

Assessment of the quality of care by indicator approach in JACIE accredited European stem cells transplantation programs

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Disclosure

Olivia Caunday

- No financial disclosures to claim.

JACIE: Joint Accreditation Committee of ISCT and EBMT

- Autologous and allogeneic hematopoietic stem cell transplantations (HSCT) represent two examples of highly sophisticated hemato-oncological procedures **that can be associated with significant morbi-mortality.**
- In order to **promote excellence in the field**, harmonize medical practices and improve patient outcome, the HSCT medical community established an accreditation program:
 - ***FACT*** in the US (1996)
 - ***JACIE*** in Europe (1999)

Main fields of application in the HSCT program

Clinical Unit

From indication of HPC
transplantation to donor
and/or patient management

Collection Unit

HSC collected from BM
or peripheral blood

Processing Unit

Cellular therapy products
processed in a laboratory

Quality indicator

The most widely quality indicators used by healthcare professionals and infrastructures are:

Activity

Measures the level
of activity

Process

Measures how the
system works

Outcome

Measures the final product or result,
including customer / patient / donor /
healthcare provider satisfaction

Usefulness of a quality indicator

- Quality indicators are increasingly being used in healthcare to:

**Justify and document the need
for supplementary resources**

**Support quality improvement
and risk management**

First objective

- To evaluate the **relevance of JACIE indicators in measuring the quantitative and qualitative benefits** for :
 - the donor/patient
 - the healthcare system

Justify and document the need for supplementary resources

Material and method

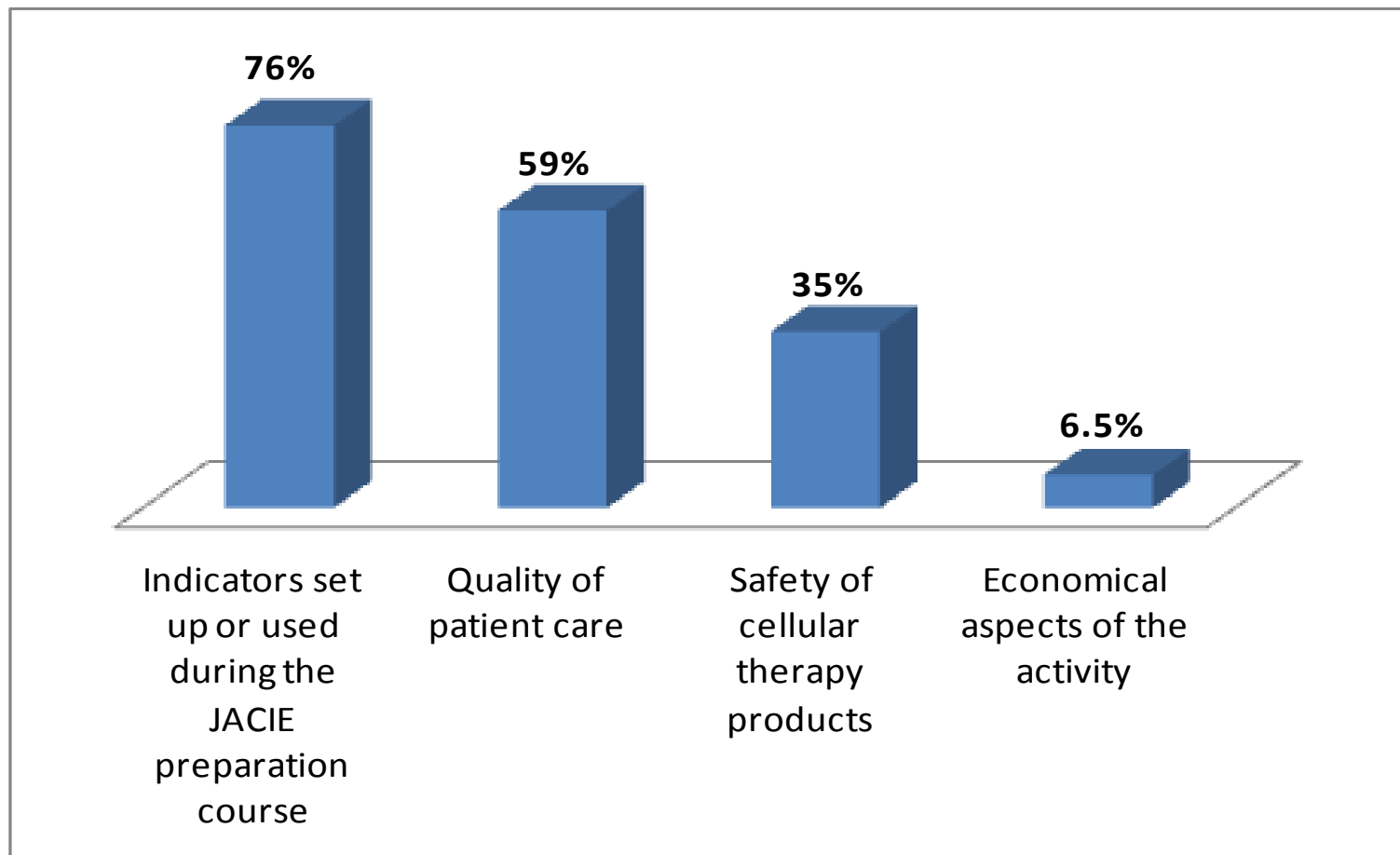
- A survey questionnaire integrated in an Excel spreadsheet was sent via email to 82 JACIE accredited European HSCT programs
- Its objectives were to collect information about existing JACIE indicators that measure:
 - the safety of cellular therapy products
 - the quality of patient care
 - the economical aspects of the activity

