Standard Operating Procedure (SOP) for CAVAuk Survey

Version	Changes
1.1	Original
1.2	• Included SOP guidance for all MS Forms • Removed abbreviations of clinical areas • Specified out of circulation machines may be ignored. • Specified input of machines used in each area • Removed question regarding whether screen could be standardised – committee will determine based on inputs
1.3	• Reduced complexity for non research Audit in line with Protocol version 1.4
1.4	Fix to identical screen question where quantities now required rather than y/n Trust no longer via drop down menu. Further rewording to clarify areas of confusion when collecting area data. Further discussion of Variant coding to include machine count ahead of Colour/format/position. References made to FAQ and worked example documents.

Objective:

The aim of the CAVA (Capnography Variation) study is to capture and analyse capnography data across various medical settings within the hospital.

Study Authors:

Andrew Shepherd, Mathew Lyons, Jennifer Proc.

1. Data Collection Procedure:

1.1. Trainee Anaesthetists' Responsibility:
Trainee anaesthetists are responsible for capturing capnography traces.

1.2. Data Submission:
Utilise Microsoft Forms to submit captured data to a secure data log for each clinical area within their study hospital.

1.3. Data to be submitted by 29.09.24

2. Data Questions:

2.1: Site Enrolment Form

2.1.1: Name of lead investigator for site:
Please give the name of the anaesthetist leading CAVAuk at your site (trainee or consultant)

2.1.2: Lead investigator email:
This will be the email address used for correspondence between the investigating committee and site leads as a direct line of communication.

2.1.3: Name of Hospital:
Name of your hospital anaesthetic department e.g. RIE Anaesthetic Department or RHCYP Paediatric Department
Most hospitals in the UK will deliver anaesthetic services via a single department. Please ensure division of local teams prior to enrolment to avoid duplication.

2.1.4: Name of Trust/ Health Board
Please name the trust or health board.

2.1.5: Supporting trainee research network:
Most hospital sites in the UK fall within trainee research networks that we envisage will support the data collection in most hospital sites. If your department falls out with this, please write N.A.

2.2: Site Clinical Director Form

2.2.1: Name of Department Lead:
Please indicate the department leads name.

2.2.2: Name of Hospital:
Name of your hospital anaesthetic department e.g. RIE Anaesthetic Department

2.2.3: Health Board or Trust
Simply input the name of the above.

2.2.4: Supporting trainee research network:
Most hospital sites in the UK fall within trainee research networks that we envisage will support the data collection in most hospital sites. If your department falls out with this, please write N.A.

2.2.5: Are you aware of the SALG statement on waveform capnography?
As the director of your site, were you aware of the SALG statement on waveform capnography published last year? This question relates to the dissemination of the SALG message as well as the message itself.

2.3: Clinical Area Form

2.3.1. Trust or health board:
Provide the health board as per the enrolment form.

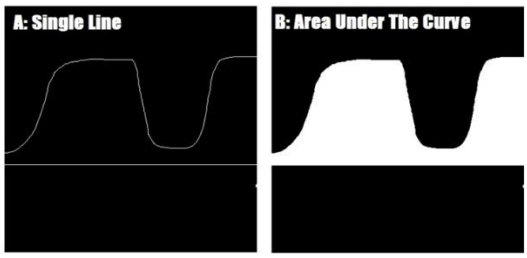
2.3.2. Hospital Site:
Specify the hospital or department site where data was collected.

2.3.3. Clinical Area:
Identify the specific clinical area where capnography traces were captured. Clinical areas include:
- Anaesthetic rooms
- Operating theatres
- Recovery bays
- Emergency department bays
- Interventional radiology suites
- Transfer monitors
- ICU bed spaces
- Dental suites
- ECT suites
- Radiology scanning suites

(The authors understand there is confusion with this system and have included guidance via a further FAQ and worked example documents that can be found on the study website.)

2.3.4 Capnography Variants:

2.3.4.1. Variant Documentation:
- Colour: Note the colour of the waveform. Options include:
  - Red: R
  - Orange: O
  - Yellow: Y
  - Green: G
  - Cyan: C
  - Blue: B
  - Violet: V
  - Pink: P
  - White: W
  - Grey: X
  - Black: K
- Graph Type: Indicate whether the waveform is an area graph (A) or a single traced line (L).



