

## Ambulance Quality Indicators: Data specification for Systems Indicators

### Contents

	Document history .....	2
Section 1:	Introduction .....	3
	Triage .....	3
	Category 1 (C1).....	4
	Category 2, 3 and 4 (C2, C3 and C4) .....	4
	Incidents with no face to face response .....	5
	Ongoing review .....	5
Section 2:	General concepts .....	6
	Call connect.....	6
	Call answer.....	6
	Cross-border calls .....	6
	Events .....	6
	Time data .....	6
	Mean average times.....	6
	Medians and centiles .....	6
Section 3:	Contacts (A0) .....	7
Section 4:	Calls (A1-A6).....	8
Section 5:	Incident counts (A7-A23, A57-A61, A74-A81, A111-A113).....	9
	HCP and IFT incidents .....	9
	Running Incident .....	9
	Categorisation .....	10
	Re-categorisation .....	10
	Incidents with non-emergency conveyance .....	11
Section 6:	Response times (A24-A38, A62-A73, A82-A105) .....	17
	Clock start .....	17
	Clock stop – all categories .....	17
	Clock stop – C1 .....	17
	Clock stop – C1T.....	18
	Clock stop – HCP / IFT .....	18
	Clock stop – C2, C3, C4.....	18
	Response time standards .....	19
Section 7:	Resource allocation and arrival (A39-A48).....	23
Section 8:	Bystander Cardio-Pulmonary Resuscitation (CPR) time (A49-A52)....	24
Section 9:	Section 136 response time (A106-A110) .....	24
Section 10:	Transport (A53-A56) .....	25
Section 11:	Abbreviations, glossary / data dictionary .....	26

## Document history

---

20170811	Agreed after 2 Aug Ambulance Response Programme (ARP) Development Group.
20170914	Pages 11 and 19: The denominator changed from (A17+A56) to A7 for the recommended Hear & Treat, See & Treat, and See & Convey rates. This does not affect how any of the data items A0 to A73 are calculated by trusts.
20170926	Pages 7 and 19: All calls from HCPs included in A53 to A56. Consequently, definition of A7 changed from A17+A56+A57+A58+A59+A60+A61 to A17+A56, to avoid double counting of calls from HCPs. Page 12: Calculation to assess how well C4H is identified displayed after A23. Page 17: Clarification that all trust-dispatched resources to be included in A39 to A48.
20180525	New data items A74 to A113 added, to supersede A58 to A73 later in 2018/19. C4H renamed C5. C1 can be downgraded by clinicians. New definitions for recategorisation during call and responding at a higher category. Frequent callers with Care Plans in CAD can be categorised according to Care Plan. Clock start for upgrade is time of upgrade. Last defibrillator clock stop removed.

## Section 1: Introduction

A new series of standards, indicators and measures has been introduced through the Ambulance Response Programme ([ARP](#)) for publication in the NHS England Ambulance Quality Indicators ([AQI](#)). This document has been developed so that all aspects of ambulance performance are measured accurately and consistently. It also sets out a framework to ensure that the operating model allows for local flexibility where that adds value for patients.

This introduction summarises some of the key elements of the technical guidance; they are not exhaustive and should be read in conjunction with the rest of the document. With the pace of local innovation and continuing development in clinical practice, it is not possible to describe within this document every scheme that Trusts may initiate. The guiding principle must always be that Trusts should put arrangements in place that are in the best interests of patients. Those interpreting the technical guidance for operational use should use these sections as a cross reference to ensure that the interpretation they have reached is in line with the intended spirit of the rules.

### Triage

Ambulance Trusts will use one of the approved triage tools to allocate incidents to one of the new response categories as quickly and accurately as possible. Pre-Triage questions and the Nature of Call (NoC) process have been proven to identify Category 1 (C1) incidents at the earliest opportunity, and must be used by all Trusts to improve the speed of response to these patients. A national model of Pre-Triage questions and NoC has been developed and approved by NHS England and should be adhered to by Ambulance Trusts. Trusts wishing to trial or adopt a different process or variation to the approved pre-Triage questions or NoC should first seek approval from NHS England.

Incidents passed to Ambulance Trusts by NHS 111 providers must be managed in the same way as 999 calls. Requests from other healthcare professionals (HCPs) and requests for inter-facility transfers (IFT) should be assessed using protocols that align to the national HCP and IFT frameworks in order to match the incident to the appropriate response category. IFT Level 1 and HCP Level 1 incidents indicate that immediate clinical assistance is required from the Ambulance Trust. Therefore, it is not appropriate to start or stop the response time clock due to the facility, or the HCP, being in possession of a defibrillator.

Incidents may be re-triaged on the basis of new information or developments in the patient's clinical condition in order to ensure that the patient receives the most appropriate response. These arrangements must not delay the dispatch of a responding resource. Outgoing calls from Emergency Operations Centres (EOC) that are initiated by an ambulance non-clinician may not result in the incident being assigned to a lower priority category than the original call.

Re-triage may take place until the arrival of a Trust vehicle, but the category of the incident may not be changed once the vehicle has arrived on scene. We recognise that in some incidents the first clinician on scene may determine that emergency transportation is not required, and that it is

appropriate to book an alternative means of conveyance in a timescale appropriate to patient's needs. The technical guidance has been constructed to allow for this practice in order to preserve emergency ambulances for those patients whose condition requires an emergency conveyance or conveyance by a fully equipped and appropriately clinically staffed ambulance.

