

IOCS Service at Torbay Hospital

Paul Scates
Blood Conservation Coordinator

Role of the Blood Conservation Coordinator (BCC)

Appointed Oct 2014

Multi disciplined role:

Departmental lead for IOCS – Operating Theatres

Patient Blood Management – HTT, PBMG, EBMG, HLC JW

Anaesthetic Support (Senior ODP)

The starting point

6 Operating Theatres in main suite, 2 in a small satellite outside of Main Theatres, an Obstetrics theatre and a Separate Day Surgery Unit

3 Sorin Xtra IOCS machines (brand new)

Between 35-40 ODP's with varying levels of training and knowledge

Under utilised service

New System



Sorin Xtra

Over-haul of IOCS service at Torbay

New machines introduced to department pre-appointment

Review of existing IOCS guidelines

Back dated review of all incidents to identify cause issues
(word of mouth exercise as no records had been previously
made/kept)

Review of past IOCS data sheets to establish a baseline of
practice for comparison

Over-haul of IOCS service at Torbay

Patient safety review

Standards of practice review

Transfusion accountability review

**PLUS 2 x CATASTROPHIC FAILURES OF IOCS
MACHINES WITHIN WEEKS OF APPOINTMENT**

Training the IOCS Operators

UKCSAG Workbook

Competency assessments
have been endorsed by:

AFPP

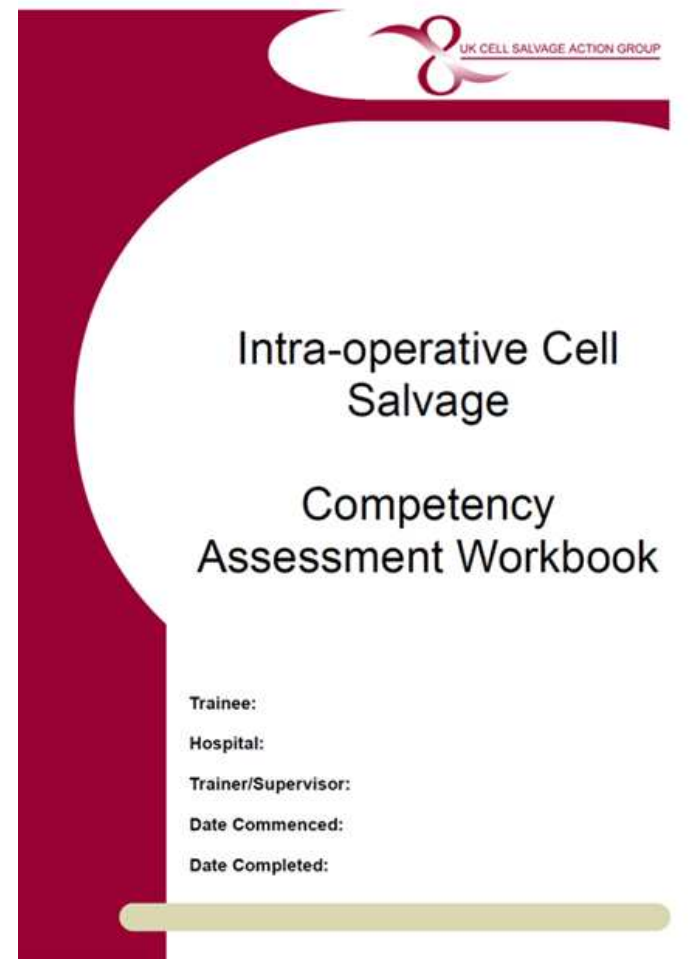
AAGBI

BBTS

CODP (now part of
UNISON)

Off the shelf competency
package

No need to re-invent the
wheel



Competency Training

UKCSAG - 106 competencies

Broken down in to 3 methods of assessment

I.Written

II.Oral

III.Direct Observation

Hand picked 4 IOCS Champions (first 4 colleagues to complete training)

Competency Training

Workbook completed by BCC – Not given to Operator

Minimum of 3 supervised Observations – Planned/ Adhoc

Initial walk through of machine 1-2-1

Any learning needs identified and accommodated

Experienced Operators filled knowledge gaps

ICS Competency Assessment

[illegible]

Supporting IOCS Operators

Standardised competency based training for all Operators

Introduced roles and responsibilities for IOCS Operators

Training plans adapted to suit learning needs and not place burden on already stretched workforce

All practical training was 1-2-1

Supporting IOCS Operators

Resource folders provided with every machine as a ready reference guide, contained roles and responsibilities, escalation pathways, guidance etc.

