



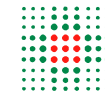
CENTRO  
REGIONALE  
SANGUE  
Emilia-Romagna



SERVIZIO SANITARIO REGIONALE  
EMILIA-ROMAGNA



CENTRO  
NAZIONALE  
SANGUE



SERVIZIO SANITARIO REGIONALE  
EMILIA-ROMAGNA  
Azienda Unità Sanitaria Locale di Bologna

Dipartimento Servizi  
UOC Servizio di Immunoematologia e Medicina Trasfusionale

# Italian Blood Donation System and Regional Blood System in Emilia Romagna

*Meeting with JRC*

*Sala delle Colonne, via Castiglione 29*

*Azienda USL di Bologna, Bologna*

*Bologna, February 19, 2018*



## BLOOD SAVE LIVES

Every second, someone in the world needs blood. In every country, surgery, trauma, severe anaemia and complications of pregnancy are among the clinical conditions that demand blood transfusion.

In countries with advanced medical, diagnostic and laboratory services, a large proportion of blood is used in sophisticated treatments requiring a high level of transfusion support, including chemotherapy, open heart surgery, organ transplantation and the management of haematological disorders such as leukaemia, thalassaemia and haemophilia.

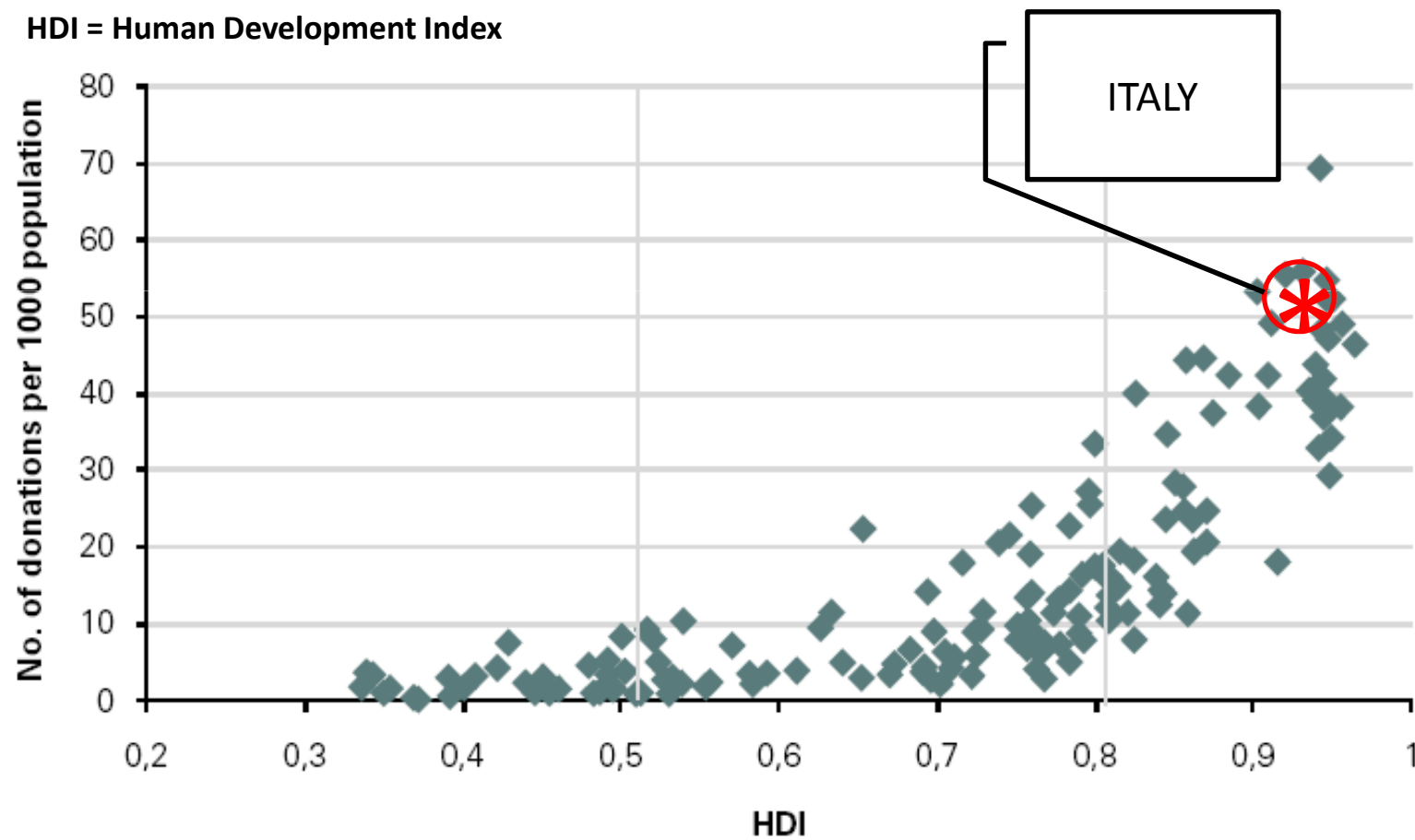
The pattern of blood usage is very different in countries where diagnostic and treatment options are more limited, with a much greater proportion of transfusions being given to women with obstetric emergencies and children suffering from severe anaemia, often resulting from malaria and malnutrition.

