

GCC: Anaesthesia

IntraOp and Induction modules



‘We are able to use the consistent and comprehensive records to identify areas to improve outcomes and enhance patient safety.’

Associate Professor Ong Biauwei Chi, Director of Patient Safety and Clinical Governance and Senior Consultant, Department of Anaesthesiology, Singapore General Hospital



Benefits

- Data recording is up to 93% faster than with traditional paper-based reporting methods.
- Physiological data from patient monitoring equipment is automatically captured and stored.
- Data entry by clinicians is expedited by pre-populated, comprehensive and configurable picklists, an intuitive touch screen interface, and large tabs and buttons, which can be audited.
- Incidents of iatrogenic harm are significantly reduced.
- Comprehensive, full-colour reports are generated automatically.
- Clinicians are able to spend more time with patients.
- Clinician specified preferences can be set for multiple anaesthetic scenarios, including regional blocks.
- Access to the preoperative and anaesthetic history of patients is at the touch of a button.
- Patient data is collected for Anaesthetic Log Book requirements.

GCC

IntraOp and *Induction* are modules in the GCC suite, a fully integrated suite of clinical software modules designed specifically for the acute care environment.

Individual modules automatically capture patient data in the preoperative, intraoperative and postoperative phases and include acute pain management recording.

Each patient’s medical history is collated into a consolidated record that is accessible from any secure portal, ensuring that clinicians can access the right patient information at any time.

GCC modules are accessed via purpose-built Getz Touch medical-grade hardware devices installed in induction bays, operating theatres and PACU/ recovery rooms, or via web-based portals suited for both personal computers and mobile devices.

Our enterprise-level subscription offering is scalable so it grows as your hospital or group of hospitals grows. The architecture of our modules complies with HL7 standards, ensuring seamless interfacing with hospital patient administration systems, theatre booking systems and all models of patient monitoring equipment.

Module overview

The GCC *Induction* and *IntraOp* modules enable anaesthetists to streamline the process of recording and annotating data derived from patient monitors and imported from hospital information systems.

Used in induction bays (*Induction*) and operating theatres (*IntraOp*), these compatible modules enable hospitals to generate accurate anaesthetic records. Data entry is via a touch screen interface on the Getz Touch GT-30-19 multimedia wide-screen medical-grade computer.

Patient vitals can be annotated and every aspect of a case can be fully documented including induction, regional blocks, medications and fluids, critical events and postoperative orders. Referrals to the acute pain service team can be made within the modules.

Staff in attendance and staff changes can be recorded easily. In-built validation ensures that the patient workflow is completed correctly and that reports are previewed before patients move to the next step of their perioperative experience. Anaesthesia reports are automatically generated and saved in the *Chronology* module.

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for every hospital

GCC modules are used in
hospitals and medical centres in four continents

50+



Vitals

The Vital screen is the main screen in the *IntraOp* module. It displays the patient’s vitals (automatically captured from the patient monitor) and enables the clinician to annotate them.

All aspects of the case can be documented from the Vitals screen including IV access, induction, regional blocks, medications, infusions, postoperative orders and staff changes.

The quick touch buttons on the Vitals screen give the clinician fast access to the screens most commonly used.



‘Getz Clinical has developed a tool for anaesthetists that is world class. IntraOp is a very simple tool to learn and use. I was up and running in 5 minutes.’

Dr Tiffany Glass, FANZCA Specialist Anaesthetist, South Australia

Bookings List

The Bookings List screen lists the appointments that have been booked for an operating theatre for a given day.

Bookings can be entered manually or received through HL7 messaging from other hospital systems.

Clinicians can switch views to see other locations. Booking data refreshes automatically every 15 seconds.

The screenshot displays the Bookings list for Operating Theatre 1 (2019/08/06 - 2019/08/20). The table lists appointments with columns for Status, Patient Name, Patient ID (MRN), Procedure, and Appointment Date and Time. The appointments are as follows:

	Status	Patient Name	Patient ID (MRN)	Procedure	Appointment Date and Time
▼	Booked for OT1	John Greener	12345678JG (MTI)	Laparoscopic Cholecystectomy	Today 16:00:00
▼	Booked for OT1	Jin Kim	32451ANB (MTI)	Appendectomy	Tomorrow 23:59:00
▼	Booked for OT1	Jane Bell	20190809 (MTI)	Lap Cholecystectomy	2019/08/15 21:59:00
▼	Booked for OT1	Tina Holland	56471ABN (MTI)	Breast biopsy	2019/08/15 23:59:00
▼	Booked for OT1	Troy Smith	23324ABN (MTI)	Cataract surgery	2019/08/16 07:30:00
▼	Booked for OT1	Rowena Raven	28888ABN (MTI)	Cholecystectomy	2019/08/16 08:30:00
▼	Booked for OT1	Arthur Madden	881218ABN (MTI)	Hemorrhoidectomy	2019/08/16 09:00:00
▼	Booked for OT1	Cecil Stratmore	32445ABN (MTI)	Hysteroscopy	2019/08/17 07:00:00
▼	Booked for OT1	Nicholas Famel	54622ABN (MTI)	Carotid endarterectomy	2019/08/17 07:30:00
▼	Booked for OT1	Catherine Norris	11344ABN (MTI)	Coronary artery bypass	2019/08/17 08:00:00

