



# 65<sup>th</sup> JACIE Training Course

## Southampton, UK



## Trainers

- Eoin McGrath 
- Operations Manager
- Since 2002
- Iris Bargalló 
- Accreditations Coordinator
- Since 2010
- Raquel Espada 
- Accreditations Coordinator
- Since June 2014



## Speakers

- Fergus Jack, Poole Hospital NHS Foundation Trust
- Claire Wiggins, Steve Mills Stem Cells and Immunotherapies Laboratory - Southampton, NHSBT
- Sarah Holtby, London Clinic
- Kim Orchard, Southampton General Hospital



# ‘Housekeeping’

- Emergency
- Bathrooms
- Wifi
- Breaks / Lunch
- Dinner



# Thanks



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<http://ebah.org/eha-cme-credit-points>



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European Board for Accreditation in Hematology

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# Where you are from?





# WHO HAS BEEN THROUGH A JACIE INSPECTION?





# CONTEXT





## Press release

### Health MEPs propose blueprint for safer healthcare

Public health - 14-04-2015 - 17:01

Committee : Environment, Public Health and Food Safety

- **MEPs note that between 8 and 12% of patients admitted to hospitals in the EU suffer adverse events such as healthcare-related infections, which place a heavy burden on limited health service budgets.**

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fTEXT%2bIM-PRESS%2b20150414IPR41844%2b0%2bDOC%2bXML%2bV0%2f%2fEN&language=EN>

# What we think healthcare looks like



Jeffrey Braithwaite, PhD  
Robyn Clay-Williams, PhD

[http://resilienthealthcare.net/onewebmedia/  
Braithwaite\\_Clay-Williams.pdf](http://resilienthealthcare.net/onewebmedia/Braithwaite_Clay-Williams.pdf)

Presentation to the Resilient Healthcare Net Conference  
Middlefart, University of Southern Denmark  
12 August 2014



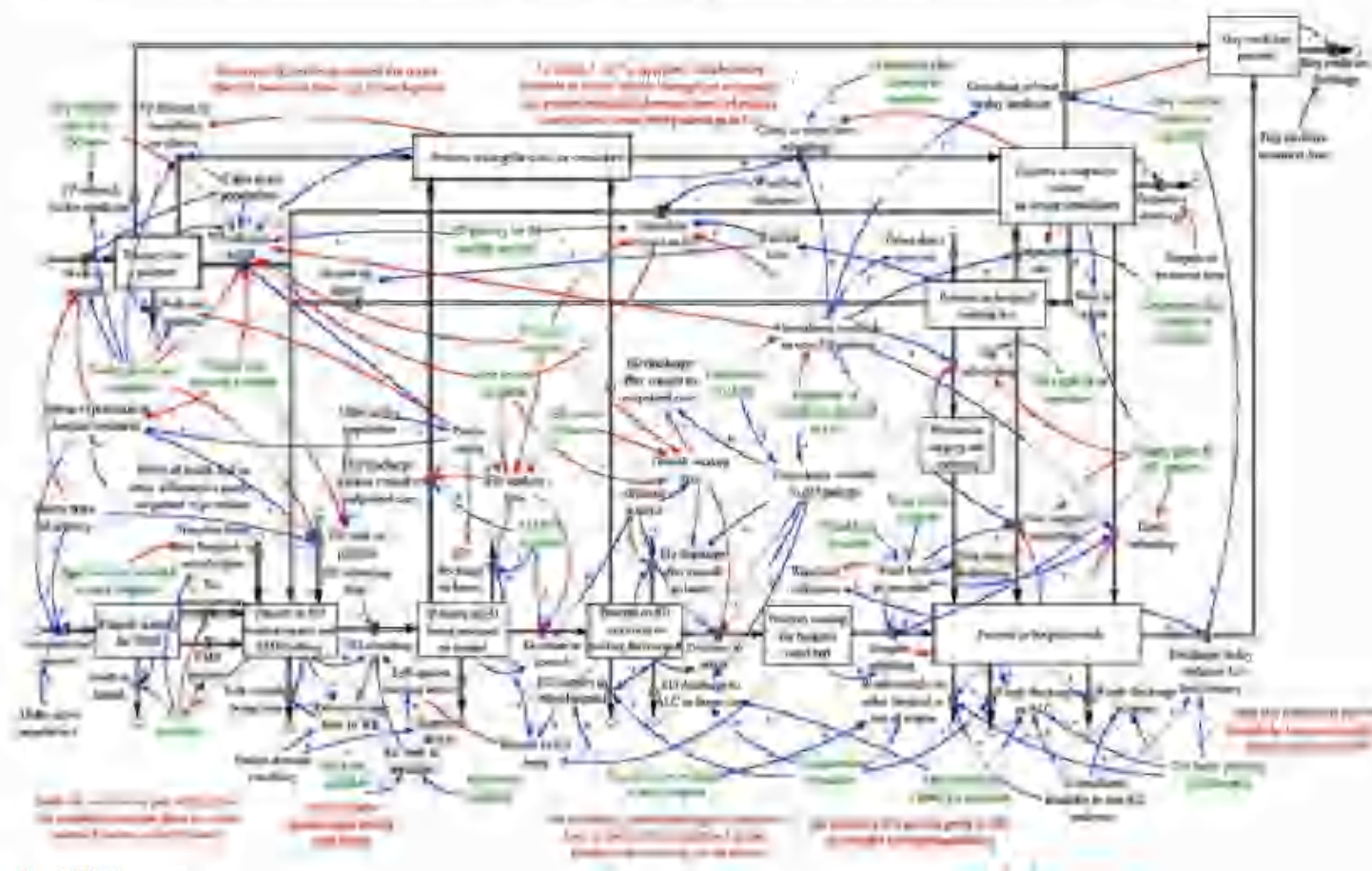
European Society for Blood and  
Marrow Transplantation



International Society for Cellular Therapy  
ISCT



# But healthcare really looks like this ...



Jeffrey Braithwaite, PhD  
Robyn Clay-Williams, PhD

[http://resilienthealthcare.net/onewebmedia/Braithwaite\\_Clay-Williams.pdf](http://resilienthealthcare.net/onewebmedia/Braithwaite_Clay-Williams.pdf)

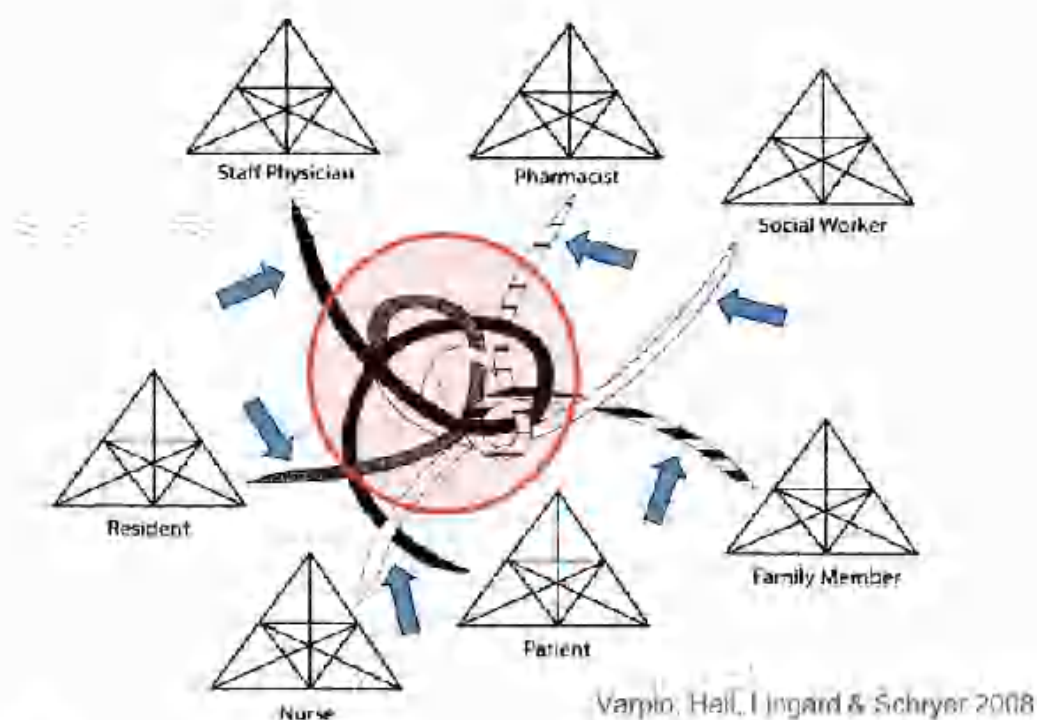
Presentation to the Resilient Healthcare Net Conference  
Middlefart, University of Southern Denmark  
12 August 2014







