Supplementary file

Supplementary Table S1. Semi-structured interview guide for online focus group discussions.

Question type	Questions
Questions of focus group with HCPs	**General** Q1. What comes to your mind when you hear the word website? Q2. What website do you consider applicable for children with CSLDs? **Content** Q3. What type of information and other content should include a website for children with CSLDs? **Functions** Q4. What features should a website have, to motivate a child with CSLD to use it more frequently? **Closing questions** Q5. Let's go back and look at what came up at the beginning and add. Q6. Is there anything else you would like to add?
Questions of focus group with parents	**General** Q1. What comes to your mind when you hear the word website? Q2. What website do you consider applicable for your children? **Content** Q3. What type of information and other content should include a website for your children? **Functions** Q4. What features should a website have, to motivate your child to use it more frequently? **Closing questions** Q5. Let's go back and look at what came up at the beginning and add. Q6. Is there anything else you would like to add?

CSLDs: chronic suppurative lung diseases; HCPs: healthcare professionals

Supplementary Table S2. Content and Functions of a website for use in children with chronic suppurative lung diseases: Professionals' Focus Group

Supplementary Table S2a. Content of a website for use in children with chronic suppurative lung diseases: Professionals' Focus Group

Main Themes	Sub Themes	Representative Quotes
Information	Medical	*"The website should include clear explanations of the disease - what chronic suppurative lung disease is and how it affects children." (HCP2)*
		"We need content that explains why each treatment is necessary - children and parents are more cooperative when they understand the reasoning." (HCP4)
	Physiotherapy	*"It should include videos describing how to do airway clearance techniques correctly." (HCP3)*
		"Many parents don't remember the techniques exactly - accessible physiotherapy guidance on the website could really help with home practice." (HCP4)
	Nutrition	*"Nutrition is a big part of managing chronic lung diseases - families need clear and practical advice on what and how much children should eat." (HCP1)*
		"Including meal plans or snack ideas that support lung health would make the website truly comprehensive." (HCP5)
		"Parents often ask about supplements or high-calorie foods - this kind of nutritional guidance should definitely be covered." (HCP6)
	Exercise	*"The website could suggest safe types of exercise, adapted to their condition..." (HCP1)*
Aesthetics	Enjoyable	*"...it should be entertaining and a little different each time - it should convey the same ideas every time but in a slightly varied way so that the child has something new to look forward to." (HCP1)*
	Simple	*"It should be simple, quick to implement, and appealing to children." (HCP5)*
Gamification	Blowing games	*"Various games, such as games that involve blowing, the measurements*

		of which will be sent directly to the corresponding center of the website, with a dedicated team responsible for collecting them..." (HCP6)
	Serious game	*"I would suggest that the website include serious games where we level up, and the difficulty gradually increases. For example, blowing a balloon so that it goes over the roof of a house." (HCP6)*
	Artificial intelligence	*"I'm not sure how this could work, but maybe the new possibilities that artificial intelligence offers could help with that." (HCP1)*
	3D animation	*"Animations are very appealing to children at this age, but if the same animation is shown every day, it will become boring. They should be varied from time to time to maintain engagement…" (HCP1)*
Evidence	Research Evidence	*"All information should be drawn from evidence-based research and literature and presented in a simple and concise manner." (HCP4)*
	Experts' final decision	*"The final advice should come from the specialist paediatric respiratory physiotherapist and the doctor. The information on the website should be general, while personalisation should be provided by the healthcare professional. This must be clearly stated within the website content." (HCP6)*
Co-design	Involvement of children and families	*"Children should be part of the design process - they're the end users, and their input is crucial for usability." (HCP2)*
		"Parents are aware the daily challenges better than anyone, so involving them ensures that the website is practical and relevant." (HCP6)

Supplementary Table S2b. Functions of a website for use in children with chronic suppurative lung diseases: Professionals' Focus Group