### **Category 1 (C1)**

The intent is to ensure that C1 incidents are identified and responded to as quickly as possible with resources appropriate to the patient's needs. To this end, we have introduced new measures to identify what proportion of C1 incidents are identified through Pre-Triage questions and NoC, and keywords where in use, and how long it takes Trusts to do so.

C1 comprises around 8% of incidents and covers a wider range of conditions than the former Red 1 category. For this reason, the attendance of a bystander with a defibrillator is not regarded as a response that stops the ambulance response time clock. However, First Responder schemes, through which the Trust actively deploys volunteers and staff from other agencies or companies, in possession of a defibrillator, who have additional training and capabilities in airway management and oxygen therapy, are deemed to be an appropriate resource to stop the response time clock for C1 patients. It continues to be the policy that the deployment of a First Responder must not delay the deployment of a Trust response vehicle.

We recognise the importance of early defibrillation and cardio-pulmonary resuscitation (CPR), and the positive impact that these interventions have on patient outcomes. Bystander defibrillation and CPR will be encouraged through the introduction of a new measure from the time of the call to the time of commencement of CPR.

We have encouraged the rapid provision of transportation for C1 patients by retaining a measure for the arrival of the conveying resource, C1T. We have tightened the clock start for this measure by aligning the C1T clock start to the C1 clock start rather than giving the option to start the clock at the point that the first clinician on scene requests conveyance. We have not specified what type of vehicle counts as a conveying resource in recognition of innovations such as advanced paramedics operating in cars adapted for the transportation of suitable patients. The intent is to measure the arrival of the vehicle that was able to convey the patient. For example, a car would not stop the C1T response time clock if it is not the vehicle that conveys the patient.

### **Category 2, 3 and 4 (C2, C3 and C4)**

The intent is to ensure that patients in these categories who require transportation receive a conveying resource in a timeframe appropriate to their clinical needs. The technical guidance is intended to prevent situations where a patient is attended by an ambulance solo responder simply to stop the response time clock, but who is not able to convey the patient to a place of definitive care.

To that end an ambulance solo responder will only stop the clock where no patient is conveyed. For all incidents that require transportation in an emergency timescale, it is the arrival of the conveying resource that will stop

the clock. In addition, we are introducing clinical measures (not included in this technical guidance) to ensure the rapid response of a conveying resource to patients for conditions including stroke, ST-elevated Myocardial Infarction (STEMI, a type of heart attack), and sepsis.

### **Incidents with no face to face response**

Under previous measures, the term “incidents with no face to face response” had become synonymous with “hear and treat”. This technical guidance includes clear, unequivocal direction on how Trusts should record this activity.

We have included approved “stop codes” that all Trusts should adopt in order to ensure national consistency in the reporting of these measures. We have specifically excluded incidents that do not receive an on-scene response due to demand management arrangements. This is not “hear and treat” activity, and should not be recorded as such.

The guidance sets out how we will measure incidents “closed with advice” and incidents “referred to another service” separately, in order to more precisely identify activity that is being definitively resolved by Trusts through hear and treat processes.

In addition, we will measure separately the sub set of codes known as Category 5 (C5; termed C4H until July 2018) that we have pre-determined should have a high probability of being managed through hear and treat processes. Through this measure, it is our intent to drive the appropriate and efficient use of ambulance resources.

We will also measure incidents categorised as C1 to C4 that are recorded as “closed with advice” and incidents “referred to another service” in order to identify any additional codes that could potentially be added to C5.

### **Ongoing review**

Amendments can be suggested via the contact details on the [AQI](#) website. For continuity of measurement, this document is unlikely to change more than once per year.

The 20180525 version of this document introduces new data items A74 to A113. However, these require development work, including by NHS Pathways, and so will not be collected until later in 2018-19, with the exact date to be agreed in due course. Other definitional changes in this version should be introduced by Trusts by 1 July 2018.

## Section 2: General concepts

### Call connect

T0 is call connect, the time at which the call is connected to the EOC telephony switch.

### Call answer

T1 is call answer, the time at which a call taker picks up the call and begins communicating with the caller.

T5 is identification of dispatch code.

### Cross-border calls

The performance reporting for an incident should sit with the Ambulance Service in whose area the incident occurs, unless there is a reciprocal agreement around certain border areas.

### Events

For all data items in this document, do not include services to events commissioned separately.

### Time data

Ambulance Services should provide all time data as a total number of seconds, to avoid Excel misinterpreting numbers in hours:minutes:seconds format.

### Mean average times

For all mean averages, Services should provide the total time, and the count of incidents. The data collection spreadsheets will divide the former by the latter, so the calculated mean is visible to Services before publication.

### Medians and centiles

Examples:

A median call answer time of 7 seconds means that half the calls were answered in less than 7 seconds. The median is identical to the 50th centile.

A 90th centile incident response time of 13 minutes means that 9 out of 10 incidents were responded to in less than 13 minutes.

Ambulance Service can calculate medians and centiles using SQL or using the Excel PERCENTILE formula, and should round them to a whole number of seconds.

## Section 3: Contacts (A0)

### **A0** *Contact count*

The count of all ambulance control room contacts.

This is to provide a measure of overall demand upon Ambulance Services.

Include all telephone calls to 999 / 112.

Include cases transferred from NHS 111. For calls that are manually transferred (not via Interoperability Toolkit, ITK) from NHS 111, do not double count as incoming calls and as NHS 111 activity.

