



LiDCO Group Plc

2010 Interim Results Presentation

26th October 2010

“Our strategy for growth remains clearly focused on three key areas: products, market access and evidence and awareness”

Theresa Wallis

Chairman’s Statement 2009/10

- Med-tech company quoted on AIM
- Minimally invasive hemodynamic monitoring products
- Standard of care moving from invasive catheters to less invasive technologies
- US\$1.2bn market potential in surgery and intensive care
- 2008 launch of LiDCO*rapid* opened up the US\$800m surgery opportunity
- Increasing body of evidence showing improving outcomes
- Important for widespread technology adoption are:
 - ease of use, accuracy and broadest applicability
 - potential for parameter convergence & connectivity

- Total revenue increased by 7% to £2.66m (2009: £2.49m)
- Revenues ex USA in Europe, UK and ROW increase by 33% to £1.78m
- Gross profit up 19% to £1.80m; gross margin 68% (2009: 61%)
- Average product margins at 79% improved slightly (2009: 78%)
- Significantly reduced operating loss to £0.58m (2009: £1.19m)
- Lowest ever six months cash outflow before financing at £113,000 (2009: £743,000 outflow)
- Cash balance of £1.73m
- Loss per share 0.35p (2009: 0.74p)

- The installed monitor base increased by 8% in the period to 2,250 units
- 175 monitors sold or placed during the period (2009: 280 – included a large stocking order)
- Studies published supporting reduced mortality in shock patients and reduced length of stay and complications in surgery patients
- LiDCO's US partner Covidien now has stronger sales team, surgery franchise and combination technology offering
- LiDCO monitors now have connectivity to both Philips and GE's Centricity Clinical Information Systems*
- LiDCO*rapid* v1.03 and blood pressure module launched in September *

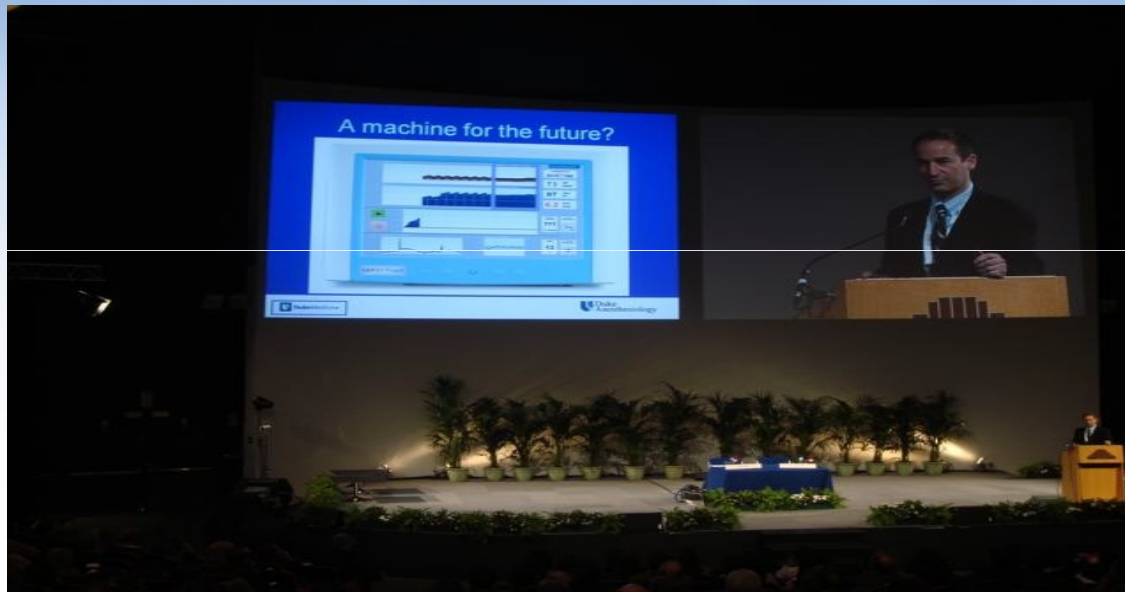
*Post period-end

Slide 5

Products & Market

- **LiDCO*plus* version 4.0 software**
 - ICU market focus - highly evolved product & software
 - Calibration, oxygen delivery targeting for goal-directed therapy
 - LiDCO business case (GDT) - saving £4,800 per patient
- **LiDCO*rapid***
 - Anesthesia product for high risk surgery
 - Uses validated PulseCO software algorithm
 - Launched April 2008 – software now updated to v.1.03
 - High volume – expands territories & distribution
 - Combined LiDCO*rapid* / BIS display project started
- **Connectivity to hospital information systems**
 - Via VueLink to Philips
 - GE via LiDCO specific drivers
 - Somanetics – Vital Sync driver in progress

Addresses \$800m disposable market opportunity
'A machine for the future'

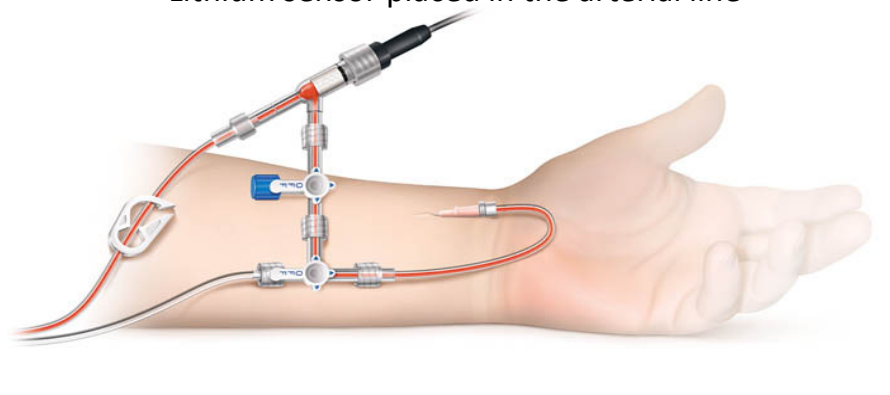


"Conclusions: A large high-risk surgical population accounts for 12.5% of all surgical procedures but more than 80% of deaths. Despite high mortality rates, fewer than 15% of these patients are admitted to the ICU."

