

PKU Research

Discussion Guide (Patients/Carers)

Section 1: Introduction & Warm Up (15 mins)

Section 2: Physical, Emotional and Social Impact of PKU (25 mins)

Section 3: Diagnosis, Management and Treatment of PKU (40 mins)

Section 4: Market Access and Cost (10 mins) **(CARERS AND ADULT PATIENTS ONLY!)**

Section 1: Introduction & Warm Up (10 mins)

Objective: to introduce respondents to the study & set the scene for the discussion by understanding respondents' situation and immediate associations with PKU

Study Introduction

- Introduce you
- Thank for agreeing to take part. Purpose of study: **To understand your feelings and thoughts about PKU itself as well as its treatment and management**
- Duration of discussion: 90 mins
- Explain market research (no selling or promotion involved). Interview conducted in accordance with MRS / EphMRA Codes of Conduct
- Tape recorded / confidentiality
- This research is being conducted on behalf of the European Society for Phenylketonuria and Allied Disorders (ESPKU), the leading PKU patient association in Europe. The ESPKU received a restricted grant from a pharmaceutical company for this research. The findings will serve as a basis to draft a PKU benchmark report, published by the ESPKU.
- Although sponsored by a pharmaceutical company, independent interviewer has no vested interest in the outcome of the study and your identity will not be revealed – comments are reported anonymously and in aggregate

MODERATOR: PLEASE ENSURE THE FOLLOWING:

- **LISTEN CLOSELY FOR THE RESPONDENT'S TERMINOLOGY / LANGUAGE AND USE THIS THROUGHOUT THE INTERVIEW**
- **PHRASE QUESTIONS CORRECTLY DEPENDING ON WHETHER YOU ARE TALKING TO THE PATIENT THEMSELVES OR THEIR CARER**
- **PLEASE MODIFY LANGUAGE AS NECESSARY DEPENDING ON AGE OF THE PATIENT**
- **BE CAREFUL OF THE SENSITIVITIES INVOLVED WHEN DISCUSSING THE CONDITION AND ESPECIALLY POTENTIAL IMPACT OF NEUROCOGNITION AND COSTS**

Respondent Introduction

- To begin our discussion, can you please tell me a little bit about yourself (and your child)
 - What is your (and your child's) age?
 - Can you tell me a little bit about your family situation?
 - Do you have any brothers or sisters? / How many children do you have with PKU?
 - Are you working / still studying? Can you tell me a little about that?
 - What are your (and your child's) hobbies / leisure activities – What do you/they enjoy doing?

MODERATOR SAY: *I'd like to talk about PKU...*

- So, thinking about PKU, what is the first thing that comes to mind when I mention PKU? What else? Why is that so top of mind?
- Were you/was your child diagnosed at birth by screening? If not when?

MODERATOR: KEEP THE BELOW SECTION SHORT AND SNAPPY

MODERATOR SAY: *Still thinking of PKU...*

- What, if anything, makes you feel glad about PKU? Can you tell me a bit more about that? Why do you say that?
- What, if anything, makes you feel mad about PKU? Can you tell me a bit more about that? Why do you say that?
- What, if anything, makes you feel sad about PKU? Can you tell me a bit more about that? Why do you say that?

MODERATOR SAY: *For this next exercise I would like to ask you to complete a few short sentences for me. Please say the first thing that comes to mind, don't think about it too much as we're interested in your immediate associations.*

MODERATOR: READ OUT SENTENCES ONE BY ONE, ALWAYS ASKING STATEMENT 'A' FIRST AND ALWAYS ASKING 'C' AND 'D' TOGETHER BUT ROTATING ORDER IN WHICH STATEMENTS 'B-D' ARE ASKED BETWEEN INTERVIEWS. FOR EACH SENTENCE COMPLETED BRIEFLY EXPLORE:

- Why?
- What makes you say that?
- Can you tell me a little bit more about that?