Notable increase in confidence and competence in operating machines throughout competency training

Re-designed audit data capture documentation to reflect practice and usage (all usage of IOCS documented)

January 2017

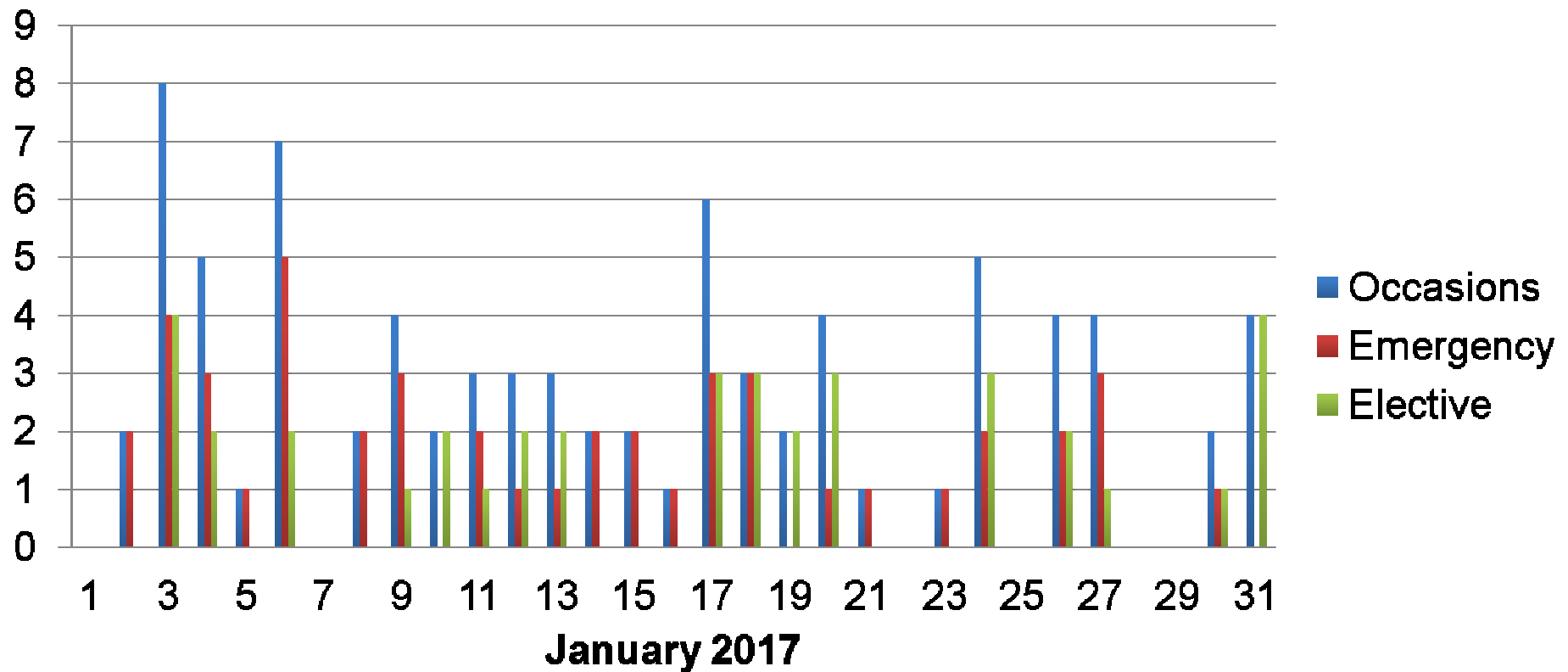
IOCS used on a total of 81 occasions

35 Elective cases and 46 “Emergencies”
(Emergencies = 36 LSCS, 10 Orthopaedic Trauma)

44 collections only - 37 process and return

11,841mls of Salvaged RBC re-infused

IOCS January 2017



RBC Transfusions Intra-Operatively

17 units of RBC attributed to Surgical patients where IOCS was used in January 2017

