

Objective

Reviewing different uses of 3D printing and additive manufacturing technology in obstetrics and gynaecology.

Design

We looked into various databases and thought about novel approaches to using additive manufacturing to improve care in obstetrics and gynaecology.

The key features of additive manufacturing are layer-by-layer fabrication and customization capabilities

Method

We used PUMED to research all articles with key words of obstetrics, gynaecology, 3D printing, additive manufacturing

Results

Novel uses include: Pelvic models for surgical planning and simulation, customized medical devices (e.g., cervical pessaries, intrauterine devices), patient-specific anatomical models for education and training enhancing surgeon understanding and preparedness, and development of bioengineered tissues and organs.

Discussion

Although additive manufacturing promise to be a valuable technology in obstetrics and gynaecology but it is not without its disadvantages, mainly high cost although it is coming down gradually in recent years, material limitations, material scarcity and finally its effect on the environment. A small model will need long hours of printing needing a lot of energy to run these printers and this has a possible negative effect on the environment, we need to think of may be incorporating renewable energy solutions into 3D printing as a business model.

Conclusion

- We aim to highlight the future applications to integrate 3D printing in obstetrics and gynaecology and the difficulties it may face to be integrated.