **N.B: INTERVIEWERS TO MARK PARTICIPANTS RESPONSE ON EXCEL SHEET (PROVIDED TO INTERVIEWERS)**

If participants select a response option suggesting needing help, please follow-up by considering the following;

- What type of 'help' are you thinking about when answering these questions?
  - Are you thinking about help from another person when answering this question?
  - Are you thinking of help from any aids (e.g. a walking stick, wheelchair, hand rail)?
  - If the participant suggests that they are answering with both help from a person and/or aid in mind, how would the participant answer if the question was only asking about help from another person (regardless of whether or not an aid was used)?
  - Does the word 'help' seem appropriate to use in this context? If not, how would the participant advise rewording?
- Why did you choose the particular response option that you did?

#### **PROBES:**

- If the participant chose e.g. '**I need some help**', why did they not choose either '**I do not need help**' or '**I cannot do this at all without help**' ?
- If the participant chose '**Not applicable**', why did they choose that response option?
  - Is it because this is an activity they e.g. avoid?

## GENERAL FEEDBACK ON MOBILITY INSTRUCTIONS (Appendix B)

### Please explore the following

- How clear were the instructions?
  - If they were not clear, why were they not clear?
  - How would you make them clearer?
  - (If not mentioned spontaneously) What are your thoughts on the examples of help in the instructions i.e. help from another person or from a supportive aid (e.g. a hand rail, walking stick, mobility scooter etc)?
- What does the word 'Independence' mean in this context?
  - Is the word independence appropriate for talking about SMA patients and the impact of the condition on daily activities?
  - Would you use a different word? If so, what would it be?
- What does the word 'assistance' mean to you?
  - When you were answering the questions were you thinking of using any aids (e.g. a walking stick, wheel chair, hand rail) to carry out a given task?
  - Are there other words that you think would be better to use than 'assistance'?
  - Is it clear what 'assistance from another person' means?
  - Is the word assistance appropriate for talking about difficulties experienced by SMA patients?
  - Would you use a different word? If so, what would it be?
- Is it clear what aid means?
  - If not, why is it not clear?
  - Would you use a different word? If so, what would it be?
- If you could re-write the instructions, how do you think they could be improved or made clearer?
  - In what ways could they be improved?

## FEEDBACK ON RESPONSE OPTIONS (Appendix B)

**N.B: YOU MAY HAVE COVERED SOME OF THIS IN THE REAL TIME RESPONSE OPTION QUESTIONS, HOWEVER PLEASE EXPLORE THESE QUESTIONS FOR ANY ADDITIONAL FEEDBACK ON COMPLETION OF THE QUESTIONS.**

- How clear were the response options?
- How easy did you find it to select an answer? Did you find any of them difficult to understand?
  - [If yes, probe on why they found them difficult]
- What type of 'help' are you thinking about when answering these questions?
  - Are you thinking about help from another person when answering this question?
  - Are you thinking of assistance such as the use of aids (e.g. a walking stick, wheelchair, hand rail)?
  - If the participant suggests that they are answering with both help from a person and/or aid in mind, how would the participant answer if the question was only asking about help from another person (regardless of whether or not an aid was used)?
  - Does the word 'help' seem appropriate to use in this context? If not, how would the participant advise rewording?
- What does **'I do not need help'** mean to you?
  - [Ask them to provide an example]
  - Are you thinking about aids when answering this question?
- What does **"I need some help"** mean to you?
  - [Ask them to provide an example]
  - Are you thinking about help from another person when answering this question?
  - Are you thinking about aids when answering this question?
- What does **"I cannot do this at all without help"** mean to you?
  - [Ask them to provide an example]
  - Are you thinking about help from another person when answering this question?
  - Are you thinking about aids when answering this question?
- What does **'Not applicable'** mean to you?
  - [Ask them to provide an example]

- Would you select this, for example, if this activity is something you do not do on a daily basis? Or avoid because of SMA?
- There are four response options, do you think there are too many, too few or the right amount?
  - [Probe on what they would add or remove, as necessary]
- Is there anything you would change to make the response options clearer?

### **FEEDBACK ON MOBILITY QUESTIONS (Appendix B)**

- What was your overall impression of these questions?
- Was anything unclear in the questionnaire? Anything you did not understand?
- Which questions related to activities most relevant to you?
- Which questions related to activities least relevant to you?
- Were there any questions that were not at all relevant?
  - If so, why was the question not relevant?
    - Does the question relate to something that does not occur on a daily basis?
    - Does the question relate to something that you avoid?
    - Some questions related to, for example: getting into/out of, stepping on & off a curb and walking up or down a flight of stairs.
      - Do you think separate questions for each e.g. stepping on AND off a curb or e.g. walking up AND down a flight of stairs are relevant?
        - If yes, why?
      - Do you think the questions could be reduced to single questions?
        - If yes, how could this be done?
- Were there activities important to you that were not included in these questions?
- Is there anything we could change to make the questionnaire better?

## Instrumental Activities For Daily Living (IADL) Questions (Appendix C)

### Instructions to participants

**N.B: INTERVIEWERS TO MARK PARTICIPANTS RESPONSE ON EXCEL SHEET (PROVIDED TO INTERVIEWERS)**

Ask participants to read aloud each question and to discuss their thinking process in choosing a response option.

Ask participants to **verbalize their thinking process** ('think aloud'), whilst completing the questions, including their rationale for choosing a response options and to draw your attention to anything that seems unclear, difficult to understand or respond to, or not relevant to their experiences.

**Encourage participants to think of the issues we are interested in getting feedback on when they are completing the questionnaire; specifically:**

- Relevance of questions,
- Clarity of instructions, questions response options ,
- Overlap between questions
- Ease of choosing a response option,
- Questions are appropriate for self-administration

### REAL TIME RESPONSE OPTION PROBES (Appendix C)

**N.B: INTERVIEWERS TO MARK PARTICIPANTS RESPONSE ON EXCEL SHEET (PROVIDED TO INTERVIEWERS)**

If participants select a response option suggesting needing help, please follow-up by considering the following;

- What type of 'help' are you thinking about when answering these questions?
  - Are you thinking about help from another person when answering this question?
  - Are you thinking of help from any aids (e.g. a walking stick, wheelchair, hand rail)?

- If the participant suggests that they are answering with both help from a person and/or aid in mind, how would the participant answer if the question was only asking about help from another person (regardless of whether or not an aid was used)?
- Does the word 'help' seem appropriate to use in this context? If not, how would the participant advise rewording?
- Why did you choose the particular response option that you did?

PROBES:

- If the participant chose e.g. '**I need some help**', why did they not choose either '**I do not need help**' or '**I cannot do this at all without help**' ?
- If the participant chose '**Not applicable**', why did they choose that response option?
  - Is it because this is an activity they e.g. avoid?

## GENERAL FEEDBACK ON IADL INSTRUCTIONS (Appendix C)

### Please explore the following

- How clear were the instructions?
  - If they were not clear, why were they not clear?
  - How would you make them clearer?
  - (If not mentioned spontaneously) What are your thoughts on the examples of help in the instructions i.e. help from another person or from a supportive aid (e.g. a hand rail, walking stick, mobility scooter etc)?
- What does the word 'Independence' mean in this context?
  - Is the word independence appropriate for talking about SMA patients and the impact of the condition on daily activities?
  - Would you use a different word? If so, what would it be?
- What does the word 'assistance' mean to you?
  - When you were answering the questions were you thinking of using any aids (e.g. a walking stick, wheel chair, hand rail) to carry out a given task?
  - Are there other words that you think would be better to use than 'assistance'?
  - Is it clear what 'assistance from another person' means?
  - Is the word assistance appropriate for talking about difficulties experienced by SMA patients?
  - Would you use a different word? If so, what would it be?

- Is it clear what aid or modification mean?
  - If not, why is it not clear?
  - Would you use a different word? If so, what would it be?
- If you could re-write the instructions, how do you think they could be improved or made clearer?
  - In what ways could they be improved?

## FEEDBACK ON RESPONSE OPTIONS (Appendix C)

**N.B: YOU MAY HAVE COVERED SOME OF THIS IN THE REAL TIME RESPONSE OPTION QUESTIONS, HOWEVER PLEASE EXPLORE THESE QUESTIONS FOR ANY ADDITIONAL FEEDBACK ON COMPLETION OF THE QUESTIONS.**

- How clear were the response options?
- How easy did you find it to select an answer?
- Did you find any of them difficult to understand?
  - [If yes, probe on why they found them difficult]
- What type of ‘help’ are you thinking about when answering these questions?
  - Are you thinking about help from another person when answering this question?
  - Are you thinking of assistance such as the use of aids (e.g. a walking stick, wheelchair, hand rail)?
  - If the participant suggests that they are answering with both help from a person and/or aid in mind, how would the participant answer if the question was only asking about help from another person (regardless of whether or not an aid was used)?
  - Does the word ‘help’ seem appropriate to use in this context? If not, how would the participant advise rewording?
- What does **‘I do not need help’** mean to you?
  - [Ask them to provide an example]
  - Are you thinking about aids when answering this question?
- What does **“I need some help”** mean to you?
  - [Ask them to provide an example]
  - Are you thinking about help from another person when answering this question?

- Are you thinking about aids when answering this question?
- What does “**I cannot do this at all without help**” mean to you?
  - [Ask them to provide an example]
  - Are you thinking about help from another person when answering this question?
  - Are you thinking about aids when answering this question?
- What does ‘**Not applicable**’ mean to you?
  - [Ask them to provide an example]
  - Would you select this, for example, if this activity is something you do not do on a daily basis? Or avoid because of SMA?
- There are four response options, do you think there are too many, too few or the right amount?
  - [Probe on what they would add or remove, as necessary]
- Is there anything you would change to make the response options clearer?

