



# Capture - Connect - Decide

**Graham Bird**

Head of ECR, RDT and Indirect Channel Sales

Philips UK Ltd





# CAPTURE CONNECT DECIDE

**Graham Bird**

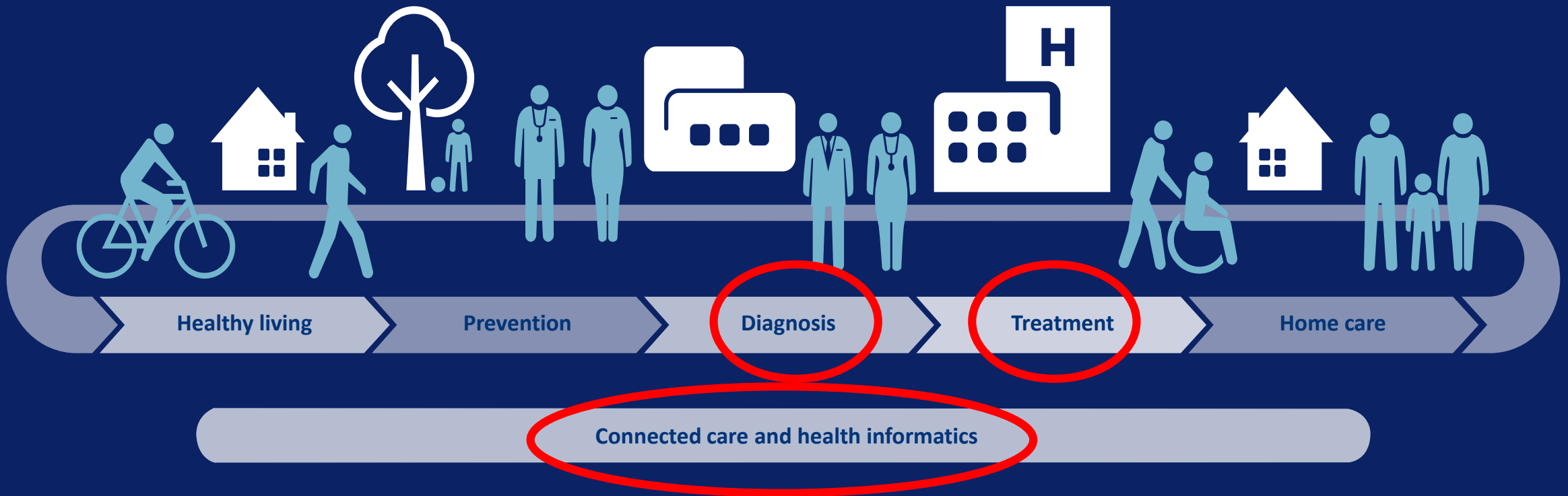
Head of In-direct channels, ECR and RDT

Biomed Conf. Nov 2019



# Ready to take on the healthcare challenge

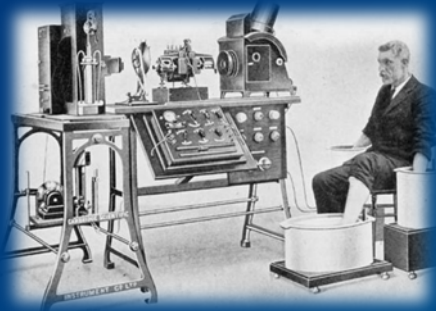
**At Philips, we take a holistic view of people's health journeys,** starting with healthy living and prevention, precision diagnosis and personalized treatment, through to care in the home – where the cycle to healthy living begins again.



# Question ?

“Can Telemedicine / Telehealth Informatics help improve patient outcomes”

# Telemedicine has been around for a long time..



FROM THIS  
1905



1930 -1950



1960-70



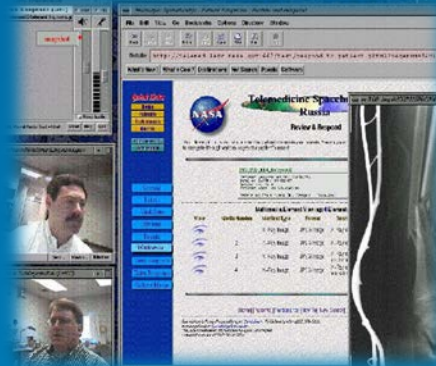
1980



1990



1995



1998



NOW

# Can telemedicine help improve outcomes

- We want Better and more Comprehensive data
- We want Reliable, Relevant and LIVE data
- Good relevant data aids better decision making.....
  - *Resource Management*
  - *Patient Assessment*
  - *Clinical Guidance and Advice*
  - *Critical decision making*
  - *Risk assessment and Governance*
  - *Clinical Audit and Clinical Review*
  - *Research*



