

## Central Lancashire Online Knowledge (CLoK)

Title	The use of computer-aided design and manufacture for foot orthoses: a cross-sectional study of orthotic services in the UK
Type	Article
URL	<a href="https://clock.uclan.ac.uk/53622/">https://clock.uclan.ac.uk/53622/</a>
DOI	<a href="https://doi.org/10.1002/jfa2.70031">https://doi.org/10.1002/jfa2.70031</a>
Date	2025
Citation	Barr, Laura, Richards, James and Chapman, Graham (2025) The use of computer-aided design and manufacture for foot orthoses: a cross-sectional study of orthotic services in the UK. <i>Journal of Foot and Ankle Research</i> , 18 (1). e70031.
Creators	Barr, Laura, Richards, James and Chapman, Graham

It is advisable to refer to the publisher's version if you intend to cite from the work.  
<https://doi.org/10.1002/jfa2.70031>

For information about Research at UCLan please go to <http://www.uclan.ac.uk/research/>

All outputs in CLoK are protected by Intellectual Property Rights law, including Copyright law. Copyright, IPR and Moral Rights for the works on this site are retained by the individual authors and/or other copyright owners. Terms and conditions for use of this material are defined in the <http://clock.uclan.ac.uk/policies/>

## Supplementary File 2. Response rates for individual questions

Question 2.1: Which of the following best describe your Orthotic Service?

Service type % (number of replies)
NHS In-house service 31.3% (41/131)
NHS Contracted service 61.8% (81/131)
Both 6.9% (9/131)
No response 0% (0/131)

Question 2.2: Does your Orthotic Service provide bespoke insoles to patients?

Response % (number of replies)
Yes 93.1% (122/131)
No 1.5% (2/131)
No response 5.3% (7/131)

Question 2.3: How many bespoke insole orders did your Orthotic service place in the 2021/22 financial year?\*

Response % (number of replies)
Response received 80.6% (104/129)#
No response 19.4% (25/129)

\*Those who responded "no" to question 2.2 were not required to answer the remainder of the questions, therefore the total number of possible respondents is 129

#Of these respondents 15/129 stated that their response was an estimate or a range rather than a known value

Question 2.4: Does your Orthotic Service ever provide bespoke insoles which have been **manufactured** using computer-aided processes, such as addition manufacture/3D printing, or reduction manufacture/milling insoles from a digital scan?

Response % (number of replies)
Yes 70.5% (91/129)
No 19.4% (25/129)
No response 10.1% (13/129)

Question 2.5: What are the barriers for using computer aided manufacture for custom insoles in your Orthotic service?\*

Response % (number of replies)
Response received 92% (23/25)
No response 8% (2/25)

\*Only those who responded "No" to question 2.4 were required to answer. Therefore the total number of possible respondents is 25.

Question 2.6: Which methods are used to **manufacture** bespoke insoles in your Orthotic service?\*

Response % (number of replies)
Response received 94.5% (86/91)
No response 5.5% (5/91)

\* Only those who responded "Yes" to question 2.4 were required to answer the remaining questions. Therefore the total number of possible respondents is 91.

Questions 2.7 to 2.12: In your Orthotic service, what **percentage** of insoles were made using

2.7 In-house Traditional Manufacture. Response % (number of replies)	2.8 In-house Computer Aided Manufacture with Reduction Manufacture. Response % (number of replies)	2.9 In-house Computer Aided Manufacture with Additive Manufacture. Response % (number of replies)	2.10 Outsourced Traditional Manufacture. Response % (number of replies)	2.11. Outsourced Computer Aided Manufacture with Reduction Manufacture. Response % (number of replies)	2.12. Outsourced Computer Aided Manufacture with Additive Manufacture. Response % (number of replies)
Response received 86.8% (79/91)	Response received 86.8% (79/91)	Response received 86.8% (79/91)	Response received 79.1% (72/91)	Response received 79.1% (72/91)	Response received 84.6% (77/91)
No response 13.2% (12/91)	No response 13.2% (12/91)	No response 13.2% (12/91)	No response 20.9% (19/91)	No response 20.9% (19/91)	No response 15.4% (14/91)

Question 3.1: How long has your Orthotic service provided bespoke insoles to patients, which were produced using computer aided manufacture processes?

Response % (number of replies)
Response received 85.7% (78/91)
No response 14.2% (13/91)

Question 3.2: Does your Orthotic service ever use foam box impression casts to capture the shape of the patient's foot, when prescribing CAD/CAM insoles?

Response % (number of replies)
Yes 95.6% (87/91)
No 1.1% (1/91)
No response 3.3% (3/91)

Question 3.3: Is the negative foam box impression cast **usually** scanned into the CAD/CAM system, or is it filled with plaster first and then the positive model scanned?\*

Response % (number of replies)
Response received 100.0% (87/87)
No response 0.0% (0/87)

\* Only those who responded "Yes" to question 3.2 were required to answer this question. Therefore the total number of possible respondents is 87.

Question 3.4: Are the foam box impression casts usually transported to another site to be scanned into the CAD/CAM system?

Response % (number of replies)
Response received 100.0% (87/87)
No response 0.0% (0/87)

\* Only those who responded "Yes" to question 3.2 were required to answer this question. Therefore the total number of possible respondents is 87.

Question 3.5: Does your Orthotic service ever use slipper casts / plaster casts to capture the shape of the patient's foot, when prescribing CAD/CAM insoles?

Response % (number of replies)
Yes 58.2% (53/91)
No 38.5% (35/91)
No response 3.3% (3/91)

Question 3.6: Are the slipper casts / plaster casts usually transported to another site to be filled with plaster and scanned into the CAD/CAM system?

Response % (number of replies)
Response received 100.0% (53/53)
No response 0.0% (0/53)

\* Only those who responded "Yes" to question 3.5 were required to answer this question. Therefore the total number of possible respondents is 53.

Question 3.7: In your Orthotic service, which is the **most common method** used to capture the shape of the patient's foot, when prescribing CAD/CAM insoles

Response % (number of replies)
Response received 97.8% (89/91)
No response 2.2% (2/91)

Question 3.8: Who is **usually** responsible for performing the modelling/rectification of the CAD/CAM insoles that your Orthotic service provide?

Response % (number of replies)
Response received 97.8% (89/91)
No response 2.2% (2/91)

Question 3.9: In your Orthotic service, what are the reasons for using CAD/CAM insoles?

Response % (number of replies)
Response received 86.8% (79/91)
No response 13.2% (12/91)