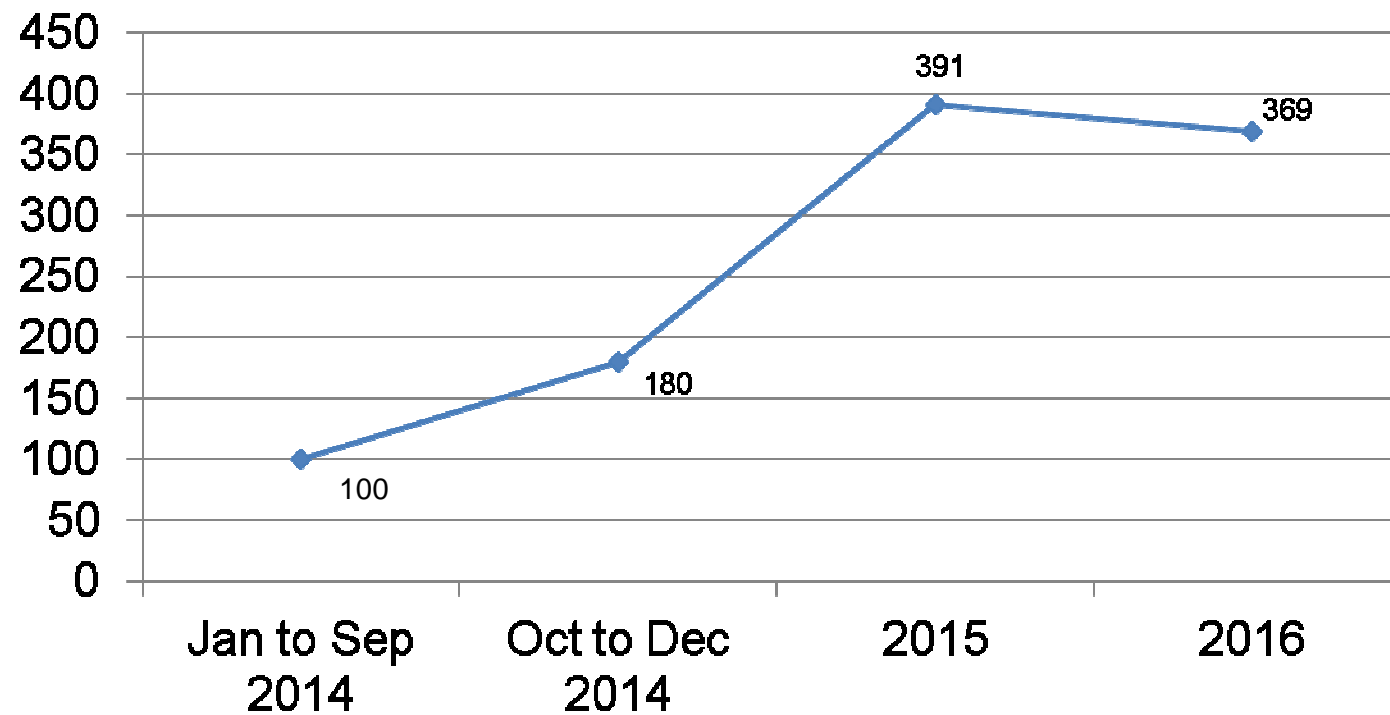
Only 1 unit of RBC given intra-operatively

(Femoral nailing where Hb didn't drop below 121g/l)