Include calls through all other numbers, such as by Healthcare Professionals (HCPs) and fire / police / coastguard, even where an incident is not created.

Do not include calls abandoned by the caller before they are answered by the Ambulance Service.

Do not include internal calls, such as enquiry calls from crews.

## Section 4: Calls (A1-A6)

For items A1 to A6:

Include calls answered after being presented to switchboard on 999 emergency lines (includes where the caller dialled 112).

Do not include Police, Fire, or HCP calling direct dial numbers (not 999).

Do not include calls from NHS 111, unless the call from NHS 111 is transferred directly through to the 999 emergency line.

Do not include calls abandoned.

The time to answer each call is the time between [call connect](#) and [call answer](#).

Where no call connect time is recorded, count zero seconds for A2 to A6.

### **A1 Calls answered**

The count of all calls answered.

### **A2 Total call answer time**

The time to answer each call aggregated across all calls in the period.

### **A3 Mean call answer time**

Across all calls in the period, the mean average time to answer each call.

Definition:  $A3 = A2 / A1$

### **A4 Median call answer time**

Across all calls in the period, the median time to answer each call.

### **A5 95th centile call answer time**

Across all calls in the period, the 95th centile time to answer each call.

### **A6 99th centile call answer time**

Across all calls in the period, the 99th centile time to answer each call.



## Section 5: Incident counts (A7-A23, A57-A61, A74-A81, A111-A113)

Incidents comprise not only calls that receive a face-to-face response from the Ambulance Service at the scene of the incident, but also calls that are successfully resolved with telephone advice with any appropriate action agreed with the patient.

Definition: A7 = A17 + A56

See also [Section 2: General concepts](#).

For all items from A7 onwards:

If there have been multiple calls to a single incident, only one incident should be counted.

Include incidents resulting from calls to NHS 111. From the point that an incident is received from NHS 111, it should be treated in the same manner as a call that was received through 999.

Include incidents initiated by a call from the fire service or police.

If a Trust resource arrives on scene after the start of a call, but before the incident is coded, then the incident is recorded as C2; unless the NoC, pre-triage questions (PTQ) or keywords have identified the incident as a potential C1, whereby the call will be recorded as C1.

### HCP and IFT incidents

In 2018-19, NHS England will start to collect new data items for HCP (also referred to as urgents / referrals) and Inter-Facility Transfer (IFT) incidents. The month from which these changes apply will be advised in due course.

The new data items and their definitions are A74 to A81 in the middle of Section 5, superseding A58 to A61; and A82 to A105 at the end of Section 6, superseding A62 to A73. (Other new items A106 to A113, not related to HCP and IFT incidents, will also be collected from this time).

When this change applies, HCP incidents will remain included in A7 and A53 to A56, and if they are triaged to a category, they should remain included in counts A8 to A12 and response times from A24 to A38.

Until that change is made:

- HCP incidents where a response of 1, 2, 3 or 4 hours is agreed should be included in the relevant counts from A58 to A61 and response times from A62 to A73;
- IFT incidents should be triaged / clinically assessed using MPDS (Medical Priority Dispatch System), NHS Pathways or locally agreed protocols that accurately match the patient's condition to one of the four categories. Once allocated to a category, the relevant standard applies.

### Running Incident

A Running Incident is where a Trust resource or clinician encounters an incident before a call is made, and is immediately on scene with the patient. All Running Incidents are C2. If any patients are transported, clock start and

stop are as for C2. If no patients are transported, the response time is zero, because the arrival on scene of the resource triggers the call being coded as C2.

### Categorisation

Reporting must be against the code in the Computer-Aided Dispatch (CAD) record immediately prior to the arrival on scene of a Trust-dispatched resource. It must not be changed after a resource has arrived at scene.

Calls from frequent callers with a pre-agreed care plan in the CAD can be categorised according to that care plan. Services should be able to identify such calls for audit purposes.

Where it has been decided to respond to an incident at a higher category than stipulated in the national clinical code set (for example, following a serious incident or Coroner's ruling), Ambulance Services can treat that incident as a higher (not lower) category than its clinical coding suggests, but still need to report performance against its national clinical category.

### Re-categorisation

If a patient has reached a disposition or [T5](#), and their condition deteriorates subsequently during the same call, the code in the CAD may be changed to a code in a higher category before a response arrives on scene. In this case the clock start is the point at which the CAD recode occurs.

Following triage, either through 999 or 111, prior to the arrival of the responding resource as defined in items i) to iii) in [Clock stop](#), it may be appropriate for some incidents to receive additional clinical assessment, which may result in an alternative category for responding and reporting. If the incident is upgraded to a higher category because of this additional clinical assessment, the clock start will be the point at which the clinician in the EOC makes the upgrade and CAD recode occurs. Otherwise, the clock start from the original call remains; this includes if the clinician calls, is unable to speak to the caller, and operationally decides to handle the incident as a higher priority (for example for patient safety concerns).

This additional assessment must not delay dispatch, and must be undertaken by a registered HCP within the Clinical Assessment Service (CAS) or EOC.

An outgoing call initiated by a non-clinician should not result in downgrading of a category.

If a further incoming call is received from any source (HCP or public 999) before a resource has arrived on scene, and is triaged to a higher category than the original call, then the clock start and reporting category should be from the subsequent call. If such a call is from a different caller and concerns an incident in a public place, Services should keep the incident in the appropriate category.

For all upgrading and downgrading calls, either the original or the subsequent call is closed as a duplicate, to avoid double counting incidents. Services should still be able to link the separate calls for audit purposes.