A) *For me/my child PKU means...*

B) *I'm proud of having (a child with) PKU because...*

C) *The single most annoying thing about PKU is...* **MODERATOR: IF SAY DIET PLEASE ASK RESPONDENT TO COMPLETE THE FOLLOWING SENTENCE**

D) *The single most annoying thing about PKU, except for diet, is...*

E) *With regards to my/my child's PKU, I just wish that...*

F) *The two things I worry about the most with regards to PKU are...*

Section 2: Physical, Emotional and Social Impact of PKU (20 mins)

Objective: to understand patient/carer's perceptions of the physical, emotional and social impact of PKU

MODERATOR SAY: *Thank you for that, that really helps us, and we may touch upon some of these aspects in more detail in the remainder of our discussion. I now would like to talk in more detail about how the condition affects patients like yourself / your child...*

- I'd like you to imagine that you're talking to someone who doesn't know anything about PKU – they have never even heard the name before; What is the most important thing they should know about the condition?
 - Why is that most important?
- To what extent, if at all, is it beneficial for people around you / your child to know about your / their PKU? Why? Why not?
 - Or is it better that they do not know? Why?
- In what ways does PKU impact your daily life / the daily life of your child? Why? How? Can you tell me more about that? Can you give me an example?
 - **Probe:** How, if at all, does PKU influence you / your child physically / emotionally / socially?
 - **PROMPT FOR IMPACT ON:**
 - **Prompt:** Your (child's) behaviour / mood
 - **Prompt:** Your (child's) social skills e.g. making friends, self control; positive self image, conforming to norms etc
 - **Prompt:** Your (child's) memory / ability to remember things
 - **Prompt:** Eating out from home, e.g. restaurant, party
 - **Prompt:** Time management: organisation around food preparation at home
 - **Prompt:** Time management: going on holiday, finding a hotel
 - **Prompt:** Your (child's) ability to concentrate
 - **Prompt:** Family life (relationship with parents / siblings / partners)
 - **Prompt:** School / Work / Specific career choices
 - **Prompt:** Friendships / Relationships with others
 - **Prompt:** Leisure activities e.g. travel, sports, music
- To what extent do you feel you are / your child is able to realise their dreams? What do you mean by that? Can you give me an example?

- To what extent, if at all, are you able to link the impact you have mentioned directly to PKU (versus other conditions you / your child may suffer from or you/their age)?

MODERATOR SAY: *And now thinking about how PKU affects those looking after / involved in the care of PKU patients (e.g. parents or a patient's partner) or others around PKU patients...*

- In what ways, if at all, does PKU impact the daily life of those looking after you / involved in your care such as your husband, partner / you? Why? How? Can you tell me more about that? Can you give me some examples?
 - **Probe:** How, if at all, does PKU impact you / them physically / emotionally / socially?
 - **Probe:** Time required to help and support with various aspects of (managing) PKU
- In what ways, if at all, does PKU influence the daily life of other people around you / your child? Why? How? Can you tell me more about that? Can you give me some examples?
 - **Probe:** How, if at all, does PKU impact you / them physically / emotionally / socially?

ASK CARERS ONLY:

- To what extent, if at all, do you feel PKU has limited you in being able to realise your dreams? What do you mean by that? Can you give me an example?

PROMPT FOR IMPACT ON:

- **Prompt:** having a career/ job
 - **Probe:** Did you stop working / change jobs / work less / experience any reduction in income?
- **Prompt:** maintaining friendships / family relationships
- **Prompt:** marriage / partnerships

Section 3: Diagnosis, Management and Treatment of PKU (20 mins)

Objective: to understand patient's experience and wishes with respect to diagnosis, management/treatment and monitoring of PKU

MODERATOR SAY: *Thank you for that, I now would like to move on and talk a little bit more about the diagnosis and treatment of PKU...so starting with diagnosis...*

Diagnosis of PKU

- Have you / has your child ever been tested for BH4 deficiency or/and BH4 responsiveness? Why? Why not? **IF YES:**
 - Done when? Why? Why then?

Management & treatment of PKU

MODERATOR SAY: *Now thinking about the management of this condition...*

- To what extent, if at all, are there specific 'PKU Centres' in your country? **IF SO:**
 - How are they organised? Can you tell me more about that?
 - **Prompt:** PKU team, e.g. physician, dietician, psychologist
 - What services are you being offered?
 - **Prompt:** Access to low phe food
 - **Prompt:** Community support
 - **Prompt:** Home cooking support
 - **Prompt:** Access to Kuvan/BH4
 - **Prompt:** Home blood testing
 - Are adults being treated at this centre? Why? Why not?
- Do you / does your child currently see a healthcare professional for your / their PKU?