Results

- **Response rate :**
 - 80% in France
 - 30% in Europe (**representing** 10 countries)
- **Respondents were mainly:**
 - Clinical programs or facility directors (60%)
 - Quality managers (40%)

Results

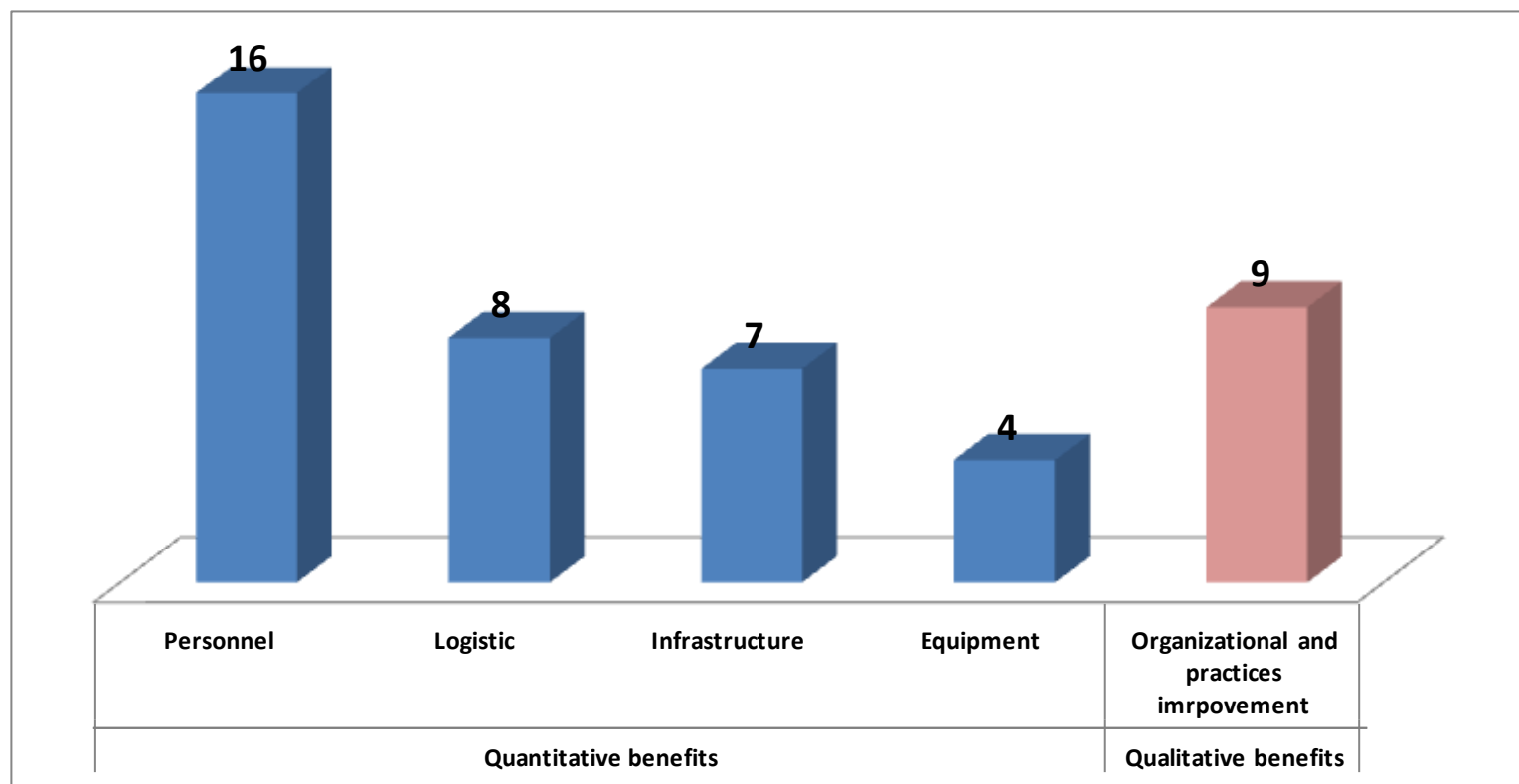
293 quality indicators were identified including:



Name of the indicator	Overall frequency	Number of centres using this indicator	Type of indicator	Proportion of cases in which this indicator was implemented for JACIE preparation
Descriptive statistics activity	25/293	8/32	activity	22/25
Transplant related mortality	23/293	18/32	outcome	20/23
Report of severe adverse events or accidents	21/293	16/32	process	14/20
Median time in days until engraftment	17/293	14/32	outcome	15/17
Cell recovery post thawing	15/293	9/32	process	10/15
Collection of HSC target: collection of CD34+ cells reached?	13/293	13/32	outcome	10/13
Microbial contamination during cell processing	12/293	11/32	process	7/12
Patient satisfaction	12/293	11/32	outcome	8/12
Positive microbiology in collected cells products	11/295	11/32	process	6/11
Apheresis efficiency	10/295	9/32	process	8/10

Ranking of the 10 first indicators by frequency (redundancy)

- 44 indicators out of 293 led to the obtention of resources



- The remaining indicators did not lead to any means

	Name of the indicator	Type of indicator	Category of obtained resources	Description
Quantitative benefits	Healthcare consultant satisfaction	Outcome	Personnel	Clinician
	Cell recovery post thawing	Process	Equipment ; personnel	Evolution of equipment
	Conduct of audits	Process	Personnel	Availability of internal auditors
	Descriptive statistics activity	Activity	Infrastructure, logistic, equipment, personnel	Creation of a collection room
Qualitative benefits	Report of severe adverse events or accidents	Process	other	Quality management staff
	Cell recovery post thawing	Process	other	Formalization of practices with procedures
	Microbial contamination during cell processing	Process	other	No more contamination related with processing ; Formalization of practices

Impact of JACIE accreditation on HSCT programs

- 85% of indicators do neither justify nor document the need for additional resource even if they are improved : *organizational and practices improvement doesn't necessarily mean resource allocation!*
- In order to improve practices, a balanced implementation of the 3 types of indicators (activity, process and outcome) is strongly recommended.