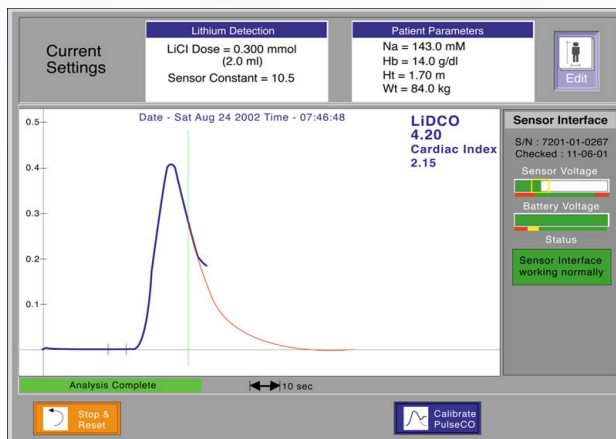
Dr Scot Brudney, Duke University, USA

Addresses \$400m disposable market opportunity

Lithium sensor placed in the arterial line



Central/peripheral LiCl injection



Lithium dilution curve on LiDCOplus monitor screen

CONDENSED CONSOLIDATED COMPREHENSIVE INCOME STATEMENT
For the six months ended 31 July 2010

	Note	Six Months ended 31 July 2010 £'000	Six Months ended 31 July 2009 £'000	Year ended 31 January 2010 £'000
Revenue	3	2,662	2,494	5,367
Cost of sales		(864)	(983)	(2,074)
Gross profit		1,798	1,511	3,293
Administrative expenses		(2,379)	(2,703)	(4,832)
Loss from operations		(581)	(1,192)	(1,539)
Finance income		4	1	5
Finance expense		-	(8)	(11)
Loss before tax		(577)	(1,199)	(1,545)
Income Tax		(5)	56	118
Loss for the period and total comprehensive income attributable to equity holders of the parent		(582)	(1,143)	(1,427)
Loss per share (basic and diluted) (p)		(0.35p)	(0.74p)	(0.87p)

CONDENSED CONSOLIDATED CASH FLOW STATEMENT
For the six months ended 31 July 2010

	Six Months ended 31 July 2010 £'000	Six Months ended 31 July 2009 £'000	Year ended 31 January 2010 £'000
Loss before tax	(577)	(1,199)	(1,545)
Net finance (income) / costs	(4)	(7)	(6)
Depreciation and amortisation charges	308	327	672
Share based payments	74	42	46
Decrease/(increase) in inventories	43	(56)	(41)
Decrease/(increase) in receivables	366	(100)	37
Increase/(decrease) in payables	126	(342)	(302)
(Decrease)/increase in deferred income	(273)	825	577
Finance expense	-	(8)	(11)
Income tax credit received	115	56	118
Net cash inflow/(outflow) from operating activities	178	(448)	(443)
Cash flows from investing activities			
Purchase of property, plant & equipment	(70)	(74)	(132)
Purchase of intangible fixed assets	(225)	(222)	(474)
Interest received	4	1	5
Net cash used in investing activities	(291)	(295)	(601)
Net cash outflow before financing	(113)	(743)	(1,044)
Cash flows from financing activities			
Repayment of finance lease	(5)	(5)	(10)
Issue of ordinary share capital	-	3,022	3,021
Invoice discounting financing facility	-	(278)	(364)
Net cash generated from financing activities	(5)	2,739	2,647
Net (decrease)/increase in cash and cash equivalents	(118)	1,996	1,603
Opening cash and cash equivalents	1,846	243	243
Closing cash and cash equivalents	1,728	2,239	1,846

