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NHS

Specialist Advice Cost Ratio Tool

User Guide

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Contents

1. Introduction

This guide is designed to support colleagues to use the Specialist Advice Cost Ratio Tool for integrated care systems (ICSs), developed by the NHS North of England Commissioning Support Unit.

The purpose of the Cost Ratio Tool is to allow ICSs to assess the cost ratio of Advice and Guidance and compare the average unit cost of pre-referral A&G with the average unit cost of a referral pathway (to secondary care).

This cost comparison model is designed to help integrated care systems better understand the financial impact of specialist advice activity across referral pathways and inform system leadership, commissioning, and delivery of high-quality Advice and Guidance (A&G) services.

This User Guide provides step-by-step set of instructions, with screenshots, to complement the instructions contained within the "Instructions" tab in the Specialist Advice Cost Ratio Tool and the Frequently Asked Questions summary.

Preparing to use the Specialist Advice Cost Ratio Tool

To access the tool, log in to the FutureNHS Collaborative Platform / Outpatient Recovery and Transformation Platform / Referral Optimisation workspace/ Specialist Advice, and download the Specialist Advice Cost Ratio Tool and access or download the Frequently Asked Questions.
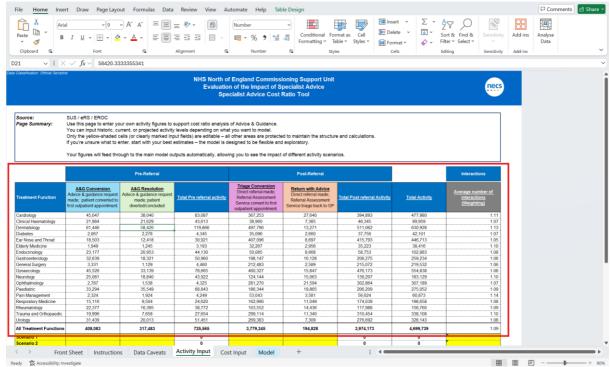
Before you begin, please ensure that you have:

- saved the downloaded file locally to retain the scenarios you generate;

- familiarised yourself with the Instructions in the tool;

- access to your local data (details described below in Step 1)

Please refer to the Data Caveats tab for methodological notes, caveats and limitations of the data and model.
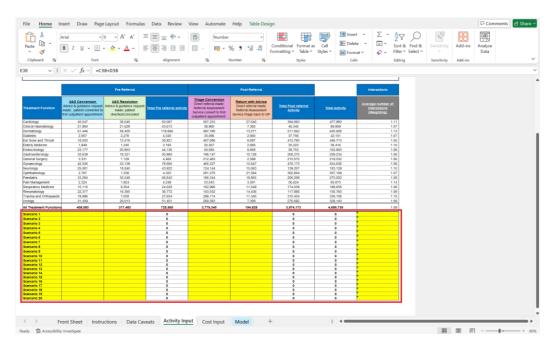
2. Step 1: Activity Input

1. Navigate to the Activity Input tab. This is where you can enter your own local figures to reflect how Advice & Guidance (A&G) and referral triage currently operate in your system.

2. The model already includes a sample from England-level activity figures, broken down by a range of Treatment Function Codes (TFC). You can use these as a benchmark or starting point. This data is included in the top half of this tab (contained within the red box below). **N.B. this data is locked and cannot be edited by users.**

Figure 1. Activity Input tab – England-level sample data by Treatment Function

- Refer Data Caveats tab for methodological notes and caveats on the sample of England-level data used for the purposes of the tool.

3. You may add your own data to the yellow cells **N.B. in the tool, all editable fields are highlighted in yellow – the tool can accommodate 20 scenarios.** You can use actual data, forecasts, or assumptions to test different scenarios. For any yellow cell ('field') where you prefer not to enter your own data, the model will apply the England-level data inputs by default.