IF HCP SEEN EXPLORE:

- Who is the key healthcare professional managing you / your child's condition?
 - What involvement do they have / what role do they play in the management of PKU?
 - At what stage did they become involved?
 - How often do you / they typically see this healthcare professional? Why this frequency?
 - How adequate do you feel this frequency is? Why? Why not?
 - Would you want (your child) to see this healthcare professional more or less frequently? Why? Why not?
 - What, if anything, is preventing you (your child) from seeing this healthcare professional more/less frequently?
 - How long does a visit with this healthcare specialist typically last? Why this length?
 - How adequate do you feel this length of visit is? Why? Why not?
 - Would you want this healthcare professional to spend more or less time with you/your child during each visit? Why? Why not?

- What, if anything, is preventing you (your child) from spending more or less time with this healthcare professional?
- Who else is involved? **IF NOT SPONTANEOUSLY MENTIONED:**
 - **Prompt:** Endocrinologist (expert who is dealing with the human hormonal system)
 - **Prompt:** Paediatrician
 - **Prompt:** Paediatrician with metabolic disease experience
 - **Prompt:** Physician being trained in metabolic disease
 - **Prompt:** Psychiatrist
 - **Prompt:** Psychologist
 - **Prompt:** Dietician
 - **Prompt:** Primary Care Physician
 - **Prompt:** Nurse(s)
 - **Prompt:** Social Worker

MODERATOR: FOR EACH SPECIALTY MENTIONED IN ANSWER TO THE QUESTIONS ABOVE EXPLORE:

- What involvement do they have / what role do they play in the management of PKU?
- At what stage did they become involved?
- Thinking of all the HCPs involved in your (child's) care, do you feel that they are working together as a team? Why? What makes you say that?

MODERATOR: IF NO HCP CURRENTLY SEEN, PLEASE EXPLORE:

- Why are you / is your child currently not seeing any HCP?

ASK ALL:

- How, if at all, has this changed over time / is this different from what it was like in the past? Can you tell me more about that?
 - **Probe:** what, if any, differences are there between child vs. teenager vs. adult care?
 - **Probe:** In terms of HCPs seen?
 - **Probe:** In terms of frequency with which HCPs are seen?

- How, if at all, was/will the transition from child to adult medical support/ care (be) managed? Can you tell me more about that?
 - **Probe:** What happened / is likely to happen?
 - **Probe:** What didn't happen / is unlikely to happen?
 - **Probe:** How, if at all, do you think this transition should ideally be managed? Can you tell me more about that? Can you give me an example?
 - **Probe:** What, if anything, in your view needs to be done to ensure lifelong management/treatment for all PKU patients? Can you tell me more about that? What else?

- What is it you / your child / your doctor is trying to achieve when it comes to managing and treating PKU? Why? **EXPLORE SPONTANEOUSLY FIRST, EXPLORING EXACTLY WHAT EACH PERSON IS LOOKING TO ACHIEVE, THEN IF NOT ALREADY DISCUSSED PROBE FOR THE FOLLOWING:**
 - **Prompt:** Avoiding mental disability / serious brain damage
 - **Prompt:** Enabling you/your child to reach their full potential; Why? Why not?
 - **Prompt:** Improvement in your (child's) behaviour/mood, social skills / friendships / relationships, memory / ability to remember things and concentrate, performance at school/work; Why? Why not?
 - **Prompt:** Management of Phe levels; Why? Why not?
 - What, if any, are the typical Phe targets that you aim for?
 - How, if at all, has this goal changed over time / is this different from what was important in the past? Can you tell me more about that?

- When do you know that a treatment / management approach is successful? Why? Can you tell me more about that?
 - What does treatment success look like versus treatment failure?
 - **Prompt:** QoL
 - **Prompt:** Compliance to treatment

- How is your / your child's condition currently being managed / treated? **IF NOT SPONTANEOUSLY MENTIONED PROBE FOR:**
 - Low Phe food
 - Amino acid supplements / Protein substitutes

- Medication
 - BH4/Kuvan

MODERATOR: FOR EACH TREATMENT OPTION (I.E. ALL OF THE THREE POTENTIAL APPROACHED TO MANAGMENT OF PKU MENTIONED ABOVE) USED EXPLORE:

- How long have been using / taking it?
- Reasons for use – Why, if at all, did your / your child’s physician say this would be appropriate?
- Which single word do you feel best describes the treatment? Why?
- What, if anything, is good about this treatment? Why? Can you tell me more about that?
- What, if anything, is bad about this treatment? Why? Can you tell me more about that?
- What, if any, impact does this treatment have on your / your child’s life? Why/How? Why not / How not? Can you tell me more about that? Can you give me an example?
 - **Probe:** Impact on diet (if BH4/Kuvan)
 - **Probe:** impact on: behaviour / mood, social skills / friendships / relationships, memory / ability to remember things and concentrate, performance at school / work etc
- What, if any impact does this treatment have on those looking after you / involved in your care / you?
- How successful, if at all, do you consider this treatment? What makes you say that?

ASK NON-KUVAN/BH4 USERS ONLY:

- Have you ever heard of PKU medication such as Kuvan/BH4?
- Have you ever taken any of those PKU medications?
 - **IF TAKEN PREVIOUSLY ASK:** Why are you no longer using this product?

ASK ALL:

- How, if at all, has your / your child’s treatment changed over time? Can you tell me more about that?
 - Which, if any, other treatments (i.e. products / medications) have you / has your child tried in the past?
- What, if any, additional care or support (beyond the direct management of your condition) (e.g. social support) do you / does your child currently receive? Why? Why not? **IF SO EXPLORE:**
 - What does this look like?

- Who provides it? How?
- How, if at all, important is this? Why? Why not? What makes you say that?
- How, if at all, has this changed over time / is this different from what it was like in the past? Can you tell me more about that?

Education and Monitoring of patients with PKU

MODERATOR SAY: *To conclude this section I would briefly like to explore how you (and your child) were educated about PKU and what if anything is typically discussed and/or measured when you see your physician...*

- How, if at all, were you / your child educated about the condition and what it is you / they need to do? Can you tell me more about that? Can you tell me what you/ they were told?
 - **Prompt:** Importance to stick to the prescribed diet?
 - **Prompt:** Importance to be compliant with any treatment(s) prescribed?
 - **Prompt:** Role of dietician(s)
- What, if anything, is typically discussed / measured / monitored? **MODERATOR: FOR EACH ASPECT MENTIONED EXPLORE:**
 - What exactly discussed / measured / monitored?
 - How? Tests conducted / What do the tests entail? Who conducts them?
 - How frequently? Why this frequency? How adequate is this frequency?

MODERATOR IF NOT MENTIONED SPONTANEOUSLY PROMPT FOR THE FOLLOWING AND COVER ALL OF THE ABOVE PROBES:

- **Prompt:** Measurement of Phe levels / fluctuations in Phe levels; Why? Why not?
- **Prompt:** Nutritional deficiencies; Why? Why not?
- **Prompt:** (Improvement in) your (child's) behaviour/mood, social skills / friendships / relationships, memory / ability to remember things and concentrate, performance at school / work; Why? Why not?
- Thinking of what's being measured and monitored, if anything, how, if at all, has this changed over time / is this different from what it was like in the past? Can you tell me more about that? **IF HAS CHANGED OVER TIME EXPLORE THE FOLLOWING AND ENSURE YOU CLEARLY ESTABLISH WHAT HAPPENED WITH WHAT FREQUENCY AT WHAT AGES**
 - Until what age were you regularly followed up?

- Would you think that a home blood testing device could facilitate your PKU management? If yes, where do you see the benefits?
 - **Prompt:** Better compliance to treatment
 - **Prompt:** More regular monitoring
- What do you think should be done with you / your child in case of a short illness or needing emergency surgery?

Exploration of satisfaction with current management and ideal management of PKU

MODERATOR SAY: *Thinking about the way in which PKU is currently managed...*

- How would you say you feel about the care you / your child receive(s)? Why? What makes you say that? Can you tell me a bit more about that?
 - On a scale of 0-10, where 0 is not at all and 10 is very much so, how satisfied are you with the current management / treatment of PKU / care given to PKU patients? Why do you say that?
- What, if any, do you consider to be the key unmet needs in the management of PKU? Why? What makes you say that? **MODERATOR: PROBE FULLY UNTIL NOTHING ELSE**
 - **Probe:** What would be required for you to give a score of 9 or 10 on the satisfaction scale we just discussed?
- If I asked you to describe what you would consider to be the ideal management of PKU, how would you describe it?
 - What or whom, if anything, would you like to have access to (for your child)? Why? What makes you say that?
 - How far away do you feel current management is from that ideal? What makes you say that?
 - What would need to happen to achieve that ideal? Can you tell me more about that?