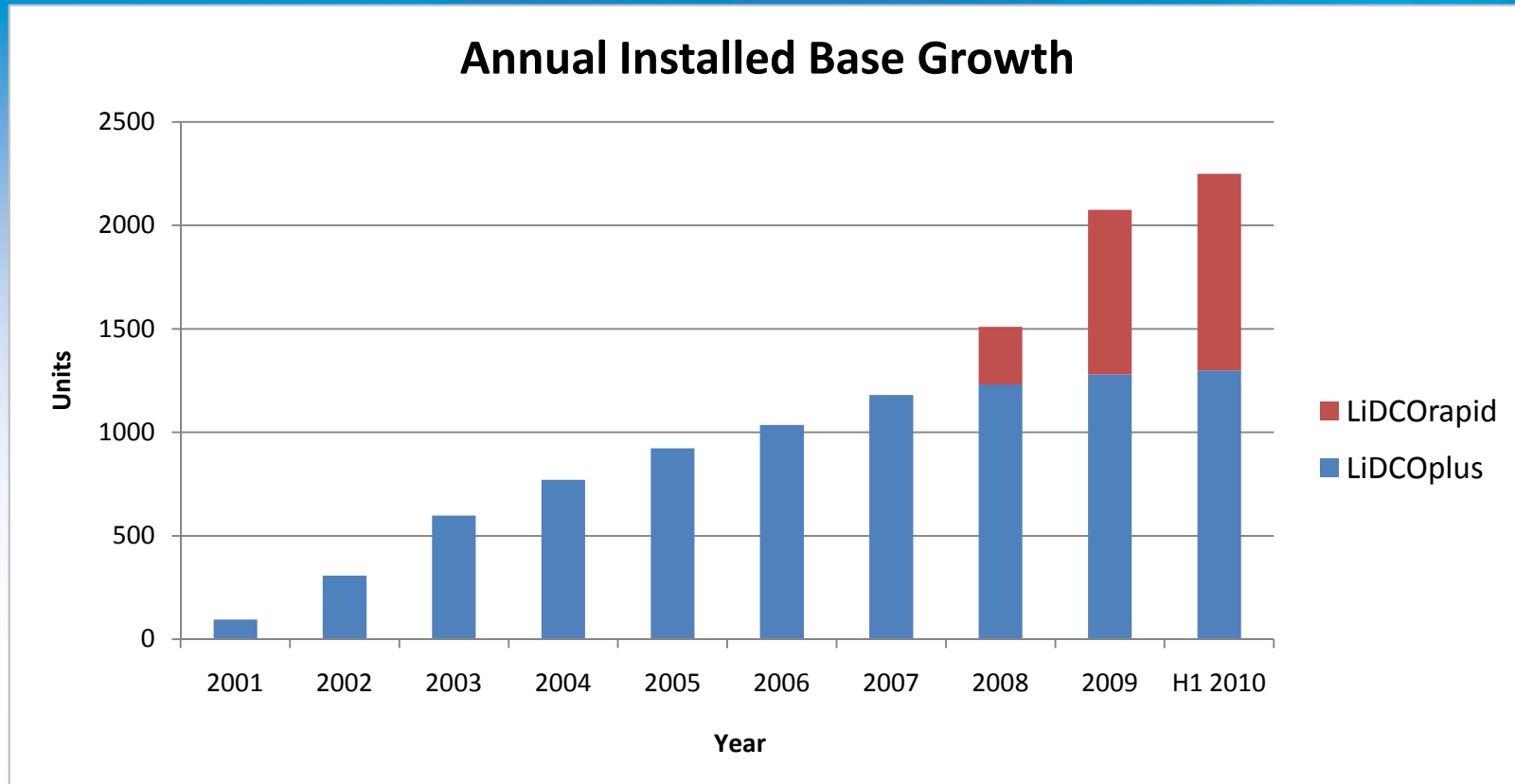
CONDENSED CONSOLIDATED BALANCE SHEET

At 31 July 2010

	31 July 2010 £'000	31 July 2009 £'000	31 January 2010 £'000
Non-current assets			
Property, plant and equipment	555	636	587
Intangible assets	783	750	764
	1,338	1,386	1,351
Current assets			
Inventory	1,051	1,109	1,094
Trade and other receivables	1,282	1,786	1,649
Current tax	-	120	120
Cash and cash equivalents	1,728	2,540	1,846
	4,061	5,555	4,709
Current liabilities			
Trade and other payables	(738)	(573)	(603)
Deferred income	(341)	(400)	(614)
Borrowings	-	(387)	(10)
	(1,079)	(1,360)	(1,227)
Net current assets	2,982	4,195	3,482
Total assets less current liabilities	4,320	5,581	4,833
Equity attributable to equity holders of the parent			
Share Capital	869	869	869
Share premium	25,393	25,393	25,393
Merger reserve	8,513	8,513	8,513
Retained earnings	(30,464)	(29,675)	(29,956)
Total equity	4,311	5,100	4,819
Non-current liabilities			
Finance lease liability	9	19	14
Deferred income	-	462	-
Total non-current liabilities	9	481	14
Total equity and non-current liabilities	4,320	5,581	4,833

Business Review - Summary Table

	6 months to 31 July 2010	6 months to 31 July 2009	Increase/ (decrease)	Increase/ (decrease) %
Sales by type (£'000)				
- Monitors	696	745	(49)	(7%)
- Sensors, Smartcards and other recurring revenue	1,632	1,627	5	0%
- Licence Fees and Other Income	334	122	212	174%
Total	2,662	2,494	168	7%
Sales by Units				
Monitors sold/placed	175	280	(105)	(38%)
Sensor, Smartcard and Fee per Use Sales	20,669	21,083	(414)	(2)%
Installed Base (period end)	2,250	1,790		



The installed base increased by **175** monitors

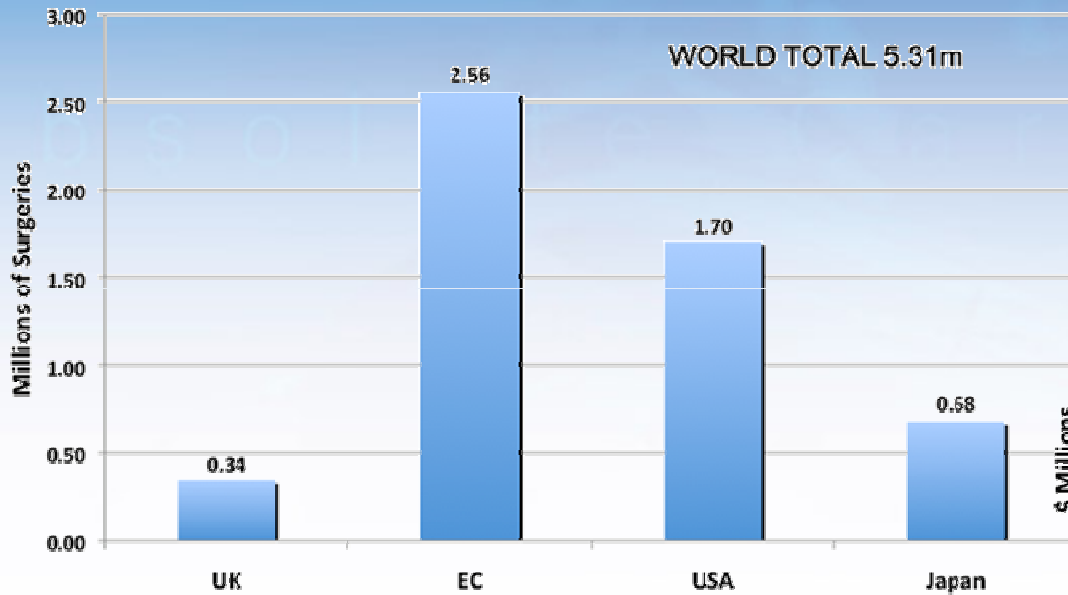
LiDCOrapid is 42% of the installed base

- Reducing surgical complications (invasive catheters , infections and organ failure)
 - in the USA there are an estimated ¹ 290,000 surgical site infections costing \$10bn / annum
- Use of LiDCO's technology on high-risk surgery patients can:
 - reduce complications (particularly infections) by more than one third
 - reduce hospital stay per patient by an average of 12 days & costs by £4,800 per patient
- Emerging evidence-based purchasing - pressure to reduce costs and improve efficiency
 - QIPP Quality Innovation Productivity and Prevention – changing practice
 - ERAS enhanced recovery after surgery

¹ The Centers for Disease Control & Prevention – quote from Wall street Journal 2nd Feb 2010

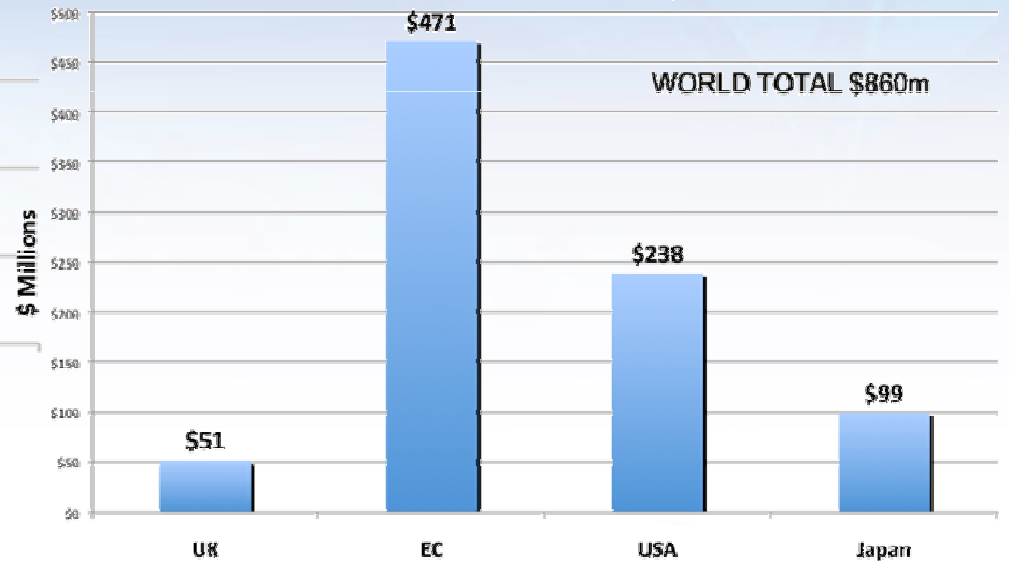
Major surgery market

Numbers of Major Surgery Procedures



TOTAL SURGERIES	AVGE PRICE	MARKET SIZE
5.31M	\$162	\$860M

Market Size - Major Surgery (\$m)