### FEEDBACK ON IADL QUESTIONS (Appendix C)

- What was your overall impression of these questions?
- Was anything unclear in the questionnaire? Anything you did not understand?
- Which questions related to activities most relevant to you?
- Which questions related to activities least relevant to you?
- Were there any questions that were not at all relevant?
  - If so, why was the question not relevant?
    - Does the question relate to something that does not occur on a daily basis?
    - Does the question relate to something that you avoid?
- Were there activities important to you that were not included in these questions?
- Is there anything we could change to make the questionnaire better?

## 5. CLOSING THE INTERVIEW (3-5 MINUTES)

---

### **Closing the interview:**

*Those are all the questions I have for you today. Is there anything else you want to tell me? Follow up as appropriate.*

*The information you shared with us today – together with information from other patients and caregivers of children with SMA will help us learn more about the impact of SMA on patients` daily lives and inform the development of questionnaires to be used in upcoming clinical trials to measure patients` independence with daily activities. Thank you again for helping us with this research!*

**Conclude audio recording and close the interview.**

## 6. APPENDICES

---

### APPENDIX A: Patient Sociodemographic Form

Please answer the following questions.

1. What is your age? \_\_\_\_\_
2. At what age were you diagnosed with SMA? \_\_\_\_\_
3. What is your gender?
  - Male
  - Female
4. What is your ethnicity?
  - White
  - Black
  - Asian
  - Biracial / Mixed (specify): \_\_\_\_\_
  - Other (specify): \_\_\_\_\_
5. With whom do you live?
  - Parent(s) (check this box whether you live with only parent(s) or parent(s) and siblings)
  - Spouse/Partner
  - Other Family Member
  - Alone
  - Other: \_\_\_\_\_
6. How would you describe your employment status?
  - Employed, full- time
  - Employed, part-time
  - Volunteer, full-time
  - Volunteer, full-time
  - Homemaker
  - Student, full-time
  - Student, part-time
  - Unemployed

- Retired
- Disabled and able to work or volunteer, full time
- Disabled and able to work or volunteer, part-time
  - If part-time, is this due to your disability? Y  / N
- Disabled and unable to work or volunteer due to my disability

7. What is the highest level of education you have completed?

- Elementary/primary school
- Secondary/high school
- Some college
- College degree
- Some graduate work
- Graduate degree
- Postgraduate degree
- Technical or vocational degree
- Other: \_\_\_\_\_

**8. Supportive Aid Checklist**

Which of the following aids do you use to carry out activities for daily living, please tick all that apply and if not listed please add to the free text option below;

- Grabbers (e.g. to help pick things up off the floor)
- Wear braces or orthotics (e.g. for walking, bending over)
- Walking stick, cane or crutch
- Walking frame or rollator
- Wheelchair, or mobility scooter
- Furniture walk (e.g. walk with help from furniture, walls, handrails)
- Handrail (e.g. for stairs, shower, bath)
- Raised/higher chair
- Bench in the shower

- Non-slip Mat (e.g. in the shower)
- Raised toilet seat
- Lift or Ramps to get wheel chair in and out of vehicle
- Other – please indicate

9. How much assistance do you need for completing daily activities within your home?

- I cannot do any activities without help
- I need a lot of help
- I need some help
- I need a little bit of help
- I do not need any help

10. How much assistance do you need for completing daily activities outside your home?

- I cannot do any activities without help
- I need a lot of help
- I need some help
- I need a little bit of help
- I do not need any help

**Question 9 and 10 follow-up PROBES**

- What does the word 'help' mean in this context?
  - Does it mean help from another person OR
  - Does it mean help from supportive aids?
- If participant chooses 'I do not need any help': What does 'I do not need any help' mean to them?

11. What is the furthest you can walk with support?

**PROBES**

- *For example, can he/she walk across a room?*
- *From one room to another?*

- *If he/she know the distance then distance can be indicated*

12. What is the furthest you can walk without support?

**PROBES**

- *For example, can he/she walk across a room?*
- *From one room to another?*
- *If he/she know the distance then distance can be indicated*

## Appendix B – Mobility Questions

We would like to learn about your level of independence for doing daily activities. Please select the option that best describes the **amount of assistance you need from another person or from a supportive aid (e.g. a hand rail, walking stick, mobility scooter etc)** to perform each activity. Please think about the **past 7 days** and pick only one answer per activity.

Please think about the amount of help needed from <b>another person</b> or from a <b>supportive aid</b> to perform the activity during the <b>past 7 days</b> .		I do not need help	I need some help	I cannot do this at all without help	Not applicable
1	Turn over in bed				
2	Sit up from lying down				
3	Stand up from a chair				
4	Stand up from a high/raised chair				
5	Stand up from a low chair				
6	Sit down into a chair				
7	Sit down into a high/raised chair				
8	Sit down into a low chair				
9	Stand/Get up from the floor				
10	Bend over to pick something up from the floor				
11	Getting up from a squatting position				
12	Getting into bed				
13	Getting out of bed				
14	Getting in the bath				
15	Getting out of the bath				
16	Getting in the shower				
17	Getting out of the shower				
18	Getting on to the toilet				
19	Getting off the toilet				
20	Getting into a car				
21	Getting out of a car				
22	Step onto a bus/train				
23	Step off a bus/train				
24	Step up on a curb				
25	Step down off a curb				
26	Walk up a single step indoors				
27	Walk down a single step indoors				
28	Walk up a flight of stairs				
29	Walk down a flight of stairs				

	Please think about the amount of help needed from <b>another person</b> or from a <b>supportive aid</b> to perform the activity during the <b>past 7 days</b> .	I do not need help	I need some help	I cannot do this at all without help	Not applicable
30	Walk across a room				
31	Walk from room to room				
32	Walk a short distance outside, e.g. from house to car (10-50 feet)				
33	Walk a short distance around your community, e.g. shop to shop				
34	Walk for a mile or more				
35	Walk quickly if needed, e.g. to cross a road				
36	Walk in an unfamiliar place/environment				
37	Walk in a busy, crowded place				
38	Walk on a flat surface indoors				
39	Walk on a flat surface outside				
40	Walk on an uneven surface outside				
41	Walk on an unstable surface outside, e.g. sand, gravel				
42	Walk on a slippery surface				

## Appendix C – Instrumental Activities For Daily Living Questions

We would like to learn about your level of independence for doing daily activities. Please select the option that best describes the **amount of assistance you need from another person or from a supportive aid (e.g. a hand rail, walking stick, mobility scooter etc)** to perform each activity. Please think about the **past 7 days** and pick only one answer per activity.

Please think about the amount of help needed from <b>another person</b> or from a <b>supportive aid</b> to perform the activity during the <b>past 7 days</b> .		I do not need help	I need some help	I cannot do this at all without help	Not applicable
1	Wash dishes while standing				
2	Standing while preparing meals/cooking				
3	Cleaning the house				
4	Mopping/sweeping the floor				
5	Making your bed				
6	Mowing the lawn				
7	Vacuuming the floor				
8	Setting the table				
9	Tidying up or putting things/toys away				
10	Unloading the dishwasher				
11	Going shopping for groceries				

**Development of an Ambulatory Module  
for the  
Spinal Muscular Atrophy  
Independence Scale**

**ROC2161**

**Wave 3  
Caregiver Interview Guide**

(Version 8.0; 27/07/2021)



## CONTENTS

<b>1. WAVES 2&amp;3 INTERVIEW OBJECTIVES &amp; OVERVIEW</b>	<b>3</b>
INTERVIEW OBJECTIVES	3
INTERVIEW OVERVIEW	3
INSTRUCTIONS FOR THE INTERVIEWER (TRAINED STUDY SITE PERSONNEL)	3
WHAT SHOULD THE INTERVIEWER DO IF AN ADVERSE EVENT IS MENTIONED?	5
<b>2. INTRODUCTION (5-7 MINUTES)</b>	<b>9</b>
INTRODUCE YOURSELF AND THE PURPOSE OF THE STUDY (3-5 MINUTES)	9
INTERVIEW PROCEDURE	9
AUDIO RECORDING	9
REASSURE PARTICIPANTS OF CONFIDENTIALITY	10
ENCOURAGE PARTICIPANTS TO BE OPEN AND HONEST	10
ADVERSE EVENT REPORTING	10
DEMOGRAPHIC INFORMATION	10
<b>3. COGNITIVE DEBRIEFING (40 – 45 MINUTES)</b>	<b>11</b>
MOBILITY QUESTIONS (APPENDIX B)	12
<i>Instructions to Participants</i>	12
<i>REAL TIME PROBES, SPECIFIC TO MOBILITY QUESTIONS (Appendix B)</i>	12
<i>FEEDBACK ON MOBILITY QUESTIONS INSTRUCTIONS (Appendix B)</i>	20
FEEDBACK ON RESPONSE OPTIONS (Appendix B)	22
FEEDBACK ON MOBILITY QUESTIONS (Appendix B)	24
<b>4. CLOSING THE INTERVIEW (3-5 MINUTES)</b>	<b>25</b>
<b>5. APPENDICES</b>	<b>26</b>
APPENDIX A: CAREGIVER SOCIODEMOGRAPHIC FORM	26
APPENDIX B – MOBILITY QUESTIONS	29

# 1. WAVES 2&3 INTERVIEW OBJECTIVES & OVERVIEW

---

## Interview objectives

- Explore the independence or level of support needed when completing daily activities in individuals with SMA who are able to walk with or without support.
- To cognitively debrief a set of newly generated questions to assess their relevance, appropriateness, clarity, ease of completion and relative importance within the context of use (COU) of ambulant or transitioning to ambulatory status SMA patients.

## Interview overview

Both wave 2 and 3 interviews (n=30) will consist of approximately 20 caregivers of paediatric patients under 12 years of age and 10 patients aged between 12 and 60 years of age with SMA.