**Incidents with non-emergency conveyance**

An incident with non-emergency conveyance is where an ambulance clinician or HCP on scene at an incident determines that non-emergency conveyance in a vehicle other than an emergency ambulance (such as Patient Transport Service (PTS), Urgent Care / Tier Vehicle, or similar), is appropriate, providing the conveyance is completed in a non-emergency vehicle.

These must only be counted as a single incident in the category recorded immediately prior to arrival on scene, and not as an extra incident in a lower category. Count in A53 or A54, as an incident with transport, but for response times, the clock stops at the arrival of the first resource (see [Clock stop](#)).

- A7 All incidents**  
The count of all incidents in the period.
- A8 C1 incidents**  
The count of incidents coded as C1 that received a response on scene.
- A9 C1T incidents**  
The count of C1 incidents where any patients were transported by an Ambulance Service emergency vehicle. Do not include incidents where an ambulance clinician on scene determines that no conveyance is necessary, or [incidents with non-emergency conveyance](#) as defined on the previous page.
- A10 C2 incidents**  
The count of incidents coded as C2 that received a response on scene.
- A11 C3 incidents**  
The count of incidents coded as C3 that received a response on scene.
- A12 C4 incidents**  
The count of incidents coded as C4 that received a response on scene.
- A57 HCP incidents with no emergency conveyance**  
The count of [incidents with non-emergency conveyance](#), or no conveyance at all, in response to a call from an HCP.
- A112 Incidents with non-emergency conveyance**  
As [defined](#) on the previous page.  
Item A112 will be collected from the same month that all items A74 to A113 are collected. See [HCP and IFT calls](#).
- A58 HCP 1 hour response**  
The count of incidents where a 1 hour response was agreed in response to a call from an HCP.
- A59 HCP 2 hour response**  
The count of incidents where a 2 hour response was agreed in response to a call from an HCP.
- A60 HCP 3 hour response**  
The count of incidents where a 3 hour response was agreed in response to a call from an HCP.
- A61 HCP 4 hour response**  
The count of incidents where a 4 hour response was agreed in response to a call from an HCP.
- A74 HCP Level 1 incidents**  
Of A8, how many were calls from an HCP.
- A75 HCP Level 2 incidents**  
Of A10, how many were calls from an HCP.

**A76 HCP Level 3 incidents**

The count of incidents where a Level 3 response was agreed in response to a call from an HCP. Include agreed 1 or 2 hour responses where those are still commissioned.

**A77 HCP Level 4 incidents**

The count of incidents where a Level 4 response was agreed in response to a call from an HCP. Include agreed 3 or 4 hour responses where those are still commissioned.

**A78 IFT Level 1 incidents**

Of A8, how many were requests for IFT.

**A79 IFT Level 2 incidents**

Of A10, how many were requests for IFT.

**A80 IFT Level 3 incidents**

The count of incidents agreed as a Level 3 IFT response.

**A81 IFT Level 4 incidents**

The count of incidents agreed as a Level 4 IFT response.

**Nature of Call (NoC) / Pre-triage questions (PTQ) and keywords**

For A14 to A16, if the call connect time is not recorded, start from the next earliest time, such as [T1](#).

**A13 C1 NoC / PTQ / keywords incidents**

The count of C1 incidents, that NoC / PTQ / keywords identified as C1, and received a response on scene.

**A14 Total time to NoC / PTQ / keywords C1**

Aggregated across each call in A13, the time, in seconds, from call connect, until the call was identified as a potential C1 using NoC / PTQ or keywords.

**A15 Mean time to NoC / PTQ / keywords C1**

Across all calls in A13, the mean average time, in seconds, from call connect, until a call was identified as a potential C1 using NoC / PTQ or keywords.

Definition:  $A15 = A14 / A13$ .

**A16 90th centile time to NoC / PTQ / keywords C1**

Across all calls in A13, the 90th centile time, in seconds, from call connect, until a call was identified as a potential C1 using NoC / PTQ or keywords.

**A111 C1 incidents from NHS 111**

The count of incidents coded as C1 resulting from an ITK message from an NHS 111 call. These have no NoC / PTQ process, and will be excluded from the denominator A8 when calculating how effective NoC / PTQ are.

Item A111 will be collected from the same month that all items A74 to A113 are collected. See [HCP and IFT calls](#).

### ***Incidents with face-to-face response***

Incidents with face-to-face response are counted in item A56 in Section 9.

### ***A17 Incidents with no face-to-face response***

Count of all incidents not receiving a face-to-face response.

Definition:  $A17 = A18 + A19 + A21 + A22$ .

The recommended Hear and Treat rate will be  $A17 / A7$ .

Items A18 to A23 should be reported against the category immediately prior to any additional clinician triage.

Incidents counted in A20 or A23 will be also counted in A8, A10, A11 or A12.

Count incidents with no face-to-face resource, where full triage was undertaken, and resolved by:

- a designated HCP accountable to the Ambulance Service providing telephone advice, or;
- decisions supported by clinical decision support software or approved triage tool, or;
- referring to another organisation working with the Ambulance Service through an agreed contract or Service Level Agreement, or through the Directory of Services.