Reference: Pearse et al., Critical Care 2006, 10:R81
(doi:10.1186/cc4928)

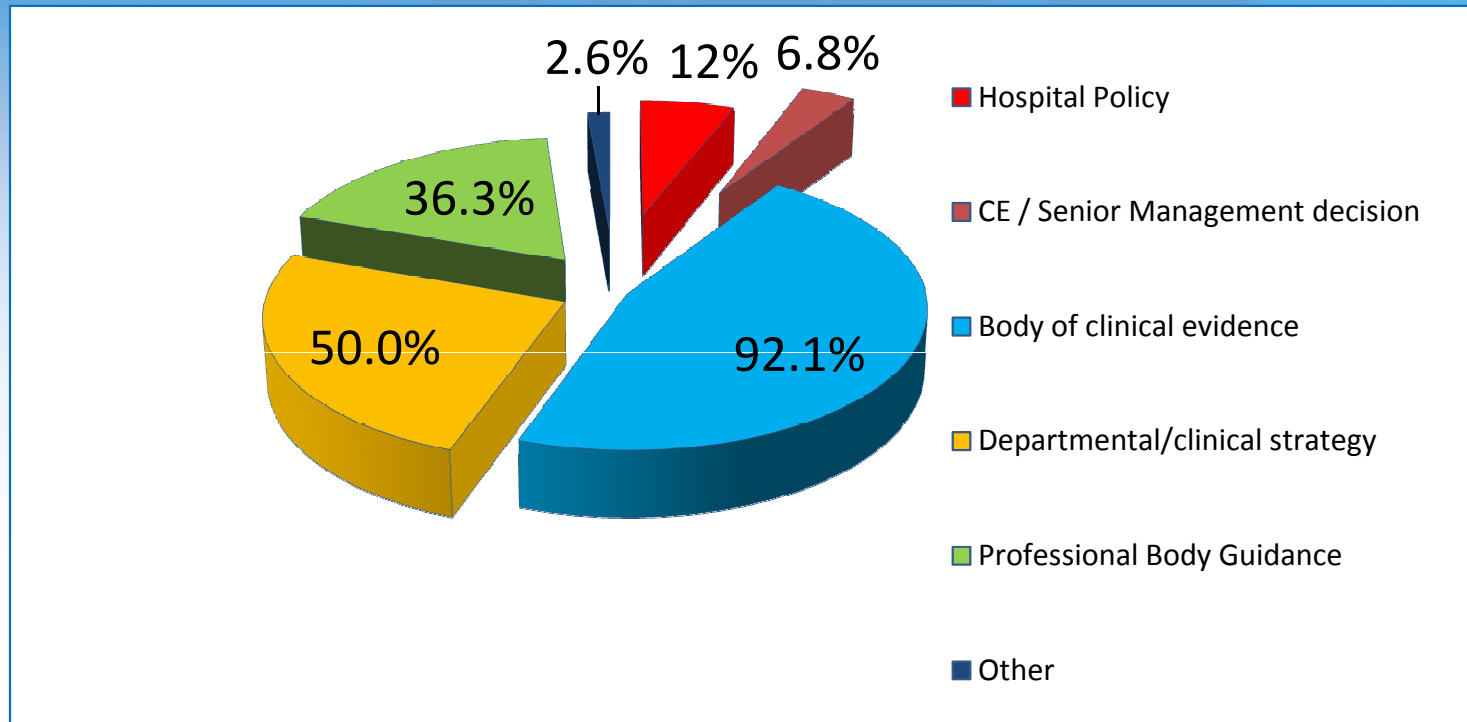
Intensive Care Society

Market analysis



- The majority of clinicians in the society are anesthetists
- LiDCO is a Gold member of the Intensive Care Society. As such we are allowed to survey its members for opinions on technology and changes in practice
- We asked them:
- What impact has the clinical evidence and discussions surrounding Enhanced Recovery after Surgery (ERAS) had on opinion and motivation to change?
- What are the requirements for a technology to be best suited for changes in practices?

What factors influence your decision to implement fluid optimisation/enhanced recovery?
(190 respondents from 198 participants)



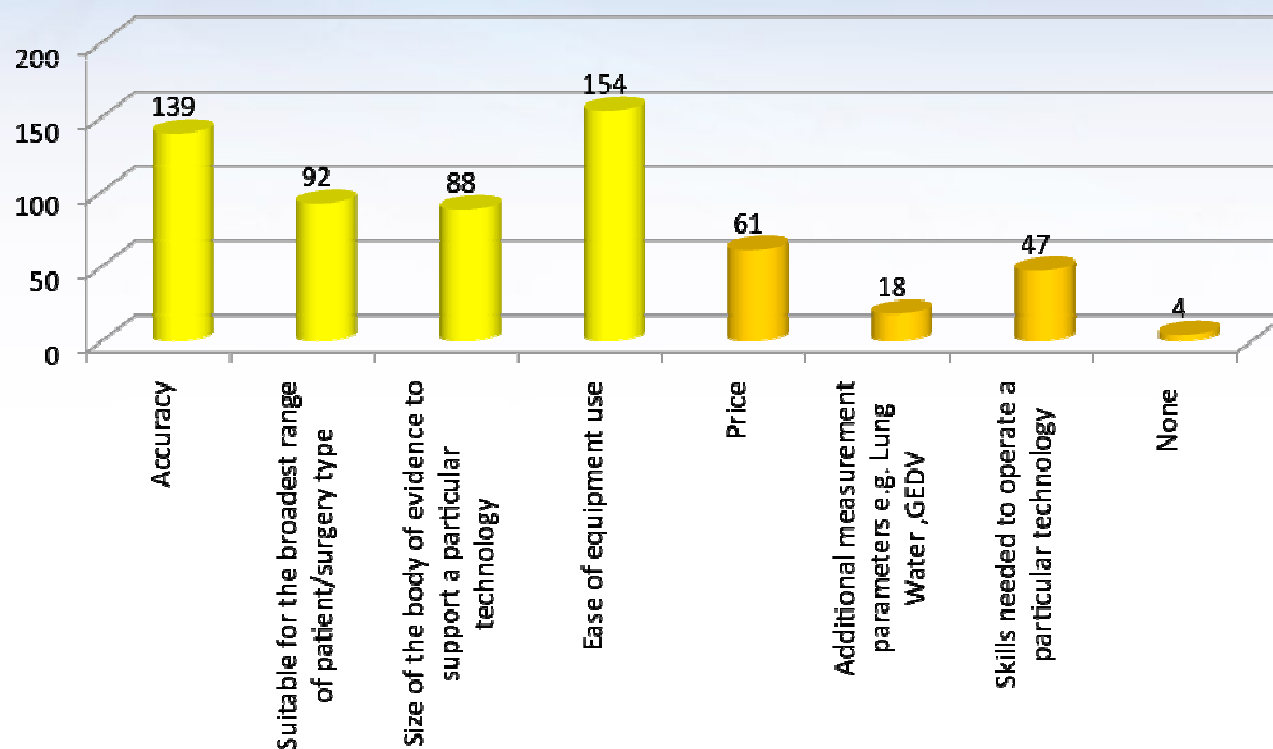
Top 3 Factors that influence medical practice