# Challenging Pre-Hospital / Hospital environments

In the UK



**21% INCREASE  
in 999 / 112  
CALLS**



**4% INCREASE  
in TRANSPORTS**

**INCREASING  
DEMANDS**



**STATIC or DECREASING  
RESOURCES and  
BUDGETS**

**ABSENTEEISM**



**SKILLED STAFFING and  
HIGH AGENCY SPEND**

<sup>1</sup>AACE Annual Report 2016-2017, p.5-7 <https://www.aace.org.uk/wp-content/uploads/2017/11/AACE-A1-ANNUAL-REPORT-2016-2017-V8F.pdf>

<sup>2</sup>Data from England's 10 regional ambulance services <https://www.bpa.org.uk/press/2018/apr/02/ambulance-handover-delays-at-ae-putting-999-response-at-risk>

<sup>3</sup>NHS Staff Survey Results – 2017/ Health & Wellbeing <https://www.nhs.uk/staffsurvey/2017/Health-Wellbeing/2017-Results/>

# There are opportunities.....

In the UK



**50%**  
**999 / 112 CALLS**  
**REQUIRE AN AMBULANCE**

*Could this be reduced by up  
skilling responders with smart  
monitors with live Data  
Communications ?*



**NOT SURE WHETHER TO**  
**TRANSPORT THE PATIENT ?**

*Supporting remote medic's with  
clinical support and confirmed  
decisions using live data, could  
aid therapy, patient outcomes  
and resources ?*



**1 in 5 A&E**  
**VISITS ARE**  
**UNNECESSARY AND**  
**COSTS UK NHS ~£290M**  
**YEAR**

*Having better data aids better  
decisions, allocates  
resources, channels correct  
therapy and savings ?*

<sup>1</sup>AACE Annual Report 2016-2017, p.5-7 <https://www.aace.org.uk/wp-content/uploads/2017/01/AACE-ANNUAL-REPORT-2016-2017-V06.pdf>

<sup>2</sup>Data from England's 10 regional ambulance services <https://www.thebritishambulance.com/press/2018/apr/02/ambulance-handover-delays-at-ae-putting-999-response-at-risk>

<sup>3</sup>NHS Staff Survey Results – 2017/ Health & Wellbeing <https://www.nhs.uk/staffsurvey.com/Pages/1064/Latest-Results/2017-Results/>



# CAPTURE CONNECT DECIDE



TEMPUS



Philips IntelliSpace Corsium

# Tempus ALS: A solution-based approach to monitoring/defibrillation/communication

## Philips Tempus Pro Advanced Monitoring



- Half the size and weight of other monitor/defibrillators
- Built on a powerful and flexible platform
- Reliable and Simple data capture
- Communications with ePCR
- Fully featured