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for every hospital

GCC modules used in **1200** surgical operations every day



‘Patient vitals such as blood pressure, pulse rate and temperature are automatically captured and recorded. More detailed and reliable records allow for greater accuracy and lead to increased patient safety. Lost paper records are now a thing of the past!’

Dr Patrick Musto, Consultant Anaesthetist, Leicester General Hospital

Bookings List hidden drawer

Tapping a booking opens a ‘hidden drawer’ which displays the patient’s height and weight and allows the clinician to review any *PreOp* reports,

or *IntraOp* (Anaesthetic) and *PACU* reports from a previous admission.

If the case has already been completed, the hidden drawer

allows the clinician to edit the *IntraOp* report within a configurable timeframe.

Patient Search

The Patient Search screen enables the clinician to search for a patient’s record by entering their patient ID or a portion of their name. A list of the patients who match the search

criteria is then displayed, which enables the clinician to determine if a record and booking has already been created for the patient.

In the rare case where patient details do not automatically appear, they can be entered manually. If required, patient records can be merged post completion of a case.

11:18:22OT2

Shut down

Bookings list for All Theatres (15-Mar-2016 - 29-Mar-2016)

Search Patient

+/- 1 DayToday+/- 1 Week

View Booking For

	Status	Patient Name	Patient ID (MRN)	Planned Procedure(s)	Appointment Date and Time
	Booked for OT1	Juan Kurej	RN48322069H	Excision lesion right lower leg	16-Mar-2016 18:30:00
	Booked for OT1	Darren Arens	RN37193553H	Laparotomy - bowel obstruction	16-Mar-2016 19:30:00
	Booked for OT2	(Hida) Morcom	RN63604233H	Excision lesion right lower leg	17-Mar-2016 08:15:00
	Booked for OT2	Suhasini Samuel	RN80178094H	Left Cataract 21.5 STB	17-Mar-2016 09:15:00
	Booked for OT2	Sian Boston	RN85240147H	Repair umbilical hernia with mesh	17-Mar-2016 09:45:00
	In OT2 Today 11:09:51	Gerhard Stainthorpe	RN81377224H	Excision plantar wart right foot lateral aspect 5th metatarsal	16-Mar-2016 11:00:00
	OT2 Complete Today 11:04:34	Tamara Bate	RN45672380H	Amputation bilateral 2nd toes at pip	16-Mar-2016 13:00:00
Actual Anaesthetist: Dr William Hibbert Episode ID:					
	Date of Birth	Age	Gender	Height	Weight
	02-May-1932	83y 10m	Female	171cm	61kg
				BMI	20.86
	Locked	Latt McGreevy	RN88722197H	Excision ossicle right medial ankle	15-Mar-2016 08:45:00
	Locked	Elanor Breed	RN49262897H	Myringotomy	16-Mar-2016 09:15:00

Edit Case

Review Reports

Select

13:53:11OT1

Back

Patient Search

Add Patient

Search using patient ID or name

Sonia

Search

Search results (1 matches for "Sonia")

	Patient ID (MRN)	Patient Name	Date of birth	Gender
	RN36089200H	Sonia Whitley	06-Nov-2009	Female

Age 6y

Height

Weight

BMI

View Appointments

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Up to 93% faster data entry than traditional paper-based reporting methods



‘The single most comprehensive source of information about a patient’s past perioperative experience, instantly available anywhere within the state’s computer network and allowing a myriad of uses of the accumulated data.’




Associate Professor John Archdeacon, Director of Anaesthesia, Intensive Care and Perioperative Medicine, Cairns Hospital, *ANZCA Bulletin*, September 2011

Confirm Patient Details

The Confirm Patient Details screen enables the clinician to verify the right patient is present in the operating theatre before starting a case.

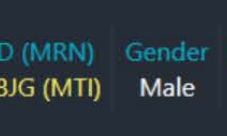
Clinicians can also view critical alerts related to the patient before the anaesthetic procedures begins.