Figure 2. Activity Input tab – up to 20 scenarios can be generated using local data

4. To create your own custom analysis, please use the Scenario rows highlighted yellow (contained within the red box below). You can enter your own (local) data into the following fields:

Pre-referral:

A&G Conversion to Outpatient Appointment	A&G request made; request converted to Outpatient First Appointment (OPFA)
A&G Resolution	A&G requests resolved without further referral

Referral pathway (post-referral):

Referral triaged to Outpatient Appointment	Direct referral made; Referral Assessment Service triaged to Outpatient First Appointment (OPFA)
Referral triaged – Return with Advice	Direct referral made; Referral Assessment Services triaged back to GP (post referral specialist advice)

Average number of interactions for A&G requests (Weighting)

In some cases there are multiple interactions between primary and secondary care for Advice and Guidance (1 interaction = 1 Request + 1 Response per A&G request). From the England data sample, the average number of interactions (Weighting) from the England sample data is 1.092.

As it is recognised there is local variation influenced by factors such as complexity, specialty and quality of A&G requests and/or responses, the tool enables input of local data.

Average number of interactions for A&G requests (Weighting)	For the purposes of the tool, 1 interaction = (1 Request + 1 Response) per case.

Local data on the number of interactions for A&G requests and the Average number of interactions (Weighting) can be extracted from e-RS. Refer Annex 1 for instructions.

When generating scenarios, if you do not wish to enter local data on the weighted average number of interactions, the tool will use the national average by default.

5. The "Total Pre-referral activity", "Total Post Referral Activity" and "Total Activity" columns will automatically calculate based on the contents of the data added to the preceding columns. This data, along with the Average number of interactions (Weighting) for A&G requests, will automatically feed into the decision tree within the Model tab.

3. Step 2: Cost Inputs

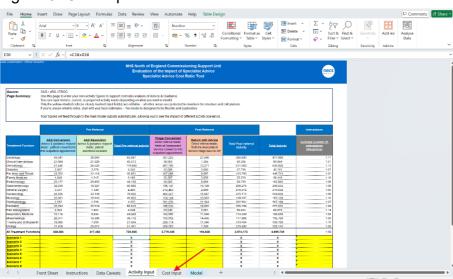1. Navigate to the Cost Input tab to define the cost assumptions for your model.

Figure 3. Cost Input tab

2. **Use Reference Costs or Custom values:**

The model includes Reference Costs by staff group and other costs, as well as assumptions of time by activity stage, which can be used as a reference or baseline when generating scenarios. This data is included in the left-hand side, under "Reference Costs", shown in the red box below and is locked and cannot be edited.
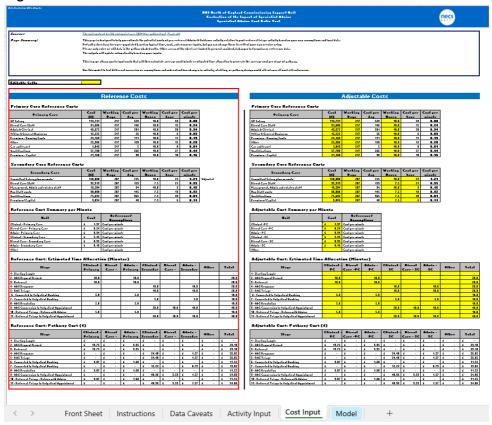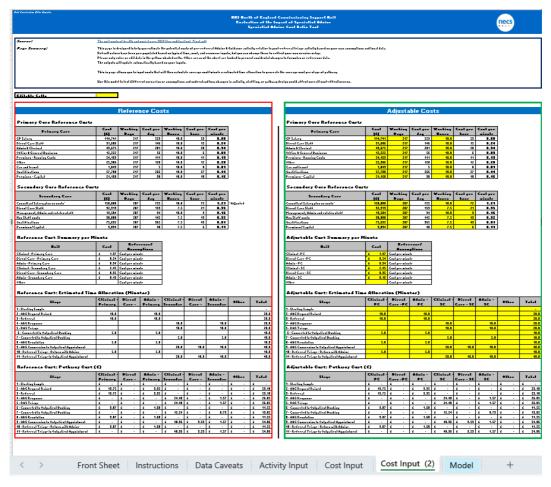
Figure 4. Reference Costs

The source of the Reference Costs is the University of Kent Unit Costs of Health and Social Care 2024 Manual, with the exception of the Consultant salary plus oncosts which has been adjusted from the above source costing.