1. Body of clinical evidence
2. Department / clinical strategy
3. Professional body guidance

What are the most important aspects determining selection / use of cardiac output?
(197 responses from 198 Returns)

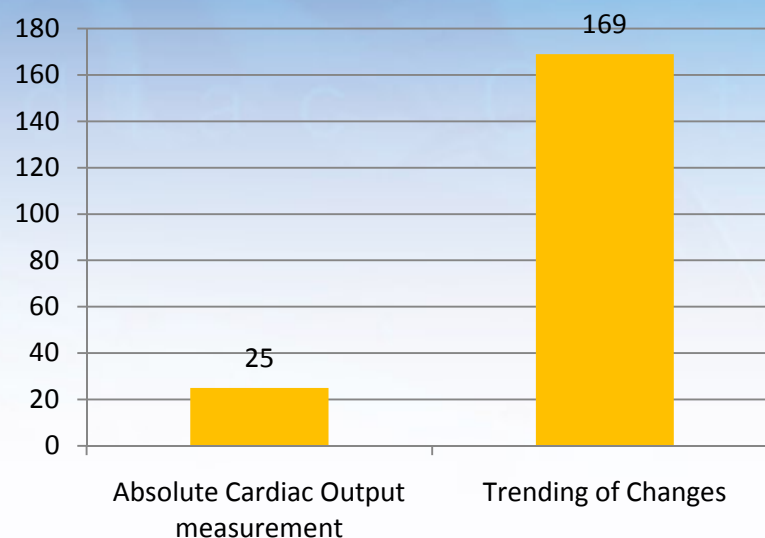
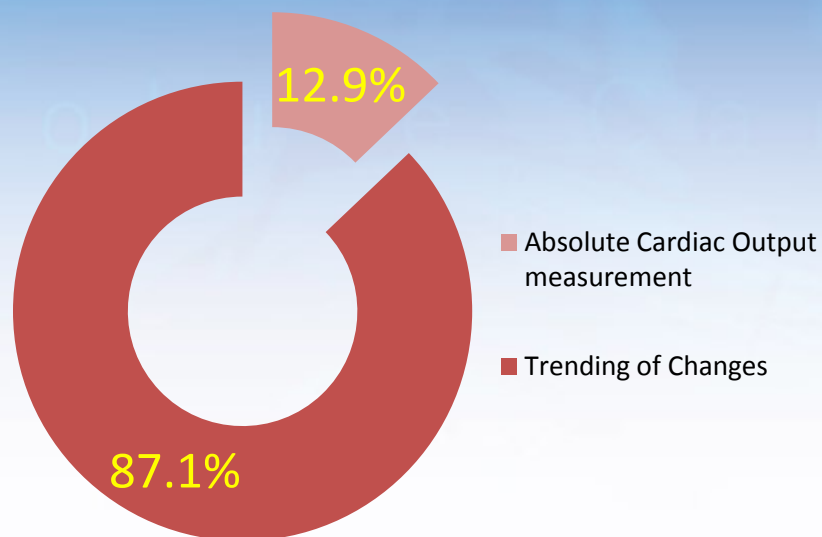
Top requirements for a cardiac output monitor

- 1.Ease of Use - 78%
- 2.Accuracy – 71%
- 3.Suitable for broadest application of use – 46%
- 4.Size of body of evidence – 45%



What is most Important to you: Absolute Cardiac Output measurement
or Trending of Changes?

(194 of 198 respondents answered the question)