## Philips Tempus LS ALS Defibrillator / Monitor / Pacer



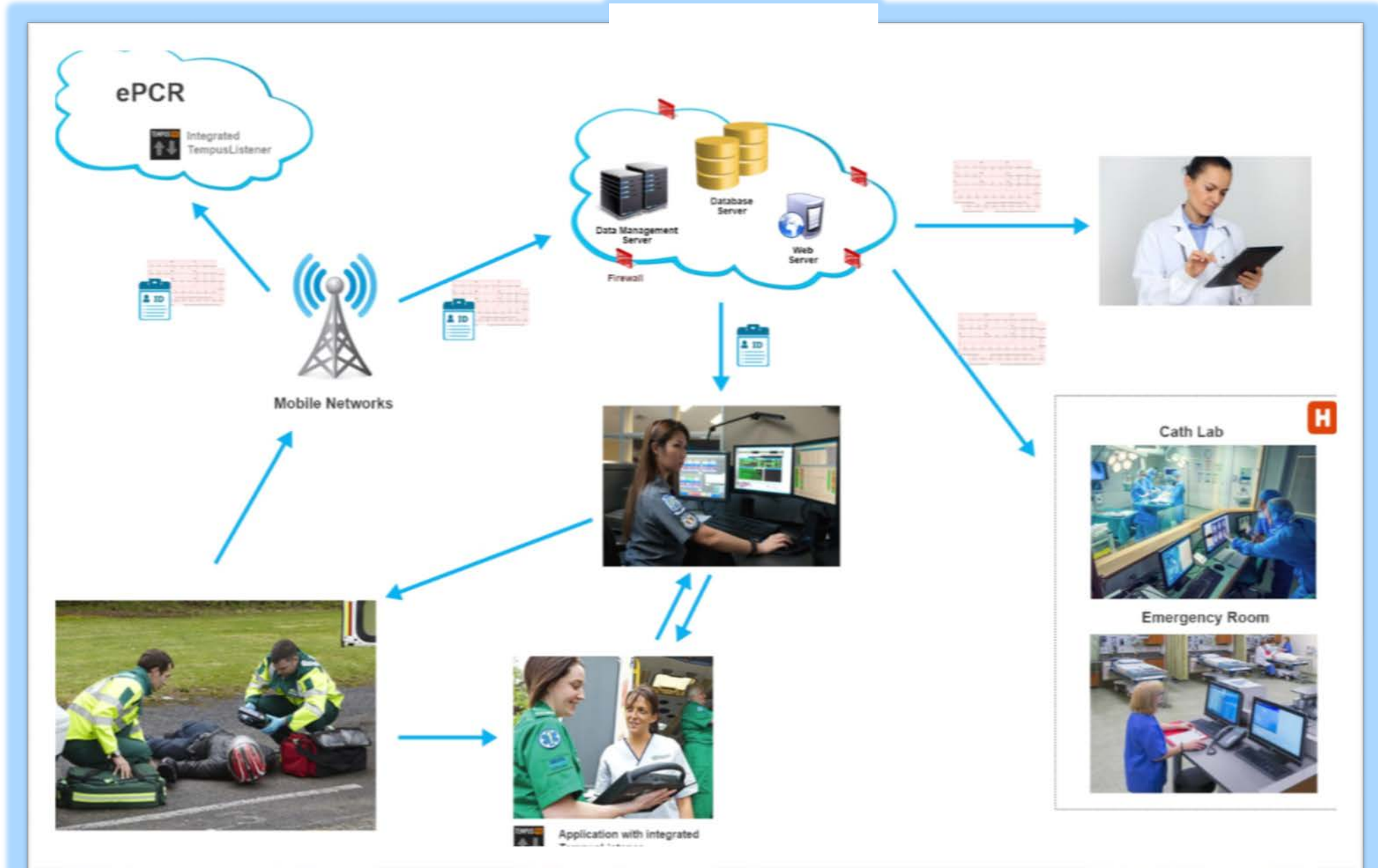
- Philips trusted Bi-Phasic Truncated Exponential (BTE) waveform
- AED & Manual mode, Sync, Pacing, CPR feedback and Monitoring

## Philips Intellispace Corsium LIVE data streaming software



- Real-time data sharing
- Clinical decision making and review at scene
- Data viewed on any device
- Review and Audit db
- Security