## Teams in healthcare are dynamic and complex

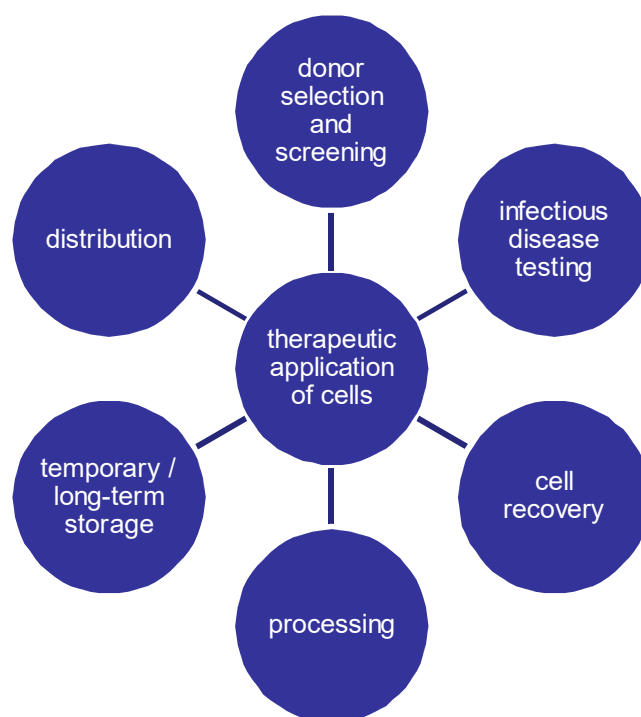


[http://www.nvz-ziekenhuizen.nl/\\_library/10852/Erik](http://www.nvz-ziekenhuizen.nl/_library/10852/Erik)



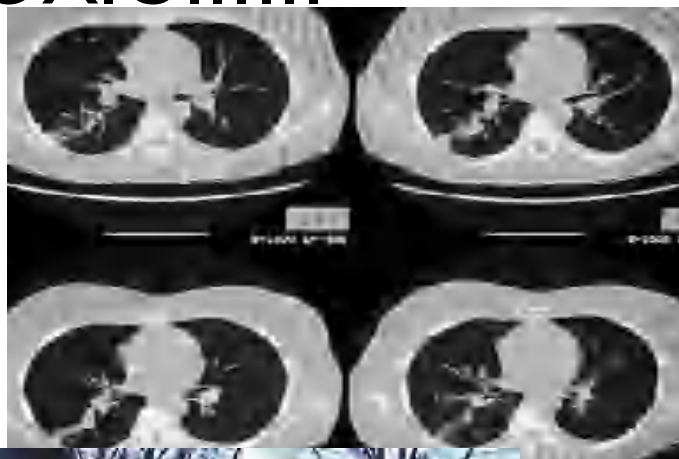
# BMT is a complex process...

Adapted from  
Tissue and Cell  
Processing: An  
Essential Guide.  
Edited by Deirdre  
Fehily, Scott A.  
Brubaker, John N.  
Kearney, and  
Lloyd  
Wolfenbarger. ©  
2012 Blackwell  
Publishing Ltd.

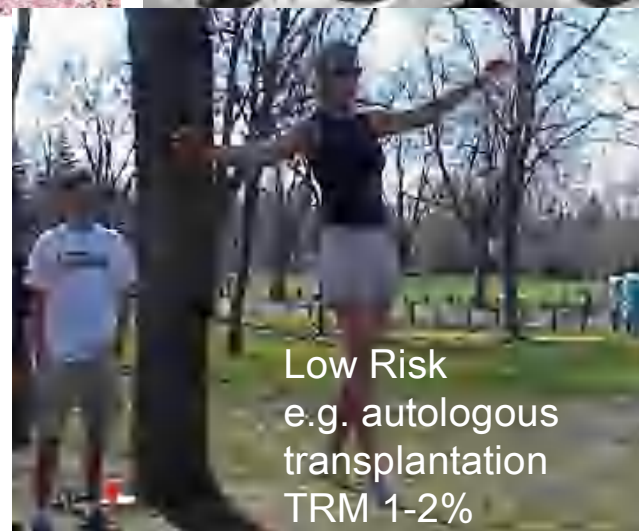




.....and TOXIC.....

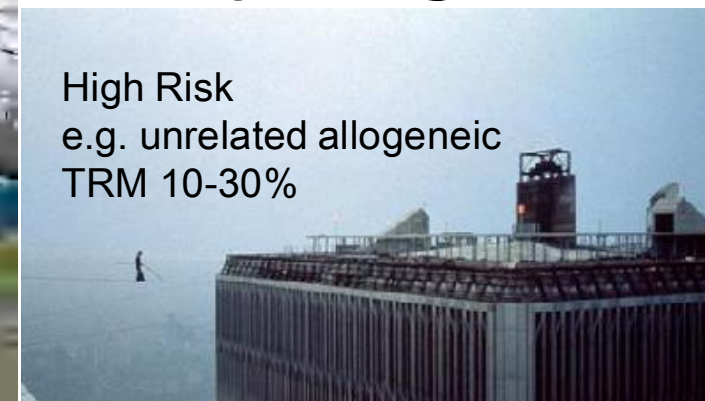


... with RISK..



Low Risk  
e.g. autologous  
transplantation  
TRM 1-2%

High Risk  
e.g. unrelated allogeneic  
TRM 10-30%





© 2009 by American Society of Clinical Oncology

## Medication Errors Among Adults and Children With Cancer in the Outpatient Setting

Kathleen E. Walsh, Katherine S. Dodd, Kala Seetharaman, Douglas W. Roblin, Lisa J. Herrinton, Ann Von Worley, G. Naheed Usmani, David Baer and Jerry H. Gurwitz

« Previous | Next Article »  
Table of Contents

### This Article

Published online before print  
December 29, 2008, doi:  
10.1200/JCO.2008.18.6072  
JCO February 20, 2009 vol. 27  
no. 6 891-896

» Abstract  
Full Text

# NEWS

NEWS | OPINION | NATIONAL AFFAIRS | BUSINESS | ARTS & CULTURE | MEDIA & TV

DEPARTMENTS | THE ECONOMY | THE WORLD | ENTERTAINMENT | SCIENCE & TECHNOLOGY | SPORTS

NEWS

Twitter

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## Cancer tests mix-up denies Lisa Beckwith the chance for more children

By PHILIP ELKOWITZ | The Courier-Mail | October 15, 2012 11:00 AM

### EUROPEAN JOURNAL OF HOSPITAL PHARMACY

Helping hospital pharmacists to provide better patient care

Online First | Current Issue | Archive | About the journal | Submit a

Online First | Current Issue | Archive | Supplements | Editorial | Topic collections

European Volume 18, Issue 2, Article

Cur J Hosp Pharm 2012;18:125-127. doi:10.1136/ejpharm-2012-000074.110

#### Abstracts

General and Risk Management, Patient Safety (including medication quality control)

#### Development of a pharmaceutical care program in a bone marrow transplantation unit

A. Asenalo, C. Lizeaga, I. Fernandez, R. Pascual, R. Carrion, J. Derral, D. Inatorza, K. Andueza, E. Esnaola, O. Valbuena

### Study of Medication Errors on a Community Hospital Oncology Ward

By Clyde D. Ford, MD, Julie Killebrew, MS, RN, Penelope Fugitt, RN, Janet Jacobsen, RPh, and Elizabeth M. Prystis, MD

Intermountain Blood and Marrow Transplant Program and Departments of Nursing, Pharmacy, and Medicine, LDS Hospital

Am J Health Syst Pharm. 2004 Sep 15;61(18):1908-16.

### Nature and causes of clinically significant medication errors in a tertiary care hospital.

Winterstein AG<sup>1</sup>, Johns TE, Rosenberg EI, Hatton RC, Gonzalez-Rothi R, Kanjanarat P.

A bone marrow cancer patient has called on Sheffield hospitals to carry out closer checks when dispensing prescriptions - after he was handed doses of several medicines intended for someone else.

Published on the

23 July  
2013  
10:24

# THE IRISH TIMES

Mon Mar 9, 2015, 18:10

Recommend

7

Tweet

12

g+

1

1

1

1

A bone marrow transplant patient died from a virus after a "transcription error" resulted in failing to monitor her for it, an inquest has heard.

A verdict of medical misadventure was returned at the inquest into the death of a woman after Dublin Coroner's Court heard a transplant co-ordinator mistakenly marked her down as negative for cytomegalovirus (CMV). A common virus which can lie dormant, CMV can be reactivated and become dangerous when someone is immunosuppressed post-transplant.

