Thinking is increasingly valued as a necessity to reduce costs, design care. However, due to many technical solutions being used on a large scale in healthcare, until now, Design Thinking has not been used in daily practice. One of the proposed methods is contrast-enhanced ultrasonography (CEUS).

Methods and Results

The Design Thinking process consists of five steps: Empathize, Define, Ideate, Prototype and Test. It is an iterative process, meaning that the process can (partly) be repeated after the fifth step. In this section, every step is explained based on the example of placenta microvasculature imaging.

Empathize - In this phase, the problem is explored. In a human-centered manner, all of the aspects of the problem are investigated. In this way, all of one’s own assumptions are set aside and real insight is gained into the user’s needs. A lot of information is gathered. Different stakeholders and experts in imaging, as well as obstetrics experts, were interviewed in this stage.

Define - The second phase is about defining the problem in a human-centered manner. For placenta vasculature imaging, it is important that the microvasculature of the placenta is visualized. For normal placental function, adaptations to placental insufficiency. For normal placental function, adaptations to placental function, on the maternal and fetal side of the placenta. Therefore, it is important that the microvasculature of the placenta is studied. Hence, placenta imaging is discussed. So far, no satisfactory method for placenta function has been used in daily practice. One of the proposed methods is contrast-enhanced ultrasonography (CEUS).

Ideate - In this phase, the problem is explored. In a human-centered manner, all of the aspects of the problem are investigated. In this way, all of one’s own assumptions are set aside and real insight is gained into the user’s needs. A lot of information is gathered. Different stakeholders and experts in imaging, as well as obstetrics experts, were interviewed in this stage.

Prototype - In this phase, the problem is explored. In a human-centered manner, all of the aspects of the problem are investigated. In this way, all of one’s own assumptions are set aside and real insight is gained into the user’s needs. A lot of information is gathered. Different stakeholders and experts in imaging, as well as obstetrics experts, were interviewed in this stage.

Test - This is the phase where the best solution from the prototype phase is tested. It is the last phase of the Design Thinking process, but one or more steps are usually repeated because of its iterative character.

Conclusion

Although still relatively unfamiliar, Design Thinking is a promising and valuable concept for innovations in healthcare. We would recommend implementing this process for future clinical problems with multidisciplinary teams.