Refer Annex 2 for Tool terminology and supporting information for further detail on the Reference Costs.

- **Adjustable Costs:** If using your own figures, you can enter costs into any of the highlighted yellow cells on the right hand side within the Primary Care Reference Costs table, and the Secondary Care Reference Costs table. These will automatically calculate the Adjustable Cost Summary per Minute for each relevant staff group.

- **Adjustable Costs: Estimated Time Allocation:** This table can be edited with expected time allocations (in minutes) for each staff group involved at each stage of Advice and Guidance and post-referral triage processes, which are also set out in the 'Model' tab. When generating scenarios, if you do not wish to enter local data on estimated time allocations for primary or secondary care, the tool will by default, use the timings from the Reference Costs: Estimated Time Allocation (Minutes) table.

Figure 5. "Costs Input" tab – local staffing costs and timings can be entered into any of the yellow cells.
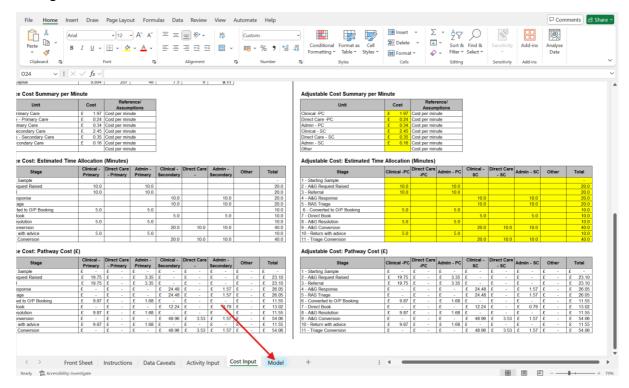

There is an additional "Other" staff group for any groups not included within the default (pre-defined) categories.

These inputs determine the cost of each part of the pathway, and are used in the decision tree model to calculate the total expected cost per case.

4. Step 3: Review the Model

1.   Navigate to the Model tab.

2.   The Model tab brings together your activity and cost inputs to estimate the financial impact of different Advice & Guidance outcomes. It calculates the expected cost per case and an overall cost ratio based on the selected parameters.

The default view uses the Reference Costs (i.e. the national figures in the "Cost Input" tab) and the sample of England-level Treatment Function data (i.e. the national data in the "Activity Input" tab).

When modelling scenarios, if local pre-referral and post-referral specialist advice activity data is entered into the "Activity Input" tab, the tool automatically calculates the probability - the proportion (%) of the total activity by outcome:

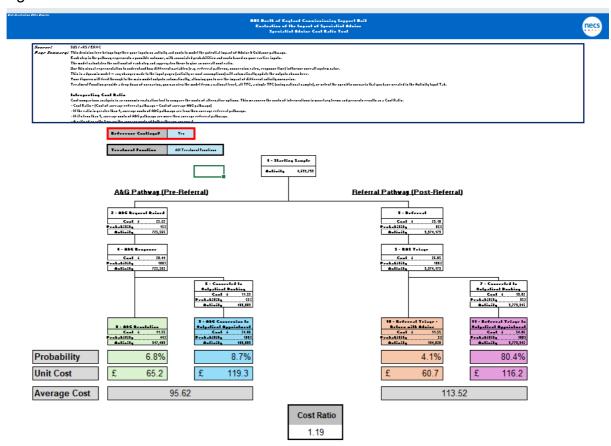| 8 - A&G Resolution	A&G requests resolved without further referral
9 - A&G Conversion to Outpatient Appointment	A&G request made; request converted to Outpatient First Appointment (OPFA)

10 - Referral triaged to Outpatient Appointment	Direct referral made; Referral Assessment Service triages to Outpatient First Appointment (OPFA)
11 - Referral triaged – Return with Advice	Direct referral made; Referral Assessment Services triages back to GP (post referral specialist advice)

