

# Technology and uncertainty

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# Focus for today

- ▶ Why my interest
- ▶ Look at evidence
- ▶ Think about a model to explain what we might see
- ▶ Brief update on some research taking place in Newcastle

# A BRIEF REVIEW OF THE EVIDENCE

- ▶ Generally positive views- mainly using qualitative research methods.

## Independence:

- ▶ Parents report a reduced care burden
- ▶ Young people (when using hybrid closed loop) report freedom to engage in more activities- unsure if this is about parental anxiety too?
- ▶ Feeling (for YP) they were being tracked
- ▶ Increased family conflict around data sharing/ who they share with and who they don't e.g. boyfriend but not mam
- ▶ still requiring significant parental interventions (timing of interventions is key)
- ▶ Parental anxiety increased where technology was seen as them having less control over this

## Trust:

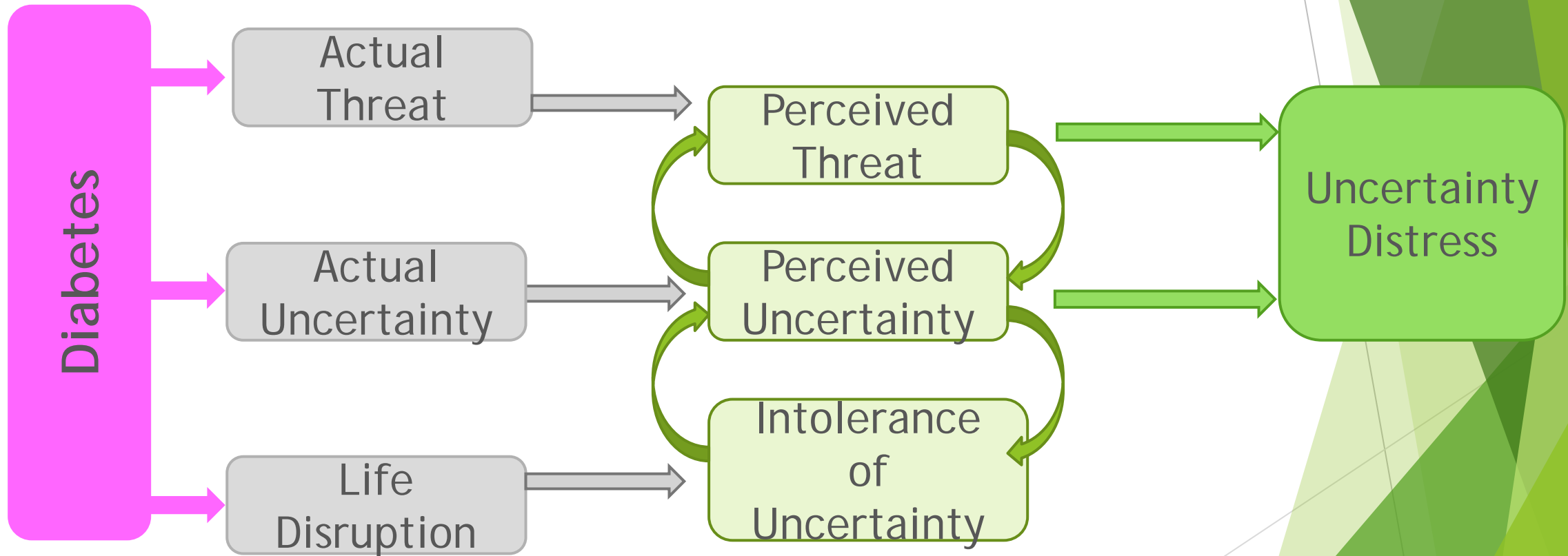
- ▶ 'increased reassurance and reduced anxiety, improved sleep and confidence and that technology allowed individuals to take time 'away from diabetes'- Some evidence that YP can forget too much (neglect basics of self care)
- ▶ concerns around trusting technology, and worries about physical bulk, technical glitches and difficulties incorporating closed-loop systems into everyday life.
- ▶ Kimbell et al (2020) also discussed that health professionals and patients had heightened anxieties around the constant availability of data and having unrealistic expectations about what the system is able to do. Often leads to interventions and not using the technology optimally.