Main Themes	Sub Themes	Representative Quotes
Technical support	Reminders	*"…some kind of electronic reminders for children, telling them that it's time to take their medication, it's time for their physiotherapy." (HCP1)*
		"...these reminders could be prepared by the therapist, ensuring the child knows to follow the treatments in the specified order." (HCP4)
	Sound notification	*"...an alarm for both pharmacological and non-pharmacological treatments could be set to remind children when they need to take their medication or follow their therapy. This would help them adhere to their treatment." (HCP5)*
	Communication Form	*"Another important issue is user access in case they have any questions. Perhaps there should be a dedicated person responsible for handling technical issues related to the website and its functionality." (HCP2)*
	User manual	*"…there should be user manuals that are simple, written in an understandable manner, perhaps even in some foreign languages." (HCP4)*
	Updates	*"Various updates will be required regarding the problems that arise." (HCP1)*
	Modular	*"To be modular! That is, for the family to choose which elements of the website they want to use initially. Because by having the ability to choose, the whole endeavor may become more appealing to them. Their selection should be somewhat more interactive. Step by step." (HCP2)*
		"The ability to adapt to what the family has, to what the family wants the child to be able to use, and to offer flexibility - from very few to many options - based on the abilities and preferences of those

		using it. In other words, a one-size-fits-all solution would be quite challenging." (HCP5)
	Calendar /Weekly questionnaire	*"The child should complete a weekly questionnaire with 3-4 questions to help us assess their clinical condition after activities such as playing, physiotherapy, or medication. It should be brief so that the child doesn't spend too much time on it. This would provide us, as healthcare professionals, with valuable guidance." (HCP6)*
	Evaluation Form	*"I would like an honest and anonymous evaluation of the website. Users should have the ability to give some kind of star rating without their name appearing below." (HCP1)*
Training	Users' training	*"…training is needed on how to use these websites, dedicating time and frequent practice. Repetition is the key to learning." (HCP1)*
		"During the follow-up of our patients, who come every 2-3 months for regular follow-up. The time the child stays at the doctor's office is long, each visit lasts approximately 1-1.5 hours. Within the framework of this visit, there is time to educate the child on how to use such a website." (HCP4)
		"…there should be gradual and personalized training for both parents and children. This process can take up to a month until the whole family completes its training." (HCP6)
	Asynchronous Training	*"There should also be a video on YouTube demonstrating the use of medications or airway clearance techniques." (HCP5)*
		"…videos that do not necessarily have to be live; the physiotherapist does not need to be on camera in real-time, but they can be pre-recorded." (HCP1)
Remote Monitoring	Electronic Spirometers	*"There are currently electronic spirometers or medication devices available that allow users to check whether they are inhaling their medication correctly*

		(unfortunately, these are not available in Greece) or if they have missed a dose. A patient who undergoes daily treatments should be able to know if they have skipped something or if something was not done correctly." (HCP4)
		"Spirometry measurements should be recorded so that we can also monitor the progress of our patients." (HCP5)
	Portable Forms (PDF)	*"Something that would allow patients to share data with doctors regarding their clinical progress, such as the expulsion of sputum, any changes in its consistency or color, whether they are producing sputum at all - in other words, a way to record these details." (HCP5)*
Accessibility	Free supply	*"Perhaps it could be provided to families through donations." (HCP4)*
Multilingual	Available in different languages	*"...it should be available in multiple languages as there are many foreigners in our country and they should also be able to use it." (HCP6)*

Supplementary Table S3. Content and Functions of a website for use in children with chronic suppurative lung diseases: Parents' Focus Group

Supplementary Table S3a. Content of a website for use in children with chronic suppurative lung diseases: Parents' Focus Group

Main Themes	Sub Themes	Representative Quotes
Information	Medical	*"Sometimes we leave the hospital with so many instructions, that it's hard to remember - if it was clearly written on the website, it would help a lot." (P2)*
		"We often google things, but it's hard to know what to trust. I'd prefer having reliable, doctor - approved information in one place." (P6)
	Physiotherapy	*"Sometimes I'm not sure if we're doing the physiotherapy exercises correctly - videos or instructions on the website would really help." (P1)*
		"They showed us the technique once at the hospital, but at home it's easy to forget the steps." (P5)
	Nutrition	*"Having a nutritional plan would definitely be helpful." (P4)*
		"An indicative list with certain foods, similar to a chart, to help the child become more independent as they grow." (P6)
	Exercise	*"Regarding exercise. A video-based exercise program, complementing other elements - whether it's nutrition or medication - should also include physical activity." (P1)*
Aesthetics	Enjoyable	*"It should be appealing, fun, and interactive. By interactive, I mean there should be a character who talks to the young children. The children should be able to participate in what the character is saying, in some way." (P5)*
	Simple	*"I think it would help if it were user-friendly and easy to understand." (P3)*
		"I believe that above all, it should be easy for children. It always depends on the age..." (P4)
	Colorful	*"As for the color, it has a lot to do with the children's age. It should be something colorful, something cheerful, something that catches their attention." (P2)*