3. At the top of the 'Model' tab, you can select the "Use Reference Costings" dropdown to select:

   Yes – Use the model's built-in default cost and time values; or

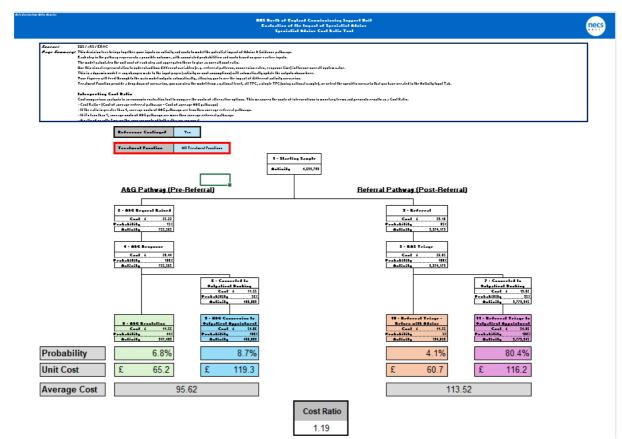   No – use the cost assumptions you entered in the 'Cost Input' tab.

   This function allows you to toggle between the England-level Reference Costs and assumptions adopted for the purposes of the tool, and your own figures.

Figure 6.

4. The Treatment Function dropdown lets you filter the analysis by clinical specialty based on the sample of England-level activity or any of the scenarios you have created using local data inputted into the Activity Input tab:

-   All – Includes all available specialties (Top 18)
-   Single Treatment Function – Select a specialty from your data (e.g. Cardiology, Dermatology)
-   Custom – You can choose to use your own data if included in the Scenario rows of the 'Activity Input' tab.

Figure 7. 'Model' tab – use the Treatment Function drop down menu to view the sample England-level scenario or to select any of the bespoke scenarios you have generated.
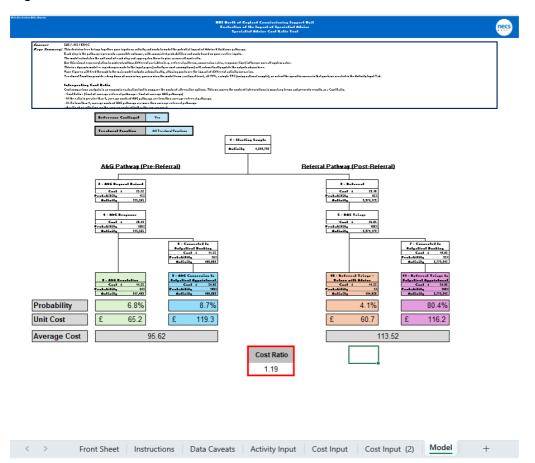

5. With the desired costing and treatment function selected, scroll down on the Model tab to view:

-   Each step includes associated costs and probabilities
-   Pathway branches reflect resolution, conversion, and triage outcomes
-   Cost Ratio comparison between A&G pathways and referral pathways

5. Step 4: Interpreting the Cost Ratio

1. Cost comparison analysis is an economic evaluation tool to compare the costs of alternative options. This measures the costs of interventions in monetary terms and presents results as a Cost Ratio.

- Cost Ratio = (Cost of average referral pathways ÷ Cost of average A&G pathways)
- If the ratio is greater than 1, average costs of A&G pathways are less then average referral pathways.
- If it's less than 1, average costs of A&G pathways are more then average referral pathways.
- A ratio of exactly 1 means the average costs of both pathways are equal.

Figure 8. "Model" tab – Cost Ratio

6. Annex 1: Interactions

How to extract the number of interactions for A&G requests and the Average number of interactions (Weighting) from the electronic Referral System (e-RS)

Step 1: An ICB users with information analyst access to log into e-RS

Step 2: from the Data tab, select 'Advice and Guidance Extracts'

Step 3: Insert the date range that they are interested in and 'Generate CSV extract'

NHS e-Referral Service

Data   Enquiries

‹ Go back

Create advice and guidance activity extract

▶ About these extracts

Select a date range for your extract

Your extract can display up to 18 months, excluding today's date

Start date
For example, 14/02/2024

End date
For example, 24/02/2024

dd/mm/yyyy 🗓   dd/mm/yyyy 🗓   Clear dates

Generate CSV extract

You have no extracts available.

Step 4: Wait for the report to generate (this make take a while across a whole ICB for a long time period). The user may have to break the request into multiple extracts if covering several months.