# theguardian

Winner of the Pulitzer prize 2014

## stem cell freezing problem may have led to girl's death

Coroner rules that deaths of three other children at hospital were not connected to difficulties with medical procedure



# Donation is not without morbidity and risk

- 5 donor fatalities
- 37 severe adverse events
- 20 hematologic malignancies

**haematologica**

the Hematology Journal  
Open Access Publication

Severe events in donors after allogeneic hematopoietic stem cell donation

Joerg Halter<sup>1</sup> , Yoshitaka Kodera<sup>2</sup>, Alvaro Urbano-Ispizua<sup>3</sup>,  
Hildegard T. Greinix<sup>4</sup>, Norbert Schmitz<sup>5</sup>, Geneviève Fayre<sup>1</sup>,  
Helen Baldomero<sup>6</sup>, Dietger Niederwieser<sup>7</sup>, Jane F. Apperley<sup>8</sup> and  
Albis Gratwohl<sup>1</sup> for the European Group for Blood and Marrow  
Transplantation (EBMT) activity survey office

Published online before print December 4, 2008.  
DOI: 10.3324/haematol.13554  
haematol January 1, 2009  
vol. 34 no. 1 94-101

Abstract  
Full Text  
Full Text (PDF)

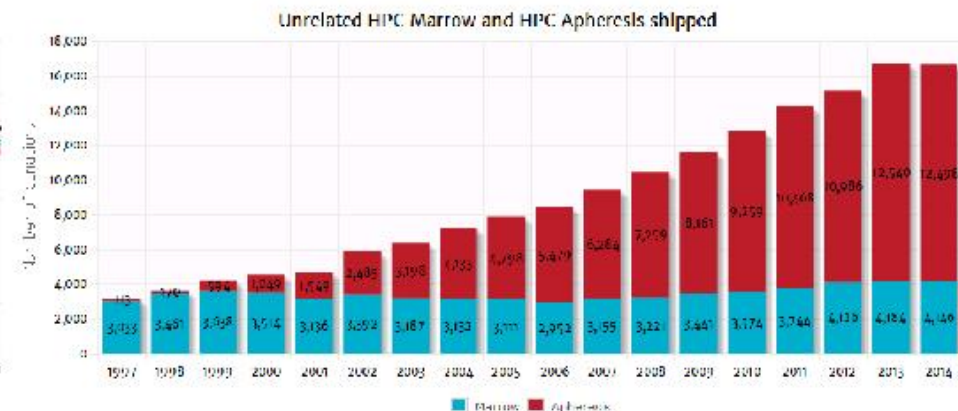
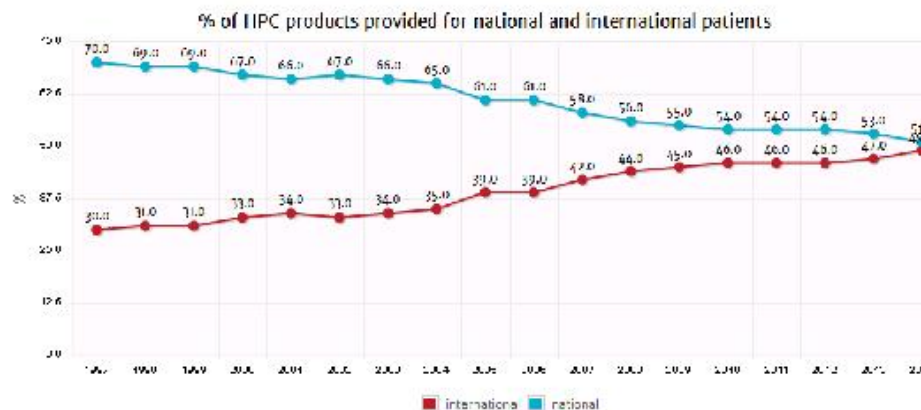
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About the Journal  
Editorial Board  
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Information  
Reviewers



## International context

- “there are now around 33 stem cell products being transported every day across the world to facilitate transplants in another country”
- 12,000+ HSCT products exchanged across borders every year



With thanks to the WMDA for providing these graphs



# **RESPONSE BY THE PROFESSIONALS TO THESE CHALLENGES**



# Popular improvement strategies



**Table 14.2 Popular improvement strategies**

Category	Examples
1. Philosophical, conceptual	<ul style="list-style-type: none"> <li>• Accounts of causation</li> <li>• Theoretical domains framework</li> <li>• Quality improvement conceptual frame</li> </ul>
2. Patient journey	<ul style="list-style-type: none"> <li>• Clinical practice guidelines</li> <li>• Care pathways</li> <li>• Chronic disease management</li> <li>• System re-engineering (or business process redesign)</li> <li>• Lean production cycles</li> </ul>
3. Education, development	<ul style="list-style-type: none"> <li>• Educational outreach</li> <li>• Continuing medical education</li> <li>• Professional development and self-directed learning</li> <li>• Extended professional roles</li> <li>• Specialty outreach programs</li> <li>• Continuous quality improvement programs</li> </ul>
4. Specific tools	<ul style="list-style-type: none"> <li>• Clinical governance</li> <li>• Audit and feedback</li> <li>• Risk and safety management</li> <li>• SBAR communication</li> <li>• Severity assessment systems</li> <li>• Causation analysis</li> <li>• Forcing functions</li> <li>• Failure modes and effects analysis</li> <li>• Functional resonance analysis method</li> <li>• Six Sigma</li> <li>• Plan-Do-Study-Act cycles (PDSA)</li> <li>• Managerial workarounds</li> <li>• Checklists</li> <li>• Clinical decision support systems</li> <li>• Adjuvant models of care</li> <li>• Evidence-based medicine</li> </ul>
5. Natural systems characteristics	<ul style="list-style-type: none"> <li>• Local opinion leaders and champions</li> <li>• Physician practice profiling</li> <li>• Culture change</li> <li>• Political reframing</li> </ul>
6. Reviews, evaluations	<ul style="list-style-type: none"> <li>• Peer case reviews</li> <li>• Realistic evaluation</li> <li>• Formative and summative evaluation approaches</li> <li>• Clinical audit</li> </ul>
7. Teamwork, collaboration	<ul style="list-style-type: none"> <li>• Interdisciplinary collaboration and teamwork</li> <li>• Multi-site quality improvement collaborations</li> <li>• Clinical service networks</li> <li>• Influencing organizational culture campaigns</li> <li>• Mediated quality improvement</li> <li>• Reported outcomes measures</li> <li>• Improved or patient-focused care</li> <li>• Public scorecards and performance reporting</li> <li>• Pay for performance schemes</li> <li>• External accreditation and standards</li> <li>• Incident reporting</li> <li>• Market-based control mechanisms</li> </ul>

External accreditation and standards

Adapted from: Scott (2009); Braithwaite and Colem (2010); Hughes (2000); Frankel et al. (2003)

**The Oxford Handbook of Health Care Management.**  
Ewan Ferlie, Kathleen Montgomery, Anne Reff Pedersen.  
Oxford University Press, 7 abr. 2016 - 504 pp. ISBN  
0191015202, 9780191015205



**Table 14.1 WHO World Alliance for Patient Safety: key structural factors, processes, and outcomes of unsafe care**

Key structures, processes and outcomes	Specific areas to be addressed
Key structural factors that contribute to unsafe care	<ul style="list-style-type: none"> <li>Organizational determinants and latent failures</li> <li>Structural accountability: use of accreditation and regulation to ensure patient safety</li> <li>Safety culture</li> <li>Training, education, and human resources <ul style="list-style-type: none"> <li>Stress and fatigue</li> <li>Production pressure</li> </ul> </li> <li>Lack of appropriate knowledge and its transfer</li> <li>Devices and procedures with no human factors</li> </ul>
Key processes that contribute to unsafe care	<ul style="list-style-type: none"> <li>Misdiagnosis</li> <li>Poor test follow-up</li> <li>Counterfeit and substandard drugs</li> <li>Inadequate measures of patient safety <ul style="list-style-type: none"> <li>Lack of involvement of patients in patient safety</li> </ul> </li> </ul>
Key outcomes of unsafe medical care	<ul style="list-style-type: none"> <li>Adverse events due to drug treatment</li> <li>Adverse events and injuries due to medical devices</li> <li>Injuries due to surgical and anesthesia errors</li> <li>Health care-associated infections</li> <li>Unsafe injection practices</li> <li>Unsafe blood products</li> <li>Safety of pregnant women and newborns</li> <li>Safety of the elderly</li> <li>Falls in hospitals</li> <li>Decubitus ulcers</li> </ul>

Adapted from: [WHO \(2005\)](#)



[http://www.who.int/patientsafety/information\\_centre/Summary\\_evidence\\_on\\_patient\\_safety.pdf](http://www.who.int/patientsafety/information_centre/Summary_evidence_on_patient_safety.pdf)



# Regulation v. Accreditation

**Table 1 Contrasting accreditation and regulation**

	Regulation	Accreditation
Standards	Minimal	Optimal
Aim	Compliance	Development
Facilitation	No	Yes
Self-assessment	No	Yes
Assessors	Inspectors	Peers
Staff engagement	Low	High

Shaw, C. (2015). Accreditation is not a stand-alone solution. *Eastern Mediterranean Health Journal*, 21(3), 226–231.