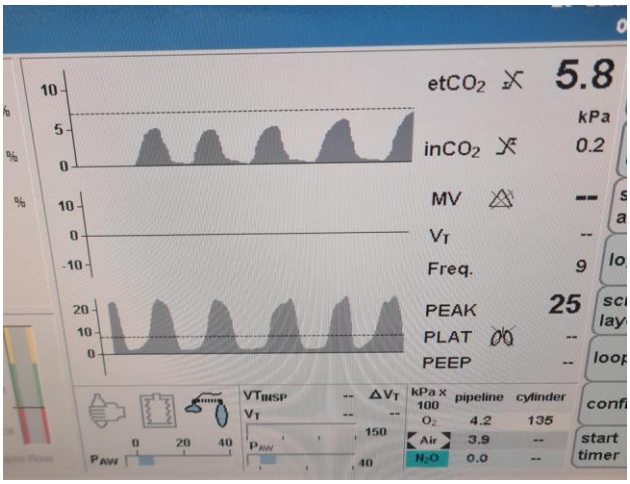
- Location on the Screen: Document the location on the screen:

Bottom (B),
Middle (any variable between bottom and top (M),
Top (T)).

Waveform display should then be coded to match the following format: [count][colour][graph type][location on monitor].
Example Codes:
- 12 Red, area graph, bottom: 12RAB
- 4 Cyan, line graph, top: 4CLT
- 6 Pink, line, middle: 6PLM
- 9 Violet, area, top: 9VAT

Note each variant encountered in each clinical area. For example an interrogation of the obstetric recovery suite found:
Variant 1: 2RAM
Varient 2: 4WLB
Varient 3: 1YLM
Other variants: N/A
Further worked examples and FAQ documents should clarify this.

2.3.4.2: How many work stations display waveforms identical in morphology to the CO2 Waveform (pressure/ volume/ agent)
Is there a waveform with identical morphology in use? E.g., could you mistake two identical wave forms conveying different things? See image below: EtCo2 is identical in morphology to airway pressure.



Answer this with a number of machines. (If none select 0)

2.3.5. Equipment Log:

2.3.5.1. Equipment Used in This Area:
List the monitoring equipment used in the specified clinical area and their numbers in the following format:
Examples include:
- 32BeneviewT8
- 12DraegerPrimus
- 9GEAisysCS2

Do not include machines that are out of circulation or awaiting medical physics repair

2.4 Investigator Form

2.4.1 Name of Investigator

Name of investigator. We envisage that this form be sent via the site lead to each contributing data collector. (One form per investigator). Please take care with spellings! The names entered will be those published.

2.4.2 Email address

Email address of the above.

2.4.3 Lead Investigator at Site?

Lead investigators will be given different certificates to mark their contribution to the study.

2.4.4 Consent to name in publication

This is required to list the contributor in any subsequent publication.

3. Submission of Data:

3.1. Prompt Data Submission:
Ensure all captured data is submitted promptly via Microsoft Forms to the designated secure data log within the study window

4. Quality Control:

4.1. Data Review:
The study team will review the data being collected and will feedback issues with collection at a local level to registered trainee leads.
Please ensure quantities of waveforms add up to the total numbers of recorded for each clinical area.

4.2. Data Management:
All local data will be passed back to Trainee Research Networks at the close of the survey.

5. Confidentiality:

5.1. Patient Data Confidentiality:
No patient data is to be recorded in any way during this survey of equipment.

5.2. Hospital Confidentiality:
Hospitals will be unnamed and in no way singled out within the final presentation of results. Clinical directors should intonate their approval of data use in the governance form for each site as part of the enrolment process to the study.

6. Data Analysis and Reporting:

6.1. Data Analysis:
Once all data has been collected, it will be analysed to identify trends, patterns, and variations in capnography traces across different clinical areas and equipment types.

6.2. Reporting:

A comprehensive report summarising the findings of the CAVA study will be compiled. This report will include recommendations for improving capnography monitoring practices based on the analysis of the collected data.

6.3. Dissemination of Results:
The final report will be disseminated to relevant stakeholders, including hospital management, anaesthetic departments, and medical device manufacturers. Additionally, findings may be presented at conferences and published in academic journals to contribute to the broader knowledge base in anaesthesia and critical care.