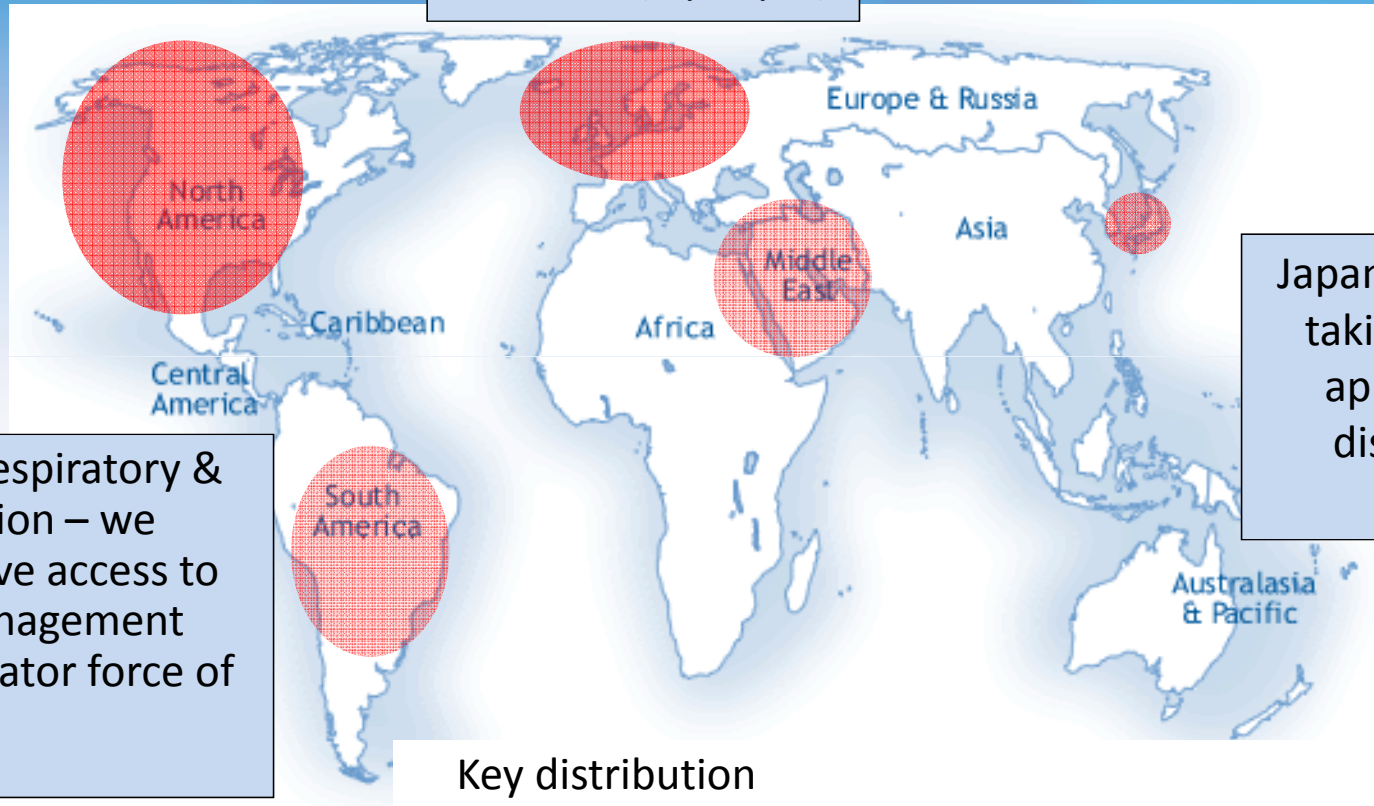


The ability to **trend data** was voted a more important feature than an absolute measurement of cardiac output

- ERAS is concept that is broadly understood and largely being adopted due to the overwhelming body of evidence that has and continues to be accumulated from use of a variety of cardiac output measuring technologies
- However in terms of the technology chosen the 2 most important features are:
 - **Ease of use (78%)**
 - **Accuracy of the cardiac output trending (71%)**
- These are design characteristics of the LiDCO*rapid* Monitor
- Our sales are growing by 34% in the UK – the majority of growth coming from LiDCO*rapid* use in high risk surgery

Market access:
a major challenge for all
companies involved

Direct sales/nurse educator team in the UK (9 people)

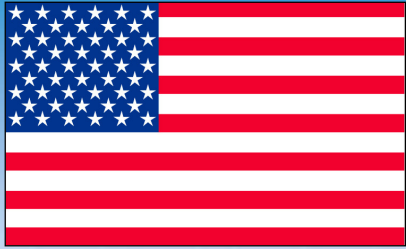


Japan discussions taking place to appoint new distribution partner

With Covidien Respiratory & Monitoring division – we progressively have access to a sales/sales management and clinical educator force of around 200 staff

Key distribution territories ●

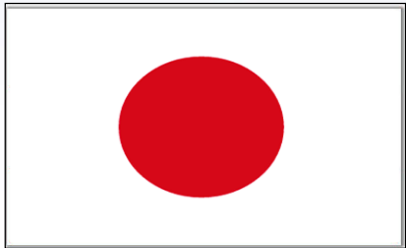
Increased interest from monitoring companies, regarding data communications and possible licensing of the software



Covidien (www.covidien.com)

A leading global healthcare products company with 2009 revenues of \$10.7 billion, 42,000 employees and sells in over 140 countries

- has **the biggest** hemodynamic monitoring medical product sales team in the US with reach into both the intensive care and surgery markets
- Currently sells into **over 80%** of operating rooms in major US hospitals
- Has complementary monitoring products – now own BIS & INVOS
- LiDCO developing “combined” monitor and connecting to Somanetics Vital Sync



Japan

BD (LiDCO distributor) sold its critical care business to Argon, a RoundTable Healthcare Company (www.roundtablehp.com), in October 2010

- In discussions with Argon and others to take over distribution licensing rights
- Japan is the second biggest country market for our products
- Registration file is complete
- Pressure waveform based monitoring is reimbursed in Japan @ \$420 per patient
- Current market is circa \$38m per annum for pressure waveform based cardiac output

- LiDCO's R&D efforts are focused on increasing customers' access to our minimally invasive hemodynamic monitoring – to broaden the number of applications
- And, to facilitate parameter convergence at the bedside and to provide data to hospital information systems

Main Projects

- Version 1.03 – LiDCO*rapid* launched Q3, 2010
 - Universal pressure waveform module
 - Language localisation
 - RS 232 data configuration
 - Connection to Somanetics Vital Sync in progress
- Version 2.0 LiDCO Monitor next generation
 - BiSpectral Index (BIS) display
 - Improved peri operative functionality and user interfaces



Vital Sync

Convergence required



Monitoring setup

LiDCOrapid

Aspect BIS

Somanetics Cerebral Oximeter



Strong cardiac presence

Covidien (NYSE: COV), a leading global provider of healthcare products, announced on July 28th 2010 that it had completed the acquisition of Somanetics Corporation for an aggregate consideration of approximately \$250 million

Somanetics sells the INVOS Cerebral/Somatic Oximeter which can detect poor brain oxygenation

The INVOS[®] System is routinely used and trusted in over 1,200 installs internationally, 700+ U.S. hospitals, 51% of the approximately 1,000 hospitals performing adult cardiac procedures in the United States and 80% of hospitals performing pediatric cardiac surgery

The INVOS System makes a meaningful, positive impact on patient outcome: studies have shown that the INVOS System can help to reduce:

- Major organ morbidity or mortality
- Stroke
- Post-op cognitive decline
- Respiratory failure/prolonged vent time
- Adverse surgical events & Coma



BIS & LiDCO as an example:

Haemodynamic changes during Anaesthetic Induction and its correlation with BIS



B Parashetharan¹, David Green¹, Tony O' Brien¹ ¹ Research Fellow King's College Hospital; ² Consultant Anaesthetist King's College Hospital; ³ CEO LiDCO Plc

Aim

Fall in mean arterial pressure (MAP) during anaesthetic induction is common and may result in profound hypotension, especially in high risk/elderly patients. Fall in MAP could be due to a reduction in cardiac output, (CO) or reduction in systemic vascular resistance (SVR) or a combination. Previous studies used a PA catheter and haemodynamic measurements were made intermittently. With the advent of minimally invasive monitors like the LiDCOrapid (LiDCO Plc, UK) haemodynamic measurements can be made continuously. The purpose of this study was to assess the mechanism of the haemodynamic changes during anaesthetic induction in high risk, elderly peripheral vascular surgery patients. The correlation of these haemodynamic changes with depth of anaesthesia using BIS (Covidien formerly Aspect Medical, USA) and preload responsiveness were also explored. Appropriate management of hypotension can then be made based on these findings.