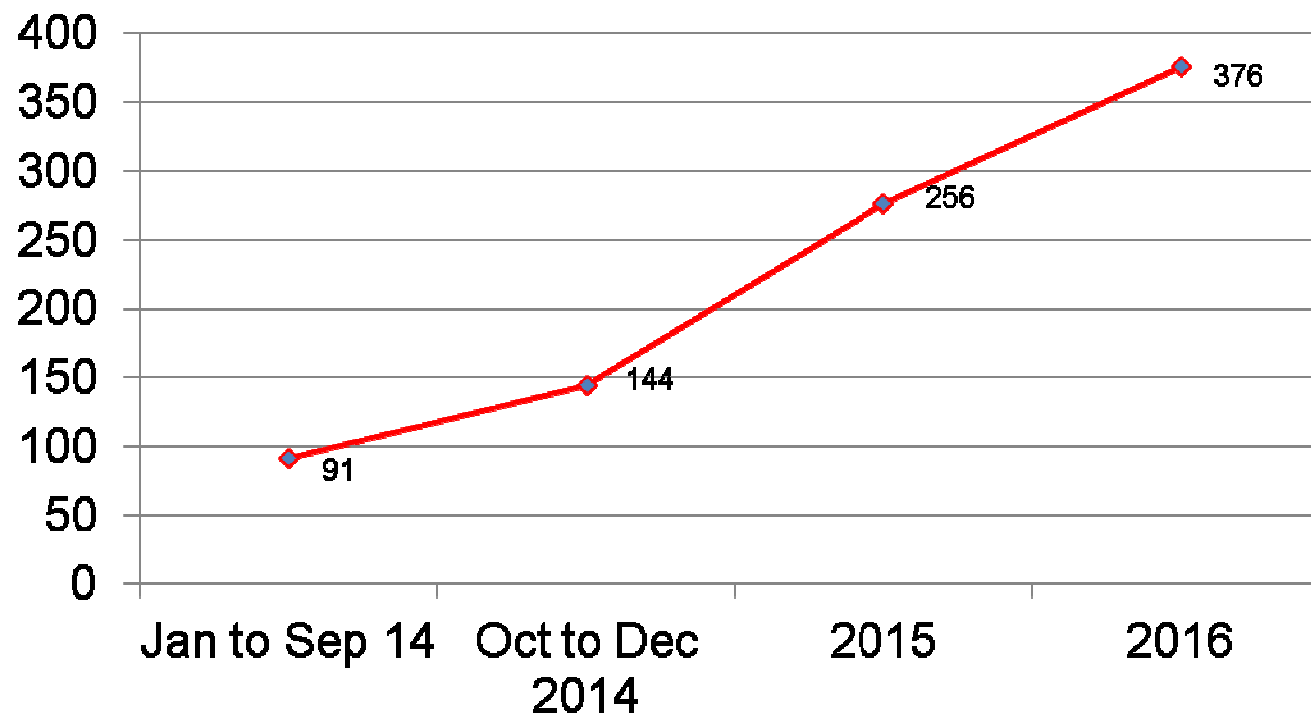
3 units given pre-op to one Orthopaedic Trauma patient