Experts at the hospital, as well as outside consultants, recognized that many factors contributed to this tragedy (Conway and Weingart, 2005).

System issues included

- minimal double-checks
- orders written by fellows without attending MD signoff
- unclear protocols that were not current and not easily available to RNs and pharmacists.

Some dosages were written in total dose and some in daily dose formats, often in the same protocol.

Maximum dose checking was not a feature of the pharmacy computer system.

....

When reporting did occur, it did not move up the organization in a timely fashion.

From *Preventing Medication Errors: Quality Chasm Series*

Committee on Identifying and Preventing Medication Errors, Philip Aspden, Julie Wolcott, J. Lyle Bootman, Linda R. Cronenwett, Editors. ISBN: 0-309-65856-X, 480 pages, 6 x 9, (2007)

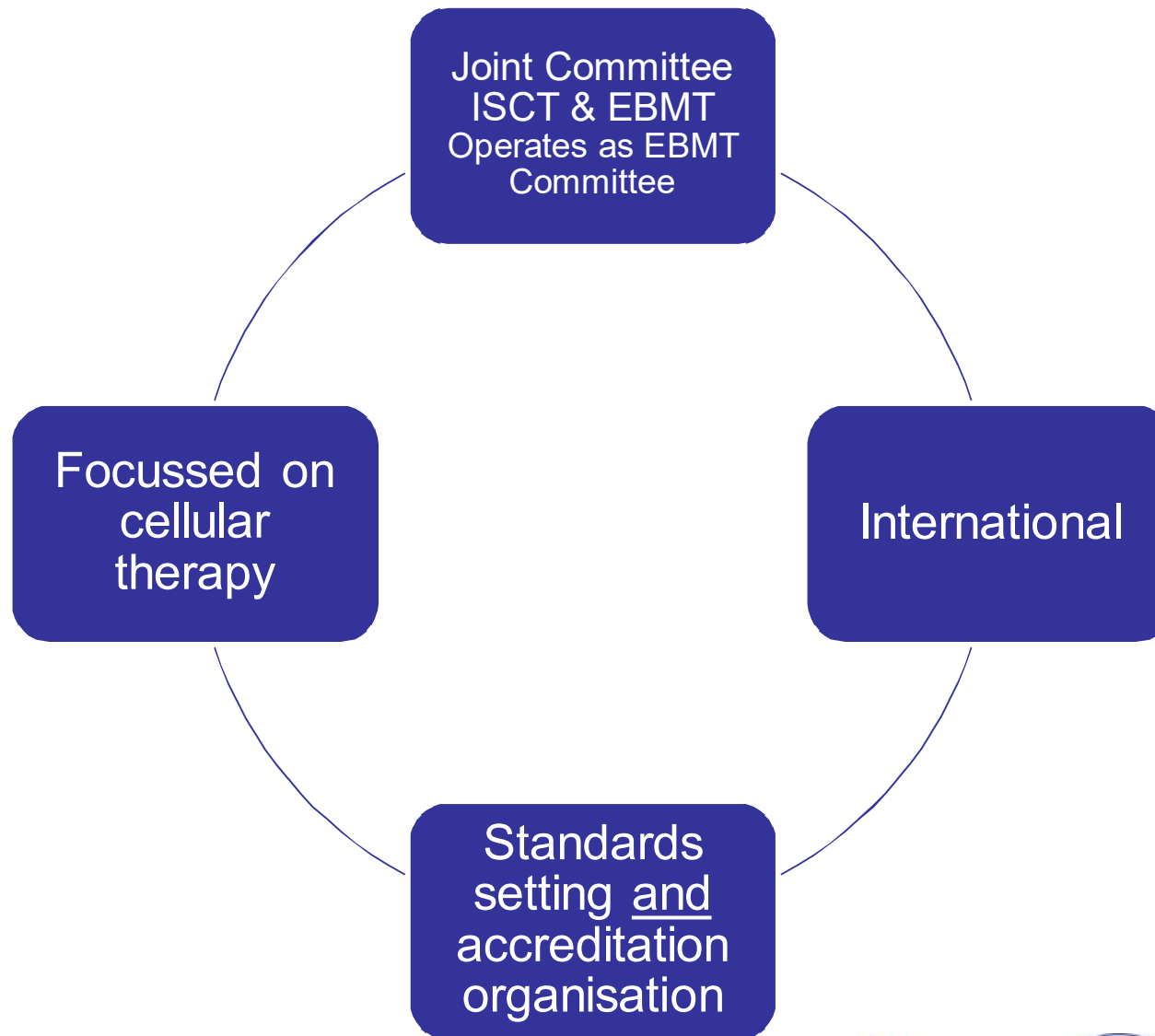




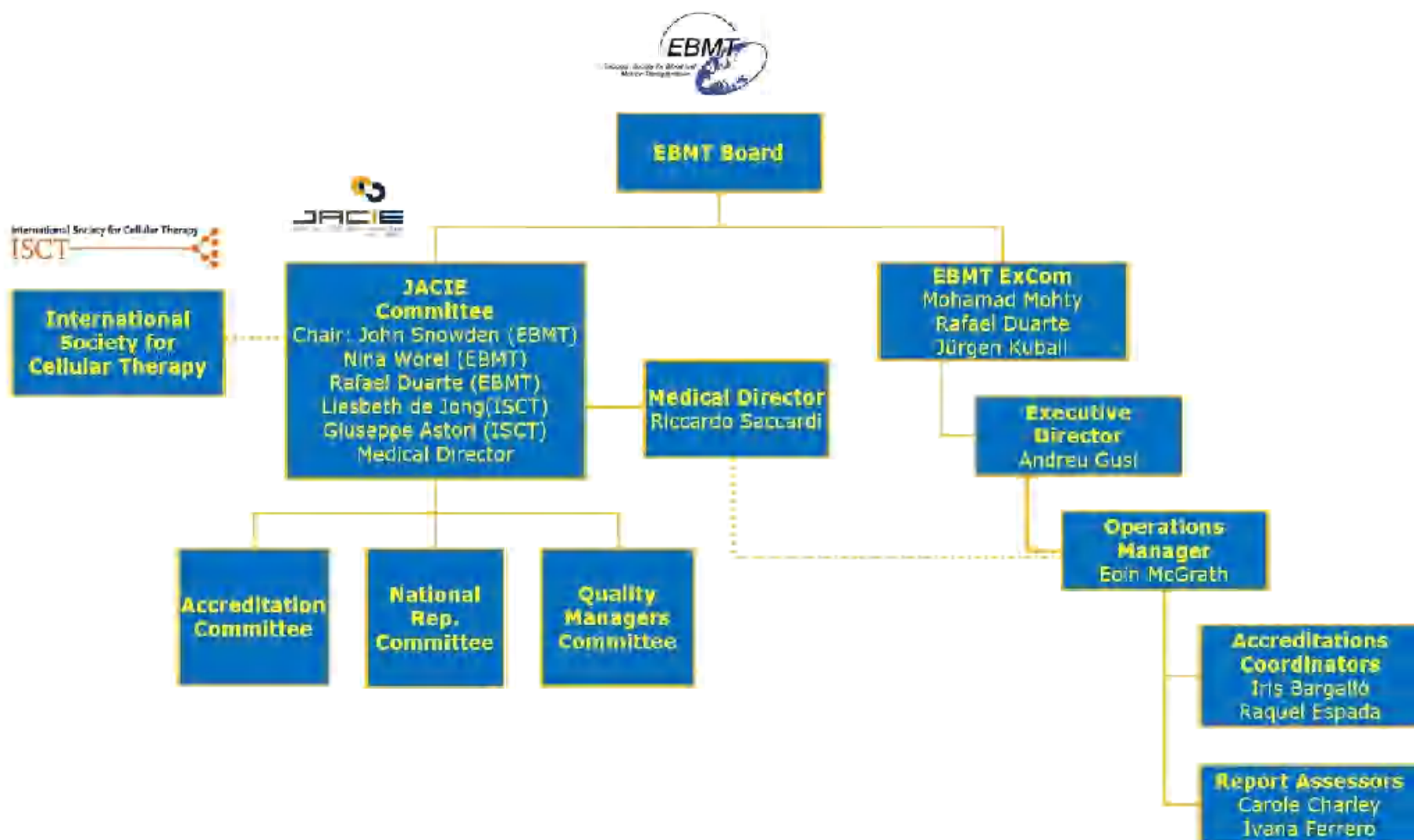
# WHAT IS JACIE?