# An example in your life

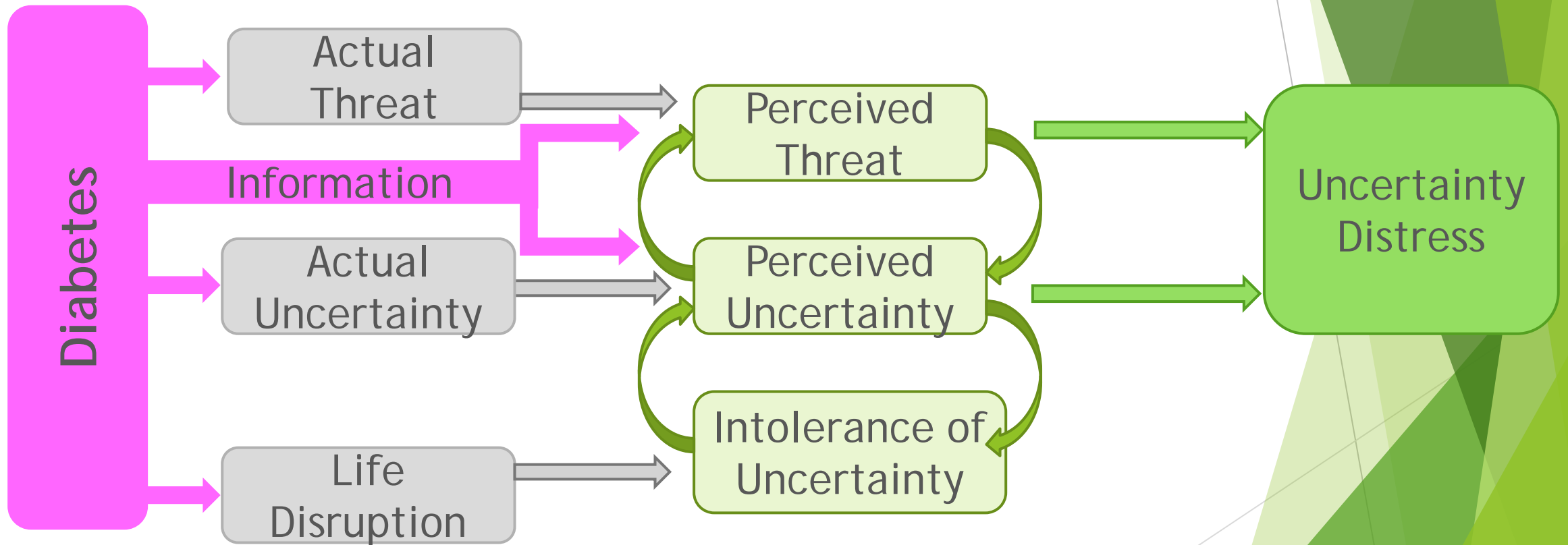
- ▶ Your own wearable technology- fitbit/apple watch?
- ▶ That is safe!
- ▶ My observations in clinic is that for **some** families this tech is feeding information to our patients and carers that has threat attached. E.g. your child's BG's are dropping sharply.
- ▶ Were going to think today about a model that might help us understand what we are seeing in terms of how people behave in relation to this technology (clinical observations leading to empirical studies).

# Diabetes and Uncertainty Distress:

<https://www.covid19an.com/team>



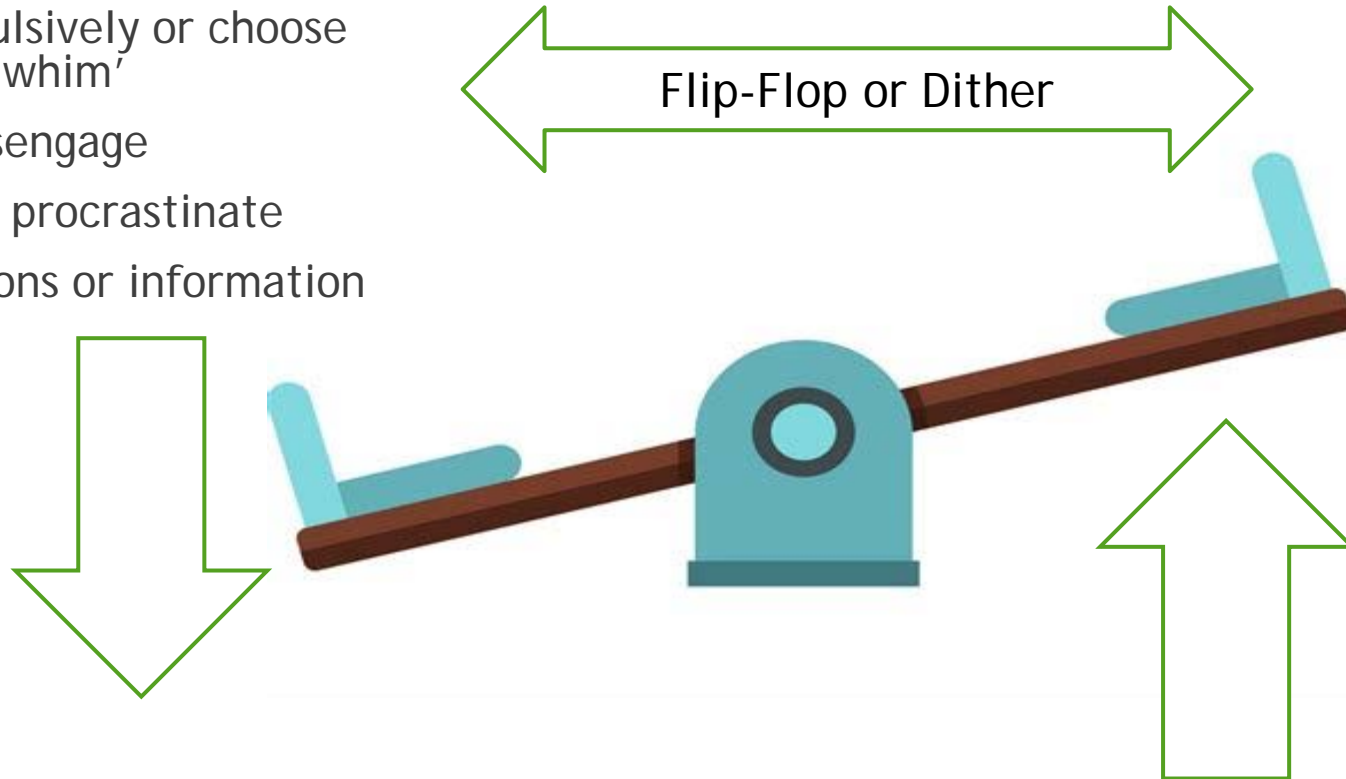
# Diabetes and Uncertainty Distress:



# How uncertainty makes us behave

## ▶ Under Engage

- ▶ Behave impulsively or choose things 'on a whim'
- ▶ Ignore or disengage
- ▶ Distract and procrastinate
- ▶ Avoid decisions or information

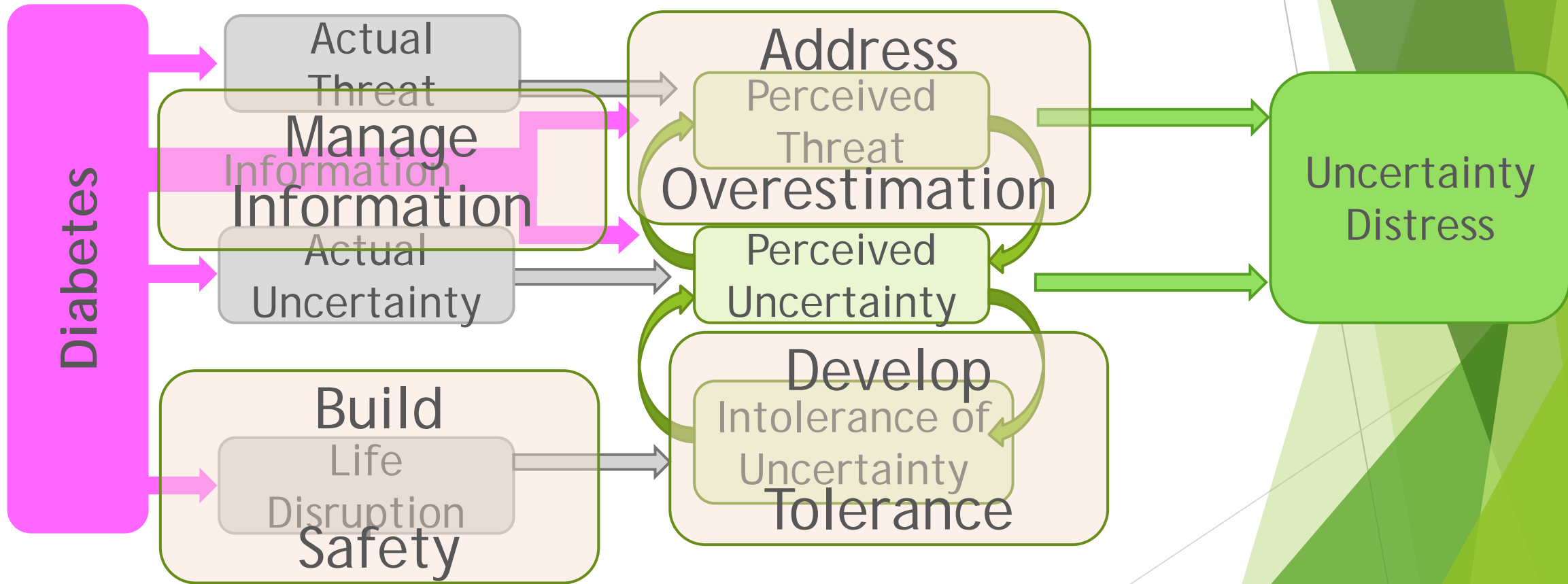


## Over Engage

- Hyper awareness of uncertainty
- Worry or ruminate
- Check, check, check, check
- Strive for more information - google
- Over practice
- Plan, plan, plan
- Prepare for worst situation
- Act as if the worst possible is happening
- Demanding more....