Figure 1 LiDCOrapid Monitor



Figure 2 BIS V60 Monitor



Figure 3 Induction changes in SV, CO, SVR and BIS

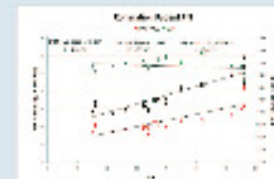


Figure 4 Correlation of SV/CO change with BIS

Methodology

- 48 elderly, high risk patients (36 male and 12 female) undergoing complex, major peripheral vascular surgery were studied.
- ASA grade 2-3 (60%, grade 3 or 4)
- Average age 78 yrs (64-92 yrs)
- Mean duration of surgery 4.1 hrs
- All patients had a radial arterial line inserted under LA prior to induction of anaesthesia
- Anaesthesia was induced with propofol and endotracheal TC1 (Mallin and Mallin, locally respectively)
- Sequence, monitored (Sage-Cp, Sage) when CO fell to significant reached (norm, propofol Cp 3 mg/ml) started, BIS level (down to fall to around 4)
- LMA Supreme (between Direct, UK) was used in all patients following CO-activation (0.1 mg/kg)
- Haemodynamic changes and depth of anaesthesia from the pre induction baseline to immediately post induction for up to 30 minutes (including intubation) were recorded with LiDCO (Figure 1) and BIS (Figure 2)

Results 1: Haemodynamics

- The average fall in MAP was -32% (s 13% SE)
- The average fall in SVR was -37% (s 18% SE)
- On average the CO fell (32% s 12% SE) correlated 82% to the average fall in MAP
- A representative patient induction profile is shown in Figure 3

Results 2: Fluid Responsiveness

- The average EVV (pre induction and during IPPV) was 17%
- 18 pts (35%) were not predicted to be fluid responsive (i.e. 10% SVV%)
- 26 pts (54%) were predicted to be fluid responsive (>10% SVV%)
- 13 pts had heart rate variation levels that precluded this evaluation
- CO and EVV fall in fluid responsive pts was significantly greater
- Fall in non fluid responsive subjects
- CO fell 36% vs. 34% (p 0.04) EVV fell 33% vs. 17%, p < 0.01 in fluid responsive/non fluid responsive

Correlation with BIS

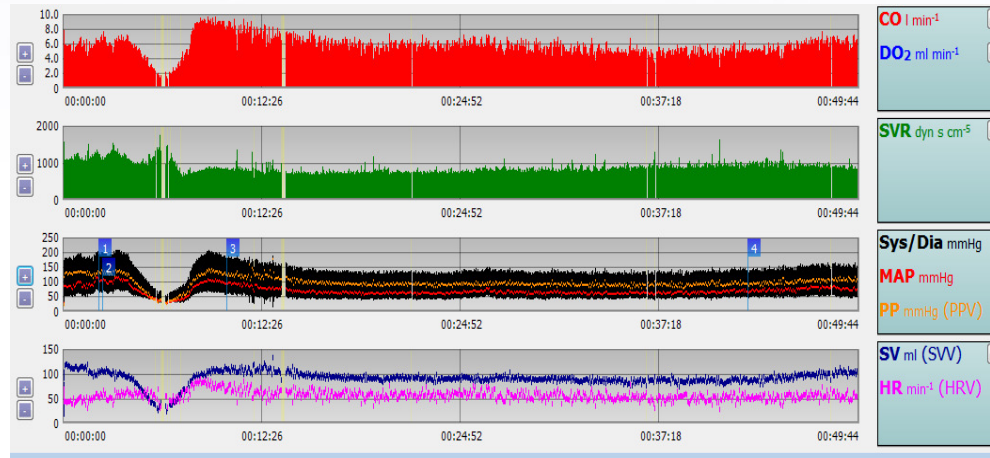
- The average fall in BIS was 82% (s 11% SE) from 91.2 to 26.3
- For each patient there was a clear linear relationship (Pearson correlation coefficient) between the responding haemodynamic parameter(s) and BIS absolute and % change
- For example in a representative patient (Figure 4) the correlation between BIS and SV was $y = 0.46x + 22.4$ (R² = 0.8)
- Across all patients the average fall in haemodynamic parameter per 1 unit change in BIS was:
CO -47 ml/min
SVR 0.76 mm Hg

Conclusions

- Fall in SVR across induction is usually driven by a reduction in CO, mostly due to a fall in SV and not by a fall in SVR
- Fall in SV is variable due to reduced contractility, preload responsiveness or a combination
- Since SVR changes are minimal, the choice of vasoconstrictor should be assessed carefully
- In most cases, increasing SVR through use of metaxalone would be an appropriate intervention
- The falls seen in CO and SV are significantly greater in the presence of preload responsiveness
- Changes in depth of anaesthesia, as measured by BIS, correlate well with changes in haemodynamics in individual patients
- Simultaneous use of LiDCO and BIS allows rational management of haemodynamic changes during induction

References: 1. Parashetharan B, Green D, O'Brien T. Haemodynamic changes during anaesthetic induction and its correlation with BIS. *Br J Anaesth* 2014; 113: 102-107. 2. Parashetharan B, Green D, O'Brien T. Haemodynamic changes during anaesthetic induction and its correlation with BIS. *Br J Anaesth* 2014; 113: 102-107.