Do not include in A17:

- duplicate or multiple calls to an incident where a response had already been activated;
- information only calls, for example from police;
- response cancelled by caller, either during the initial call, or during a subsequent call to the Ambulance Service (including, but not limited to, when patient recovers without intervention);
- deceased patient with no response on scene;
- calls abandoned by the caller before coding is complete;
- caller not with patient and unable to give details;
- caller refused to give details;
- hoax calls where response not activated;
- calls that are not resolved with telephone advice and do not receive a response on scene due to demand management arrangements associated with surge pressures;
- calls passed to another Ambulance Service or other emergency service;
- if NHS Pathways is used, incidents with a final disposition of Dx32, Dx321, Dx322, Dx323, Dx324, Dx325, Dx326, Dx327, Dx328, Dx329, Dx330, Dx332, Dx34, Dx35, Dx38, Dx45, Dx49, Dx52, Dx90, Dx95, or Dx108.

Ambulance Services will establish and report through National Ambulance Information Group (NAIG) consistent national stop codes corresponding to calls that are not incidents because of:

- i. no send – demand management;
- ii. cancelled by caller due to waiting time;
- iii. patient recovering;
- iv. other reasons.

**A18 Incidents closed with advice: Non-C5**

For C1 to C4 incidents coded as requiring a face-to-face response; the count of incidents where the patient was given specific home management advice about their condition, and did not require any onward referral.

If using MPDS, count incidents with a stop code of self-care.

If using NHS Pathways, count incidents with a final disposition of Dx09, Dx16, Dx25, Dx39, Dx46, or Dx83.

**A19 Incidents referred to other service: Non-C5**

For C1 to C4 incidents coded as requiring a face-to-face response; the count of incidents where an onward treatment path was agreed with the patient; whether the Ambulance Service advised the patient to make their own way, or arranged this (including by sending a taxi).

If using MPDS, count incidents with a stop code of Refer to GP, Refer to A&E, Refer to Minor Injuries Unit (MIU) / Walk-in Centre, Refer to HCP, Refer to Specific service, or Refer to 111 / out of hours care.

If using NHS Pathways, count incidents with a final disposition of Dx02, Dx021, Dx03, Dx05, Dx06, Dx07, Dx08, Dx10, Dx11, Dx110, Dx111, Dx1111, Dx112, Dx116, Dx117, Dx118, Dx119, Dx12, Dx120, Dx13, Dx14, Dx15, Dx17, Dx18, Dx19, Dx20, Dx21, Dx22, Dx23, Dx28, Dx30, Dx31, Dx42, Dx43, Dx47, Dx48, Dx50, Dx51, Dx60, Dx63, Dx64, Dx73, Dx74, Dx75, Dx84, Dx88, Dx89, Dx91, Dx92, Dx94, or Dx98.

**A20 Incidents with call back before response on scene: Non-C5**

For C1 to C4 incidents coded as requiring a face-to-face response; the count of incidents where, before any resource arrived on scene, the patient received additional clinical assessment over the telephone, but the patient still received a response on scene.

**A21 Incidents closed with advice: C5**

Count of C5 incidents where the patient was given specific home management advice regarding their condition, and did not require any onward referral, as determined by the stop codes / Dx codes in A18.

**A22 Incidents referred to other service: C5**

Count of C5 incidents where an onward treatment path was agreed with the patient; whether the Ambulance Service advised the patient to make their own way, or arranged this (including by sending a taxi), as determined by the stop codes / Dx codes listed in A19.

**A23 Incidents with call back before response on scene: C5**

Count of incidents originally coded as C5 where a clinician called back and determined that an ambulance response was necessary. Exclude where an incident is initially coded as Dx32, Dx325, Dx326, Dx327, Dx328, Dx329, Dx330, Dx332, Dx34, Dx35 and Dx38, and is passed to a clinician to call back to complete triage.

- NHS England will calculate  $(A21 + A22) / (A21 + A22 + A23)$  to assess how well C5 incidents are identified.

**A113 C5 incidents with response on scene**

Count of incidents originally coded as C5 but where a response was sent and arrived (including due to clinician unavailability, or where triggered by NoC) before the clinician could speak to the patient and complete triage.

Item A113 will be collected from the same month that all items A74 to A113 are collected. See [HCP and IFT calls](#).



## Section 6: Response times (A24-A38, A62-A73, A82-A105)

### Clock start

For C1 and C1T, the earliest of:

- the call is coded (for MPDS, at [T5](#); for NHS Pathways, at disposition); or
- the first resource is assigned; or
- 30 seconds from call connect.

For C2, C3 and C4, the earliest of:

- the call is coded (for MPDS, at T5; for NHS Pathways, at disposition); or
- the first resource is assigned; or
- 240 seconds from call connect.

For C2 to C4, assignment of a First Responder would not on its own start the clock.

If a responding resource is asked to head towards the location of an incident, it must be allocated to the incident on the CAD, therefore registering the correct clock start point.

If a second resource is allocated, whether following auto-dispatch or otherwise, the original clock start should not be altered.

For NHS 111 incidents transferred through ITK, and incidents electronically transferred from another Ambulance Service's CAD, clock starts on transfer of the incident to the EOC CAD.

### Clock stop – all categories

A legitimate clock stop position can include the response arriving at a pre-arrival rendezvous point when one has been determined as appropriate for the safety of ambulance staff in agreement with the control room. For example, a rendezvous point could be agreed for the following situations:

- Information has been received relating to the given location that a patient or bystander is violent, and police or other further assistance is required;
- Information has been received that the operational incident, because of its nature, is unsafe for ambulance staff to enter.