		"...in our case, for children around the age of six, it should be something colorful, something joyful that captures their interest." (P4)
	Adaptable	*"...it should be adapted according to the child's age and needs. For example, my 6-year-old daughter would be interested if there was a game included in order to keep her engaged during therapy." (P1)*
Gamification	Imaginary friend	*"As previously mothers mentioned, creating a hero in an interactive way - one who embodies role models in areas like nutrition or exercise and accompanies the child throughout the entire program - would be a great idea..." (P1)*
		"Well, I believe that a digital friend within the tool would be very helpful. An electronic friend that they could see on their phone through virtual reality." (P4)
		"A hero could be created who grows with them and experiences the therapy alongside them..." (P5)
	3D animation	*"She would like the website to include an animated game to keep her engaged during therapy." (P1)*

Supplementary Table S3b. Functions of a website for use in children with chronic suppurative lung diseases: Parents' Focus Group

Main Themes	Sub Themes	Representative Quotes
Technical support	Reminders	*"A daily reminder or whenever necessary for what they have to do, in a pleasant way that doesn't feel burdensome." (P1)*
		"Reminders for medication, physical therapy, and water." (P2)
		"It should alert as soon as the therapy is finished, reminding them to take the medication." (P4)
		"If there was also a reminder that then you should write the next medication…now it's time for physiotherapy...something...it would be very helpful." (P5)
		"Let there be a reminder of what needs to be done. A reminder to not deviate from the path so as to do everything right and as it should be." (P6)
	Sound notification	*"It should provide an auditory cue through a sound notification giving guidelines about what should be done next, in a smart, pleasant way that is not tiring. Something like "Now we're doing this" or "This needs to be done" or "You've already done this" Check it". (P3)*
	Telephone Support	*"...and then maybe a telephone number in case we can't find a way to come in touch." (P4)*
	Email	*"There should be some communication with the person providing the website, either by an email or through an image on social media (e.g. Instagram), involving the specialist." (P3)*
	Chat Box	*"..as we mentioned earlier about the chat, I think children could also use it to share their concerns or express how they feel with each other." (P4)*
		"…a real-time chat that allows the children to come in touch with an advisor in order to express any concerns or feelings until they speak to a specialist."(P5)
		"A chat that could cover their questions." (P6)

	Social media	*"I strongly believe that children should have a platform (e.g., Instagram, Facebook) where they can share the weight they feel, their concerns, their problems - anything. I think that if there were such a space exclusively for patients or even for caregivers, it would be very helpful." (P4)*
	Pharmacological and non-pharmacological diary	*"Would it help if there was something like a diary? For example, a diary for tracking medication, physiotherapy, and exercise." (P3)*
Remote Monitoring	Feedback from HCPs	*"If the entire physiotherapy process has been carried out correctly, there could be a way to check whether the respiratory exercises are actually being performed properly and in the correct manner." (P2)*
		"Beyond just ensuring that the exercises are done correctly, I would also like to track progress. Essentially, I want to see the current condition, whether the website can display that, and whether there is any improvement. I want to monitor the child's progress - whether there is a steady course, whether things are being done well, or if something that initially wasn't done properly has now improved. I would like to know that, to see how the child is progressing." (P3)
	Digital spirometer	*"A spirometer that could record data via Wi-Fi, allowing you to track the child's progress in daily life." (P4)*
Asynchronous Training	Video	*"…it could improve the respiratory physiotherapy by providing a more accurate demonstration, for example, if there was a way for the video to illustrate it." (P1)*
		"And the second thing, I insist again, she could also watch it herself, even though she is six, to see how she could do the respiratory physiotherapy more correctly. That is, to apply her breathing exercises better. If there was a way for the video to show it, it would be helpful

		because it's a dull time that she has to sit through." (P2) *"A video that shows them how to do their respiratory physiotherapy." (P5)* *"I agree with the video, as another mother mentioned, about the way she should do her respiratory physiotherapy." (P6)*
Accessibility	Free supply	*"The free provision. Because if it's something that must be paid for, someone might not be able to afford it, right? Whereas if it's free, they will be able to do it regularly and sustain it." (P5)*

Supplementary Table S4. Mapping of Focus Group Themes to Delphi Round 1 Items

This table presents the mapping of main themes and sub-themes derived from focus group discussions with healthcare professionals (HCPs) and parents of children with CSLDs to representative participant quotes and the corresponding Delphi Round 1 items.