# What is JACIE?

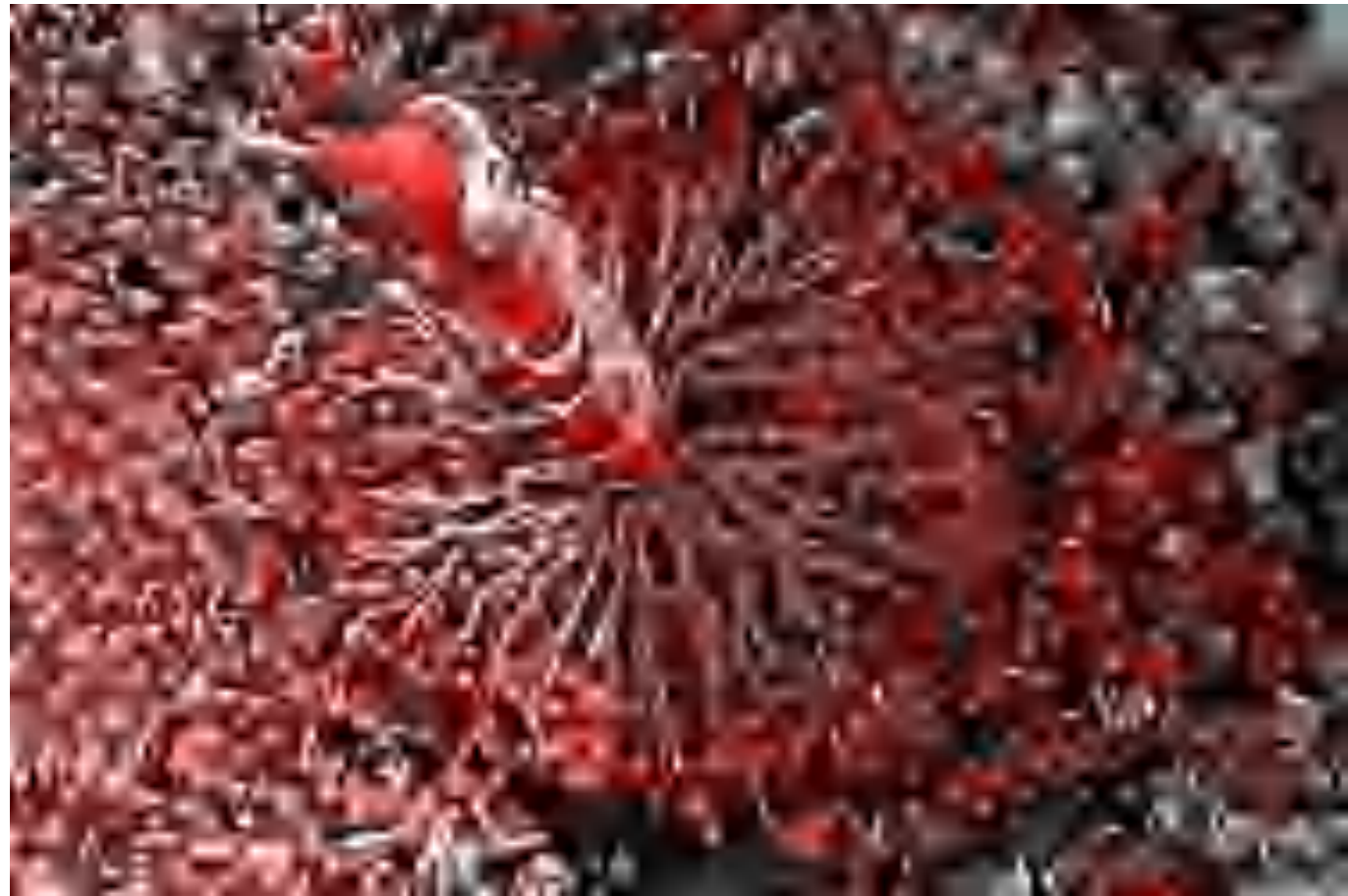
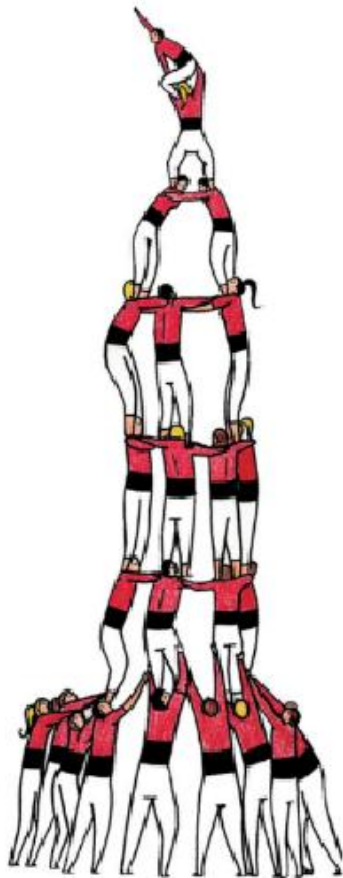


# Structure & Reporting lines





# JACIE: A Standards-setting & Accreditation organisation





## “Classic” view



Clinical



Bone Marrow  
Collection



Apheresis



Processing

## FACT-JACIE view



Clinical

Bone Marrow  
Collection

Apheresis

Processing



# WHAT WE DO WANT TO BE?

## An initiative that impacts on patient survival



### Use of the quality management system "JACIE" and outcome after hematopoietic stem cell transplantation

by Alois Gratwohl, Ronald Brand, Eoin McGrath, Anja van Biezen, Anna Sureda, Per Ljungman, Helen Baldomero, Christian Schubert, and Jane Apperley

haematologica 2015 [Epub ahead of print]

Citation: Gratwohl A, Brand R, McGrath E, van Biezen A, Sureda A, Ljungman P, Schubert C, and Apperley J. Use of the quality management system "JACIE" and outcome after hematopoietic stem cell transplantation. *Haematologica*. 2015; 99:2022. doi:10.3324/haematol.2015.141641



Research Article

### Economics and Outcome After Hematopoietic Stem Cell Transplantation: A Retrospective Cohort Study

Alois Gratwohl<sup>1\*</sup>, Anna Sureda<sup>2</sup>, Helen Baldomero<sup>3</sup>, Michael Gratwohl<sup>4</sup>, Peter Dreger<sup>5</sup>, Marius Krüger<sup>6</sup>, Per Ljungman<sup>7</sup>, Eoin McGrath<sup>8</sup>, Mohammad Morry<sup>9</sup>, Arnon Nagler<sup>10</sup>, Alexander Reinhold<sup>11</sup>, Carmen Ruiz de Elvira<sup>12</sup>, John A. vanwesen<sup>13</sup>, Jakob Wawrow<sup>14</sup>, Jane Apperley<sup>15</sup>, Detlev Niederwieser<sup>16</sup>, Theo Sijhmer<sup>17</sup>, Ronald B. and<sup>18</sup> for the Joint Accreditation Committee (JACIE) of the International Society for Cellular Therapy (ISCT) and the European Society for Blood and Marrow Transplantation (EBMT) and the European Leukemia Net (ELN)





# WHAT WE DO WANT TO BE?

## An initiative that impacts on donor safety

Bone Marrow Transplantation (2014), 1–4  
© 2014 Macmillan Publishers Limited All rights reserved 0268 3369/14  
[www.nature.com/bmt](http://www.nature.com/bmt)



### ORIGINAL ARTICLE

## The impact of improved JACIE standards on the care of related BM and PBSC donors

C Anthias<sup>1,2</sup>, ME Ethell<sup>3</sup>, MN Potter<sup>3</sup>, A Madrigal<sup>1,2</sup> and BE Shaw<sup>1,2,3</sup>

Discrepancies exist between the care of unrelated donors (UDs) and related donors (RDs), particularly regarding medical suitability criteria, consenting procedures and donor follow-up. Changes to the most recent JACIE standards have addressed these issues. We studied 208 RDs who underwent PBSC or BM donation in a single centre during 2004–2013 to determine the impact of regulatory changes on donor care, and assessed the safety and efficacy of stem cell donation in donors not meeting UD medical suitability criteria. We observed significant improvements in donor consenting procedures ( $P=0.003$ ) and donor follow-up ( $P=0.007$ ) after stipulations in these areas were introduced. We saw a higher incidence of serious adverse events (SAEs) in RDs not meeting UD suitability criteria ( $P=0.018$ ), and a higher incidence of SAEs in donors  $\geq 60$  years ( $P=0.020$ ). Haematopoietic progenitor cell donation is less safe in RDs who do not meet UD criteria for medical suitability. Although changes to JACIE standards have improved practice, development of specific medical suitability for RDs and guidelines around 'grey areas' where risks to a donor are unclear or theoretical, will be important in improving RD safety and standardising practice.