### Clock stop – C1

- i. A fully equipped Trust Ambulance (Land or Air), with ambulance staff trained to deliver clinical care to patient(s) at the scene of an incident, arrives within a 200 metre geo-fence of the patient (if tracked); or such an ambulance confirms arrival at scene through an updated status message via the Mobile Data Terminal (MDT) in the vehicle, or a clinician confirming verbally to the EOC that they are on scene;
- ii. A fully equipped Rapid Response Vehicle (RRV), motorbike or cycle, Blue Light Response Officer, or Critical Care BASIC Responder, arrives within a 200 metre geo-fence of the patient (if tracked); or the RRV confirms arrival at scene through an updated status message via the MDT in the vehicle, or a clinician confirming verbally to the EOC that they are on scene;

- iii. An ambulance resource commissioned to work on behalf of the Trust, who is deployed by the Trust, working to the Trust Policies and Procedures, on a fully equipped ambulance with qualified staff on board (for example, Private Ambulance Service (PAS) or Voluntary Ambulance Service (VAS)), arrives within a 200 metre geo-fence of the patient (if tracked); or the clinician confirms arrival at scene through an updated status message via the MDT in the vehicle, or a clinician confirming verbally to the EOC that they are on scene;
- iv. C1 only: An approved First Responder deployed by the Trust, trained in basic airway management, and trained in the use of and the provision of emergency oxygen, arrives within a 200 metre geo-fence of the patient (if tracked); or the First Responder confirms arrival at scene through an updated status message via the MDT in the vehicle, or a First Responder confirming verbally to the EOC that they are on scene, or through technical methods that offer the same level of assurance. Examples of approved First Responder include, but are not limited to: Community First Responder (CFR); Co-Responder from other public services such as Police, Fire Service, Mountain Rescue, Coastguard; and schemes established with private companies.

### **Clock stop – C1T**

The clock stops at the arrival of first vehicle of the type that transports the patient.

Examples:

- If two emergency ambulances arrive, and for logistical reasons the patient is transported in the second, the first will stop the clock.
- If the patient is transported in an emergency ambulance, which arrives after an RRV, the clock stops at the arrival of the emergency ambulance, not the RRV.

### **Clock stop – HCP / IFT**

The clock stops at the arrival of first vehicle of the type that transports the patient.

Examples:

- If two emergency ambulances arrive, and for logistical reasons the patient is transported in the second, the first will stop the clock.
- If the patient is transported in an emergency ambulance, which arrives after an RRV, the clock stops at the arrival of the emergency ambulance, not the RRV.

If the only resource attending an HCP incident is an Urgent Tier vehicle, then that will stop the clock in the same way as an emergency vehicle.

### **Clock stop – C2, C3, C4**

If no patients are transported by an emergency vehicle (including [incidents with non-emergency conveyance](#)), the clock stops at the arrival of the first vehicle as defined in items i) to iii) in [Clock stop – C1](#).

If the only resource to arrive on scene is a First Responder, where no other ambulance resource arrives on scene, and an EOC clinician confirms to the responder that patient transport is not necessary, the clock stop is the arrival of the First Responder.

Otherwise, the clock stops at the arrival of first vehicle of the type that transports the patient.

Examples:

- If two emergency ambulances arrive, and for logistical reasons the patient is transported in the second, the first will stop the clock.
- If the patient is transported in an emergency ambulance, which arrives after an RRV, the clock stops at the arrival of the emergency ambulance, not the RRV.

### Response time standards

Category	Mean average definition	Standard for mean	Standard for 90th centile
C1	A25 = A24 / A8	≤ 7 minutes	≤ 15 minutes
C1T	A28 = A27 / A9		
C2	A31 = A30 / A10	≤ 18 minutes	≤ 40 minutes
C3	A34 = A33 / A11		≤ 120 minutes
C4	A37 = A36 / A12		≤ 180 minutes

C1T does not have a formal standard, but mean and 90th centile will be published and monitored, and Ambulance Services should aim for a 90th centile of 30 minutes.

#### **A24 Total response time: C1**

The total response time aggregated across all incidents in A8 in the period.

#### **A25 Mean response time: C1**

Across all incidents in A8 in the period, the mean average response time.

#### **A26 90th centile response time: C1**

Across all incidents in A8 in the period, the 90th centile response time.

#### **A27 Total response time: C1T**

The total response time aggregated across all incidents in A9 in the period.

#### **A28 Mean response time: C1T**

Across all incidents in A9 in the period, the mean average response time.

#### **A29 90th centile response time: C1T**

Across all C1T incidents in A9 in the period, the 90th centile response time.

#### **A30 Total response time: C2**

The total response time aggregated across all incidents in A10 in the period.

#### **A31 Mean response time: C2**

Across all incidents in A10 in the period, the mean average response time.

#### **A32 90th centile response time: C2**

Across all incidents in A10 in the period, the 90th centile response time.

**A33 Total response time: C3**

The total response time aggregated across all incidents in A11 in the period.

**A34 Mean response time: C3**

Across all incidents in A11 in the period, the mean average response time.

**A35 90th centile response time: C3**

Across all incidents in A11 in the period, the 90th centile response time.

**A36 Total response time: C4**

The total response time aggregated across all incidents in A12 in the period.

**A37 Mean response time: C4**

Across all incidents in A12 in the period, the mean average response time.

**A38 90th centile response time: C4**

Across all incidents in A12 in the period, the 90th centile response time.

Later in 2018-19, NHS England will start to collect items A74 to A113 and stop collecting items A58 to A73. See [HCP and IFT calls](#).