# A typical telemedicine network:



Live dashboard

Filter OFF

# 601917

ALS13

Bike Team

King's College

Adult

NEWS 3

# 602044

ALS14

West Car

Royal Berkshire

Adult

NEWS 3

# 601030

DE ALS 1

South Helicopter

Royal Berkshire

Adult

NEWS 3

# 999003

HEMS-003

Bike Team

Frimley Park

Adult

NEWS 5

# 999002

HEMS-002

Bike Team

Frimley Park

Adult

NEWS 8

# 999001

HEMS-001

Bike Team

Frimley Park

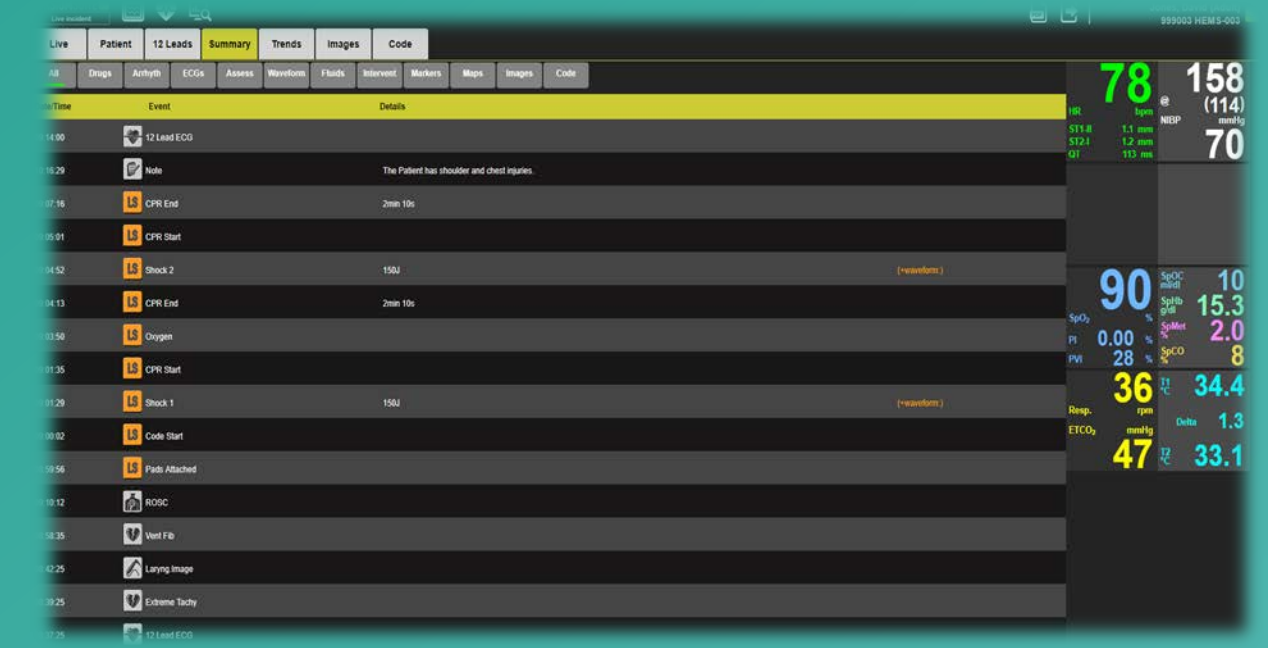
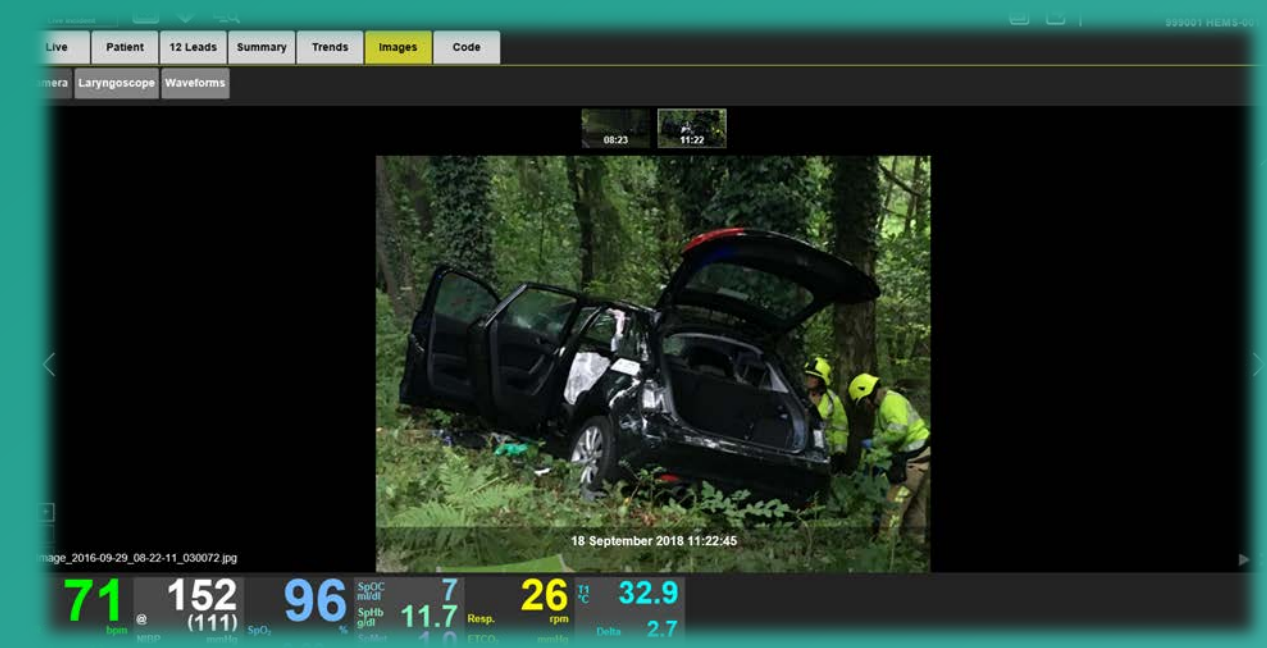
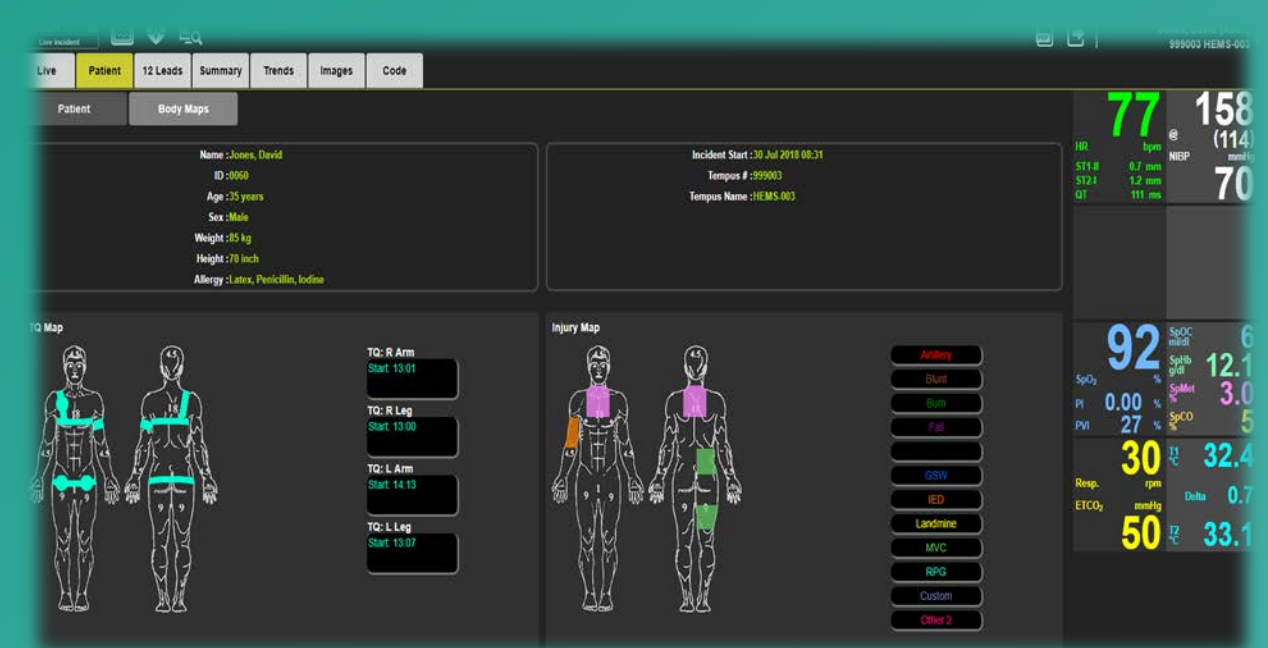
Adult