Second objective

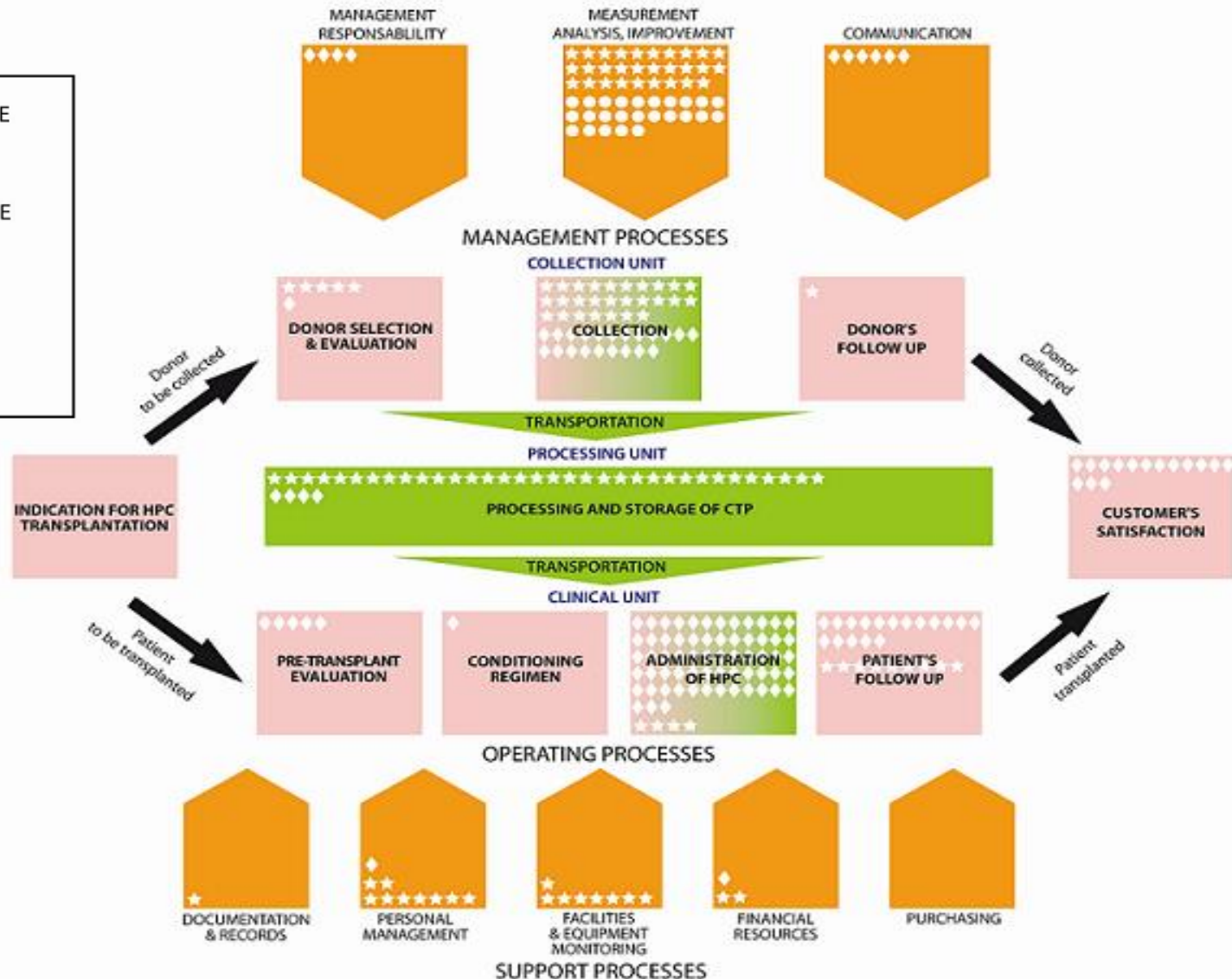
- To understand whether a method was used to implement the indicators and to assess if all the HSCT processes were efficiently monitored

