

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**

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### **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)

	NHS In-house service (This means the orthotists are directly employed by your Trust/Health Board)
x	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 ( <b><i>end of questionnaire</i></b> )

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)

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).

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	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)

	<b>In-house Traditional.</b> You have staff on site in your service who use heat moulding / draping techniques to produce the insole
	<b>In-house Computer Aided Manufacture using Reduction Manufacture.</b> You have milling equipment on site in your service and mill insoles from a block of material
	<b>In-house Computer Aided Manufacture using Additive Manufacture.</b> You have a “3Dprinter” on site in your service and manufacture insoles using additive processes
	<b>Outsourced Traditional.</b> Your casts or models are sent to an external technical company who use heat moulding / draping techniques to produce the insole
	<b>Outsourced Computer Aided Manufacture using Reduction Manufacture.</b> Your casts, models or scans are sent to an external technical company who mill insoles from a block of material
	<b>Outsourced Computer Aided Manufacture using Additive Manufacture.</b> Your casts, models or scans are sent to an external technical company who manufacture the insoles using an additive process / “3D printer”
x	<b>Do not know</b> - 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?

 %

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?

 %

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?

 %

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

 %

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?

 %

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?

 %

**Unable to obtain this information**

**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?

- 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)

	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)

	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)

	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

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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 ( <i>continue to question 3.4</i> )
	No ( <i>skip to question 3.5</i> )

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	
	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:

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**Questions continue on next page**

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	
	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:

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3.6 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)

	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
	The production of CAD/CAM insoles is more environmentally friendly than traditional techniques
	Patients request the use of CAD/CAM
	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

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**END OF QUESTIONS**