NEWS 5

ECG dashboard


Device Group: All | Support Centre: All | Review Status: All

ECG Time	ETA	Review Status	Patient	Support Centre	Device Group	Device
22 Sep 09:45	✓	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: Please leave patient at home and refer to own doctor ↳ Received and understood by ALS13 (601917) at 09:47	Adult (U)	King's College	Bike Team	601917 ALS13
22 Sep 08:38	✓ 08:54	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: fhyyfy ↳ Received and understood by ALS14 (602044) at 08:38	Adult (U)	Royal Berkshire	West Car	602044 ALS14
21 Sep 14:47	✓ 15:05	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: Please leave patient at home and make them a cup of tea ↳ Received and declined by DE ALS 1 (601030) at 14:50	25 years (M)	Royal Berkshire	South Helicopter	601030 DE ALS 1
21 Sep 13:50	✓ 14:02	Diagnosis: STEMI Instruction: Transport patient to the hospital of your choice Comments: ert ↳ Received and understood by DE ALS 1 (601030) at 13:52			Frimley Park	
21 Sep 13:38	✓ 13:56	Diagnosis: STEMI Instruction: Transport to Frimley Park Comments: urgent ↳ Received and understood by DE ALS 1 (601030) at 13:41			King's College	
21 Sep 13:32	✓	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: frgrgghr ↳ Received and understood by DE ALS 1 (601030) at 13:35			King's College	
21 Sep 11:31	✓	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: egfkdyhkejhfej			King's College	
21 Sep 14:28	✓ 14:40	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: hctguzryuf ↳ Received and understood by ALS13 (601917) at 14:30	35 years (M)	Frimley Park	Bike Team	601917 ALS13
21 Sep 13:17	✓ 13:33	Diagnosis: STEMI Instruction: Transport to Frimley Park ↳ Received and understood by ALS13 (601917) at 13:18			Queen Elizabeth	
21 Sep 12:58	✓	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: nsr ↳ Received and declined by ALS13 (601917) at 13:00			Queen Elizabeth	
21 Sep 10:58	✓ 11:15	Diagnosis: STEMI Instruction: Transport to Frimley Park Comments: sghdwuqywdyuw8e ↳ Received and understood by ALS14 (602044) at 11:09	Adult (U)	Royal Berkshire	West Car	602044 ALS14
21 Sep 08:15	✓	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: gjufyhrgehg ↳ Received and understood by ALS14 (602044) at 08:15	Adult (U)	Royal Berkshire	West Car	602044 ALS14
20 Sep 14:44	✓ 15:00	Diagnosis: Heart Block 1 Instruction: Transport patient to the hospital of your choice Comments: yty ↳ Received and understood by DE ALS 1 (601030) at 14:45	30 years (M)	King's College	South Helicopter	601030 DE ALS 1
20 Sep 14:23	✓	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: Go and have a coffee ↳ Received and understood by ALS13 (601917) at 14:25	Adult (O)	King's College	Bike Team	601917 ALS13
20 Sep 13:20	✓	Diagnosis: NSR Instruction: Don't convey patient to the hospital Comments: Please leave patient at home and make them a cup of tea ↳ Received and understood by ALS13 (601917) at 13:23			Queen Elizabeth	
20 Sep 11:57	✓ 12:08	Diagnosis: Heart Block 2 Instruction: Transport patient to the hospital of your choice Comments: rhytyh ↳ Received and understood by DE ALS 1 (601030) at 11:58	25 years (M)	King's College	South Helicopter	601030 DE ALS 1




Live Patient 12 Leads Summary Trends Images Code

Camera Laryngoscope Waveforms



08:42

Live Patient 12 Leads Summary Trends Images Code



18 September

**71** @ **152** **96** **8**  
 bpm NIBP (111) SpO<sub>2</sub> SpOC  
 mmHg PI 0.00 % SpHb  
 SpMet  
 11.5  
 8  
 20  
 33  
 rpm  
 20  
 33  
 °C  
 Delta  
 33  
 mmHg  
 36  
 33  
 mmHg  
 33  
 mmHg

Live Patient 12 Leads Summary Trends Images Code

Review Recordings Layout Averaged Filter Gain Speed

ECG recorded: 2017-04-07 09:14:27 25mm/s, 10mm/mV, Filters:0.05-40Hz:50



HR **82** bpm  
 ST1-II 0.5 mm  
 ST2-I 1.6 mm  
 QT 264 ms

SpO<sub>2</sub> **91** %  
 PI **0.00** %  
 PVI **28** %

Filters:0.05-40Hz;50Hz  
 low to scale

ECG viewer version: 1.0

Resp. **24** rpm  
 ETCO<sub>2</sub> **33** mmHg

Code Summary

Sep 2016	Event
15:14	LS Disconnected
14:00	12 lead ECG
12:01	Amiodarone
10:12	LS ROSC
07:58	LS Shock 3
07:43	LS Shock Advised

