

This form has 7 pages. Unless you are prompted to skip a question or to stop answering, please ensure you answer **all** questions before returning the form.

Section 1

1. Does your Trust/Health Board have an orthotics department?

Yes

No

If the answer is “Yes” please answer section 2. If the answer is “No” no further information is required

Section 2

2.1 Which of the following best describe your Orthotic Service?
(select **all that apply** option by entering “X” in the left-hand column)

X	NHS In-house service (This means the orthotists are directly employed by your Trust/Health Board)
	NHS Contracted service (This means an external contractor employs the orthotists)

2.2 Does your Orthotic Service provide bespoke insoles to patients?
(select **only one** option by entering “X” in the left-hand column)

X	Yes (<i>continue to question 2.3</i>)
	No (<i>end of questionnaire</i>)

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

(In this context we assume that a “bespoke insole order” is likely to be either a pair of insoles for one patient, or a single insole for one patient)

3,079

- 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?
(Select **only one** option by entering “X” in the left-hand column)

X	Yes (<i>skip to question 2.6</i>)
	No (<i>continue to question 2.5</i>)

- 2.5 What are the barriers for using computer aided manufacture for custom insoles in your Orthotic service? (Select **all that apply** by entering “X” in the left-hand column).

	The cost of scanning equipment	
	The cost of manufacturing equipment (millers, 3D printers, etc.)	
	Insufficient access to computer equipment to support CAD/CAM systems	
	Computer aided manufacture does not fit with the current priorities of your service	
	Insufficient training to use CAD/CAM equipment	
	Perception that traditional methods produce better insoles	
	Perception of better patient outcomes with traditional methods	
	Other. Please provide a reason in the right-hand column	Free-text reason:

If you have completed question 2.5, this is now the end of the form.

If you were not asked to complete question 2.5 you should continue to the next page.

2.6 Which methods are used to **manufacture** bespoke insoles in your Orthotic service? (Select **all that apply** by entering “X” in the left-hand column)

	In-house Traditional. You have staff on site in your service who use heat moulding / draping techniques to produce the insole
	In-house Computer Aided Manufacture using Reduction Manufacture. You have milling equipment on site in your service and mill insoles from a block of material
	In-house Computer Aided Manufacture using Additive Manufacture. You have a “3Dprinter” on site in your service and manufacture insoles using additive processes
X	Outsourced Traditional. Your casts or models are sent to an external technical company who use heat moulding / draping techniques to produce the insole
X	Outsourced Computer Aided Manufacture using Reduction Manufacture. Your casts, models or scans are sent to an external technical company who mill insoles from a block of material
X	Outsourced Computer Aided Manufacture using Additive Manufacture. Your casts, models or scans are sent to an external technical company who manufacture the insoles using an additive process / “3D printer”
	Do not know - only select this option if your insoles are usually manufactured externally and you do not have knowledge of the external processes

Questions continue on next page

The definitions for the terms used in these questions, are explained on page 3.

2.7 In your Orthotic service, what **percentage** of insoles were made using **In-house Traditional Manufacture** in the 2021/22 financial year?

0 %

2.8 In your Orthotic service, what **percentage** of insoles were made using **In-house Computer Aided Manufacture with Reduction Manufacture** in the 2021/22 financial year?

0 %

2.9 In your Orthotic service, what **percentage** of insoles were made using **In-house Computer Aided Manufacture with Additive Manufacture (3D printed)** in the 2021/22 financial year?

0 %

2.10 In your Orthotic service, what **percentage** of insoles were made using **Outsourced Traditional Manufacture** in the 2021/22 financial year?

60 %

2.11 In your Orthotic service, what **percentage** of insoles were made using **Outsourced Computer Aided Manufacture with Reduction Manufacture** in the 2021/22 financial year?

30 %

2.12 In your Orthotic service, what **percentage** of insoles were made using **Outsourced Computer Aided Manufacture with Additive Manufacture (3D printed)** in the 2021/22 financial year?

10 %

Questions continue on next page

Section 3

The following questions relate **only** to the insoles produced by computer aided design and manufacture (CAD/CAM). These may be manufactured in-house or externally.

If your service and/or insole manufacturer do not use this method, you do not need to answer any further questions.

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

5 to 6 years

- 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? (Select **only one** option by entering "X" in the left-hand column)

X	Yes (<i>continue to question 3.3</i>)
	No (<i>skip to question 3.4</i>)

- 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? (Select **only one** option by entering "X" in the left-hand column)

X	The negative foam box is usually scanned
	The foam box is usually filled with plaster and the positive cast is then scanned
	Do not know – only select this option if your insoles are usually manufactured externally and you do not have knowledge of the external processes

- 3.2 Are the foam box impression casts usually transported to another site to be scanned into the CAD/CAM system? (Select **only one** option by entering "X" in the left-hand column)

X	Yes - they are usually sent to another hospital or external manufacturer to be filled with plaster and/or scanned
	No - they are usually scanned on the same site that the patient attended for their appointment

3.3 Does your Orthotic service ever use slipper casts / plaster casts to capture the shape of the patient's foot, when prescribing CAD/CAM insoles?
 (Select **only one** option by entering "X" in the left-hand column)

	Yes (continue to question 3.4)
X	No (skip to question 3.5)

3.4 Are the slipper casts / plaster casts usually transported to another site to be filled with plaster and scanned into the CAD/CAM system?
 (Select **only one** option by entering "X" in the left-hand column)

	Yes – they are usually sent to another hospital or external manufacturer to be filled with plaster and / or scanned
	No – they are usually filled with plaster and scanned on the same site that the patient attended for their appointment

3.5 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
 (Select **only one** option by entering "X" in the left-hand column)

	Direct 3D scan using a flat-bed scanner	
X	Direct 3D scan using a handheld scanner	
	Foam box impression cast	
	Slipper cast / plaster cast	
	Measurements only (using tracings or tape measures etc.)	
	Other. Please specify in the right-hand column	Free-text:

Questions continue on next page

3.6 Who is **usually** responsible for performing the modelling/rectification of the CAD/CAM insoles that your Orthotic service provide?
 (Select **only one** option by entering “X” in the left-hand column)

	The orthotist who assessed the patient	
	Another orthotist who did not assess the patient	
	A clinical assistant	
X	A technician	
	Do not know – only select this option if your insoles are usually manufactured externally and you do not have knowledge of the external processes	
	Other. Please specify in the right-hand column	Free-text:

3.7 In your Orthotic service, what are the reasons for using CAD/CAM insoles?
 (Select **all options that apply** by entering “X” in the left-hand column)

X	Perception that CAD/CAM insoles produce better patient outcomes
	CAD/CAD production is cheaper for us than traditional techniques
	CAD/CAM insole production is faster than the traditional options
X	The production of CAD/CAM insoles is more environmentally friendly than traditional techniques
	Patients request the use of CAD/CAM
X	CAD/CAM insoles are more easily repeatable than traditional insoles
	Producing insoles with CAD/CAM facilitates us in running more virtual Orthotic clinics
	Producing insoles with CAD/CAM allows us to reduce physical contact with patients
	The Covid-19 pandemic prompted us to increase the use of CAD/CAM insole production
	Producing insoles with CAD/CAM allowed our Orthotic service to resume work more quickly following the onset of the Covid-19 pandemic

END OF QUESTIONS