15:13:17
Operating Theatre 1

Back

Confirm Patient Details for **John Greener**



Patient ID (MRN)	Gender	Weight	Height	Date of Birth	Age	Ethnic Group	Religion
12345678JG (MTI)	Male	60kg	175cm	1962/02/18	57y 5m		

PreOp Temp	Observation Blood Pressure	Pulse	Sat	BSL
36.5 °C	120/80 mmHg	80 bpm	99 %	100 mmol/L

Patient Information



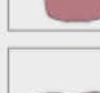

Planned Procedure
Laparoscopic Cholecystectomy

Comorbidities (1)
Type II Diabetes

Patient Alerts (1)
Critical - Shellfish - Allergy - Severe

PreOp Assessment

Mallampati

☒ Difficult Intubation Expected

Assessed By
Dr Charlotte Barker (USI0001D)

☒ Same as Primary Anaesthetist

Heart
Sinus rythm

Neck Circ. (cm)
35 cm

Thyromental (cm)
35 cm

Lungs
Clear

Dentition (Top)
No Issues


Neck
Adequate extension

Dentition (Bottom)
No Issues

Notes

ASA
2

Last Updated On: Aug/13/2019 11:28

 Confirm Patient




Set Up Case


The Set Up Case screen enables the clinician to record the details of all the clinicians involved in the procedure, specify the anaesthetic

details and nominate the time they want the *IntraOp* module to begin collecting patient vitals. The case is started from this screen.


11:33:00

Operating Theatre 1

 Back

Set Up Case for **12345678JG (MTI) John Greener**

 Add New Clinician Role

Planned Procedure

Laparoscopic Cholecystectomy

Diagnosis (Provisional)

Acute cholecystitis

Anaesthetic details

Anaesthetic Technique







GA - ETT

Episode ID

ASA

2


Staffing

Clinician Role	Clinician Name	Staff Type	Delete
Anaesthetist (Principal)*	Dr Charlotte Barker (USI0001D)	Anaesthetic Consultant	
Surgeon (Principal)*	Dr Don Jeacon (USI8888B)	Surgical Consultant	
Anaesthetist (Associate)			
Surgeon (Associate)			
Anaesthetic Support			
Perfusionist			

View/Edit Preferences

Start data collection:

11:33:00

 Confirm All and Start

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Induction

The Induction screen enables the clinician to document an induction quickly and accurately. Templates of anaesthetic preferences specific to individual anaesthetists can be created to expedite data entry. Clinicians can also record complications.

11:50:18

Operating Theatre 1

Patient ID

12345678JG (MTI)

John Greener

175cm

60kg

57y 5m

Primary Clinician: Dr Charlotte Barker

11:50:18

Add Induction

Select clinician

Dr Charlotte Barker

Category

Adult

Add Medication

Add Infusion

Induction Preference

Mid/Fent/Prop/Roc (Enterprise)

Grade 1

Grade 2

Grade 3

Grade 4

Bag-mask Ventilation

Easy

Laryngeal View

Grade 1

Grade 2

Grade 3

Grade 4

Airway Method

ETT » PVC » Oral » 8.5

Circuit

Circle

Patient Position

Supine

Add Devices

Laryngoscope » McCoy

Complications/Events

Rapid Sequence

Inhalational Induction

Cricoid Pressure

BURP

Pre-oxygenation

IV Induction

Medication Name	Route	Dose	Dose/kg	Delete
Propofol (mg)	IV	200 mg		✗
Fentanyl (mcg)	IV	100 mcg		✗
Midazolam (mg)	IV	1.5 mg		✗
Rocuronium (mg)	IV	50 mg	0.83 mg	✗

Infusion Name	Rate	Target Blood Conc.	Conc. %	Delete
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Administered By

Dr Charlotte Barker (USI0001D)

Checked By

Dr Don Jeacon

✗ Cancel

✓ Confirm

ECG (bpm)

Pulse (bpm)

71

St Seg

St Seg (mm)

BIS

Entropy

32

Temp (°C)

Temp2 (°C)

36.9

34.9

Resp (bpm)

SpO2 (%)

97

EtCO2 (mmHg)

CVP (mmHg)

48.0

16.2

NIBP (90)

124 / 73

ART (98)

133 / 81

ABP

PA

SVV (%)

CI

NMT (%)

Iso Insp (%)

Iso Exp (%)

3.1

2.4

MAC (%)

O2 Insp (%)

1.20

33.0

N2O Insp (%)

67.0

Regional Block

The Regional Block screen enables the clinician to document the regional block applied from a predefined medications list and a template of personalised defaults for specific block types. Preferences allow clinicians to select from previous configured regional block templates. Multiple blocks can also be documented as required.