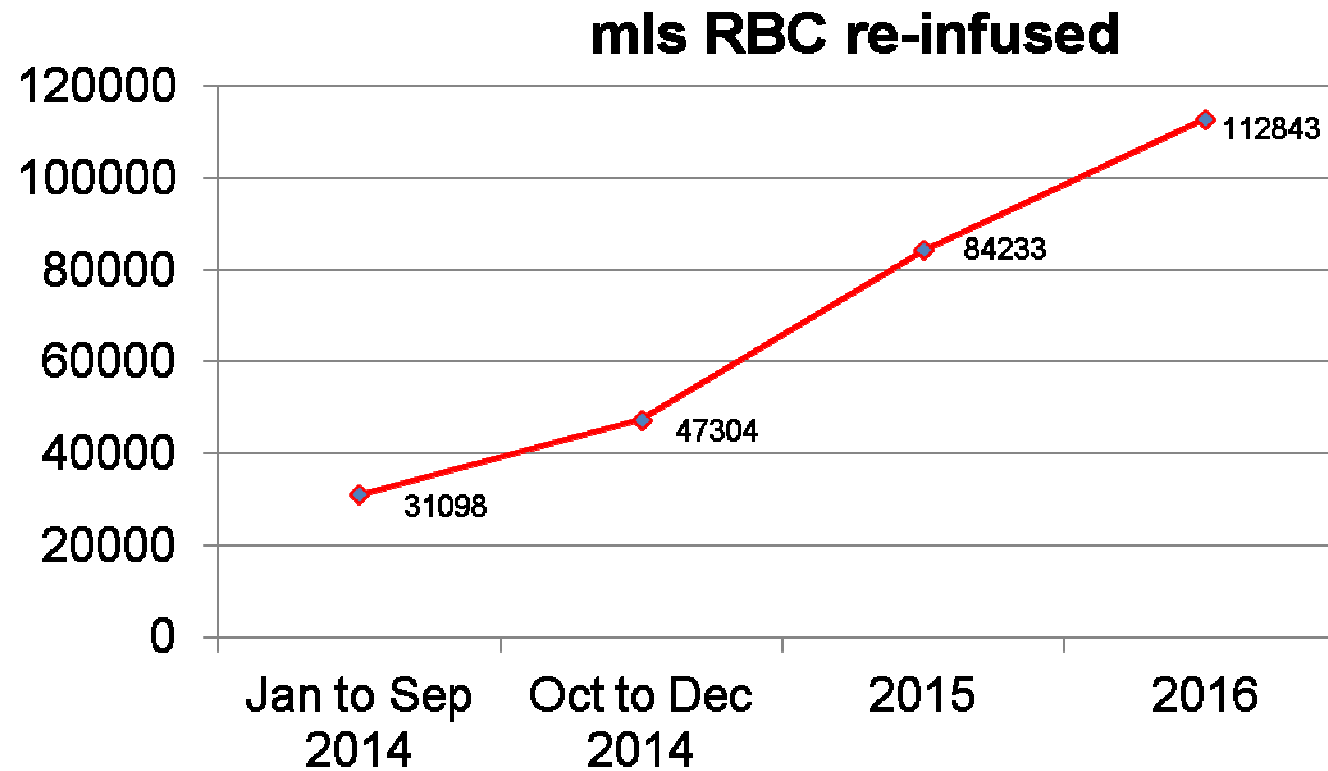
All remaining units given between 2 and 6 days post op.

IOCS collection only episodes



Total re-infusion Events





Salvaged RBC re-infused at Torbay Hospital

2014	47,304mls
2015	84,233mls
2016	112,843mls
Total	244,380mls

$244,380\text{mls} / 250\text{mls} = 978$ units of RBC in Nacl

One unit of RBC contains approximately 180ml (range 150 to 210 ml) of red cells, 100ml of Optisol®, and approximately 30ml (range 10 to 50 ml) of plasma.

978 units @ £124 (apx cost) = £121,272 (estimated)

Estimated Cost of disposables £63,973 (excludes machine cost, fluids, ACDA)

Impact on Torbay's Transfusion Department

Significant reduction in usage of packed RBC

Reduced blood stock levels at Torbay

Future review of Surgical Blood Order Schedule for
Elective Surgery (particularly Orthopaedics)

The biggest concern is stock going out of date – currently
being reviewed

Our Service

Volumes re-infused range from 60mls – 2000mls +

We return to patients all salvaged RBC unless contra-indicated (even then only after Consultant to Consultant discussion)

No reports of any intra or post op IOCS reactions or complications

We provide a 24/7 IOCS service and have done for last 18 months +

Where we are today

32 Operators who have met the competency standards of the UKCSAG competency workbook

The integrity of the service is supported by the Operators and the wider Perioperative team

Increased Theatre team work (all disciplines)

Better communication

Innovation of service - Major Haemorrhage, laparoscopic surgery, Obstetrics

All Caesarean Sections both elective and emergency have IOCS set up as standard (safety net)

Where we are today

Blue Shield award (Trust award) winner for IOCS service at Torbay (Innovation and research – Silver)

A measurable increase in returns to patients

Multiple audits and publications in progress

Gold standard of service – HLC for JW

Audit of fractured neck of femurs to investigate whether IOCS should be utilised as routine – underway

Approached by Trusts from the SW region who wish to emulate the IOCS service at Torbay

Any Questions?