*Bone Marrow Transplantation* advance online publication, 10 November 2014; doi:10.1038/bmt.2014.260



# WHAT WE DO NOT WANT TO BE?

Bone Marrow Transplantation (2004) 34, 835–838  
© 2004 Nature Publishing Group All rights reserved 0268-3369/04 \$30.00  

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www.nature.com/bmt

## Editorial

### Just Another Cost Increasing Exercise (JACIE)?





# WHAT WE DO NOT WANT TO BE?

- “Tick-box exercise”
- Encouraging health professionals to stop thinking for themselves!





# WHERE ARE WE TODAY?



## Take-up among transplant centres\*

- % of transplanting centres reporting to 2014 EBMT Activity Survey that have applied, been inspected or been accredited since 2000
- 42% of all those reporting centres are/have been in some part of the JACIE process
  - 59% of allogeneic centres
  - 21% of autologous centres

\*Provisional data

Centres that have  
applied as  
percentage of  
total centres  
reporting  
transplants to  
2014 EBMT  
Activity Survey





# Take-up among transplant centres\*

- Percentage of transplanting centres reporting to the 2014 EBMT Activity Survey\* that have at least applied for accreditation since 2000

Transplants	Global	Switz.	UK	Italy	Germany	France
All types	42%	90%	88%	65%	47%	43%
Auto	21%	83%	88%	24%	9%	14%
Allo	59%	100%	100%	85%	74%	71%
Total respondents	657	10	51	95	109	76

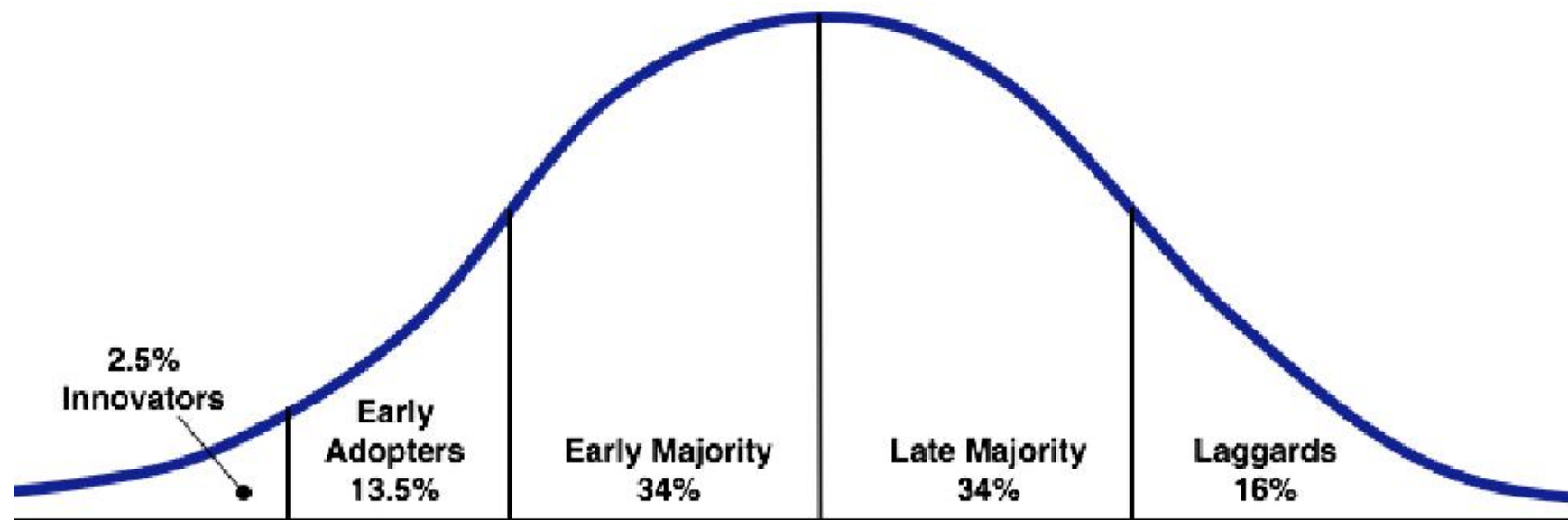
\* Passweg JR, Baldomero H, Bader P, Bonini C, Cesaro S, Dreger P, et al. Hematopoietic stem cell transplantation in Europe 2014: more than 40 000 transplants annually. Bone Marrow Transplant [Internet]. 2016 Feb 22;(January):1–7. Available from: <http://www.nature.com/doifinder/10.1038/bmt.2016.20>

\*data May 2016





# Diffusion of innovations



Source: Everett Rogers, Diffusion of innovations model

Diffusion of Innovation" model, ([Everett Rogers, 1962](#))

# Activity



\* 2016 – 14 inspections scheduled up to Dec.