15:32:40

Operating Theatre 1

Patient ID

12345678JG (MTI)

John Greener

175cm

60kg

57y 5m

Primary Clinician: Dr Charlotte Barker

15:32:40

Add Regional Block

Select Clinician:

Dr Charlotte Barker

Add Medication

Regional Preference

Preference Category

Adult

Block Site/Type

Back » Lumbosacral » Epidural » L3-L4

Left

Right

LA to Skin

Ultrasound

Patient Position

Left Lateral

Aseptic Technique

Gown, glove, sterile prep, drape, mask

Attempts

1

Needle Type

Quincke

Needle Gauge

20 g

Distance to Space

2 cm

Nerve Stim

2 mA

Marking at Skin

2 cm

Resistance

LOR Air

Administered By

Dr Charlotte Barker (USI0001D)

Checked By

Comments

Complications

✗ Cancel

✓ Confirm

ECG (bpm)

Pulse (bpm)

66

St Seg

St Seg (mm)

BIS

Entropy

31

Temp (°C)

Temp2 (°C)

37.5

35.5

Resp (bpm)

SpO2 (%)

100

EtCO2 (mmHg)

CVP (mmHg)

50.3

17.6

NIBP (90)

115 / 78

ART (97)

123 / 84

ABP

PA

SVV (%)

CI

NMT (%)

Iso Insp (%)

Iso Exp (%)

3.2

MAC (%)

O2 Insp (%)

2.2

1.20

O2 Insp (%)

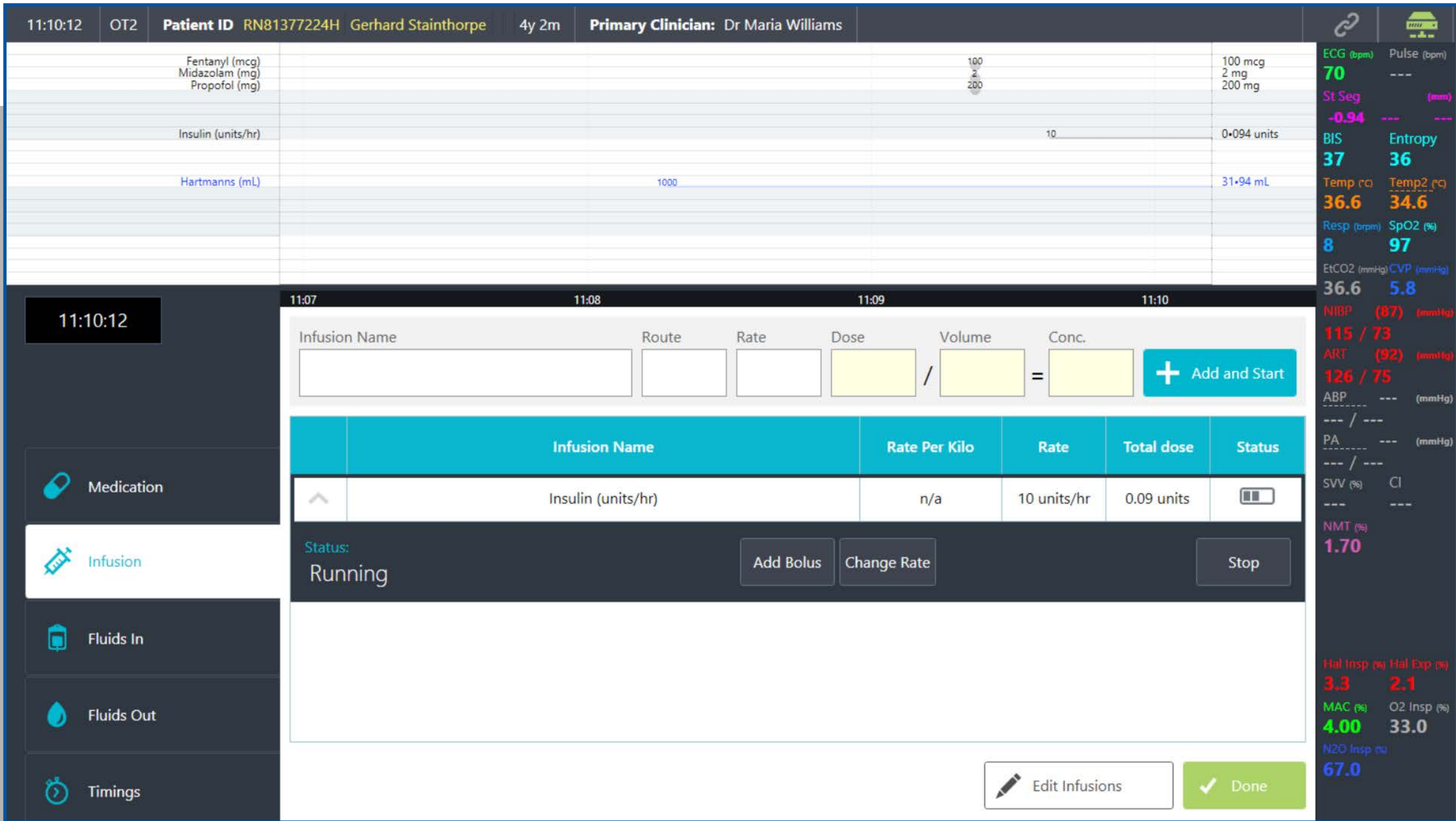
N2O Insp (%)

