KIMMS definitions

Introduction

KIMMS involves the collection of incidents that occur during the pre-analytical and post-analytical phases of Pathology. There are 35 **incidents** that are divided into 8 **categories,** some of which are further divided into **options**. Finally, some information is collected about the laboratory that will allow for **benchmarking** using myQAP analytics. The following are the KIMMS definitions for all of the above.

Episodes

All results are reported as a rate of incidents per 100,000 episodes.

Episode	May comprise one or a multiple of requests, accessions and specimens, however, all are collected from the patient at the same time.
Total episodes	This is the total number of episodes processed by the participant in the time covered by the KIMMS survey.
Options episodes:	This is the number of episodes processed by the participant for each option reported - ED, inpatients, outpatients and community (see options for definitions).

Categories

The incidents are divided into 8 categories and follow the Request-Test-Report cycle. They indicate where the error occurs in the process (Figure 1)

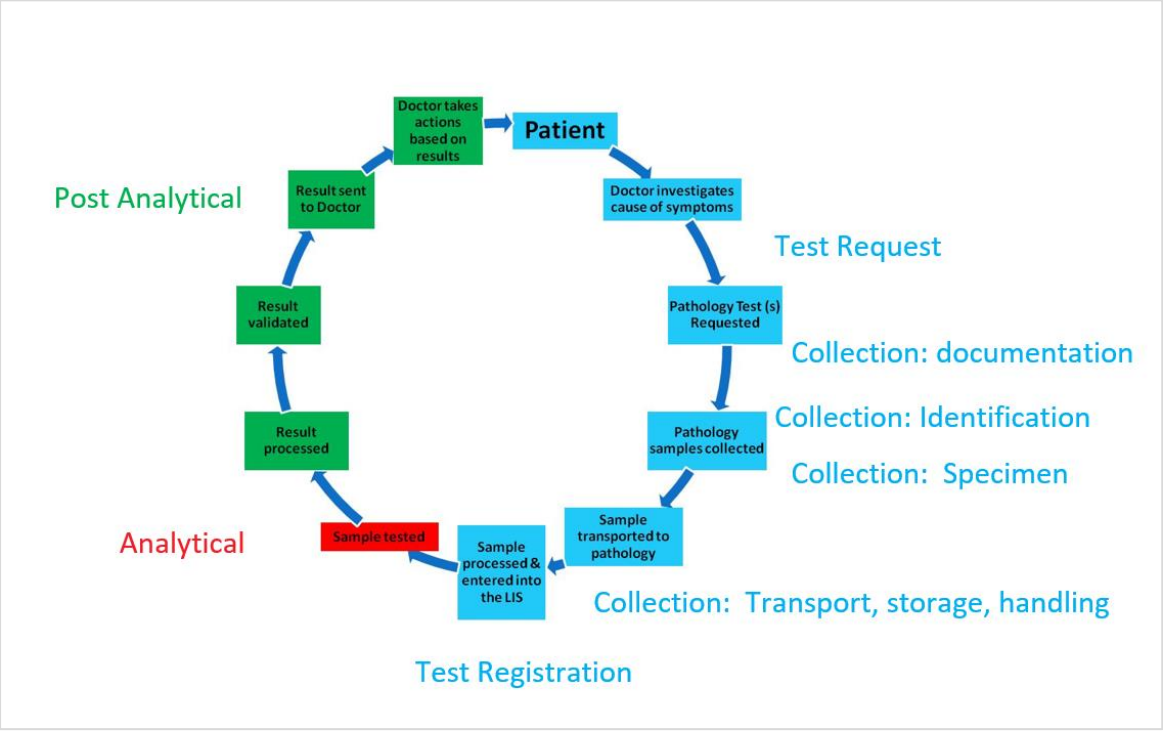

Figure 1: Request-test-cycle showing KIMMS categories.

Options

The first 5 categories are further divided into 4 options

Emergency Department	Pathology testing performed on a patient attending an Emergency Department (ED)/Emergency Room (ER)/Accident and Emergency (A&E)/Casualty ward/department
Inpatient	Pathology testing performed on an admitted hospital patient (Private or Public).
Outpatient	Pathology request and specimens are collected while the patient attends a clinic run by a hospital. This includes day patients and cancer treatment centres
Community	The pathology request may be generated anywhere, but the specimens are collected in a setting other than those listed. This includes Doctors surgeries, designated collection centres (even if situated within a hospital), nursing homes, home visits and workplace collections.

Where a participant is unable to break their episodes into the options, they should enter results under **Mixed**.