Step 5: Download the csv(s)

- As the definition of an interaction is a request + a response, the data should be filtered to 'ADVICE_AND_GUIDANCE_RESPONDED' in the Activity Type (Column E)

- Req/Resp Seq (Column H) gives you the sequence number (interaction count). Use the maximum value for each UBRN only.

- Service Specialty is shown in Column AF.

- This then allows you to get the number of interactions and the average number of interactions per specialty

7. Annex 2: Specialist Advice Cost Ratio Tool terminology and supporting information

'Activity Input' tab – terminology and supporting information

Term	Supporting information
Data source: SUS	The Secondary Uses Service (SUS) is the single, comprehensive repository for healthcare data in England which enables a range of reporting and analyses to support the NHS in the delivery of healthcare services. Service on a page SUS+ - NHS England Digital
Data source: e-RS	The NHS e-Referral Service (e-RS) is a digital platform used to refer patients to service providers. e-Referral Service - NHS England Digital
Data source: EROC	Monthly specialist advice activity returns collected from Integrated Care Boards (ICBs) as part of the System Elective Recovery Outpatient Collection (System EROC). Statistics » Specialist advice activity data The data is available by 'type of specialist advice'. For the purposes of this data collection, the different types are categorised as: • Pre-referral Advice & Guidance (A&G) • Post-referral triage services that offer specialist advice • Other equivalent models. System Elective Recovery Outpatient Collection - NHS Standards Directory
Treatment Function / Treatment Function Code (TFC)	A Treatment Function is a division of clinical work based on main specialty but incorporating approved sub-specialties and treatment interests used by lead Care Professionals including Consultants. A Treatment Function Code (TFC) is recorded to report the specialised service within which the patient is treated. Main Specialty and Treatment Function Codes Table
A&G Conversion to Outpatient Appointment	A&G requests that led to a first outpatient appointment (OPFA)
A&G Resolution	A&G requests resolved without further referral
Referral Triage to Outpatient Appointment	Direct referral made; Referral Assessment Service triage**d** to Outpatient First Appointment (OPFA)
Referral Triage - Return with Advice	Referrals triaged back to the GP with Advice and Guidance (post-referral A&G)
Average Number of Interactions in an A&G pathway (weighted)	In some cases there are multiple interactions between primary and secondary care as part of the A&G pathway (1 interaction = 1 Request + 1 Response). The A&G Cost Ratio tool applies a weighting, being the average number of interactions between primary and secondary care (1 interaction = 1 Request + 1 Response) per case.

'Cost Input' Tab – terminology and supporting information

Term	Supporting information
Reference Costs - source:	The source of the Reference Costs utilised for the sample of England-level activity contained within the A&G Cost Ratio tool is: The unit costs of health and social care 2024 (for publication)_Final.pdf produced by the University of Kent. This is a free resource available online in the Kent Academic Repository: www.pssru.ac.uk/unitcostsreport/ Refer Section 12.1 Inflation Indices(page 109) Refer Section 12.6 Glossary (pages 120-121). These costs are published annually.
Primary Care Reference Costs	Refer Section 9 Hospital-based Health Care Staff (pages 91-106). Refer section 9.4 Costs and unit estimations for a General Practitioner (GP) – (pages 72-73); 9.4.1 Commentary for GPs including Direct care staff and Qualifications (Page 74)
Secondary Care Reference Costs	Refer Section 11 (pages 91 – 106) Refer section 11.3.1 Hospital-based doctors – unit cost components (pages 104-105)) and section 11.3.2 Annual and unit costs for hospital-based doctors (page 106)
Reference Cost: Summary per Minute	It is recognised that the cost of providing the same good or service will likely differ across regions, local areas, hospitals and care providers. The cost inputs within the A&G Cost Ratio tool are editable to enable local costs to be entered into the tool.
Reference Cost: Estimated Time Allocation (Minutes)	This is the average estimated time allocation to complete each component within an A&G pathway or a referral pathway, calculated by taking the annual cost, dividing by working days to calculate a cost per working day. This is then divided by working hours to calculate a cost per hour and cost per minute.
Reference Cost: (Average) Pathway Cost	This table shows the average Pathway cost which is automatically calculated by multiplying the Reference Costs Summary per minute, by the Reference Cost: Estimated Time Allocation (Minutes).
Adjustable Costs	This part of the tab enables you to input local costs and estimated time allocations that will be applied to scenario modelling in the 'Model' tab
Adjustable Primary Care Reference Costs	Editable cells where you can input local costs for primary care related to the provision of A&G.
Adjustable Secondary Care Reference Costs	Editable cells where you can input local costs for secondary care related to the provision of A&G.
Adjustable Cost Summary Per Minute	This is the average estimated time allocation to complete each component within an A&G pathway or a referral pathway. The table enables input of units of time in minutes (i.e. 10.0 minutes) per staffing group. It also enables estimated time allocations for 'Other' staffing groups (in addition to clinical, administrative and direct care staff).
Adjustable Cost: Estimated Time Allocation (Minutes)	This is the average estimated time allocation to complete each component within an A&G pathway or a referral pathway. The table enables input of units of time in minutes (i.e. 10.0 minutes) per staffing group. It also enables estimated time allocations for 'Other'