Main Theme	Sub-theme	Representative Quote	Delphi Item (Round 1)
Information	Medical	"The website should include clear explanations of the disease…" (HCP2)	Information (medical, physiotherapy, nutrition, exercise)
Information	Physiotherapy	"It should include videos describing how to do airway clearance techniques correctly." (HCP3)	Information (medical, physiotherapy, nutrition, exercise)
Information	Nutrition	"Nutrition is a big part of managing chronic lung diseases…" (HCP1)	Information (medical, physiotherapy, nutrition, exercise)
Information	Exercise	"The website could suggest safe types of exercise, adapted to their condition…" (HCP1)	Information (medical, physiotherapy, nutrition, exercise)
Aesthetics	Simple	"It should be simple, quick to implement, and appealing to children." (HCP5)	Simple
Aesthetics	User-friendly	"I think it would help if it were user-friendly and easy to understand." (P3)	User friendly
Aesthetics	Colorful	"It should be something colorful, something cheerful that catches their attention." (P2)	Colorful
Aesthetics	Adaptable to age	"Adapted according to the child's age and needs." (P1)	Easy navigation / Language adaptability
Gamification	General gamification	"Various games…with measurements sent directly to the center…" (HCP6)	Gamification
Gamification	Imaginary friend/avatar	"A hero could be created who grows with them and experiences the therapy…" (P5)	Imaginary friend (avatar)
Gamification	3D animation	"Animations are very appealing to children…" (HCP1)	3D animation
Evidence	Evidence-based content	"All information should be drawn from evidence-based research…" (HCP4)	Evidence-based content
Co-design	Involvement of children	"Children should be part of the design process…" (HCP2)	Co-design
Technical support	Reminders	"Some kind of electronic reminders for children…" (HCP1)	Reminders
Technical support	Sound notification	"…an alarm for both pharmacological and non-pharmacological treatments…" (HCP5)	Sound notification
Technical support	Communication form	"…there should be a dedicated person responsible for handling technical issues…" (HCP2)	Communication form
Technical support	User manual	"…user manuals that are simple…perhaps even in some foreign languages." (HCP4)	User manual
Technical support	Updates	"Various updates will be required regarding the problems that arise." (HCP1)	Updates
Technical support	Modular	"To be modular…for the family to choose which elements…" (HCP2)	Modular
Technical support	Calendar/Weekly questionnaire	"The child should complete a weekly questionnaire…" (HCP6)	Calendar/Weekly questionnaire
Technical support	Evaluation form	"I would like an honest and anonymous evaluation…" (HCP1)	Evaluation form

Technical support	Telephone support	"…a telephone number in case we can't find a way to come in touch." (P4)	Telephone support
Technical support	Email	"…either by an email or through an image on social media…" (P3)	Email
Technical support	Chat box	"…a real-time chat that allows the children to…express any concerns…" (P5)	Chat box
Technical support	Social media	"…a platform…where they can share their concerns…" (P4)	Social media
Technical support	Diary	"…a diary for tracking medication, physiotherapy, and exercise." (P3)	Diary
Training	Child's training	"…gradual and personalized training for both parents and children." (HCP6)	Child's training
Training	Parent's training	"…gradual and personalized training for both parents and children." (HCP6)	Parent's training
Training	HCP training	"…training is needed…repetition is the key to learning." (HCP1)	Healthcare professionals' training
Training	Video	"…videos describing how to do airway clearance techniques…" (HCP3)	Video
Remote monitoring	Multilingual	"…should be available in multiple languages…" (HCP6)	Multilingual
Remote monitoring	Compatible with other devices	"…adapt to what the family has…" (HCP5)	Compatible with other devices
Remote monitoring	Interaction with HCPs	"…communication with the health care team…" (HCPs)	Interaction between patients and HCPs
Remote monitoring	Image uploading	"…a way to record these details…" (HCP5)	Image uploading
Remote monitoring	Portable forms (PDF)	"…share data with doctors…" (HCP5)	Portable forms (pdf)
Accessibility	Easy navigation	"…user-friendly and easy to understand." (P3)	Easy navigation
Accessibility	Language adaptability	"…user manuals…in some foreign languages." (HCP4)	Language adaptability
Accessibility	Privacy	"…strict privacy for users." (HCP4)	Strict privacy policies
Accessibility	Free supply	"If it's free, they will be able to do it regularly…" (P5)	Free supply