Where a participant only wants to break their incidents into one of the above options, they should enter their other results under the most appropriate other option. Do not enter them under mixed.

Incidents

Specific incidents have been chosen based on discussions with KIMMS participants and input from the Advisory Committee. The table below illustrates the use of each of these and gives examples. The consequences are based on the consequences scale referred to in the RCPAQAP Data Analysis and Assessment Criteria Handbook.

Categories	Specific Incident	Consequences	Guidance on the use of this parameter in KIMMS:	Examples
Test request	Test request: Clarification of tests required	1	Collector or laboratory required to contact requestor to confirm test(s) requested as information not clear or illegible on request.	Examples: Information required to decide which tests or to interpret results (family history, medical history)
	Test request: Insufficient requester details or signature missing	2	This occurs when the information supplied is not sufficient to know which doctor should receive the report, or the request is not signed when a signature is required.	Examples: Dr Smith, when you have several Dr Smith's your area. Signature required to make request eligible for government payment (esp in Australia).
Collection: Identification	Collection: Unlabelled specimen and/or request	4	This is when sample or request has no patient identifiers.	Note: Totally unlabelled sample
	Collection: Insufficient patient ID specimen and/or request	3	Minimum identifiers are full name and DOB. 3 identifiers may be required E.g., transfusion samples.	Note: Less than 2 identifiers on the sample or request form, less than 3 for Transfusion samples. Examples: Missing Name, UR or date of birth, or unique laboratory number.
	Collection: ID mismatch between specimen and/or request	3	ID on specimen label does not match accompanying request form or electronic order	
	Collection: Specimen from wrong patient (WSIT)	4	Labelling of specimen and request are concordant, but the actual sample in the	Example: It may be suspected or known that this is the case E.g.: totally

			container is from a different patient.	different results from previous results, which is not possible.
Collection: Documentation	Collection: Essential collection date and/or time not provided or discrepant between specimen and request	4	Specimen and form must align especially essential for a Transfusion request	Examples: Collection date and/or time incomplete or not recorded on specimen or request form. Discrepancy between those on sample and request form.
	Collection: Essential signature missing or discrepant on transfusion sample and/or request	3	This refers to collector and patient signature	Example: Unsigned label or request form for a transfusion sample
	Collection: Essential clinical indication for test not provided	2	Collector fails to record the clinical indication for the test that is required by the laboratory to aid in the interpretation of results.	Examples: Fasting status, relevant medication, time since last dose not recorded at the time of collection
	Collection: Essential specimen type/site not provided	4	Specimen type and/or site not provided when information is required to aid in appropriate testing and interpretation of results by the laboratory.	Examples: Site of swab or biopsy not provided
Collection: Specimen	Collection: Incorrect patient preparation	3	Patient not fasting, medication taken instead of being withheld, preparation procedure for test not followed	Note: This can be caused by patient not being given correct information or not following the information that was given.
	Collection: Incorrect specimen type or container or acid	3	Incorrect specimen type collected/submitted for test request	Examples: EDTA collected when LiHep required; urine with acid added vs urine without acid; fresh tissue vs formalin fixed; random urine submitted when 24 hour urine required.
	Collection: No specimen received	4	No sample received to do the test	
	Collection: Insufficient specimen	3	Insufficient specimen to do any or all tests requested.	
	Collection: Specimen incorrect fill leading to incorrect specimen:additive ratio	3	Under or overfilled Citrate (COAG) tubes.	Note: Usually citrate tubes, but any tube with a liquid additive could be affected.
	Collection: Specimen clotted or other clotting issue	3	Most commonly EDTA tubes, but any tube with anti-coagulant may be clotted.	
	Collection: Specimen contaminated – non microbiological	4	E.g: Diluted from IV drip; or order of draw incorrect.	
	Collection: Specimen contaminated - microbiological	3	Contaminated microbiology samples that require a recollection.	
	Collection: Specimen haemolysed	3	Haemolysis should be counted if the sample is deemed unsuitable for one or more tests due to the level of haemolysis.	It is not possible to assign a level of haemolysis due to the differences between analyser flags and correlation between flags and actual levels of haemolysis. It is also method specific
	Collection: Specimen leaking	2	Any leakage should be recorded, even if there is still sufficient specimen to do the test.	
Collection: Transport, Storage and Handling	Transport and Storage: Incorrect transport/storage temperature/handling	3	Stored and/or transported at wrong temperature or handling not in accordance with documented procedure	Examples: Delayed separation of serum or plasma, specimen left too long in centrifuge; specimen not shipped frozen.
	Transport and storage: Transport delay leading to specimen being too old to test	3	Any delay in transport	Examples: being left in collection centre or at Drs surgery, or courier delayed for any reason Example: accident, cancellation of flight.
Test registration	Test registration: Incorrect unique specimen identifier	4	Also known as episode; laboratory or accession number. It is the unique identifier for that specimen from that patient	Incorrect barcode is read at test registration. It is NOT an incorrect Barcode being placed on the sample at the time of collection.

