

We are currently the providers of all 3D printing in University Hospitals of Leicester NHS Trust.

Computer Aided Design (CAD) and Computer Aided Manufacture (CAM) are now an integral part of consent, surgical planning and research within our Trust.

CAD/CAM is used Maxillofacial oncology surgical planning, with the provision of computer generated cutting guides and pre bent surgical plates. The surgeon plans the operation on the required software, and we use the software to construct patient specific cutting guides and templates. We can then, if required forward the necessary file data for bespoke 3D printed titanium reconstruction plates by an outside bureau.

The same software is used in Maxillofacial Trauma, to create bespoke orbital floor plates, Peek implants and pre bend reconstruction plates. This use of CAD/CAM pre surgery, enables the surgeon to achieve optimal results, reduce anaesthetic time for the patient and results in more efficient use of valuable theatre time.

We are currently using a new software package for Orthognathic surgical planning, again to improve outcomes and reduce theatre time.

From what we have experienced here at Leicester with the use of CAD/CAM I feel it is becoming the norm and many more specialities such as Orthopaedics, ENT and Paediatric cardiology are using and enquiring about our services, software and what it can do for them. We have produced a number of Phantom models for medical research and have been asked about producing teaching models.

The biggest issue we face is the constant cost of licenses for the software programmes. If the NHS could do a deal for all hospitals then I feel this technology would be welcomed by all Trusts.

Kind Regards

Matt Pilley  
Specialist in Clinical Prosthetics