Vitals (5)

HR bpm

SpO<sub>2</sub> %

NIBP mmHg

Resp. rpm

CPR Status  
 CPR Timer  
**00:22**

Incident Timer  
**00:02:28**

Defib Status  
 Manual

**FASTER**

**45** **118**  
 Depth mm Rate / min

**33**  
 ETCO<sub>2</sub> mmHg

**150** J  
 Sync Off

**1**  
 00:06

**97** **15**  
 SpO<sub>2</sub> % SpOC ml/dl  
 SpHb g/dl **10.8**  
 SpMet % **1.9**  
 SpCO % **8**

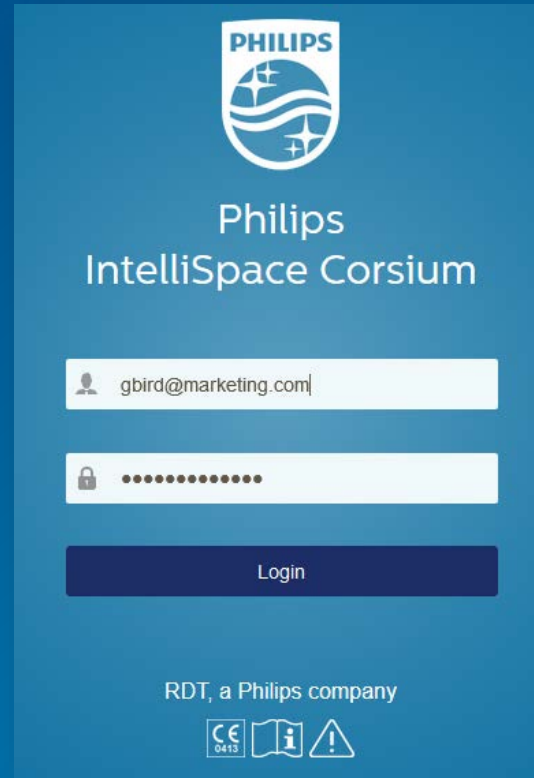
**39** **36.5**  
 T1 °C  
 Delta **0.7**

**41** **35.8**  
 T2 °C

**73** **154** **95** **7** **25** **30.4**  
 bpm @ NIBP (112) SpO<sub>2</sub> SpOC  
 mmHg PI 0.00 % SpHb  
 SpMet  
 10.1  
 2.0  
 7  
 25  
 30.4  
 rpm  
 33  
 mmHg  
 33  
 mmHg  
 33  
 mmHg



# LIVE DEMO



The image shows a login interface for Philips IntelliSpace Corsium. At the top is the Philips logo, which consists of a shield with a star and waves, and the word "PHILIPS" above it. Below the logo, the text "Philips IntelliSpace Corsium" is displayed. There are two input fields: the first contains the email address "gbird@marketing.com" and the second contains a password represented by ten dots. A dark blue "Login" button is positioned below the password field. At the bottom of the interface, it says "RDT, a Philips company" and includes three small icons: a CE mark with "0413", an information icon, and a warning icon.

[www.philips.com](http://www.philips.com)

<https://www.corsiumsuite.co/marketing>

# Future Service Considerations

Systems like this still require service maintenance

1. Industry driving Data led solutions both Pre-Hospital and Hospital
2. Network systems are getting more complex
3. Consider:
  - *Implementation, Training and PM Service Planning*
  - *Network structure and integrated products within*
  - *Product performance validation, Service techniques, Data security and Compliance*
  - **KEY Point - Important to work with the manufacturer !**



# In Summary

Capturing and Sending LIVE patient data from scene to the Ambulance Control (EOC) or Hospital teams

## Can aid;

*# managing resources*

*# making critical decisions / observations*

*# alert teams to drive effective and shorten patient hand-overs*

*# deliver the right therapy / service*

*# aid in Governance, Audit and Clinical review*

*# device remote Tracking, Svc and Asset Mgt.*

***And can potentially, lead to better patient outcomes !***