**A62 Total response time: HCP 1 hour response**

The total response time aggregated across all incidents in A58 in the period.

**A63 Mean response time: HCP 1 hour response**

Across all incidents in A58 in the period, the mean average response time.

**A64 90th centile response time: HCP 1 hour response**

Across all incidents in A58 in the period, the 90th centile response time.

**A65 Total response time: HCP 2 hour response**

The total response time aggregated across all incidents in A59 in the period.

**A66 Mean response time: HCP 2 hour response**

Across all incidents in A59 in the period, the mean average response time.

**A67 90th centile response time: HCP 2 hour response**

Across all incidents in A59 in the period, the 90th centile response time.

**A68 Total response time: HCP 3 hour response**

The total response time aggregated across all incidents in A60 in the period.

**A69 Mean response time: HCP 3 hour response**

Across all incidents in A60 in the period, the mean average response time.

**A70 90th centile response time: HCP 3 hour response**

Across all incidents in A60 in the period, the 90th centile response time.

**A71 Total response time: HCP 4 hour response**

The total response time aggregated across all incidents in A61 in the period.

**A72 Mean response time: HCP 4 hour response**

Across all incidents in A61 in the period, the mean average response time.

**A73 90th centile response time: HCP 4 hour response**

Across all incidents in A61 in the period, the 90th centile response time.

**A82 Total response time: HCP Level 1**

The total response time aggregated across all incidents in A74 in the period.

**A83 Mean response time: HCP Level 1**

Across all incidents in A74 in the period, the mean average response time.

Definition:  $A83 = A82 / A74$

**A84 90th centile response time: HCP Level 1**

Across all incidents in A74 in the period, the 90th centile response time.

**A85 Total response time: HCP Level 2**

The total response time aggregated across all incidents in A75 in the period.

**A86 Mean response time: HCP Level 2**

Across all incidents in A75 in the period, the mean average response time.

Definition:  $A86 = A85 / A75$

**A87 90th centile response time: HCP Level 2**

Across all incidents in A75 in the period, the 90th centile response time.

**A88 Total response time: HCP Level 3**

The total response time aggregated across all incidents in A76 in the period.

**A89 Mean response time: HCP Level 3**

Across all incidents in A76 in the period, the mean average response time.

Definition:  $A89 = A88 / A76$

**A90 90th centile response time: HCP Level 3**

Across all incidents in A76 in the period, the 90th centile response time.

**A91 Total response time: HCP Level 4**

The total response time aggregated across all incidents in A77 in the period.

**A92 Mean response time: HCP Level 4**

Across all incidents in A77 in the period, the mean average response time.

Definition:  $A92 = A91 / A77$

**A93 90th centile response time: HCP Level 4**

Across all incidents in A77 in the period, the 90th centile response time.

**A94 Total response time: IFT Level 1**

The total response time aggregated across all incidents in A78 in the period.

**A95 Mean response time: IFT Level 1**

Across all incidents in A78 in the period, the mean average response time.

Definition:  $A95 = A94 / A78$

**A96 90th centile response time: IFT Level 1**

Across all incidents in A78 in the period, the 90th centile response time.

**A97 Total response time: IFT Level 2**

The total response time aggregated across all incidents in A79 in the period.

**A98 Mean response time: IFT Level 2**

Across all incidents in A79 in the period, the mean average response time.

Definition:  $A98 = A97 / A79$

**A99 90th centile response time: IFT Level 2**

Across all incidents in A79 in the period, the 90th centile response time.

**A100 Total response time: IFT Level 3**

The total response time aggregated across all incidents in A80 in the period.

**A101 Mean response time: IFT Level 3**

Across all incidents in A80 in the period, the mean average response time.

Definition:  $A101 = A100 / A80$

**A102 90th centile response time: IFT Level 3**

Across all incidents in A80 in the period, the 90th centile response time.

**A103 Total response time: IFT Level 4**

The total response time aggregated across all incidents in A81 in the period.

**A104 Mean response time: IFT Level 4**

Across all incidents in A81 in the period, the mean average response time.

Definition:  $A104 = A103 / A81$

**A105 90th centile response time: IFT Level 4**

Across all incidents in A81 in the period, the 90th centile response time.

## Section 7: Resource allocation and arrival (A39-A48)

Counts of resources assigned to incidents, regardless of whether they arrived on scene.

Include all trust-dispatched resources (including urgent tier vehicles), and PAS or VAS.

Do not include CFR or co-responders such as police, military, fire service.

### **A39 Resources allocated to C1**

For all incidents in A8, total count of resources allocated

### **A40 Resources arriving to C1**

For all incidents in A8, total count of resources that arrived on scene.

A39 and A40 will be divided by A8 to give, respectively, mean allocations and mean arrivals on scene per C1 incident.

### **A41 Resources allocated to C1T**

For all incidents in A9, total count of resources allocated

### **A42 Resources arriving to C1T**

For all incidents in A9, total count of resources that arrived on scene.

A41 and A42 will be divided by A9 to give, respectively, mean allocations and mean arrivals on scene per C1T incident.

### **A43 Resources allocated to C2**

For all incidents in A10, total count of resources allocated

### **A44 Resources arriving to C2**

For all incidents in A10, total count of resources that arrived on scene.

A43 and A44 will be divided by A10 to give, respectively, mean allocations and per C2 incident.

### **A45 Resources allocated to C3**

For all incidents in A11, total count of resources allocated

### **A46 Resources arriving to C3**

For all incidents in A11, total count of resources that arrived on scene.