Interviews will consist of a cognitive debriefing section where participants will be asked to complete and feedback on newly generated questions using a 'think aloud' process. The interview will be divided into the following sections:

<b>Interview Stage</b>	<b>Objective</b>	<b>Approximate duration</b>
1 Interviewer introduction ( <b>not recorded</b> )	Set the context and disclaimers & collect demographic details	7-10 minutes
2 Cognitive debriefing	Evaluate the relevance, appropriateness clarity and ease of completion of the newly generated questions.	40-45 minutes
3 Closing remarks	Allow the participant to add any relevant information at which point the interviewer will close the session with a brief explanation of what we are going to do with the information	3-5 minutes

Using the schedule above, the interview process should take approximately **60 minutes**. The time allocated for each section is an indication where the duration of interview time may vary between participants.

## Instructions for the interviewer (trained study site personnel)

It is very important that you avoid leading the participant. Ask all questions in as open-ended a manner as possible in order to allow the participant enough time to answer and make sure not to bias their responses.

Once a participant has mentioned a disease symptom or disease impact, you can ask questions to clarify their experience.

Examples of non-leading questions:

- *You mentioned [impact / experience]. Can you tell me more about what that is like?*
- *I am not sure I completely understand [impact / experience]. Can you give me an example?*
- *How long does [impact] last? How often does that happen? How bothersome is that?*

Example of a non-leading clarification when a patient gives a brief or single-word response

- *Can you elaborate a bit on this, for the sake of the recording?*

Expect patients to take a significant amount of **time** to respond to some questions. Please allow them enough time to answer even if this means there are “uncomfortable silences.” Sometimes, this indicates that the patient is taking time to search for the right words or think about responses.

**Probes** have been added for several topics. These are questions/issues that should be covered in the interview. However, in **all** instances, participants must be given the opportunity to respond to a question in their own way before any probes are used.

It is important for **all of the main areas of the interview guide** to be covered; however, they do not need to be covered in the order presented in the interview guide. If a topic comes up earlier, you may discuss it at that time. The interviewer should be familiar with the interview guide so that it is easy to “switch gears” as the patient naturally moves from topic to topic.

The **questions in italics** and displayed in boxes do not need to be asked exactly as written, or in the order presented below. The goal of this interview is to learn as much as possible about the range of symptoms and impacts that people experience. Use your best judgment and knowledge of the participant to help them share this information with you.

If the participant asks you questions of a medical nature, you should explain that you are not qualified to offer medical advice in this context and direct the patient to their physician.

## What should the interviewer do if an adverse event is mentioned?

An Adverse Event (AE) is defined as **“Any untoward medical occurrence in a person administered a Roche medicinal product and which does not necessarily have to have a causal relationship with this treatment. An adverse event can be any unfavourable and unintended sign (e.g. an abnormal laboratory finding), symptom, or disease temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product.”**

An Adverse Event is a response to a medicinal product which is noxious and unintended. This includes adverse reactions which arise from the use of a medicinal product within the terms of the marketing authorization; or the use outside the terms of the marketing authorization, including these Special Situations:

**Overdose.** This refers to the administration of a quantity of a medicinal product given per administration or cumulatively, which is above the maximum recommended dose according to the authorised product information.

**Off-label use.** This relates to situations where the medicinal product is intentionally used for a medical purpose not in accordance with the authorised product information.

**Misuse.** This refers to situations where the medicinal product is intentionally and inappropriately used not in accordance with the authorised product information.

**Abuse.** This corresponds to the persistent or sporadic, intentional excessive use of a medicinal product, which is accompanied by harmful physical or psychological effects.

**Medication errors.** This refers to any unintentional error in the prescribing, dispensing, or administration of a medicinal product while in the control of the healthcare professional, patient, or consumer.

**Occupational exposure.** This refers to the exposure to a medicinal product as a result of one’s professional or non-professional occupation.

In addition, the following Reports considered as Special Situations (referred hereinafter to as “Special Situation Reports”) should be collected and transmitted to Roche:

- Data related to product usage in a paediatric or elderly population
- Data related to suspected transmission of an infectious agent via a medicinal product
- Suspected Adverse Reaction related to quality defect or falsified medicinal products (whether suspected or confirmed)
- Reports from class action lawsuits

Please note that the following Special Situations Reports should be collected and transmitted to Roche even in the absence of an Adverse Event:

- Data related to product usage during pregnancy or breastfeeding
- Data related to overdose, abuse, misuse, medication error or occupational exposure
- Lack of therapeutic efficacy

A product quality complaint (PQC) is any discrete concern that questions the identity, quality, durability, reliability, safety, efficacy, or performance of a product. The complaint may allege an adverse event, side effect, and injury or malfunction associated with the use of a product. It may also involve the design, packaging, or promotion of a product.

This is a non-interventional study with no study drug. However, if the individual with SMA mentions an adverse event that they have experienced, you should make a note of it and at the end of the interview go through the 'Adverse Event/Product Complaint Form' (Appendix B of this interview guide) for any Roche product or for non-Roche products report it to the concerned authorities via the national spontaneous reporting system. At this time please state the following to the individual with SMA:

(Please note that this is only necessary if the information provided did not cover the bare minimum for what is required for the AE form):

- ☐ “During the interview you mentioned a problem that you experienced while taking a medicinal product. I would like to spend a couple of minutes with you now to collect some more details about the problem. Is that OK with you?”
- ☐ **If yes and the AE is related to a Roche product:** “Thank you. The information you provide will be sent to the study sponsor, who may wish to contact your doctor for further information. If you agree to provide your doctor’s name, this will not be linked in any way to your other responses given during the interview. Are you happy to provide the name of your doctor?” (If a Roche product, complete the form in Appendix R).
- ☐ **If yes and the AE is related to a non-Roche product:** “Thank you. The information you provide will be sent to the [relevant authority] who are responsible for keeping record of any problems experienced whilst taking a medication in [Country]
- ☐ **If no:** “OK that’s fine. However, as the information you were given about this study explained, we do have to report this problem [if Roche product: to the sponsor] [if non-Roche product: to the (relevant national authority)]. This will be done anonymously, and none of your personal details will be shared with them.”

Completed **'Adverse Event/Product Complaint Forms'** should be sent to the sponsor's pharmacovigilance team via email **within 24 hours, contact details below.**

	Address	Tel	Fax	Email	Non-Roche product reporting system
<b>USA</b>	Genentech Drug Safety 1 DNA Way MS 258A South San Francisco, CA 94080 USA	+1 888 835 2555	+1 650 225 4682	<a href="mailto:us_drug.safety@gene.com">us_drug.safety@gene.com</a>	MedWatch <a href="https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program">https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program</a>
<b>UK</b>	Roche Products Limited 6 Falcon Way Shire Park Welwyn Garden City AL7 1TW United Kingdom	+44 1707 367554		<a href="mailto:welwyn.uk_dsc@roche.com">welwyn.uk_dsc@roche.com</a>	MHRA <a href="https://yellowcard.mhra.gov.uk/">https://yellowcard.mhra.gov.uk/</a>

Remember, an Adverse Event must be reported when the following are present:

**PREP – Patient, Reporter, Event, Product**

**1. A Patient or group of patients**

Identifiers such as age, age group, birth date, gender, role, profession should be collected if available, if not the event should still be reported.

**2. An identifiable Reporting source**

Information that identifies the reporter, establishing knowledge of the reportable event in an identifiable consumer. The reporter could be a patient, doctor, patient's parent, friend, colleague, or caregiver.

**3. An adverse Event**

Description of at least one event or product complaint.

**4. A suspect Product**

Patient must mention taking one of the products being marketed by the company that we are doing research for.

An AE can also include a complaint specific to the product itself, or packaging, as opposed to its effect on the patient. Examples include damaged or missing tablets; wrong strength or colour of tablets; damaged packaging; a label that cannot be read; a liquid that should be clear but is cloudy or contains unexpected particles; a bent needle, a broken syringe; a missing patient information leaflet or the identification of a potentially counterfeit medicine.

## 2. INTRODUCTION (7-10 MINUTES)

---

Waves 2 and 3 of the interviews (n=30) will be used to further explore the impact of SMA on daily activities and evaluate the relevance, appropriateness, clarity, and ease of completion of the newly generated questions.

### Introduce yourself and the purpose of the study (3-5 minutes)

Good morning, my name is [Interviewer name] and I work for Modus Outcomes. Modus Outcomes is a health research consulting firm that works with pharmaceutical companies to learn about as well as report on patients' experiences in various health conditions. Currently, Modus Outcomes is working with Roche Pharmaceuticals to understand how SMA impacts the daily life of patients with the condition and develop a questionnaire for assessing this impact in upcoming clinical trials.

### Interview procedure

*During this interview, we would like to discuss and get your feedback on a newly developed questionnaire which I understand has been emailed to you **[confirm they have received this and ask them to have this email at hand during the interview]**. You will be asked to complete the questionnaire as well as read the questions aloud and give your feedback on its relevance, clarity, and appropriateness for SMA.*

*This interview should last about one hour. You can stop the interview at any time. Feel free to ask me questions about anything that you do not understand. You can also choose not to answer a question if you do not want to.*

### Audio recording

*These interviews will be audio recorded to ensure that we capture the information you share with us. Please try to speak clearly to ensure that the recorder can pick up what you are saying. If you need to take any breaks, please do not hesitate to let me know. I can pause the recording at any time.*

*Do you agree to have this interview audio recorded? [Yes/ No]*

*If the participant answers 'No', thank the participant for their time and remind them that they will subsequently be removed from the study and that any information previously collected can still be used, unless the participant request otherwise.*

## Reassure participants of confidentiality

*Any information you share with me today will be reported in a way that protects your privacy. A participant identification number will be assigned to the interview transcript that will be made available to Modus Outcomes, the company analysing the interview data. When the interview is transcribed, references to your name or names of family, friends, healthcare professionals, and other people, as well as specific place names or any other information that could specifically identify you are removed from the transcript.*

## Encourage participants to be open and honest

*We appreciate any information you can share with us today. Please be open in your responses and do not be afraid to share any of your opinions. We are hoping to learn from you and remind you that any information you share with us will remain strictly anonymous.*

## Adverse event reporting

*If you happen to report any adverse event while on a pharmaceutical drug and mention it during this interview, we are required by law to report this to the company even if it has already been reported by you directly to the company or the regulatory authorities. You will remain anonymous and you will only be identified by your participant ID numbers on all relevant research documents.*

## Demographic Information

Complete the sociodemographic form before starting the next section of the interview: cognitive debriefing (See Appendix A).