## JACIE & Regulations







# INSPECTORS



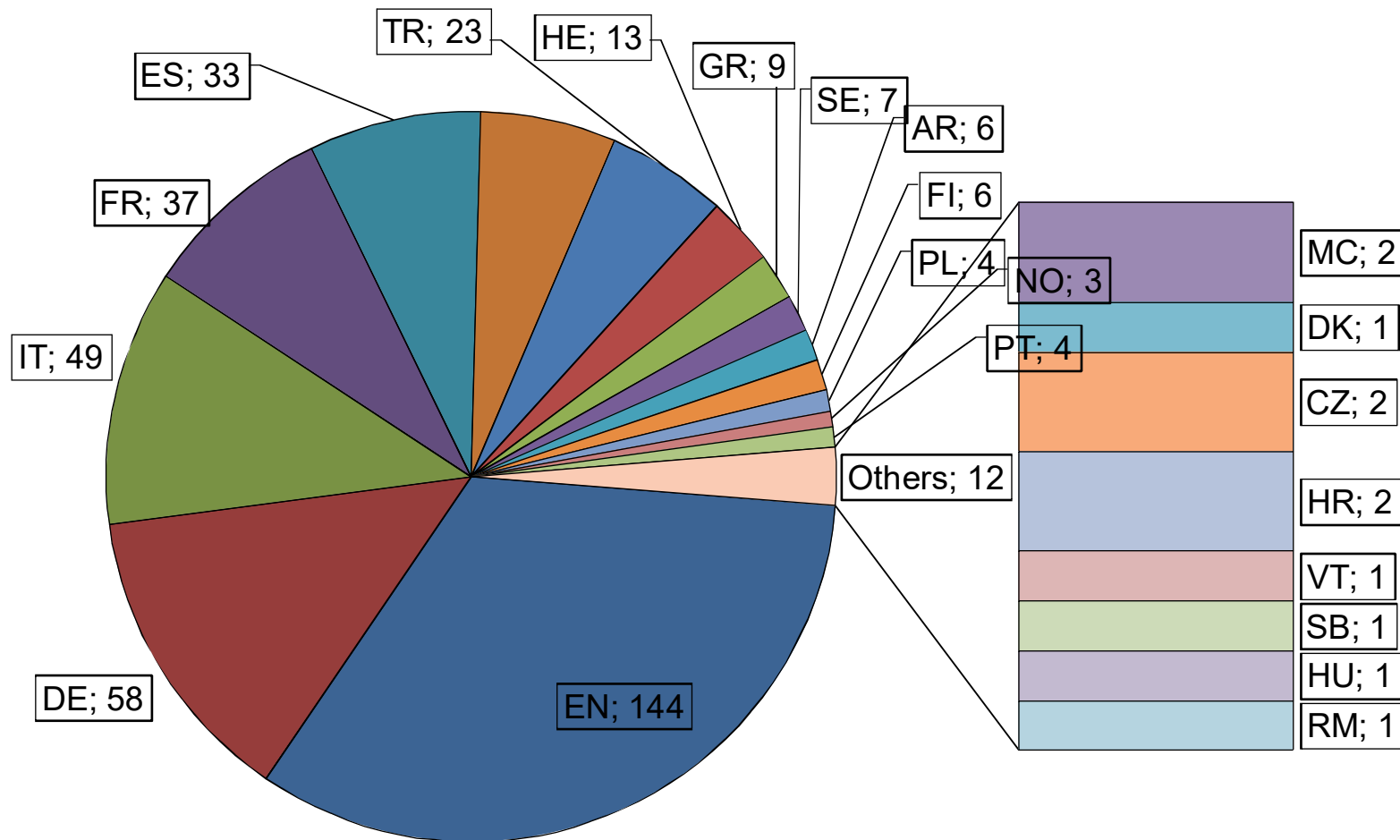


## Inspectors

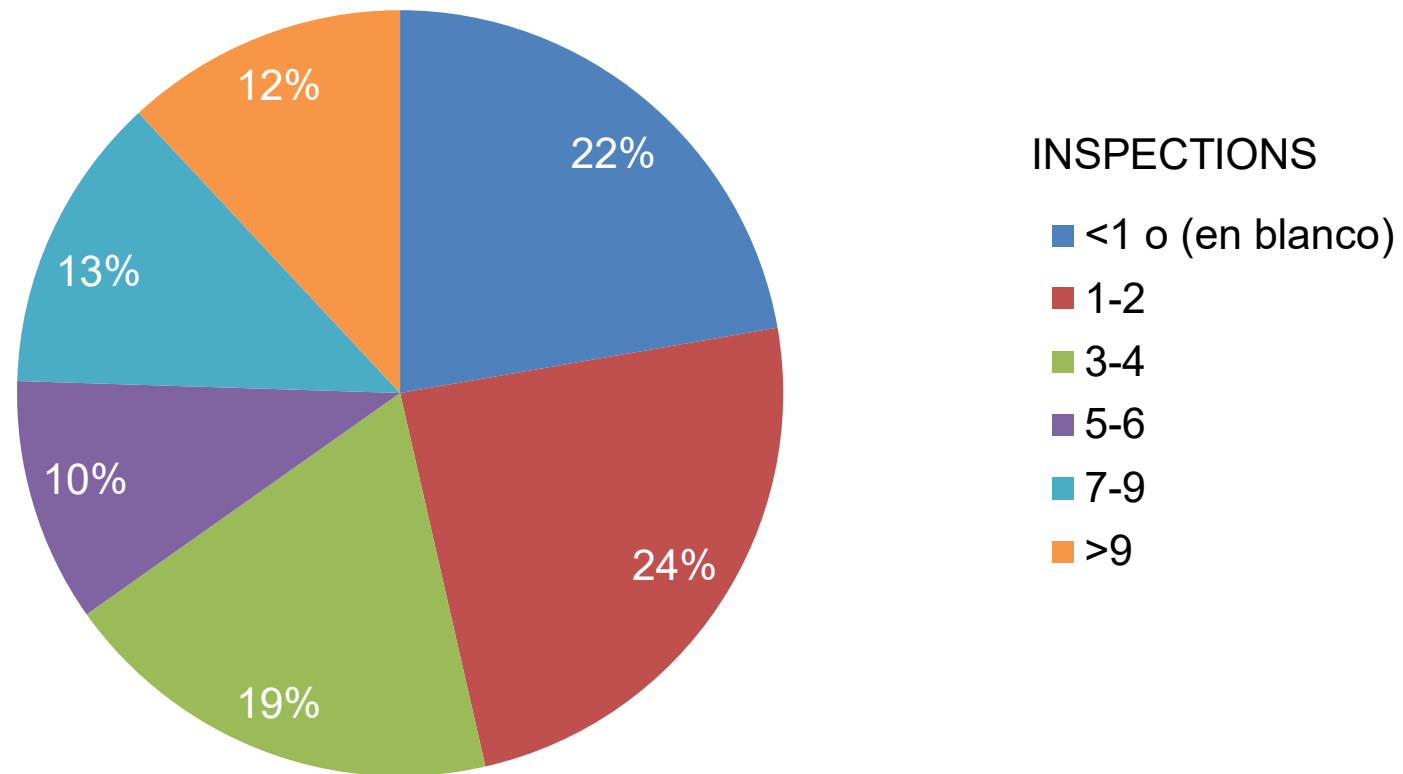
- ~300 cellular therapy professionals on the JACIE register
- Volunteers
- Receive only expenses and *per diem*
- Fundamental to the process



# Languages & inspectors



# Experience among inspector pool



# Quality Management Inspectors

- Initiative from late 2015
- Further details tomorrow with Raquel Espada



# CLOSING



Atul Gawande cited by Erik Heineman, 1 April 2014, EBMT, Milan  
*Atul Gawande is an Indian American surgeon and journalist.  
He is widely known as an expert on optimizing modern healthcare systems.*



Paradigm of Care: Ego- or Eco-system?

## What is needed on **an individual level** for **Clinical Governance?**

➤ **'Humility'**: 'a commitment to self-reflection, self-critique, lifelong learning, and reflective practice'

➤ **'Discipline'**

➤ **'Teamwork'**

Atul Gawande

- Self-reflection
- Self-critique
- Lifelong learning
- Reflective Practice



- **“If you cannot measure it, you can not improve it”**

William Thomson (Lord Kelvin) 1824 – 1907  
Determined the correct value of absolute zero  
as approximately -273.15 Celsius





- **“Without data, you’re just another person with an opinion”**

**William Edwards Deming** (October 14, 1900 – December 20, 1993) was an American engineer, statistician, professor, author, lecturer, and management consultant.

[https://en.wikipedia.org/wiki/W.\\_Edwards\\_Deming](https://en.wikipedia.org/wiki/W._Edwards_Deming)

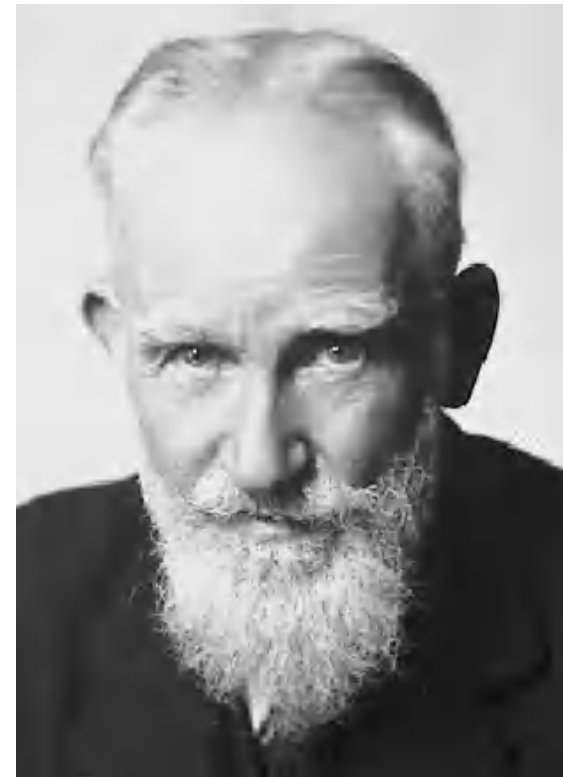




- **“The single biggest problem in communication is the illusion that it has taken place”**

As quoted in *Leadership Skills for Managers* (2000) by Marlene Caroselli, p. 71

George Bernard Shaw (26 July 1856 – 2 November 1950) was an Irish playwright, who received the Nobel Prize for Literature in 1925



# RESILIENT HEALTH CARE

“Health is more than the absence of disease”

“Safety is more than the absence of risk”



- The current approach to patient safety, labelled Safety I, is predicated on a ‘find and fix’ model. It identifies things going wrong, after the event, and aims to stamp them out, in order to ensure that the number of errors is as low as possible. Healthcare is much more complex than such a linear model suggests. We need to switch the focus to what we have come to call Safety II: a concerted effort to enable things to go right more often. The key is to appreciate that healthcare is resilient to a large extent, and everyday performance succeeds much more often than it fails

International Journal for Quality in Health Care Advance Access published August 20, 2015



International Journal for Quality in Health Care, 2015, 1–3  
doi: 10.1093/intqhc/mzv063  
Perspectives on Quality