MODERATOR SAY: *To complete this section I am going to read out a few statements and I would like you to give me a number on a scale of 0 to 10, where 0 is totally disagree and 10 is totally agree..*

MODERATOR: PLEASE READ OUT THE FOLLOWING STATEMENTS; ROTATING THE ORDER IN WHICH STATEMENTS ARE READ OUT BETWEEN INTERVIEWS

“Living with PKU made me / my child a strong person”

“The organisation of PKU food (for my PKU child) is heavily time consuming.”

“My (child’s) PKU limits my social activities.”

“PKU treatment should be reimbursed equally across Europe”

“There should be life-long financial, medical and social support to help my PKU child/me stay on PKU treatment”

Section 4: Market Access and Cost (10 mins)

Objective: to understand current insurance coverage and implications for access to treatment

NB: CARERS AND ADULT PATIENTS ONLY; BE AWARE OF SENSITIVE NATURE OF THIS DISCUSSION AND TREAD CAREFULLY; FOR ADOLESCENT PATIENTS MOVE TO WRAP UP SECTION AT THE END

MODERATOR SAY: *Thanks for all that information. In this final section I would briefly like to explore the extent to which insurance covers some of the treatments you / your child needs and any implications this has financially and/or in terms of gaining access to certain treatments...*

- To what extent, if at all, does your medical health insurance cover the treatment approaches we discussed?
 - Low Phe food
 - Amino acid supplements / Protein substitutes
 - Medication
 - Kuvan/ BH4

MODERATOR: FOR EACH APPROACH ENSURE YOU GAIN DETAIL ON:

- Which ones (i.e. products) are covered and to what extent?
 - Up to what age?
 - What, if any, restrictions are there?
- What, if anything, are the implications/consequences of the situation you have described with respect to insurance...
 - Generally? Can you tell me more about that, please?
 - Financially? Can you tell me more about that, please?
 - In terms of your ability to gain access to certain treatments? Can you tell me more about that, please?

- Have you ever encountered a situation where your / your child's physician suggested you / your child could really benefit from a certain treatment, but you were not able to get it due to insurance or other limitations? **MODERATOR: IF YES, PLEASE PROBE FOR THE FOLLOWING**
 - **Probe:** How did this situation make you feel?
 - **Probe:** To what extent, if at all, did you try to change the situation? Why? What was the outcome?
- As far as you are aware, is there anywhere patients / parents can go to receive financial support / access to the medication?
- What, if any, other barriers to treatment access are there? Please tell me more about that? What else?

MODERATOR SAY: *Talking about costs, if I may...*

- What is the typical monthly out of pocket cost that you need to incur for...?
 - Low Phe food
 - Amino acid supplements / Protein substitutes
 - Medical intervention
 - Professional and social support
 - Any other?
- To what extent, if at all, are you entitled to / do you receive any subsidies?

MODERATOR: PROBE FOR:

- Estimated annual income from medical subsidies
- Estimated annual income from unemployment benefits
- Estimated annual income from housing benefits
- Any others?
- To what extent, if at all, are you aware of the existence of 'rare disease' plans? **MODERATOR: IF AWARE EXPLORE WHAT THE RESPONDENT KNOWS ABOUT THEM AND HOW (S)HE FEELS ABOUT THEM?**
- **IF AWARE:** To what extent, if any, do you agree that there is a need to lobby the Government / Health Authorities in your country to put PKU in their 'rare disease' plans and put pressure on them to ensure that these plans are implemented? Why? Why not? Can you tell me more about that?

Wrapping up the interview

- To close our discussion, what if anything would you say to...
 - Pharmaceutical companies working in the area of PKU?
 - Diet companies working in the area of PKU?
 - Patient advocacy groups working in the area of PKU?
 - The government of your country in terms of what you would want them to do?
 - To your hospital?

These are all my questions. Do you have any further comments or suggestions you would like to add to the discussion we've had today?

THANK AND CLOSE