### 3. COGNITIVE DEBRIEFING (40 – 45 MINUTES)

---

**Objective:** cognitive debriefing of the newly developed questions.

Start by asking the participant to retrieve the email link shared with them prior to the interview.

**Note to interviewers:** Each participant will be given a unique survey link that will be emailed to the respondent prior to the interviews. During the interview, interviewers will provide participants with their unique ID to insert in the link before they can proceed to completing it.

**Note to interviewers:** Ask participants to complete all relevant questionnaire items using the 'think aloud' process (**spontaneous feedback**). Specific item level **probes** are provided below for each section.

Ask the participants to access the link of the online survey shared with them via email.

**Note to interviewers:** If the participants are having problems accessing the link please email it to them again and stay on the line for 15 minutes whilst attempting to troubleshoot. If the issue is not resolved the interview will need to get rescheduled.

*I am interested to hear your views on a set of newly developed questionnaire items to assess independence with daily activities in SMA. We would like to get your feedback on their relevance and appropriateness to caregivers. We will go through the questions one by one and I would like you to share your feedback and thoughts on the relevance and clarity of the questions and response options. There are no right or wrong answers, we are just interested in your honest impression of these questions. First, I will ask that you complete each question and I will then follow up with some specific questions. Please read the questions aloud as you are completing them and let us know what goes through your mind as you are picking a response.*

## Mobility Questions (Appendix B)

### Instructions to Participants

#### **N.B: INTERVIEWERS TO MARK PARTICIPANTS RESPONSE ON EXCEL SHEET (PROVIDED TO INTERVIEWERS)**

Ask participants to read aloud each question and to discuss their thinking process in choosing a response option.

Ask participants to **verbalize their thinking process** ('think aloud'), whilst completing the questions, including their rationale for choosing a response option and to draw your attention to anything that seems unclear, difficult to understand or respond to as well as anything that is not relevant to their experience.

**Encourage participants to think of the issues we are interested in getting feedback on when they are completing the questionnaire; specifically:**

- Relevance of questions
- Clarity of instructions, questions and response options
- Overlap between questions
- Ease of choosing a response option
- Questions are appropriate for self-administration

### REAL TIME PROBES, SPECIFIC TO MOBILITY QUESTIONS (Appendix B)

Please **specifically investigate** the following topics in relation to the mobility questions whilst the participants are completing them (Appendix B). A \* indicates questions that should be prioritised.

\*Q1 – 41:

- If the participant selects 'Not Applicable' (NA) for any of the items (1-41) explore the following;
  - Why did you choose NA for that item?
    - Was this due to not performing the activity in the last 7 days?
    - Was it due to the item not being relevant to the child you care for due to their age?

**Q3 & Q6:**

- (Compare Q3 and Q6) Do you find your child experiences any difference between standing up from, or sitting down into, a regular chair?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - What are you thinking of when thinking of a 'regular' chair?

- What do you think the term 'regular' as a description for the chair?
- Is this an appropriate term?
- Are there other words/terms which you think would be more appropriate?
- Do you think there is overlap between these two questions?
  - Do you think both questions are relevant?
  - If not, which of these questions is more relevant to your child and why?
  - Do you think both questions are needed? (Q3 and Q6)

If not, which of these questions (either Q3 or Q6) would you remove and why?

#### **Q4 & Q7:**

- (Compare Q4 and Q7) Do you find your child experiences any difference between standing up from a high/raised chair or sitting down into a high/raised chair?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - What are you thinking of when thinking of a 'high' or 'raised' chair?
    - Do these terms ('high' or 'raised' chair) make you think of different chairs e.g. is a high chair different to a raised chair?
    - Are these appropriate terms?
      - If not, are there other words/terms which you think would be more appropriate?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - Do you think both questions are needed? (Q4 and Q7)
    - If not, which of these questions (either Q4 or Q7) would you remove and why?

#### **Q5 & Q8:**

- (Compare Q5 and Q8) Do you find your child experiences any difference between standing up from a low chair or sitting down into a low chair?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - What are you thinking of when thinking of a 'low' chair?
    - What do you think of the term 'low' as a description for the chair?
    - Is this an appropriate term?
    - Are there other words/terms which you think would be more appropriate?

- Do you think there is overlap between these two questions?
  - Do you think both questions are relevant?
  - If not, which of these questions is more relevant to your child and why?
  - Do you think both questions are needed? (Q5 and Q8)
  - If not, which of these questions (either Q5 or Q8) would you remove and why?

**\*Q3 – Q8:**

- (Compare Q3&6 to Q4&7 to Q5&8) Do you think all the questions in relation to sitting and standing from a chair are relevant/needed? (e.g., stand up from a regular chair / sit down into a regular chair OR stand up from a high/raised chair /sit down into a raised chair OR stand up from a low chair / sit down into a low chair)?
  - Which items would be most relevant?
  - Which items would be least relevant?

Would you remove any of the items and if so, why?

**Q11**

- N.B: If the participant answers 'cannot do this at all' please ask the following;
  - Is your child able to get into a squatting position?
  - If they are not able, could this item be improved to make it more relevant?
    - If so, how could it be improved?

**Q12 & Q13:**

- \*(Compare Q12 to Q13) Does your child experience any difference between getting into bed and getting out of bed?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

**Q14 & Q15:**

- \*(Compare Q14 to Q15) Does your child experience any difference between getting in and out of the bath?
  - Is one more difficult than the other?

- Would your child require any more help for one compared to the other?
- \*Do you think there is overlap between these two questions?
  - Do you think both questions are relevant?
  - If not, which of these questions is more relevant to your child and why?
  - \*Do you think both questions are needed?
  - \*If not, which of these questions would you remove and why?

**Q16 & Q17:**

- \*(Compare Q16 to Q17) Does your child experience any difference between getting in and out of the shower?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

**Q18**

- Does your child experience any difficulty standing in the shower?
  - If no, do you think this question is relevant to a questionnaire focussed on mobility in SMA?
    - If not, why? Could the item be improved in any way to make it more relevant?

**Q19 & Q20:**

- \*(Compare Q19 to Q20) Does your child experience any difference between getting on to the toilet and getting off the toilet?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

**Q23 & Q24:**

- \*(Compare Q23 and Q24) Do you find your child experiences any difference between walking up or down a single step indoors?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

**Q25 & Q26:**

- \*(Compare Q25 and Q26) Do you find your child experiences any difference between going up or down a flight of stairs?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

### Q27 & Q28:

- \*(Compare Q27 to Q28) Does your child experience any difference between getting into a car and getting out of a car?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

### Q29 & Q30:

- \*(Compare Q29 and Q30) Do you find your child experiences any difference between walking up or down a curb (i.e. on/off the pavement)?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

### Q35:

- Is walking in a busy or crowded place any different to walking in one which is not crowded for your child?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?

### Q37, Q38 and Q39:

- \*(Compare Q37, Q38 and Q39) Do you find your child experiences any difference between walking on uneven surfaces compared to unstable surfaces (e.g. on sand or gravel) or slippery surfaces?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these questions?
    - Do you think there is a difference between uneven surfaces and unstable surfaces?
      - If so, how are they different?
    - Do you think sand and gravel are good examples of unstable surfaces?
      - If not, what other examples might be more appropriate?
    - What were you thinking about when answering the question on slippery surfaces?
      - Do you think the addition of an example would help for this question e.g. wet, shiny or icy?
    - Do you think all of these questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think all these questions are needed?
    - \*If not, which of these questions would you remove and why?

### Q40 & 41

- \*Does your child experience any difference between walking up and walking down an incline?
  - Is one more difficult than the other?
  - Would your child require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to your child and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?
  - What were you thinking about when answering question 40; 'walking up an incline' and question 41; 'walking down an incline'?
    - What kind of incline are you thinking about?

- Could the items be improved in any way?

## FEEDBACK ON INSTRUCTIONS FOR MOBILITY (Appendix B)

### Please explore the following

- \*How clear were the instructions?
  - If they were not clear, why were they not clear?
  - How would you make them clearer?
  - Was it clear when to select the 'Not Applicable' (NA) option?
    - If not, why was this not clear?
    - Could this be improved in any way?
      - If you were to re-write when to select NA how would you word it to make it clearer?
- \*What does the word 'Independence' mean in this context?
  - Is the word independence appropriate for talking about SMA patients and the impact of the condition on daily activities?
  - Would you use a different word? If so, what would it be?
- \*What does the word 'assistance' mean in this context?
  - Is the word assistance appropriate for talking about difficulties experienced by SMA patients?
  - Would you use a different word? If so, what would it be?
- Were there any aids that you think should have been in the list of aids in the instruction's sections?
- \*Was it clear that the instructions were asking about the last 7 days?
  - Does 7 days seem appropriate for this questionnaire?
    - Should this be a longer or shorter period?
      - If yes, what do you think would be a more appropriate time scale?
- \*Was it clear that in the first section you were answering questions relating to the home environment of the child you care for (items 1 – 26) and in the second section, that you were answering questions relating to being outside of the home environment of the child you care for (items 27 – 41)?
  - If this was not clear, why was this not clear?
  - Could this be improved in any way?

- Do you have any suggestions for improving this?
- Do you think overall the instructions could be improved or made clearer?
  - If so, in what ways could they be improved?