33.0

67.0

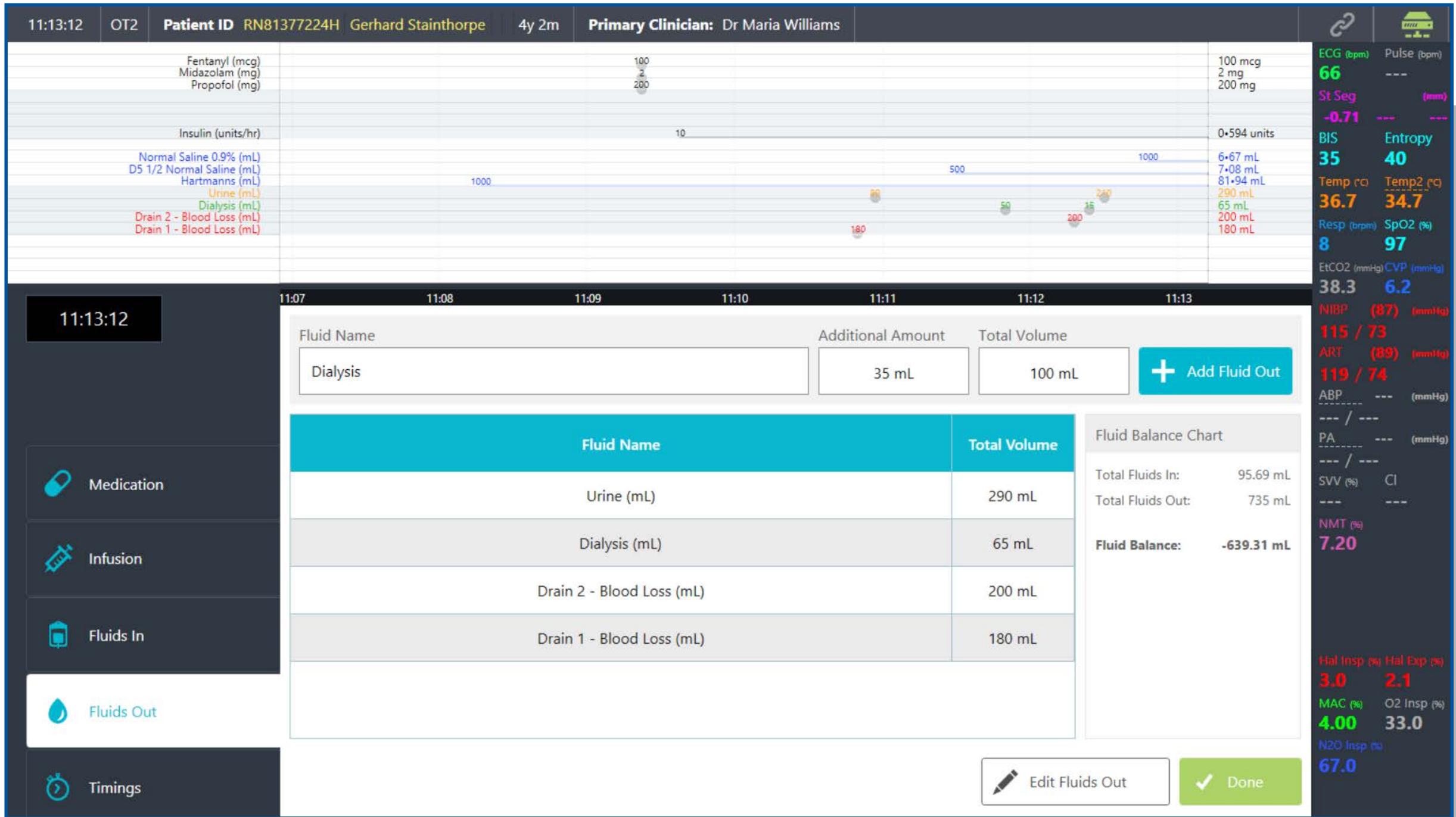
Infusion

Infusions can be documented quickly by using picklists to select medications and numerical keypads to enter rates and volumes. Rate adjustments and boluses can be easily documented by tapping buttons in the ‘hidden drawer’.