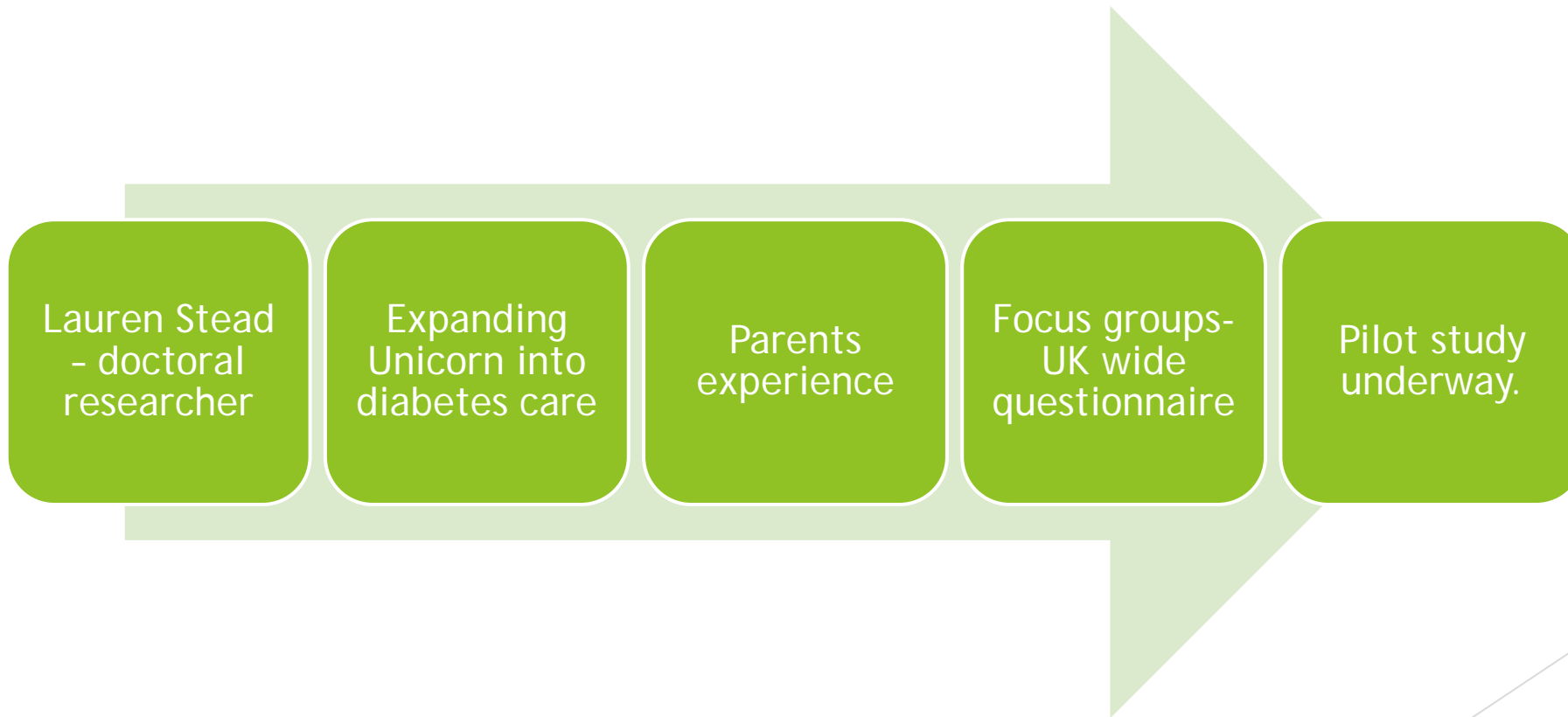
These behaviours are aimed at reducing the perceived uncertainty or the discomfort associated with it but are often ineffective or may contribute to more uncertainty. May help identify your own and others responses to uncertainty.

# Diabetes and Uncertainty Distress:





# Research



Lauren Stead  
- doctoral  
researcher

Expanding  
Unicorn into  
diabetes care

Parents  
experience

Focus groups-  
UK wide  
questionnaire

Pilot study  
underway.