## FEEDBACK ON RESPONSE OPTIONS (Appendix B)

**N.B: YOU MAY HAVE COVERED SOME OF THIS IN THE REAL TIME RESPONSE OPTION QUESTIONS, HOWEVER PLEASE EXPLORE THESE QUESTIONS FOR ANY ADDITIONAL FEEDBACK ON COMPLETION OF THE QUESTIONS.**

- \*How clear were the response options?
- How easy did you find it to select an answer?
- Did you find any of them difficult to understand?
  - [If yes, probe on why they found them difficult]
- \*What does **'Independent with no aids'** mean to you?
  - [Ask them to provide an example]
- \*What does **'Independent with aids'** mean to you?
  - [Ask them to provide an example]
- \*What does **'Require help from another person'** and **'Cannot do this at all'** mean to you?
  - [Ask them to provide an example of both]\*Do you think there is any overlap between these two options?
  - \*Could these response options be improved in any way?
    - \*If yes, what do you think of changing these response options to; 'require a little 'help from another person' (instead of 'require help from another person') and 'require a lot of help from another person' (instead of 'cannot do this at all')?
    - \*Can you think of response options that you think would be more appropriate than **'Require help from another person'** and **'Cannot do this at all'**
      - If so, what would these be?

**NB: You may have covered aspects of the 'Not Applicable' (NA) response option in the 'real time' probes, however, please ask all participants the following if not previously covered;**

- What does 'Not Applicable' mean to you?
  - [Ask them to provide an example]Was it clear when to select the 'Not Applicable' (NA) option ( (i.e., If the person you care for does not have a bath in their house OR if the person you care

for is too young to be independent in relation to a given activity)

- If not, why was this not clear?
- Could this be improved in any way?
  - If you were to re-write when to select NA how would you make it clearer?
- There are five response options, do you think there are too many, too few or the right amount?
  - [Probe on what they would add or remove, as necessary]
- Is there anything you would change to make the response options clearer?

## FEEDBACK ON MOBILITY QUESTIONS (Appendix B)

- What was your overall impression of these questions?
- Was anything unclear in the questionnaire? Anything you did not understand?
- \*Which questions related to activities were most relevant to your child?
  - Please provide the top 3 most relevant tasks.
- \*Which questions related to activities were least relevant to your child?
  - Please provide the top 3 least relevant tasks.
- Were there any questions that were not at all relevant?
  - If so, why was the question not relevant?
    - Does the question relate to something that does not occur on a daily basis?
    - Does the question relate to something that your child avoids?
- Were there activities important to your child that were not included in these questions?
- Is there anything we could change to make the questionnaire better?

## 4. CLOSING THE INTERVIEW (3-5 MINUTES)

---

### **Closing the interview:**

*Those are all the questions I have for you today. Is there anything else you want to tell me? Follow up as appropriate.*

*The information you shared with us today – together with information from other patients and caregivers of children with SMA will help us learn more about the impact of SMA on patients` daily lives and inform the development of questionnaires for potential use in future clinical trials to measure patients` independence when completing daily activities. Thank you again for helping us with this research!*

**Conclude audio recording and close the interview.**

## 5. APPENDICES

---

### Appendix A: Caregiver Sociodemographic Form

1. What is your relationship to the individual you care for?
  - Parent
  - Grandparent
  - Other Relative
  - Professional Caregiver
  - Other: \_\_\_\_\_
2. Do you live with this individual?
  - Yes
  - No
3. If you do not live with the individual, how many hours per week, approximately, do you spend with the patient? \_\_\_\_\_
4. What is your age? \_\_\_\_\_
5. What is the individual's age? \_\_\_\_\_
6. At what age was the individual diagnosed with SMA? \_\_\_\_\_
7. What is your gender?
  - Male
  - Female
8. What is the individual's gender?
  - Male
  - Female
9. What is your ethnicity?
  - White
  - Black
  - Asian
  - Biracial / Mixed (specify): \_\_\_\_\_
  - Other (specify): \_\_\_\_\_
10. What is your marital status?
  - Married
  - Single

- Divorced\separated
- Widowed
- Other: \_\_\_\_\_

11. How would you describe your employment status?

- Employed, full- time
- Employed, part-time
- Volunteer, full-time
- Volunteer, part-time
- Homemaker
- Student, full-time
- Student, part-time
- Unemployed
- Retired
- Disabled

12. What is the highest level of education you have completed?

- Elementary/primary school
- Secondary/high school
- Some college
- College degree
- Some graduate work
- Graduate degree
- Postgraduate degree
- Technical or vocational degree
- Other: \_\_\_\_\_

13. How much assistance does the child you care for need for completing daily activities within their home?

- He/She cannot do any activities without help
- He/She need a lot of help
- He/She need some help
- He/She need a little bit of help
- He/She do not need any help

14. How much assistance does the child you care for need for completing daily activities outside their home?

- He/She cannot do any activities without help
- He/She need a lot of help
- He/She need some help
- He/She need a little bit of help
- He/She do not need any help

15. What is the furthest he/she can walk with support?

**PROBES**

- For example, can he/she walk across a room?
- From one room to another?
- If he/she know the distance then distance can be indicated

16. What is the furthest he/she can walk without support?

**PROBES**

- For example, can he/she walk across a room?
- From one room to another?
- If he/she know the distance then distance can be indicated

## Appendix B – Mobility Questions

We would like to learn about the level of independence of the person with SMA that you are caring for. Please select the option that **best describes** the **amount of assistance that he/she needs** to perform each activity.

Please think about the **past 7 days** and pick only one answer per activity. If the question is not relevant (e.g., the person you care for does not have a bath in their house) or the person you care for is too young to be independent in relation to a given activity please choose the **not applicable** response option.

Before completing the SMAIS Ambulatory Module, please select **all** of the supportive aids that the individual you care for uses to carry out activities:

- Grabbers (e.g. to help pick things up off the floor)
- Wear braces or orthotics (e.g. for walking, bending over)
- Walking stick, cane or crutch
- Walking frame or rollator
- Wheelchair, or mobility scooter (manual)
- Manual wheelchair with power assistance
- Wheelchair, or mobility scooter (electric)
- Furniture walk (e.g. walk with help from furniture, walls, handrails)
- Handrail (e.g. for stairs, shower, bath)
- Raised/higher chair
- Bench in the shower
- Non-slip mat (e.g. in the shower)
- Raised toilet seat
- Lift or ramps to get wheelchair in and out of vehicle
- Ramps to get in and out of house
- Lift or stair lift
- Stroller/Pushchair (e.g. for longer walks)
- Other (please specify):.....

Thinking about the person with SMA that you care for, please select the response option that best describes their level of independence when performing the activity **at home** during the **past 7 days**.

	Independent with no aids	Independent with aids	Requires help from another person	Cannot do this at all	Not Applicable
1. Turn over in bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Sit up from lying in bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Stand up from a regular height chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Stand up from a high/raised chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Stand up from a low chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Sit down into a regular height chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Sit down into a high/raised chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Sit down into a low chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Stand/Get up from the floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Bend over to pick something up from the floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Getting up from a squatting position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Getting into bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Getting out of bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Getting in the bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Getting out of the bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Getting in the shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Getting out of the shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about the person with SMA that you care for, please select the response option that best describes their level of independence when performing the activity **at home** during the **past 7 days**.

	Independent with no aids	Independent with aids	Requires help from another person	Cannot do this at all	Not Applicable
18. Standing in the shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Getting on to the toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Getting off the toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Walk across a room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Walk from room to room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Walk up a single step indoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Walk down a single step indoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Walk up a flight of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Walk down a flight of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about the person with SMA that you care for, please select the response option that best describes their level of independence when performing the activity **outside the home** during the **past 7 days**

	Independent with no aids	Independent with aids	Requires help from another person	Cannot do this at all	Not Applicable
27. Getting into a car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Getting out of a car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Step up on a curb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about the person with SMA that you care for, please select the response option that best describes their level of independence when performing the activity **outside the home** during the **past 7 days**

	Independent with no aids	Independent with aids	Requires help from another person	Cannot do this at all	Not Applicable
30. Step down off a curb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Walk a short distance outside, e.g. from house to car (10-50 feet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Walk a short distance around your community, e.g. shop to shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Walk a long distance around your community e.g. a mile, a kilometer or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Walk quickly if needed, e.g. to cross a road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Walk in a busy, crowded place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Walk on a flat surface outside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Walk on an uneven surface outside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Walk on an unstable surface outside, e.g. sand, gravel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Walk on a slippery surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Walk up an incline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Walk down an incline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Development of an Ambulatory Module  
for the  
Spinal Muscular Atrophy  
Independence Scale**

**ROC2161**

**Wave 3**

**Patient Interview Guide**

(Version 8.0; 27/07/2021)



## CONTENTS

<b>1. WAVES 2&amp;3 INTERVIEW OBJECTIVES &amp; OVERVIEW .....</b>	<b>3</b>
INTERVIEW OBJECTIVES.....	3
INTERVIEW OVERVIEW.....	3
INSTRUCTIONS FOR THE INTERVIEWER (TRAINED STUDY SITE PERSONNEL) .....	3
WHAT SHOULD THE INTERVIEWER DO IF AN ADVERSE EVENT IS MENTIONED? .....	4
<b>2. INTRODUCTION (7-10 MINUTES) .....</b>	<b>9</b>
INTRODUCE YOURSELF AND THE PURPOSE OF THE STUDY (3-5 MINUTES) .....	9
INTERVIEW PROCEDURE .....	9
AUDIO RECORDING .....	9
REASSURE PARTICIPANTS OF CONFIDENTIALITY .....	10
ENCOURAGE PARTICIPANTS TO BE OPEN AND HONEST .....	10
ADVERSE EVENT REPORTING .....	10
DEMOGRAPHIC INFORMATION.....	10
<b>3. COGNITIVE DEBRIEFING (40 - 45 MINUTES) .....</b>	<b>11</b>
MOBILITY QUESTIONS (APPENDIX B) .....	12
<i>Instructions to participants</i> .....	12
<i>REAL TIME PROBES, SPECIFIC TO MOBILITY QUESTIONS (Appendix B)</i> .....	12
<i>GFEEDBACK ON MOBILITY INSTRUCTIONS (Appendix B)</i> .....	19
<b>4. CLOSING THE INTERVIEW (3-5 MINUTES).....</b>	<b>22</b>
<b>5. APPENDICES .....</b>	<b>23</b>
APPENDIX A: PATIENT SOCIODEMOGRAPHIC FORM .....	23
APPENDIX B – MOBILITY QUESTIONS.....	26

# 1. WAVES 2&3 INTERVIEW OBJECTIVES & OVERVIEW

---

## Interview objectives

- Explore the independence or level of support needed when completing daily activities in individuals with SMA who are ambulant or able to walk with support.
- To cognitively debrief a set of newly generated questions to assess their relevance, appropriateness, clarity, ease of completion and relative importance within the context of use (COU) of ambulant on transitioning to ambulatory status SMA patients.