Fluids

An accurate fluid balance can be maintained by the easy charting of fluids in and out. Multiple fluids can be added with a set volume rate or time period. A hidden drawer displays functionality for bolus doses and allows the clinician to edit the volume delivered or mark the bag as empty. The fluids out function can track loss from a configurable range of outputs and calculates fluid balance against the amount of fluids in.



‘This state-of-the-art record has advanced the quality and credibility of records as well as being a useful teaching and audit tool. It is the anaesthetic equivalent of an aeroplane’s “black box” flight recorder.’

Princess Alexandra Hospital, Year in Review 2009-2010

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We have demonstrated well over **500%**
return on investment for existing customers



Surgical Safety Checklist

With this feature users can document the surgical safety checklist through the Quick Touch button on the vitals screen. The default checklist is based on the

World Health Organization's recommended surgical safety checklist. The checklist can be modified according to the hospital needs or requirement.

11:43:15

Operating Theatre 1

Patient ID

12345678JG (MTI)

John Greener

175cm

60kg

57y 5m

Primary Clinician:

Dr Charlotte Barker

11:43:15

Surgical Safety Checklist

Sign In

Time Out

Sign Out

Before Induction of Anaesthesia

Yes

No

Patient

Patient has confirmed: Identity, Site, Procedure, Consent

Surgery site shaved in ward?

Known Allergies

Adverse Reactions exists for this patient

Critical - Shellfish - Allergy - Severe

Surgery

Incision site expected

Site Marked

Risk of > 500ml Blood loss (7ml/kg in children)

Anaesthesia

Anaesthesia Safety Check Completed

Pulse Oximeter Required?

Cancel

Confirm

ECG (bpm)

66

Pulse (bpm)

St Seg

0.66

Entropy

30

Temp (°C)

37.3

Temp2 (°C)

35.3

Resp (bpm)

96

SpO2 (%)

100

EtCO2 (mmHg)

47.0

CVP (mmHg)

16.1

NIBP (mmHg)

114 / 79

ART (mmHg)

118 / 86

ABP (mmHg)

PA (mmHg)

SVV (%)

CI

NMT (%)

Iso Insp (%)

3.4

Iso Exp (%)

2.1

MAC (%)

1.20

O2 Insp (%)

33.0

N2O Insp (%)

67.0

Anaesthetic Reversal

Anaesthetic Reversal allows clinicians to enter agents used to reverse the effect of anaesthesia. Once this button is tapped, it redirects the user to the Associated

Drug screen with Preference set to Reversal, displaying the configured reversal agents. A user can then click on "Confirm and Add" to each reversal item.

11:55:49

Operating Theatre 1

Patient ID

12345678JG (MTI)

John Greener

175cm

60kg

57y 5m

Primary Clinician:

Dr Charlotte Barker

11:55:49

Associated Drugs

Clinician

Dr Charlotte Barker

Preference Set

Reversal

Category

Adult

Medication Name	Route	Dose/Kg	Dose	Administer
Glycopyrrolate (mg)	IV	0.01 mg	0.4 mg	Confirm and Add
Neostigmine (mg)	IV	0.04 mg	2.5 mg	Confirm and Add

Medications

Infusions

Fluids In

Fluids Out

Timed Items

Done

ECG (bpm)

66

Pulse (bpm)

St Seg

0.93

Entropy

32

Temp (°C)

36.7

Temp2 (°C)

34.7

Resp (bpm)

100

SpO2 (%)

100

EtCO2 (mmHg)

50.8

CVP (mmHg)

13.6

NIBP (mmHg)

116 / 75

ART (mmHg)

123 / 83

ABP (mmHg)

PA (mmHg)

SVV (%)

CI

NMT (%)

Iso Insp (%)

3.4

Iso Exp (%)

2.0

MAC (%)

1.20

O2 Insp (%)

33.0

N2O Insp (%)

67.0

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Edit Case

The Edit Case function allows the clinician to edit any details of the Anaesthesia (*IntraOp*) report after the case has been completed.