A45 and A46 will be divided by A11 to give, respectively, mean allocations and mean arrivals on scene per C3 incident.

### **A47 Resources allocated to C4**

For all incidents in A12, total count of resources allocated

### **A48 Resources arriving to C4**

For all incidents in A12, total count of resources that arrived on scene.

A47 and A48 will be divided by A12 to give, respectively, mean allocation and mean arrivals on scene per C4 incident.



## Section 8: Bystander Cardio-Pulmonary Resuscitation (CPR) time (A49-A52)

For incidents where a bystander has started CPR before call connect, include the incident in A49, and count zero time for A50, A51 and A52.

### **A49 Bystander CPR count**

Count of incidents where CPR is started by a bystander, including off-duty clinicians, before arrival of an ambulance response.

### **A50 Total time to bystander CPR**

For all incidents in A49, total of time from call connect until CPR is started by a bystander.

### **A51 Mean time to bystander CPR**

For all incidents in A49, the mean average time from call connect until CPR is started by a bystander.

Definition:  $A51 = A50 / A49$

### **A52 90th centile time to bystander CPR**

For all incidents in A49, the 90th centile time from call connect until CPR started by a bystander.

## Section 9: Section 136 response time (A106-A110)

Items A106-A110 will be collected from the same month that all items A74 to A113 are collected. See [HCP and IFT calls](#).

Section 136 response times should use the [clock start](#) and [clock stop](#) definitions from Section 6 above.

### **A106 Section 136 count**

Count of incidents where a patient is attended by an Ambulance Service as a result of a request under section 136 in a mental health crisis situation.

### **A107 Section 136 total response time**

The total response time aggregated across all incidents in A106 in the period.

### **A108 Section 136 mean response time**

Across all incidents in A106 in the period, the mean average response time.

Definition:  $A108 = A107 / A106$

### **A109 Section 136 90th centile response time**

Across all incidents in A106 in the period, the 90th centile response time.

### **A110 Section 136 transport**

For all incidents in A106, the count where the Ambulance Service transported a patient.



## Section 10: Transport (A53-A56)

For A53 to A56, count one for a single incident, even if there is more than one call to 999, and / or more than one patient transported.

The recommended See & Convey rate is  $(A53+A54) / A7$ .

The recommended See & Treat rate is  $A55 / A7$ .

Include only those incidents which resulted in a patient being conveyed as a result of a call made by a member of the public or organisation, or transferred electronically to the CAD system from another CAD system, or as a result of a referral by an HCP.

### **A53 Incidents with transport to ED**

Count of incidents with any patients transported to an Emergency Department (ED), including incidents where the department transported to is not specified. Include [incidents with non-emergency conveyance](#) to ED.

ED includes stroke and Primary Percutaneous Coronary Intervention units.

If a single incident had one or more patients transported to an ED, but also one or more patients transported to another facility, count the incident only in A53, and not in A54.

### **A54 Incidents with transport not to ED**

Count of incidents with any patients transported to any facility other than an Emergency Department, including, but not limited to:

- MIU, whether run by an Acute Trust or primary care organisation;
- Emergency, Medical, or Surgical Assessment Unit (EAU, MAU, SAU);
- Walk-in centres;
- Transport from hospital to hospice.

Include [incidents with non-emergency conveyance](#) to any of these destinations.

### **A55 Incidents with no transport**

Count of incidents with face-to-face response, but no patients transported, including:

- patient(s) refused treatment, deceased, or could not be found, or
- Ambulance Service staff arranged an appointment for the patient, or a follow-up home visit; or
- Ambulance Service staff attended an incident and gave advice, without clinical intervention.

### **A56 Incidents with face-to-face response**

Definition:  $A56 = A53 + A54 + A55$

## Section 11: Abbreviations, glossary / data dictionary

NEAS, NWS, YAS, EMAS, WMAS, EEAST, LAS, SECamb, SCAS, SWAS, IOW	North East, North West, Yorkshire, East Midlands, West Midlands, East of England, London, South East Coast, South Central, South Western, Isle of Wight Ambulance Services
--	---

AQI	Ambulance Quality Indicators
ARP	Ambulance Response Programme
BASIC	British Association for Immediate Care
CAD	Computer-Aided Dispatch
CAS	Clinical Assessment Service
CFR	Community First Responder
CPR	Cardio-pulmonary resuscitation
Dx	Disposition
EAU	Emergency Assessment Unit
ED	Emergency Department
EOC	Emergency Operations Centre
HCP	Healthcare Professional
IFT	Inter-Facility Transfer
ITK	Interoperability Toolkit
MAU	Medical Assessment Unit
MDT	Mobile Data Terminal
MIU	Minor Injuries Unit
MPDS	Medical Priority Dispatch System
NAIG	National Ambulance Information Group
NoC	Nature of Call (questions before NHS Pathways questions)
PAS	Private Ambulance Service
PTQ	Pre-triage questions
PTS	Patient Transport Services
RRV	Rapid Response Vehicle
SAU	Surgical Assessment Unit
VAS	Voluntary Ambulance Service

These items are defined in [Section 2: General concepts](#):

- Call connect
- Call answer
- Cross-border calls
- Events
- Time data
- Mean average times
- Medians and centiles

These items are defined in later places in this document:

- [Re-categorisation](#)
- [Clock start](#)
- [Clock stop](#)
- [Incidents with non-emergency conveyance](#)
- [Running Incidents](#)