## Interview overview

Both wave 2 and 3 interviews (n=30) will consist of approximately 20 caregivers of paediatric patients under 12 years of age and 10 patients aged between 12 and 60 years of age with SMA.

Interviews will consist of a cognitive debriefing section where participants will be asked to complete and feedback on newly generated questions using a 'think aloud' process. The interview will be divided into the following sections:

<b>Interview Stage</b>	<b>Objective</b>	<b>Approximate duration</b>
1 Interviewer introduction ( <b>not recorded</b> )	Set the context and disclaimers & collect demographic details	7-10 minutes
2 Cognitive debriefing	Evaluate the relevance, appropriateness clarity and ease of completion of the newly generated questions	40-45 minutes
3 Closing remarks	Allow the participant to add any relevant information at which point the interviewer will close the session with a brief explanation of what we are going to do with the information	3-5 minutes

Using the schedule above, the interview process should take approximately **60 minutes**. The time allocated for each section is an indication where the duration of interview time may vary between participants.

## Instructions for the interviewer (trained study site personnel)

It is very important that you avoid leading the participant. Ask all questions in as open-ended a manner as possible in order to allow the participant enough time to answer and make sure not to bias their responses.

Once a participant has mentioned a disease symptom or disease impact, you can ask questions to clarify their experience.

Examples of non-leading questions:

- *You mentioned [impact / experience]. Can you tell me more about what that is like?*
- *I am not sure I completely understand [impact / experience]. Can you give me an example?*
- *How long does [impact] last? How often does that happen? How bothersome is that?*

Example of a non-leading clarification when a patient gives a brief or single-word response

- *Can you elaborate a bit on this, for the sake of the recording?*

Expect patients to take a significant amount of **time** to respond to some questions. Please allow them enough time to answer even if this means there are “uncomfortable silences.” Sometimes, this indicates that the patient is taking time to search for the right words or think about responses.

**Probes** have been added for several topics. These are questions/issues that should be covered in the interview. However, in **all** instances, participants must be given the opportunity to respond to a question in their own way before any probes are used.

It is important for **all of the main areas of the interview guide** to be covered; however, they do not need to be covered in the order presented in the interview guide. If a topic comes up earlier, you may discuss it at that time. The interviewer should be familiar with the interview guide so that it is easy to “switch gears” as the patient naturally moves from topic to topic.

The **questions in italics** and **displayed in boxes** do not need to be asked exactly as written, or in the order presented below. The goal of this interview is to learn as much as possible about the range of symptoms and impacts that people experience. Use your best judgment and knowledge of the participant to help them share this information with you.

If the participant asks you questions of a medical nature, you should explain that you are not qualified to offer medical advice in this context and direct the patient to their physician.

### **What should the interviewer do if an adverse event is mentioned?**

An Adverse Event (AE) is defined as **“Any untoward medical occurrence in a person administered a Roche medicinal product and which does not necessarily have to have a causal relationship with this treatment. An adverse event can be any unfavourable and unintended sign (e.g. an abnormal laboratory finding), symptom, or disease temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product.”**

An Adverse Event is a response to a medicinal product which is noxious and unintended. This includes adverse reactions which arise from the use of a medicinal product within the terms of the marketing authorization; or the use outside the terms of the marketing authorization, including these Special Situations:

**Overdose.** This refers to the administration of a quantity of a medicinal product given per administration or cumulatively, which is above the maximum recommended dose according to the authorised product information.

**Off-label use.** This relates to situations where the medicinal product is intentionally used for a medical purpose not in accordance with the authorised product information.

**Misuse.** This refers to situations where the medicinal product is intentionally and inappropriately used not in accordance with the authorised product information.

**Abuse.** This corresponds to the persistent or sporadic, intentional excessive use of a medicinal product, which is accompanied by harmful physical or psychological effects.

**Medication errors.** This refers to any unintentional error in the prescribing, dispensing, or administration of a medicinal product while in the control of the healthcare professional, patient, or consumer.

**Occupational exposure.** This refers to the exposure to a medicinal product as a result of one's professional or non-professional occupation.

In addition, the following Reports considered as Special Situations (referred hereinafter to as "Special Situation Reports") should be collected and transmitted to Roche:

- Data related to product usage in a paediatric or elderly population
- Data related to suspected transmission of an infectious agent via a medicinal product
- Suspected Adverse Reaction related to quality defect or falsified medicinal products (whether suspected or confirmed)
- Reports from class action lawsuits

Please note that the following Special Situations Reports should be collected and transmitted to Roche even in the absence of an Adverse Event:

- Data related to product usage during pregnancy or breastfeeding
- Data related to overdose, abuse, misuse, medication error or occupational exposure
- Lack of therapeutic efficacy

A product quality complaint (PQC) is any discrete concern that questions the identity, quality, durability, reliability, safety, efficacy, or performance of a product. The complaint may allege an adverse event, side effect, and injury or malfunction associated with the use of a product. It may also involve the design, packaging, or promotion of a product.

This is a non-interventional study with no study drug. However, if the individual with SMA mentions an adverse event that they have experienced while taking a Roche product, or a product you suspect is a Roche product, you should make a note of it and at the end of the interview go through the 'Adverse Event/Product Complaint Form' (Appendix B of this interview guide). At this time please state the following to the individual with SMA:

(Please note that this is only necessary if the information provided did not cover the bare minimum for what is required for the AE form):

- 🗣️ “During the interview you mentioned a problem that you experienced while taking a medicinal product. I would like to spend a couple of minutes with you now to collect some more details about the problem. Is that OK with you?”
- 🗣️ **If yes and the AE is related to a Roche product:** “Thank you. The information you provide will be sent to the study sponsor, who may wish to contact your doctor for further information. If you agree to provide your doctor’s name, this will not be linked in any way to your other responses given during the interview. Are you happy to provide the name of your doctor?” (If a Roche product, complete the form in Appendix R).
- 🗣️ **If yes and the AE is related to a non-Roche product:** “Thank you. The information you provide will be sent to the [relevant authority] who are responsible for keeping record of any problems experienced whilst taking a medication in [Country]”
- 🗣️ **If no:** “OK that’s fine. However, as the information you were given about this study explained, we do have to report this problem [if Roche product: to the sponsor] [if non-Roche product: to the (relevant national authority)]. This will be done anonymously, and none of your personal details will be shared with them.”

Completed **'Adverse Event/Product Complaint Forms'** should be sent to the sponsor's pharmacovigilance team via email within 24 hours, contact details below.

	Address	Tel	Fax	Email	Non-Roche products reporting system
<b>USA</b>	Genentech Drug Safety 1 DNA Way MS 258A South San Francisco, CA 94080 USA	+1 888 835 2555	+1 650 225 4682	<a href="mailto:us_drug.safety@gene.com">us_drug.safety@gene.com</a>	MedWatch  <a href="https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program">https://www.fda.gov/safety/medwatch-fda-safety-information-and-adverse-event-reporting-program</a>
<b>UK</b>	Roche Products Limited 6 Falcon Way Shire Park Welwyn Garden City AL7 1TW United Kingdom	+44 1707 367554		<a href="mailto:welwyn_ds@roche.com">welwyn_ds@roche.com</a>	MHRA  <a href="https://yellowcard.mhra.gov.uk/">https://yellowcard.mhra.gov.uk/</a>

Remember, an Adverse Event must be reported when the following are present:

**PREP – Patient, Reporter, Event, Product**

**1. A Patient or group of patients**

Identifiers such as age, age group, birth date, gender, role, profession should be collected if available, if not the event should still be reported.

**2. An identifiable Reporting source**

Information that identifies the reporter, establishing knowledge of the reportable event in an identifiable consumer. The reporter could be a patient, doctor, patient's parent, friend, colleague, or caregiver.

**3. An adverse Event**

Description of at least one event or product complaint.

**4. A suspect Product**

Patient must mention taking one of the products being marketed by the company that we are doing research for.

An AE can also include a complaint specific to the product itself, or packaging, as opposed to its effect on the patient. Examples include damaged or missing tablets; wrong strength or colour of tablets; damaged packaging; a label that cannot be read; a liquid that should be clear but is cloudy or contains unexpected particles; a bent needle, a broken syringe; a missing patient information leaflet or the identification of a potentially counterfeit medicine.

## 2. INTRODUCTION (7-10 MINUTES)

---

Waves 2 and 3 of the interviews (n=30) will be used to further explore the impact of SMA on daily activities and evaluate the relevance appropriateness, clarity, and ease of completion of the newly generated questions.