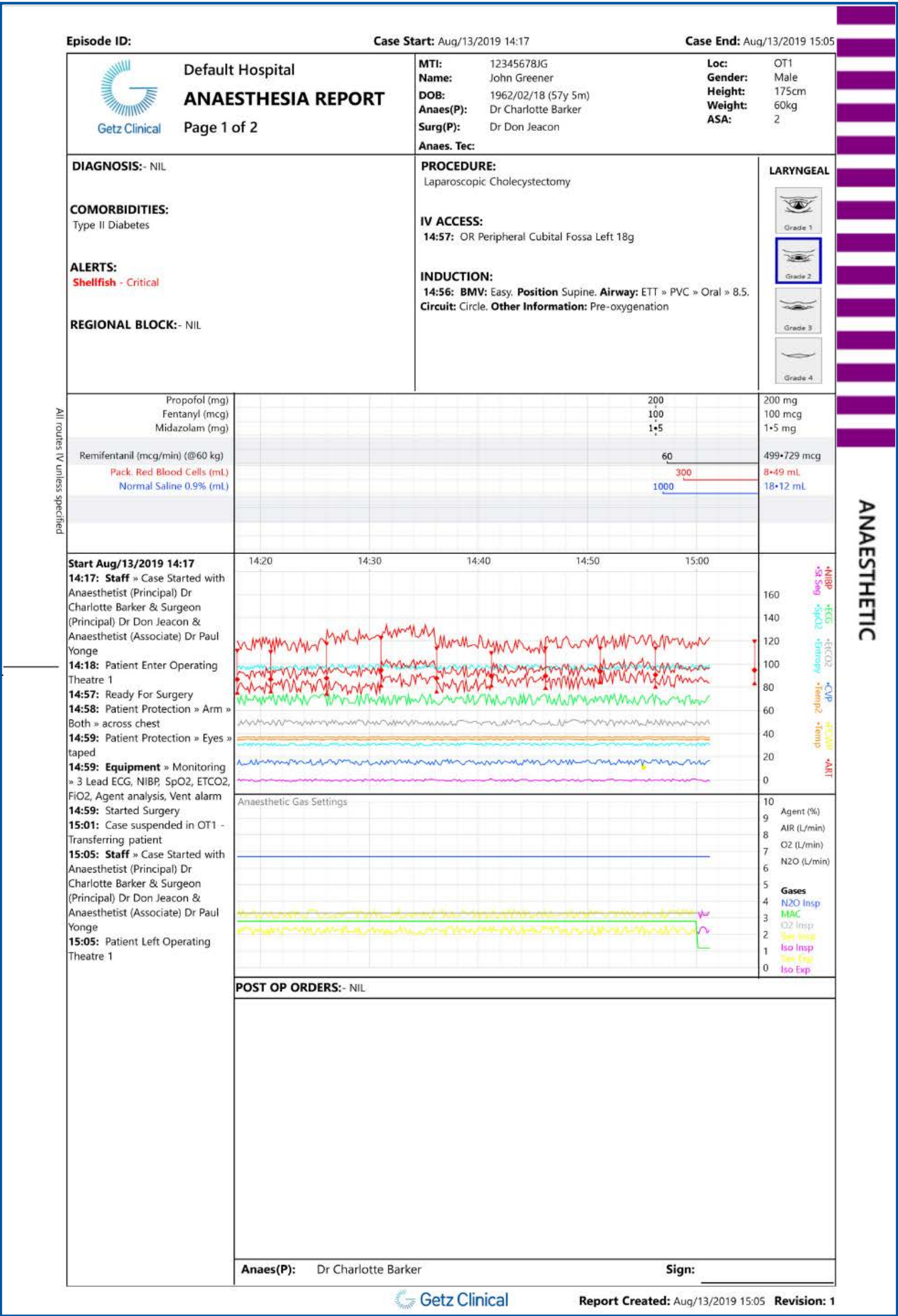
A yellow banner across the top of the screen indicates that the case has been opened in edit mode, and is not a live case.



Anaesthesia Report

A comprehensive anaesthesia report is generated at the end of every case. The report can be previewed at any time during a case to check that essential aspects have been documented.

When a case is closed the report is automatically saved in the patient's electronic medical record (EMR). The report can also be printed and included in the patient's notes.



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for every hospital

Getz Clinical subscription costs typical less than **1%**
of typical theatre operating costs



Getz Clinical

Getz Clinical is a world leader in perioperative information management systems.

Our solutions, implemented through our GCC suite of software modules, have been deployed in over 50 hospitals and medical centres across Asia, Europe, Africa, Australia and the Pacific.

Major customers include Singapore General Hospital, the University Hospitals of Leicester Trust in the United Kingdom and the Chris Hani Baragwanath Hospital in South Africa. In Australia our solutions are used by Lyell McEwin Hospital and Queensland Health.