	staffing groups (in addition to clinical, administrative and direct care staff).
Adjustable Cost: (Average) Pathway Cost (£)	This table automatically applies the 'Adjustable Cost Summary per Minute' by the 'Adjustable Cost: Estimated Time Allocation (Minutes)' to calculate the Adjustable Cost: (Average) Pathway Cost (£). This feeds directly into the Model tab.

'Model' tab – terminology and supporting information

Term	Information / definition
Reference Costings	A drop down menu enabling you to select whether to toggle and use either the model's built-in default cost and time values; or use the cost assumptions you entered in the 'Cost Input' tab.
Treatment Function	A drop down menu where you can toggle to view the sample England-level analysis or to view any of the bespoke scenarios you have generated using inputs into the Activity Input tab and/or the Cost Input tab.
1-Starting sample (Activity)	This is England-level activity data from the quantitative analysis of the NHS NECS evaluation of specialist advice. Refer the 'Data Caveats' tab for detailed information. It is based on NHS Acute Provider Trusts in England only. Non-eRS data is available at aggregate-level only. An adjustment has been made to Advice & Guidance figures to take this into account.
2-A&G Request Raised	A&G request raised by General Practice to secondary care
3-Referral	Referral to secondary care
4-A&G Response	A&G response provided by secondary care to General Practice
5-RAS Triage	Referral Assessment Services (RAS) allow providers to: • assess the clinical referral information from the GP/referrer without the need for an appointment being booked • decide on the most appropriate onward clinical pathway • contact the patient to discuss choice (if an elective referral) • arrange an appointment, where needed • return the triage request to the original referrer with advice, if an onward referral isn't need A Referral Assessment Service (RAS) supports complex care pathways, where it's not always clear whether a patient needs a consultant appointment or a diagnostic test. A RAS set up by the provider will ensure patients' referrals are triaged correctly. Note: where a RAS is part of a consultant-led pathway, a referral into a RAS service will generate a referral-to-treatment clock start. Referral Assessment Services - NHS e-Referral Service - NHS England Digital
6 and 7 - A&G Conversion to Outpatient Appointment	A&G requests that led to a first outpatient appointment
8 - A&G Resolution	A&G requests resolved without further referral

9-A&G Conversion to Outpatient Appointment:	A&G requests that led to a first outpatient appointment (OPFA)
10-Post-referral A&G – Return with Advice: Referrals triaged and returned back to the GP with Advice and Guidance 11-Referral Triage to Outpatient Appointment: Direct referrals assessed and converted to outpatient appointment	Direct referral made; Referral Assessment Service triages to Outpatient First Appointment (OPFA)
Probability	The proportion of the total activity as a percentage (%) by outcome: A&G resolution. A&G conversion to an Outpatient Appointment; Post Referral Advice and Guidance; or where a referral is triaged to an Outpatient Appointment.
Unit Cost	This is the average unit cost for the pathway outcome
Average Cost	This is the average cost for the pathway
Cost Ratio	This is the specialist advice cost ratio.