### Introduce yourself and the purpose of the study (3-5 minutes)

*Good morning, my name is [Interviewer name] and I work for Modus Outcomes. Modus Outcomes is a health research consulting firm that works with pharmaceutical companies to learn about as well as report on patients' experiences in various health conditions. Currently, Modus Outcomes is working with Roche Pharmaceuticals to understand how SMA impacts the daily life of patients with the condition and develop a questionnaire for assessing this impact in upcoming clinical trials.*

### Interview procedure

*During this interview, we would like to discuss and get your feedback on a newly developed questionnaire which I understand has been emailed to you **[confirm they have received this and ask them to have this email at hand during the interview]**. You will be asked to complete the questionnaire as well as read the questions aloud and give your feedback on its relevance, clarity, and appropriateness for SMA.*

*This interview should last about one hour. You can stop the interview at any time. Feel free to ask me questions about anything that you do not understand. You can also choose not to answer a question if you do not want to.*

### Audio recording

*These interviews will be audio recorded to ensure that we capture the information you share with us. Please try to speak clearly to ensure that the recorder can pick up what you are saying. If you need to take any breaks, please do not hesitate to let me know. I can pause the recording at any time.*

*Do you agree to have this interview audio recorded? [Yes/ No]*

*If the participant answers 'No', thank the participant for their time and remind them that they will subsequently be removed from the study and that any information previously collected can still be used, unless the participant requests otherwise.*

## **Reassure participants of confidentiality**

*Any information you share with me today will be reported in a way that protects your privacy. A participant identification number will be assigned to the interview transcript that will be made available to Modus Outcomes, the company analysing the interview data. When the interview is transcribed, references to your name or names of family, friends, healthcare professionals, and other people, as well as specific place names or any other information that could specifically identify you are removed from the transcript.*

## **Encourage participants to be open and honest**

*We appreciate any information you can share with us today. Please be open in your responses and don't be afraid to share any of your opinions. We are hoping to learn from you and remind you that any information you share with us will remain strictly anonymous.*

## **Adverse event reporting**

*If you happen to report any adverse event you experienced while on a pharmaceutical drug and mention it during this interview, we are required by law to report this to the company even if it has already been reported by you directly to the company or the regulatory authorities. You will remain anonymous and you will only be identified by your participant ID numbers on all relevant research documents.*

## **Demographic Information**

Complete the sociodemographic form before starting the next section of the interview: cognitive debriefing (See Appendix A).

### 3. COGNITIVE DEBRIEFING (40 - 45 MINUTES)

---

**Objective:** cognitive debriefing of the newly developed questions.

Start by asking the participant to retrieve the email link shared with them prior to the interview.

**Note to interviewers:** Each participant will be given a unique survey link that will be emailed to the respondent prior to the interviews. During the interview, interviewers will provide participants with their unique ID to insert in the link before they can proceed to completing it.

**Note to interviewers:** Ask participants to complete all relevant questionnaire items using the 'think aloud' process (**spontaneous feedback**). Specific item level **probes** are provided below for each section.

Ask the participants to access the link of the online survey shared with them via email.

**Note to interviewers:** If the participants are having problems accessing the link please email it to them again and stay on the line for 15 minutes whilst attempting to troubleshoot. If the issue is not resolved the interview will need to get rescheduled.

*I am interested to hear your views on a set of newly developed questionnaire items to assess independence with daily activities in SMA. We would like to get your feedback on their relevance and appropriateness to patients like yourself. We will go through the questions one by one and I would like you to share your feedback and thoughts on the relevance and clarity of the questions and response options. There are no right or wrong answers, we are just interested in your honest impression of these questions. First, I will ask that you complete each question and I will then follow up with some specific questions. Please read the questions aloud as you are completing them and let us know what goes through your mind as you are picking a response.*

## Mobility Questions (Appendix B)

### Instructions to participants

**N.B: INTERVIEWERS TO MARK PARTICIPANTS RESPONSE ON EXCEL SHEET (PROVIDED TO INTERVIEWERS)**

Ask participants to read aloud each question and to discuss their thinking process in choosing a response option.

Ask participants to **verbalize their thinking process** ('think aloud'), whilst completing the questions, including their rationale for choosing a response options and to draw your attention to anything that seems unclear, difficult to understand or respond to, or not relevant to their experiences.

**Encourage participants to think of the issues we are interested in getting feedback on when they are completing the questionnaire; specifically:**

- Relevance of questions
- Clarity of instructions, questions and response options
- Overlap between questions
- Ease of choosing a response option
- Questions are appropriate for self-administration

### REAL TIME PROBES, SPECIFIC TO MOBILITY QUESTIONS (Appendix B)

Please **specifically investigate** the following topics in relation to the mobility questions whilst the participants are completing them (Appendix B). A \* indicates questions that should be prioritised.

\*Q1 – 41:

- If the participant selects 'Not Applicable' (NA) for any of the items (1-41) explore the following;
  - Why did you choose NA for that item?
    - Was this due to not performing the activity in the last 7 days?

**Q3 & Q6:**

- (Compare Q3 and Q6) Do you find that there is any difference between standing up from or sitting down into a regular chair?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?

- What are you thinking of when thinking of a 'regular' chair?
  - What do you think the term 'regular' as a description for the chair?
  - Is this an appropriate term?
  - Are there other words/terms which you think would be more appropriate?
- Do you think there is overlap between these two questions?
  - Do you think both questions are relevant?
  - If not, which of these questions is more relevant to you and why?
  - Do you think both questions are needed? (Q3 and Q6)
    - If not, which of these questions (either Q3 or Q6) would you remove and why?

#### **Q4 & Q7:**

- (Compare Q4 and Q7) Do you find that there is any difference between standing up from a high/raised chair or sitting down into a high/raised chair?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - What are you thinking of when thinking of a 'high' or 'raised' chair?
    - Do these terms ('high' or 'raised' chair) make you think of different chairs e.g. is a high chair different to a raised chair?
    - Are these appropriate terms?
      - If not, are there other words/terms which you think would be more appropriate?
  - Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - Do you think both questions are needed? (Q4 and Q7)
    - If not, which of these questions (either Q4 or Q7) would you remove and why?

#### **Q5 & Q8:**

- (Compare Q5 and Q8) Do you experience any difference between standing up from a low chair or sitting down into a low chair?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - What are you thinking of when thinking of a 'low' chair?
    - What do you think of the term 'low' as a description for the chair?
    - Is this an appropriate term?

- Are there other words/terms which you think would be more appropriate?
- Do you think there is overlap between these two questions?
  - Do you think both questions are relevant?
  - If not, which of these questions is more relevant to your child and why?
  - Do you think both questions are needed? (Q5 and Q8)
  - If not, which of these questions (either Q5 or Q8) would you remove and why?

**\*Q3 – Q8:**

- (Compare Q3&6 to Q4&7 to Q5&8) Do you think all the questions in relation to sitting and standing from a chair are relevant/needed? (e.g., stand up from a regular chair / sit down into a regular chair OR stand up from a high/raised chair /sit down into a raised chair OR stand up from a low chair / sit down into a low chair)?
  - Which items would be most relevant?
  - Which items would be least relevant?

Would you remove any of the items and if so, why?

**Q11**

- N.B: If the participant answers 'cannot do this at all' please ask the following;
  - Are you able to get into a squatting position?
  - If they are not able, could this item be improved to make it more relevant?
    - If so, how could it be improved?

**Q12 & Q13:**

- \*(Compare Q12 to Q13) Do you experience any difference between getting into bed and getting out of bed?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

#### **Q14 & Q15**

- \*(Compare Q14 to Q15) Do you experience any difference between getting in and out of the bath?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - \*Do you think both questions are needed?

\*If not, which of these questions would you remove and why?

#### **Q16 and Q17:**

- \*(Compare Q16 to Q17) Do you experience any difference between getting in and out of the shower?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

#### **Q18**

- Do you experience any difficulty standing in the shower?
  - If no, do you think this question is relevant to a questionnaire focussed on mobility in SMA?
    - If not, why?
    - Could the item be improved in any way to make it more relevant?

#### **Q19 & Q20**

- \*(Compare Q19 to Q20) Do you experience any difference between getting on to the toilet and getting off the toilet?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?

- If not, which of these questions is more relevant to you and why?
- \*Do you think both questions are needed?
- \*If not, which of these questions would you remove and why?

**Q23 & Q24:**

- \*(Compare Q23 and Q24) Do you find you experience any difference between walking up or down a single step indoors?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

**Q25 & Q26:**

- \*(Compare Q25 and Q26) Do you experience any difference between going up or down a flight of stairs?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

**Q27 & Q28:**

- \*(Compare Q27 to Q28) Do you experience any difference between getting into a car and getting out of a car?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

**Q29 & Q30:**

- \*(Compare Q29 and Q30) Do you experience any difference between walking up or down a curb (i.e. on/off the pavement)?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?

**Q35:**

- Is walking in a busy or crowded place any different to walking in one which is not crowded?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?

**Q37, Q38 and Q39:**

- \*(Compare Q37, Q38 and Q39) Do you find that there is any difference between walking on uneven surfaces compared to unstable surfaces (e.g. on sand or gravel) or slippery surfaces?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the others?
  - \*Do you think there is overlap between these questions?
    - Do you think there is a difference between uneven surfaces and unstable surfaces?
      - If so, how are they different?
    - Do you think sand and gravel are good examples of unstable surfaces?
      - If not, what other examples might be more appropriate?
    - What were you thinking about when answering the question on slippery surfaces?

- Do you think the addition of an example would help for this question e.g. wet, shiny or icy?

- Do you think all of these questions are relevant?
- If not, which of these questions is more relevant to you and why?
- \*Do you think all these questions are needed?
- \*If not, which of these questions would you remove and why?

#### **Q40 & 41**

- \*Do you experience any difference between walking up and walking down an incline?
  - Is one more difficult than the other?
  - Would you require any more help for one compared to the other?
  - \*Do you think there is overlap between these two questions?
    - Do you think both questions are relevant?
    - If not, which of these questions is more relevant to you and why?
    - \*Do you think both questions are needed?
    - \*If not, which of these questions would you remove and why?
  - What were you thinking about when answering question 40; 'walking up an incline' and question 41; 'walking down an incline'?
    - What kind of incline are you thinking about?
    - Could the items be improved in any way?