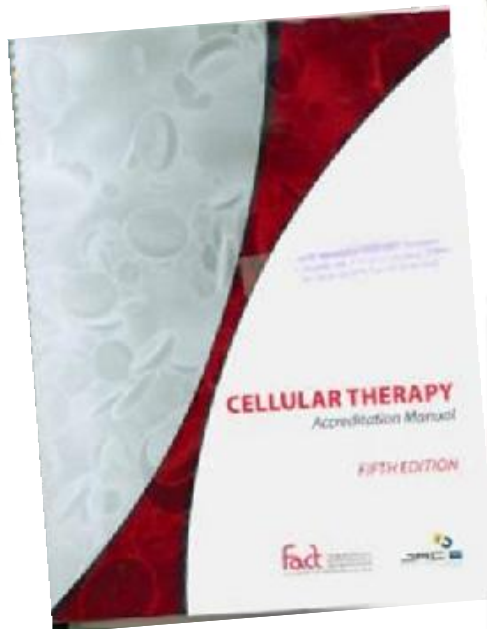


Perspectives on Quality

## Resilient health care: turning patient safety on its head<sup>†</sup>

JEFFREY BRAITHWAITE<sup>†</sup>, ROBERT L. WEARS<sup>2,3</sup>, and ERIK HOLLNAGEL<sup>4,5</sup>





@JACIE\_EBMT



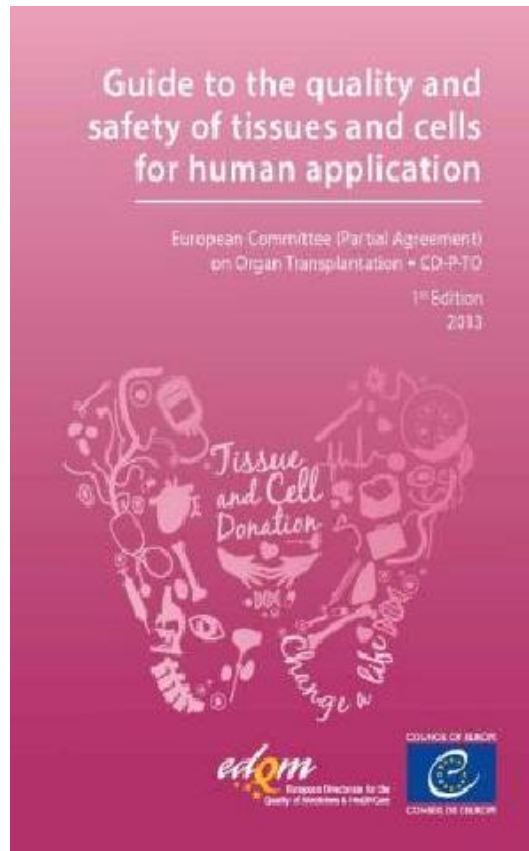
<http://tots.edqm.eu/entry.htm>



52



# EDQM GUIDE TO THE QUALITY AND SAFETY OF TISSUES AND CELLS (1<sup>ST</sup> EDITION)

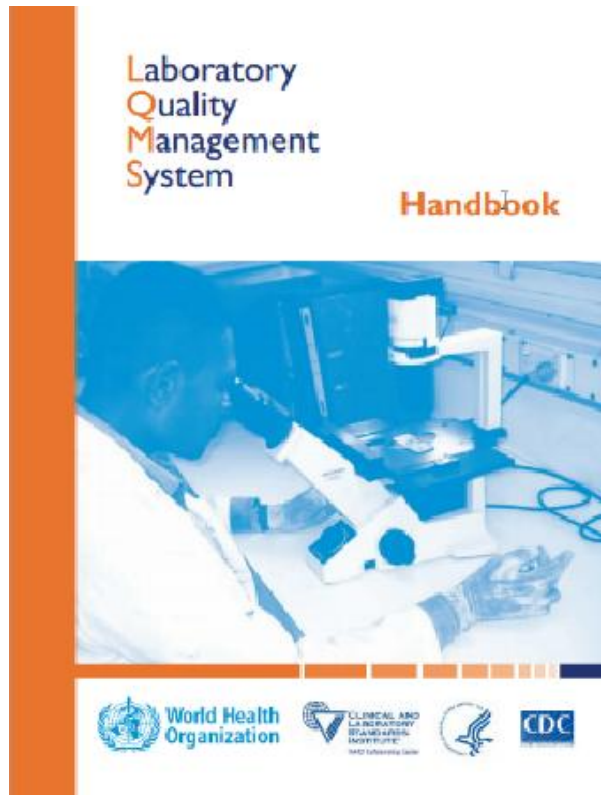


- **Exhaustive guidelines** for the activities carried out in TE, **both for those starting the activity and** looking for guidance and **for those already established** and looking for specific details or indications
- Contributes to the **harmonisation** of these activities among European TE, facilitating uniform standards and practices
- Ensures high level of **quality and safety standards** for procurement, processing, preservation and distribution of T&C of human origin used for transplantation purposes
- Comprehensive introduction on **legislation and ethics**
- **Continuous update** and maintenance planned
- Addressed to **the 47 CoE member states**

<http://tots.edqm.eu/entry.htm>



# Laboratory quality management system handbook



- Comprehensive reference on Laboratory quality management
- Covers topics that are essential for quality management of a public health or clinical laboratory.
- Based on both ISO 15189 and CLSI GP26-A3 documents

<http://www.who.int/ihr/publications/lqms/en/#>



## Other resources

- AHCTA
- [www.ahcta.org](http://www.ahcta.org)



**ahcta**

**alliance for harmonisation of  
cellular therapy accreditation**

### **SURVEY November 2013**

The Alliance for Harmonisation of Cellular Therapy Accreditation (AHCTA) requests processing facilities to complete a survey to assist with developing recommendations for cell processing laboratory staff qualifications, training and competency. Please limit your responses to just those staff responsible for the processing of minimally manipulated products like hematopoietic progenitor cells (HPC) for stem cell transplantation and therapeutic cells (TC)- T cells. Only a single response from each processing facility is required.

## Technical Report

Bone Marrow Transplantation, (16 June 2014) | doi:10.1039/bmt.2014.104

### Essential requirements for setting up a stem cell processing laboratory

T Leenhijs, D Padley, C Keever-Taylor, D Niederwieser, F Teshima, F Lanza, C Chabannon, P Szabolcs, A Bazarbachi, M B C Nahi and on behalf of the Graft Processing Subcommittee of the Worldwide Network for Blood and Bone Marrow Transplantation (WBMT)

The Graft Processing subcommittee of the Worldwide Network for Blood and Marrow Transplantation wrote this guideline to assist physicians and laboratory technologists with the setting up of a cell processing laboratory (CPL) to support a hematopoietic stem cell transplant program, thereby facilitating the start-up of a transplant program in a new location and improving patient access to transplantation worldwide. This guideline describes the minimal essential features of designing such a laboratory and provides a list of equipment and supply needs and staffing recommendations. It describes the typical scope of services that a CPL is expected to perform, including product testing services, and discusses the basic principles behind the most frequent procedures. Quality management (QM) principles specific to a CPL are also discussed. References to additional guidance documents that are available

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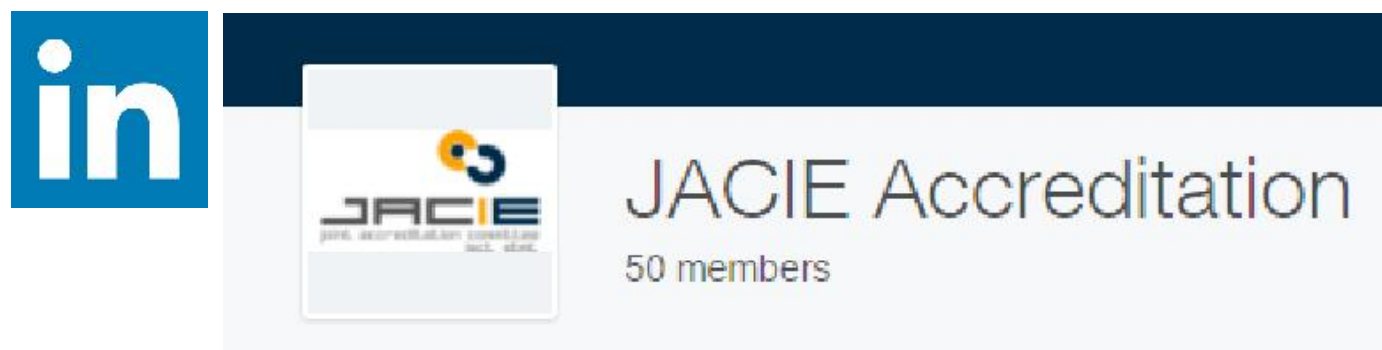
#### SEARCH WITHIN THIS ARTICLE

- T Leenhijs
- D Padley
- C Keever-Taylor
- D Niederwieser
- F Teshima
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## LinkedIn Group



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# Acknowledgements

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