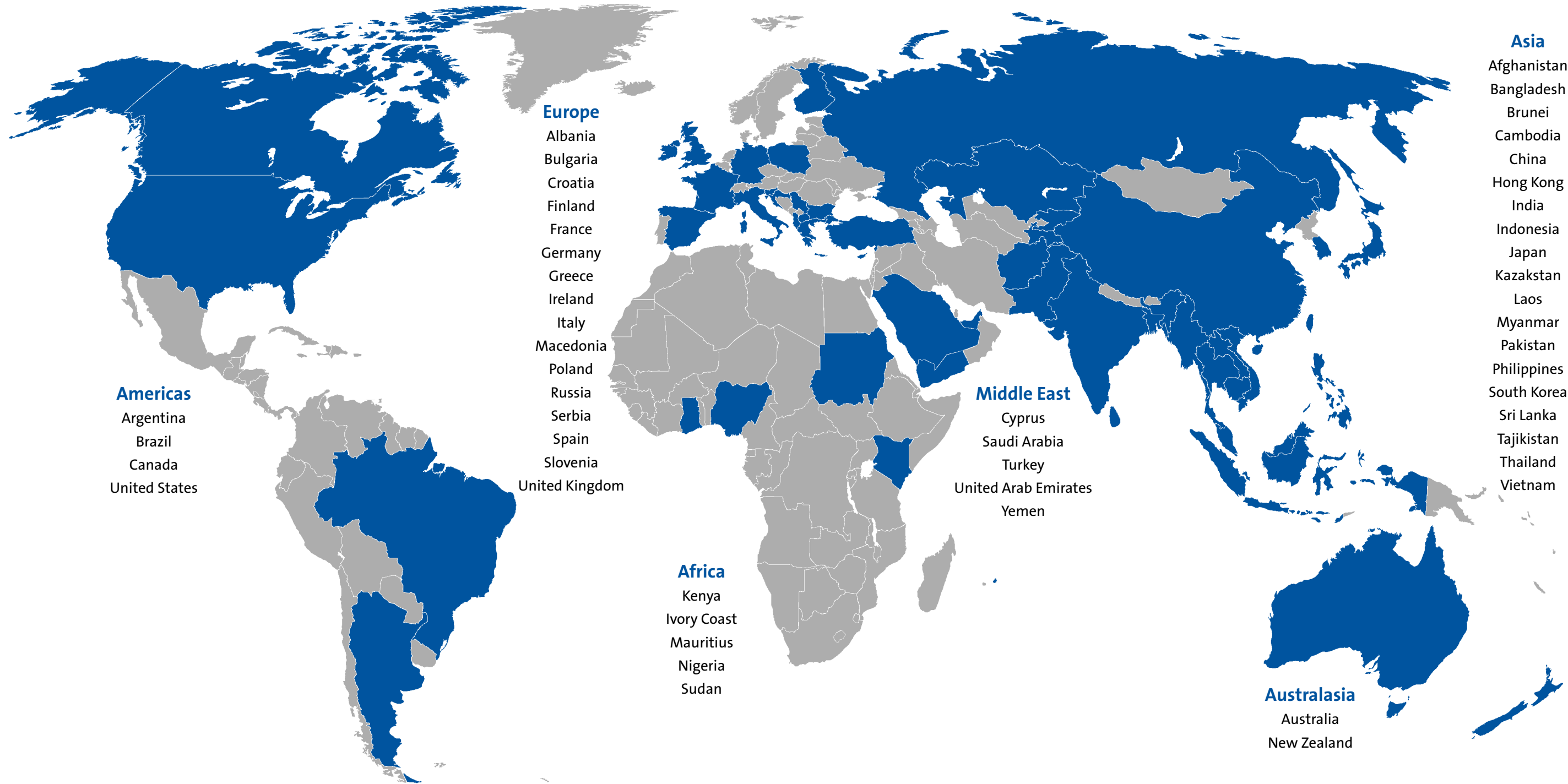
The Queensland Health project, covering 44 hospitals, remains the largest hospital network of its kind in the world.

Getz Clinical has sales and support teams operating out of seven offices in Australia, Singapore, the United Kingdom and the Philippines.

Our team of highly skilled personnel with extensive experience in providing eHealth solutions includes developers, integration specialists, project managers, clinical experts, business analysts, service delivery managers, sales managers and account managers.

Our head office is in Singapore and our development centre is located in Adelaide in South Australia.

Getz Clinical is a subsidiary of the Getz Group of companies. The Getz Group, founded in 1852, is a strategic investment business. Our products and services are delivered by 12,000 employees in 50 countries, with an annual turnover exceeding US\$1.27 billion.



A member of the Getz Group
The Getz Group is a diversified business focusing on healthcare, chemicals, distribution, retailing and hotels.

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