## FEEDBACK ON INSTRUCTIONS FOR MOBILITY QUESTIONS (Appendix B)

### **Please explore the following**

- \*How clear were the instructions?
  - If they were not clear, why were they not clear?
  - How would you make them clearer?
  - Was it clear when to select the 'Not Applicable' (NA) option?
    - If not, why was this not clear?
    - Could this be improved in any way?
      - If you were to re-write when to select NA how would you word it to make it clearer?
- \*What does the word 'Independence' mean in this context?
  - Is the word independence appropriate for talking about SMA patients and the impact of the condition on daily activities?
  - Would you use a different word? If so, what would it be?
- \*What does the word 'assistance' mean to you?
  - Is the word assistance appropriate for talking about difficulties experienced by SMA patients?
  - Would you use a different word? If so, what would it be?
- Were there any aids that you think should have been in the list of aids in the instruction's sections?
- \*Was it clear that the instructions were asking about the last 7 days?
  - Does 7 days seem appropriate for this questionnaire?
    - Should this be a longer or shorter period?
      - If yes, what do you think would be a more appropriate time scale?
- \*Was it clear that in the first section you were answering questions relating to your home environment (items 1 – 26) and in the second section answering questions relating to being outside of your home environment (items 27 – 41)?
  - If this was not clear, why was this not clear?
  - Could this be improved in any way?
    - Do you have any suggestions for improving this?
- Do you think overall the instructions could be improved or made clearer?
  - If so, in what ways could they be improved?

## FEEDBACK ON RESPONSE OPTIONS (Appendix B)

**N.B: YOU MAY HAVE COVERED SOME OF THIS IN THE REAL TIME RESPONSE OPTION QUESTIONS, HOWEVER PLEASE EXPLORE THESE QUESTIONS FOR ANY ADDITIONAL FEEDBACK ON COMPLETION OF THE QUESTIONS.**

- \*How clear were the response options?
  - How easy did you find it to select an answer?
- Did you find any of them difficult to understand?
  - [If yes, probe on why they found them difficult]
- \*What does **'Independent with no aids'** mean to you?
  - [Ask them to provide an example]
- \*What does **'Independent with aids'** mean to you?
  - [Ask them to provide an example]
- \*What does **'Require help from another person'** and **'Cannot do this at all'** mean to you?
  - [Ask them to provide an example of both]
  - \*Do you think there is any overlap between these two options?
  - \*Could these response options be improved in any way?
    - \*If yes, what do you think of changing these response options to; 'require a little help from another person' (instead of 'require help from another person') and 'require a lot of help from another person' (instead of 'cannot do this at all')?
    - \*Can you think of response options that you think would be more appropriate than **'Require help from another person'** and **'Cannot do this at all'**
      - If so, what would these be?

**NB: You may have covered aspects of the 'Not Applicable' (NA) response option in the 'real time' probes, however, please ask all participants the following if not previously covered;**

- What does 'Not Applicable' mean to you?
  - [Ask them to provide an example]
  - Was it clear when to select the 'Not Applicable' (NA) option (i.e., If the person you care for does not have a bath in their house OR if the person you care for is too young to be independent in relation to a given activity)
    - If not, why was this not clear?

- Could this be improved in any way?
    - If you were to re-write when to select NA how would you make it clearer?
- There are five response options, do you think there are too many, too few or the right amount?
  - [Probe on what they would add or remove, as necessary]
- Is there anything you would change to make the response options clearer?

### **FEEDBACK ON MOBILITY QUESTIONS (Appendix B)**

- What was your overall impression of these questions?
- Was anything unclear in the questionnaire? Anything you did not understand?
- \*Which questions related to activities most were relevant to you?
  - Please provide the top 3 most relevant tasks.
- \*Which questions related to activities were least relevant to you?
  - Please provide the top 3 least relevant tasks.
- Were there any questions that were not at all relevant?
  - If so, why was the question not relevant?
    - Does the question relate to something that does not occur on a daily basis?
    - Does the question relate to something that you avoid?
- Were there activities important to you that were not included in these questions?
- Is there anything we could change to make the questionnaire better

## 4. CLOSING THE INTERVIEW (3-5 MINUTES)

---

### **Closing the interview:**

*Those are all the questions I have for you today. Is there anything else you want to tell me? Follow up as appropriate.*

*The information you shared with us today – together with information from other patients and caregivers of children with SMA will help us learn more about the impact of SMA on patients` daily lives and inform the development of questionnaires to be used in upcoming clinical trials to measure patients` independence with daily activities. Thank you again for helping us with this research!*

**Conclude audio recording and close the interview.**

## 5. APPENDICES

---

### APPENDIX A: Patient Sociodemographic Form

Please answer the following questions.

1. What is your age? \_\_\_\_\_
2. At what age were you diagnosed with SMA? \_\_\_\_\_
3. What is your gender?
  - Male
  - Female
4. What is your ethnicity?
  - White
  - Black
  - Asian
  - Biracial / Mixed (specify): \_\_\_\_\_
  - Other (specify): \_\_\_\_\_
5. With whom do you live?
  - Parent(s) (check this box whether you live with only parent(s) or parent(s) and siblings)
  - Spouse/Partner
  - Other Family Member
  - Alone
  - Other: \_\_\_\_\_
6. How would you describe your employment status?
  - Employed, full- time
  - Employed, part-time
  - Volunteer, full-time
  - Volunteer, full-time
  - Homemaker
  - Student, full-time
  - Student, part-time
  - Unemployed

- Retired
- Disabled and able to work or volunteer, full time
- Disabled and able to work or volunteer, part-time
  - If part-time, is this due to your disability? Y  / N
- Disabled and unable to work or volunteer due to my disability

7. What is the highest level of education you have completed?

- Elementary/primary school
- Secondary/high school
- Some college
- College degree
- Some graduate work
- Graduate degree
- Postgraduate degree
- Technical or vocational degree
- Other: \_\_\_\_\_
- I do not need any help

8. How much assistance do you need for completing daily activities within your home?

- I cannot do any activities without help
- I need a lot of help
- I need some help
- I need a little bit of help
- I do not need any help

9. How much assistance do you need for completing daily activities outside your home?

- I cannot do any activities without help
- I need a lot of help
- I need some help
- I need a little bit of help
- I do not need any help

10. What is the furthest you can walk with support?

**PROBES**

- *For example, can he/she walk across a room?*
- *From one room to another?*
- *If he/she know the distance then distance can be indicated*

11. What is the furthest you can walk without support?

**PROBES**

- *For example, can he/she walk across a room?*
- *From one room to another?*
- *If he/she know the distance then distance can be indicated*

## Appendix B – Mobility Questions

We would like to learn about your level of independence. Please select the option that **best describes** the **amount of assistance that you need** to perform each activity.

Please think about the **past 7 days** and pick only one answer per activity. If the question is not relevant (e.g., you do not have a bath in your house) please choose the **not applicable** response option.

Before completing the SMAIS Ambulatory Module, please select **all** of the supportive aids that you use to carry out activities:

- Grabbers (e.g. to help pick things up off the floor)
- Wear braces or orthotics (e.g. for walking, bending over)
- Walking stick, cane or crutch
- Walking frame or rollator
- Wheelchair, or mobility scooter (manual)
- Manual wheelchair with power assistance
- Wheelchair, or mobility scooter (electric)
- Furniture walk (e.g. walk with help from furniture, walls, handrails)
- Handrail (e.g. for stairs, shower, bath)
- Raised/higher chair
- Bench in the shower
- Non-slip mat (e.g. in the shower)
- Raised toilet seat
- Lift or ramps to get wheelchair in and out of vehicle
- Ramps to get in and out of house
- Lift or stair lift
- Stroller/Pushchair (e.g. for longer walks)
- Other (please specify):.....

Please select the response option that best describes your level of independence when performing the activity **at home** during the **past 7 days**.

	Independent with no aids	Independent with aids	Require help from another person	Cannot do this at all	Not Applicable
1. Turn over in bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Sit up from lying in bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Stand up from a regular height chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Stand up from a high/raised chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Stand up from a low chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Sit down into a regular height chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Sit down into a high/raised chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Sit down into a low chair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Stand/Get up from the floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Bend over to pick something up from the floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Getting up from a squatting position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Getting into bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Getting out of bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Getting in the bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Getting out of the bath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please select the response option that best describes your level of independence when performing the activity **at home** during the **past 7 days**.

	Independent with no aids	Independent with aids	Require help from another person	Cannot do this at all	Not Applicable
16. Getting in the shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Getting out of the shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Standing in the shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Getting on to the toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Getting off the toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Walk across a room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Walk from room to room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Walk up a single step indoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Walk down a single step indoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Walk up a flight of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Walk down a flight of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please select the response option that best describes your level of independence when performing the activity **outside the home** during the **past 7 days**.

	Independent with no aids	Independent with aids	Require help from another person	Cannot do this at all	Not Applicable
27. Getting into a car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Getting out of a car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Step up on a curb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Step down off a curb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Walk a short distance outside, e.g. from house to car (10-50 feet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Walk a short distance around your community, e.g. shop to shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Walk a long distance around your community e.g. a mile, a kilometer or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Walk quickly if needed, e.g. to cross a road	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Walk in a busy, crowded place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Walk on a flat surface outside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Walk on an uneven surface outside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Walk on an unstable surface outside, e.g. sand, gravel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Walk on a slippery surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please select the response option that best describes your level of independence when performing the activity **outside the home** during the **past 7 days**.

	Independent with no aids	Independent with aids	Require help from another person	Cannot do this at all	Not Applicable
40. Walk up an incline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Walk down an incline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>