**Support quality improvement
and risk management**

Overview of indicators categories

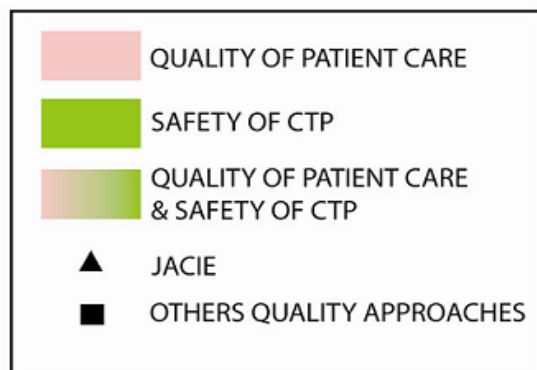
QUALITY OF PATIENT CARE
 SAFETY OF CTP
 QUALITY OF PATIENT CARE & SAFETY OF CTP

● ACTIVITY INDICATOR
 ◆ OUTCOME INDICATOR
 ★ PROCESS INDICATOR

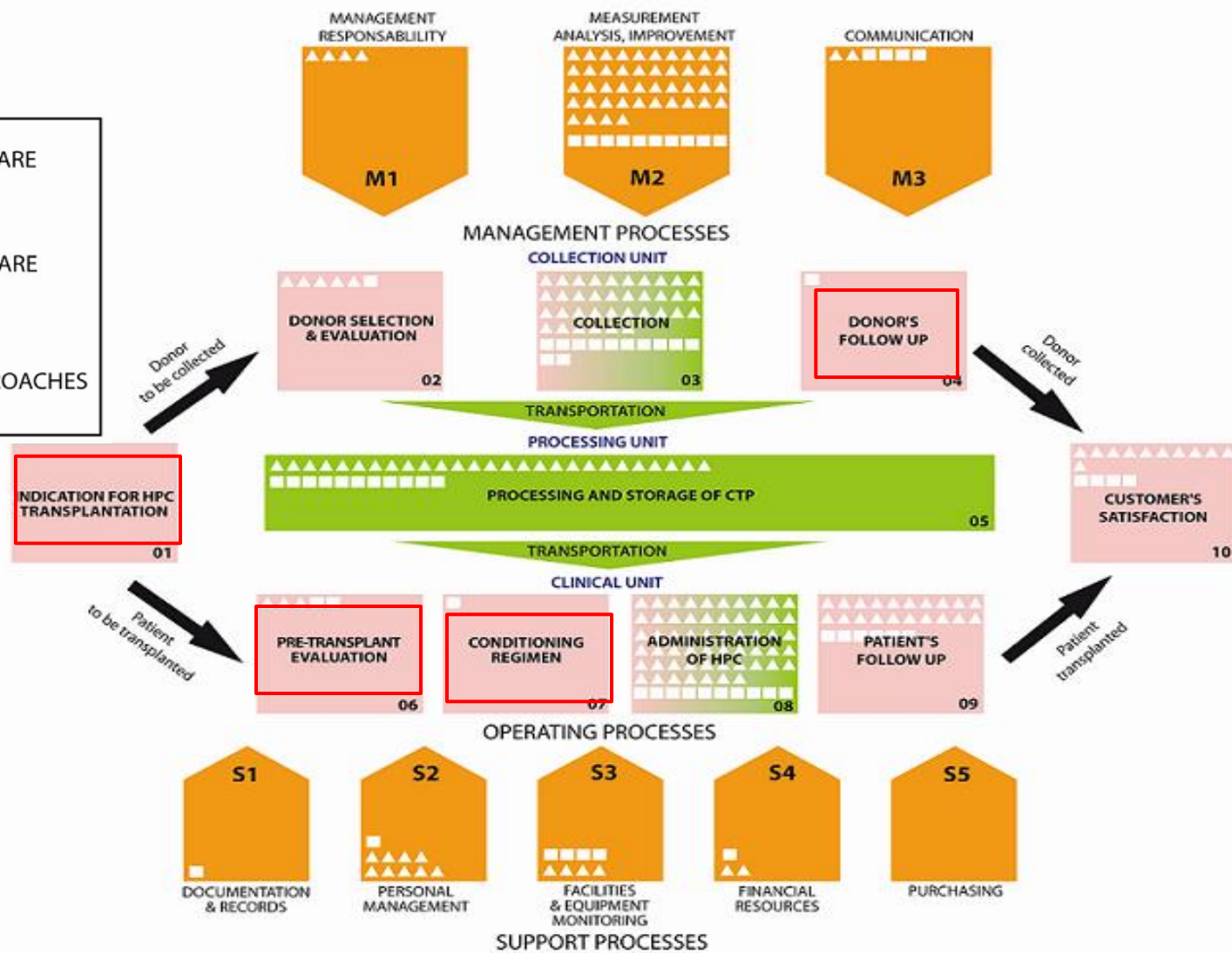


- 8.5% of activity indicators
 - 47% of outcome indicators
 - 44% of process indicators

Overview of indicators implemented for JACIE



- 18% of indicators positionned on M2 process
- 16% of indicators positionned on O3 process
- 12.5% of indicators positionned on O5 process
- 23% of indicators positionned on O8 process



Conclusion

- The mapping of indicators implemented for JACIE reveals the low level of monitoring of some critical processes contributing to the delivery of HSCT.
- The uneven distribution between the 3 types of indicators across the different processes underpins the need for improved support and better methodologies in the establishment of a quality management procedure

Further improvements

- Produce a list of relevant indicators and make it available to all the HSCT programs (mutualization)
- Use process mapping to initiate a quality risk management process based on:
 - Planned events (inspections, audits...)
 - Unplanned events (reported incidents and adverse events)

Acknowledgments

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- **JACIE Office:** Eoin Mc Grath
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- **CHU Brabois Nancy, FR:** Pr Jean François Stoltz, Dr Odette Agulles, Dr Fabienne Empereur

Thank you



Questions