			collected/submitted on that date/time.	
	Test registration: Patient ID wrong patient	4	This occurs when the wrong patient is chosen at data entry from a list of patients with the same, or similar name. Request associated to incorrect patient demographics.	Specimen registered under the wrong patient details.
	Test registration: Error in transcription of patient demographic information	2	This occurs when information is incorrectly entered from a request. Registration data manually entered	Examples: Incorrect Name, DOB or address added at registration Note: Most likely to occur when registration done manually
	Test registration: Incorrect or missed tests	3	Test on request form not added at registration or incorrect test added.	This does not include add-on tests or tests that can't be interpreted at data entry.
	Test registration: Incorrect or missing specimen type, site, collection time	3	This is when the information is available on the request form or electronic order but is not entered into the LIS.	Examples: Specimen type not added. Incorrect collection time added
	Test registration: Incorrect requesting or copy doctor	3	Referring clinician or copy to clinician not registered to receive copy of the report	Examples: Incorrect Doctor selected at registration, copy to Doctor not added
Analytical	Analytical: Internal laboratory process incident - unfixable	3	This refers to any incident that happens after the sample has arrived at the laboratory that is not directly related to performing the test.	Examples: Irreplaceable sample spilt, formalin added to fresh specimen, samples thawed and not used; wrong test(s) performed and specimen volume depleted; specimen discarded prior to completion of testing, small sample placed on automation and not manually presented leading to inadequate sample for analysis
	Analytical: Within laboratory ID error	4	Error transferring patient Identification within the laboratory.	Examples: Pipetting incorrect patient into tube or well, mislabelling aliquot or block, not labelling aliquot or block
	Analytical: Intra or inter-laboratory specimen lost or misplaced - irreplaceable	5	Specimens lost during intra and inter-laboratory transfer that are irreplaceable.	Examples: Irreplaceable samples are those that are deemed precious or difficult/impossible to recollect. E.g.: CSF, tissue and cytology samples; specimens that are collected as part of a series such as stimulation or suppression tests; pre-dose drug levels; specimens collected under sedation.
	Analytical: Intra or inter-laboratory specimen lost or misplaced - replaceable	3	Specimens lost during intra and inter-laboratory transfer that can be recollected	Examples: Specimen recorded as received in Specimen Reception but did not reach department, Specimen recorded as sent to another laboratory but not received
Post Analytical	Post analytical: Failure of clinical handover high-risk (critical) results	5	Failure to communicate high-risk results to the relevant party within agreed guidelines as documented within your organisation.	Result outside critical limits not communicated to Clinician
	Post-analytical: Failure of clinical handover non-critical results	3	Requests to re-send copy of report due to non-receipt by the requestor, including referring laboratories.	Note: More an issue in community patients than hospitals.
	Post Analytical: Amended report. Significant patient impact	5	This is amended report due to a diagnostic error or incorrect result being released. .	Examples: Result incorrectly reported as Negative, found to be Positive so amended result issued with correct result. Missed diagnosis in AP or Haematology. Note: This does not include reports that have been amended due to more information becoming available, usually due to further testing or results of a second opinion

Benchmarking

To allow for further comparisons using the analytics function of myQAP, some further parameters are collected. Participants are asked to choose from a list of pre-defined options.

Size of laboratory

Small	<100,000 episodes per quarter (3 months)
Medium	100,000-500,000 episodes per quarter
Large	>500,000 episodes per quarter.

% of own collectors

An own collector is a person who collects specimens and is under the direct employ of the participant's organisation.

<25%	Most specimens are collected by people not employed by the participant
25-75%	A mix of own collectors and other collectors specimens are received.
>75%	Most specimens are collected by own collectors – e.g within the control of the participant.

% **of eRequest**

An eRequest is an electronic order received directly into your LIS as opposed to an order which is computer generated but requires manual transcription into your LIS.

<25%	Majority of request are manually entered into LIS
25-75%	A mix of eRequests and manually entered requests are received.
>75%	Majority of requests are received as eRequests