

ACTiF study: Understanding adherence to nebuliser treatment in adults with cystic fibrosis using the Theoretical Domains Framework.



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- The Theoretical Domains Framework describes 14 factors from theories of behaviour change that fall under the categories of *Capability*, *Opportunity* and *Motivation*.
- Interviews were conducted with 18 adults with CF to explore nebuliser adherence.
- We chose a purposive sample with a range of ages, gender, adherence profiles, socio-economic status.
- During the interview participants were presented with charts of their own nebuliser adherence data
- Interview transcripts were content-analysed using the Theoretical Domains Framework.
- Key domains along with example **facilitators** and **barriers** are described.

Motivational factors

Beliefs about the consequences of adherence to nebuliser treatment

the necessity of treatment

“Basically because is going in straight to where you need it to go. It’s targeting your lungs it’s going into your airways it’s getting straight into all the bad stuff” (P3)

concerns about treatment

“And I just started doing it nearly every day, twice a day. And then they found out that’s making me tighter [right], so then I thought well if this is meant to be making me better and it’s making me worse, what’s the point in doing all the rest...” (P2)

Feedback from treatment

that it works

“over the last I don’t know I think 9 years or so I have been in every, three times in a year something like that whereas up until now I have not been in since last June because I have decided to actually pull my finger out and do the stuff that I need to do to keep well which is adherence with the neb” (P10)

lack of feedback

“its harder with the nebulizer because you don’t get any real feedback because you don’t feel like it’s working [yeah] so you don’t know what it’s really doing” (P1)

Goals to adhere

“that is probably why it was more or less the highest in that period is because I was gearing up for the role so I needed to make sure that I was well enough to do it” (P10)

opposing goals

*“I: Sundays seem to be the worst.
P: Yeah, it’s my chill out day, it’s my lazy day” (P8)*

Capability factors

Knowledge about treatment

having knowledge

"...my DNase like cuts through like my mucus and thins it out a bit so that helps because obviously it's been really thick just lately and it's just been helping it to get it out and it feels ace when it's out" (P6)

not having/having incorrect knowledge

"I: Do you have to leave a gap between the treatments or do you just do them straight after each other? Or...

P: It's one of those interesting things. Originally when they did it, they said you have to leave an hour's gap between each one. And I said well fair enough but it's... and I was having trouble because I sit down at work and have one, then an hour later I'll be working. But I'll try and fit it in sort of three hours into the day, well two hours actually. And they said 'oh they told you that? You only have to leave half an hour between them.'" (P13)

Planning treatment

having a routine

"It's easier in a morning because I've got more of routine" (P18)

not having/wanting a plan

"I got into the routine of just not doing it sort of thing [yeah]. It's more easier to just like do a routine of not doing it than it is easier than to do it, sort of thing" (P2)

Memory

being able to remember

forgetting

"then in the evening, I sit down and watch TV with (husband) after a long day and then say, 'shall we go to bed? Oh shit, I've not done my nebuliser!' [laughs]. Probably 2 times a week that happens!" (P17)

Opportunity factors

Environmental influences

helpful influences

“Do you know what I hate most about the nebulisers? Washing it afterwards....when I first started taking it,(husband) said if I did it, he would do [laughs], he would wash it, which he does, bless him, not in the day, but in the evening “(P17)

things that hinder

“whereas night times are all different cos there’s karate, there’s swimming, there’s football, there’s this there’s that there’s other and I’m all over the place so when I get home I’ve just had enough” (P3)

Conclusions

- The Theoretical Domains Framework allowed us to identify a broad range of influencing factors on nebuliser adherence.
- The barriers and facilitators were highly variable between individuals.
- Interventions should be tailored to the specific *Motivation, Capability* and *Opportunity* issues that influence treatment adherence for an individual.
- We have used the results from this study to develop CFHealthHub
- CFHealthHub is an online intervention that combines feedback of objective adherence data with tailored support around motivation, capability and opportunity.
- www.cfhealthhub.com