

The development of online learning designs for patients with type 2 diabetes

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Research question

An online, patient-centred learning environment for patients with type 2 diabetes will lead to improved levels of self-efficacy and self-management?

Unpack the question

- *What is an online, patient-centred learning environment?*
 - Series of educational activities based which have been built from the ground-up using authentic patient experiences
 - Online, web-based environment
- *Why type 2 diabetes?*
 - One of the major public health challenges of our time
- *Why is self-efficacy important?*
 - Self-efficacy can lead to improved health outcomes through improved levels of self-management

An online, patient-centred learning environment

- Not a great deal in the literature about the *process* of the development of online resources. More on:
 - How resources can improve health outcomes
 - Exploration of different electronic forms (e.g. mobile phone)
- How do you go about building a patient-centred environment?

Building the environment

- Conduct interviews with patients with type 2 diabetes using the **McGill Illness Narrative Interview**
 - Conducted **3** interviews so far
- Conduct thematic analysis using **Interpretive Phenomenological Analysis**
- Develop educational activities based on themes

Building themes - example

Interviewer: So you mentioned hereditary factors and food. Do you think there are any other causes?

Participant: Er. Ignorance. About when I was told I was insulin intolerant. **Patient knowledge?** I think you know I'd get the diabetes then. Yeah. Er cos I didn't know about what the intolerance meant in fact I didn't know until I asked the educator. **Interaction with allied health professional?** He showed me a diagram on what it was and I was rather surprised.

Building themes - example

Interviewer: Surprised in what way?

SP: Erm, what it actually meant. Yeah, erm you know I thought er I thought it meant **the idea that I couldn't take insulin** which is not the case at all but that's what I thought. Erm, and I don't remember reading anything about that even on the Internet not on the sites I went to.

Patient misconceptions

Knowledge and understanding of illness: patient misconceptions

Descriptive layer	Interpretive layer	Themes and sub-themes
Participant's understanding of insulin resistance	A good example of a conceptual misconception. Insulin resistance is misunderstood to be that the body can't tolerate insulin if taken. Insulin resistance = insulin becoming less effective at lowering blood sugars	Parent theme: Knowledge and understanding of illness Sub-theme: misconceptions

Some other themes

- **Agency and illness: control**
- **Agency and illness: self-blame**

Educational challenge

How do we go from a theme to a learning design?

Reflection and patient as practitioner

Task: As a group, patients are asked to think about their misconceptions

What have you been told that you don't understand?

What language don't you understand?

Choose one area in particular that you are still unsure about

The self-directed learner

Task: During your next visit to health professional ask member of allied health team about chosen theme

Collaborative learning

Task: Return to online environment to discuss. What did you find out? Are you still unclear? Do you have any further questions for the allied health team on your next visit?

Patient empowerment and agency

Task: Write down any further questions for your next visit

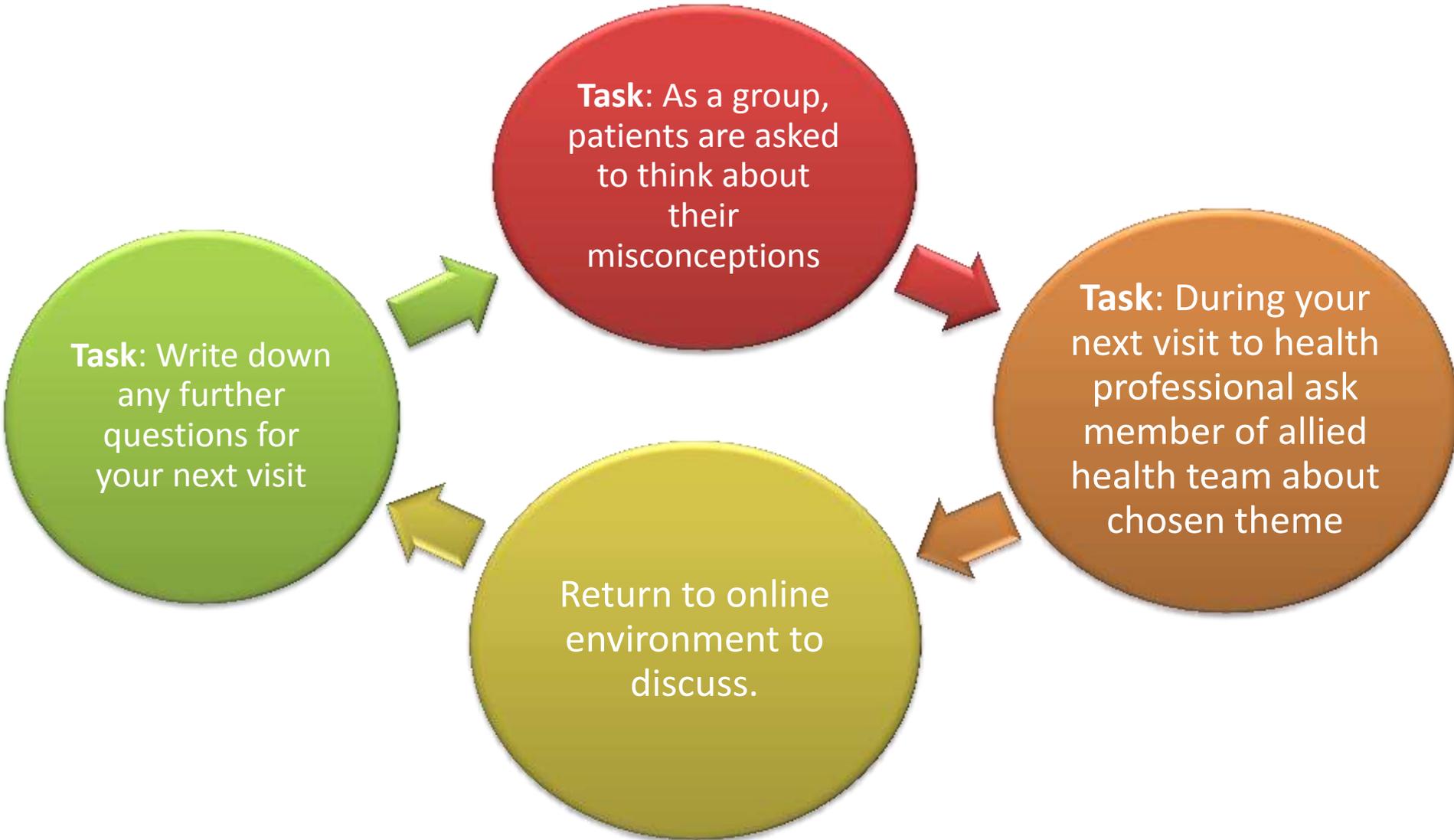
A learning design for patient misconceptions