Blood flow fall across induction and its correction using LiDCOrapid



Accumulating body of evidence

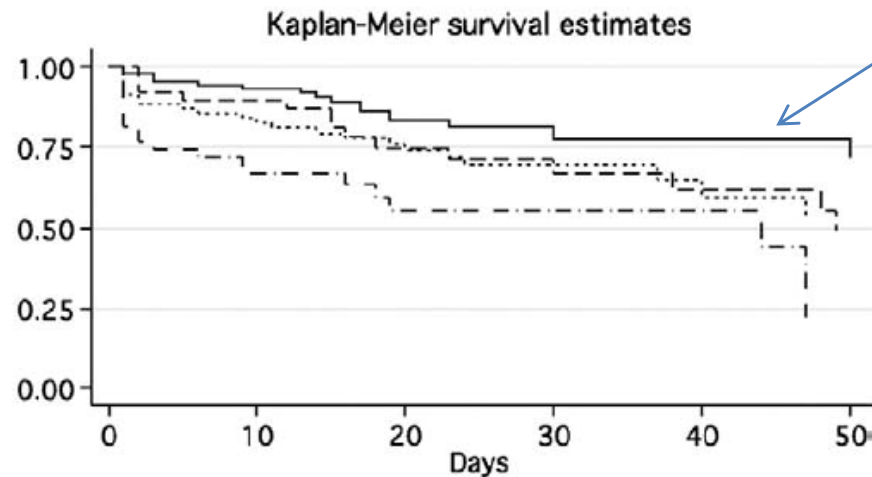
Reduced mortality with noninvasive hemodynamic monitoring of shock

J. Steven Hata MD, FCCP, MSc^{a,*}, Corey Stotts MD^b,
Constance Shelsky RN, BSN, CCRN^c, Emine O. Bayman PhD^d, Anita Frazier^e,
Jenny Wang PhD^f, Ellen J. Nickel PharmD^g

^aDivision of Critical Care in the Department of Anesthesia, University of Iowa Hospitals and Clinics, Iowa City, IA 52242, USA

^bAnesthesiology Institute, Cleveland Clinic, Cleveland, OH 44195, USA

LiDCO^{plus} monitored
shock patients



The PulseCO algorithm inside the LiDCO*plus* and LiDCO*rapid* has remained unchanged since launch in 2001 and its performance validated in the following patient populations:

- General surgery (Heller et al., 2002)
- General intensive care (Smith *et al.*, 2005)
- Post-operative care (Pittman *et al.*, 2005; Hamilton, 2002)
- Hyperdynamic liver transplantation (Costa *et al.*, 2007)
- Off-pump cardiac surgery (Missant and Wouters, 2007)
- On-pump cardiac surgery (Wilde *et al.*, 2007, Marquez et al., 2008)
- Heart failure (Kemps et al., 2009)
- Obstetrics (Dyer et al., 2008, Langesaeter et al., 2009)

Note: in addition to the above a number separate studies have been conducted to demonstrate improved outcomes

Over the last year clinicians have demonstrated use in the fields of:

- organ transplantation
- major and bariatric surgery
- obstetrics
- intensive care
- cardiology

Optimisation of intraoperative haemodynamics: early experience of its use in major head and neck surgery

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CLINICAL RESEARCH

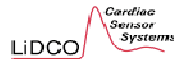
Stroke Volume Variation as a Guide to Fluid Administration in Morbidly Obese Patients Undergoing Laparoscopic Bariatric Surgery

Anil Kumar Jain · Amitabh Dutta

Hemodynamic Effects of Ephedrine, Phenylephrine, and the Coadministration of Phenylephrine with Oxytocin during Spinal Anesthesia for Elective Cesarean Delivery

Robert A. Dyer, F.C.A.(S.A.),* Anthony R. Reed, F.R.C.A.,† Dominique van Dyk, F.C.A.(S.A.),‡
Michelle J. Arcache, F.C.A.(S.A.),‡ Owen Hodges, F.C.A.(S.A.),‡ Carl J. Lombard, Ph.D.,§ Jaime Greenwood, F.R.C.A.,||
Michael F. James, Ph.D.#

29 April 2010



LIDCO Haemodynamic Workshop

Course Director: Dr Maurizio Cecconi
 Course Co-Director: Dr Phillip Newman

Faculty
 Dr Maurizio Cecconi, MD, MD(UK) Consultant in Anaesthesia and Intensive Care
 Deborah Dawson Consultant Nurse in Intensive Care
 Dr Phillip Newman, FRCA Consultant in Anaesthesia and Intensive Care
 Dr Andrew Rhodes, FRCP, FRCA Consultant in Anaesthesia and Intensive Care
 Vaughan Holm Clinical Simulation Specialist
 Andrew Sykes Clinical Simulation Engineer
 Nicholas Costing Head of Simulation

Programme

08.30 - 09.00 Registration and Welcome

Haemodynamic Optimisation

09.00 - 09.15	Cardiovascular Physiology	Dr M. Cecconi
09.15 - 09.30	Fluid Challenge and Stroke Volume Maximisation	Dr A. Rhodes
09.30 - 09.45	Evidence Base	Dr P. Newman
09.45 - 10.00	St George's Hospital Optimisation: How we do it.	D. Dawson

Hands on the monitors (Participants divided in two groups: Group 1 and Group 2)

10.00 - 10.30	Group 1	Hands on LIDCO
10.00 - 10.30	Group 2	Simulation
10.30 - 11.00	Group 1	Simulation
10.30 - 11.00	Group 2	Hands on LIDCO
11.00 - 11.30		Coffee

Case Based Discussion

11.30 - 12.00	Optimising the high risk patient
12.00 - 12.30	The haemodynamically unstable patient
12.30 - 13.30	Lunch

Participants divided in 3 groups (A, B, C)

13.30 - 14.15	Group A	Theatre LIDCOrapia
	Group B	ICU LIDCOrapia
	Group C	ICU LIDCOplus
14.15 - 15.00	Group A	ICU LIDCOrapia
	Group B	ICU LIDCOplus
	Group C	Theatre LIDCOrapia
15.00 - 15.45	Group A	ICU LIDCOplus
	Group B	Theatre LIDCOrapia
	Group C	ICU LIDCOrapia
15.15 - 16.30		Coffee and Certificates



www.lidco.com

Email via: www.lidco.com
 Global Contact: +44 (0) 1223 830888
 LIDCO Ltd, Unit M, South Cambridge Business Park,
 Babraham Road, Babington, Cambridge, CB22 3JH, UK

Venue: St Georges Hospital and Simulation Centre

Royal College of Anaesthetists have accredited the St George's course for 5 CME (continuing medical education) points

LIDCO has accreditation from the Royal College of Nursing ("RCN") for its LIDCOplus monitor competency based study day.

- Strategy for growth remains focused on three key areas: products, market access, and evidence & awareness
- Lowest ever cash usage with a profit made 2nd Q. 2010
- Second half expected to be stronger still and for 2nd half profits (finnCap forecasts)
- Covidien getting into it's stride – evaluations ramping up
- Outlook for sales growth remains positive - excluding parts of Europe
- Distributor network positions the Company to take advantage of global opportunities in the two major markets Japan & USA
- R&D focus to broaden usage, portability of data and converge parameters
- Japan expected to produce sales in 2011