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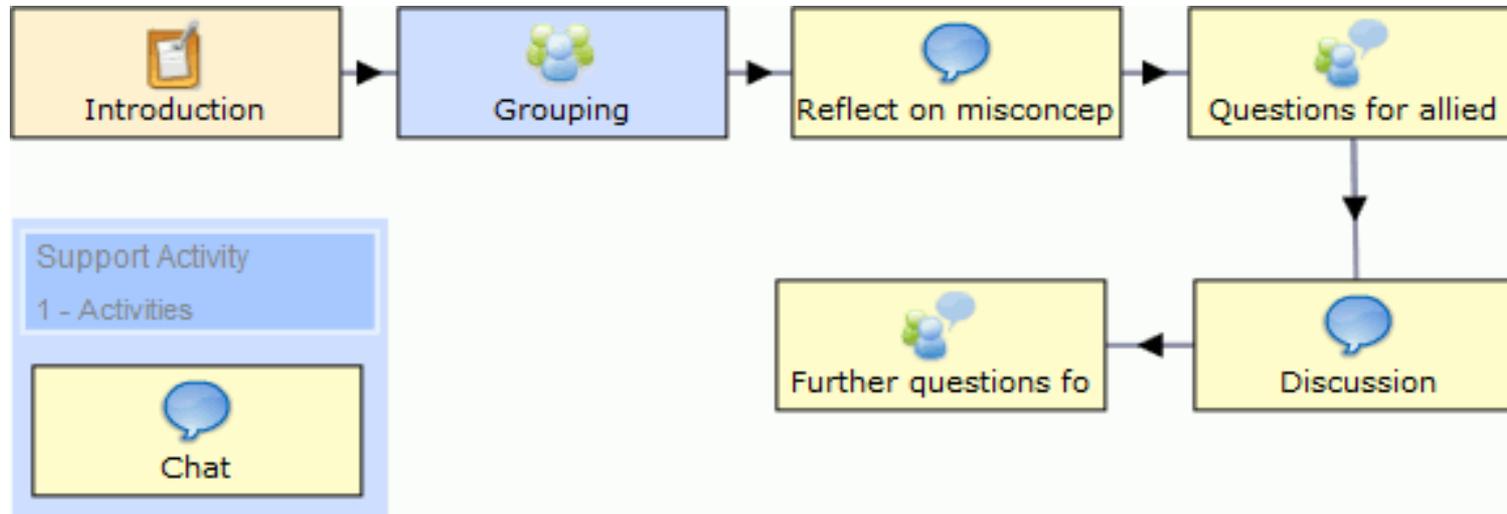
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A learning design for patient misconceptions in LAMS

(Learning Activity Management System)



- Open source
- Online system
 - Authoring learning designs
 - Deployment of learning designs
- Can integrate with Moodle LMS

Where to next?

- Further interviews
- Thematic analysis
- Learning designs
- Develop learning environment in LAMS/Moodle-based environment
- Evaluate effectiveness using self-efficacy instruments for patients *newly diagnosed* with type 2 diabetes

Thanks

- Professor Ian Wilson, Graduate School of Medicine, University of Wollongong
- Professor Anthony Maeder, University of Western Sydney
- Professor Annemarie Hennessy, University of Western Sydney

Educational activities and educational theories

Educational activities	Educational ideas
<p>Task: Patients are asked to think about their misconceptions - What have you been told that you don't understand? What language don't you understand? Choose one area in particular that you are still unsure about.</p>	<p>Reflection and patient as practitioner [1, 2]</p>
<p>Task: During your next visit ask member of allied health team about chosen theme or look up the area yourself.</p>	<p>The self-directed learner [3]</p>
<p>Task: Return to online environment to discuss. What did you find out? Are you still unclear? Do you have any further questions for the allied health team on your next visit?</p>	<p>Collaborative learning, Community of Practice [4] and socio-cultural theory of learning [5]</p>
<p>Task: Write down any further questions for your next visit.</p>	<p>Patient empowerment and agency [6]</p>

References

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