Whatever the degree of development of the health care system, transfusion is the only option for survival for many patients.



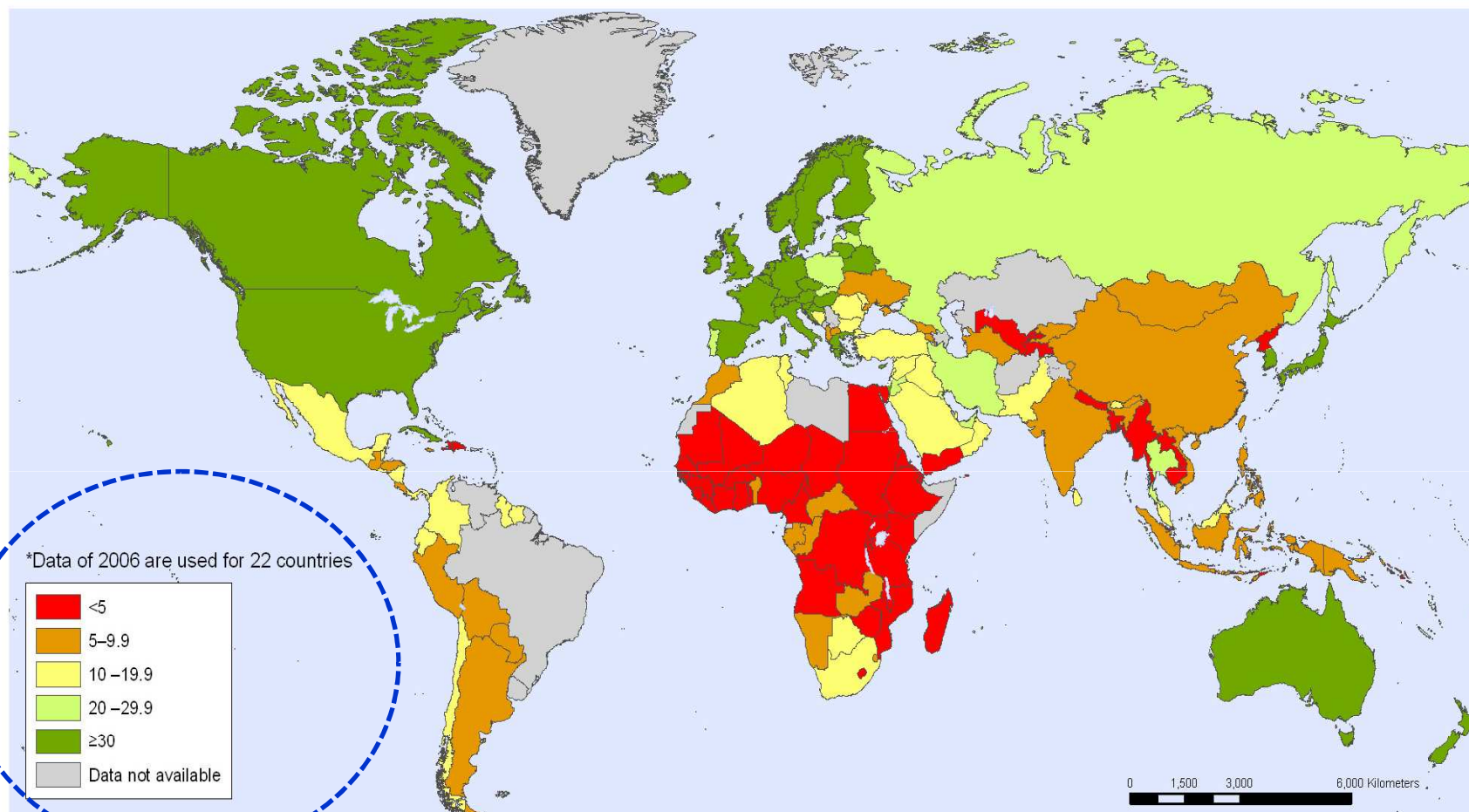
## Donations per 1000 population, by HDI

HDI = Human Development Index



Source: WHO Global Database on Blood Safety (GDBS), 2009 survey

## Blood donations per 1000 population, 2007\*



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization  
Map Production: Blood Transfusion Safety (BTS)  
World Health Organization



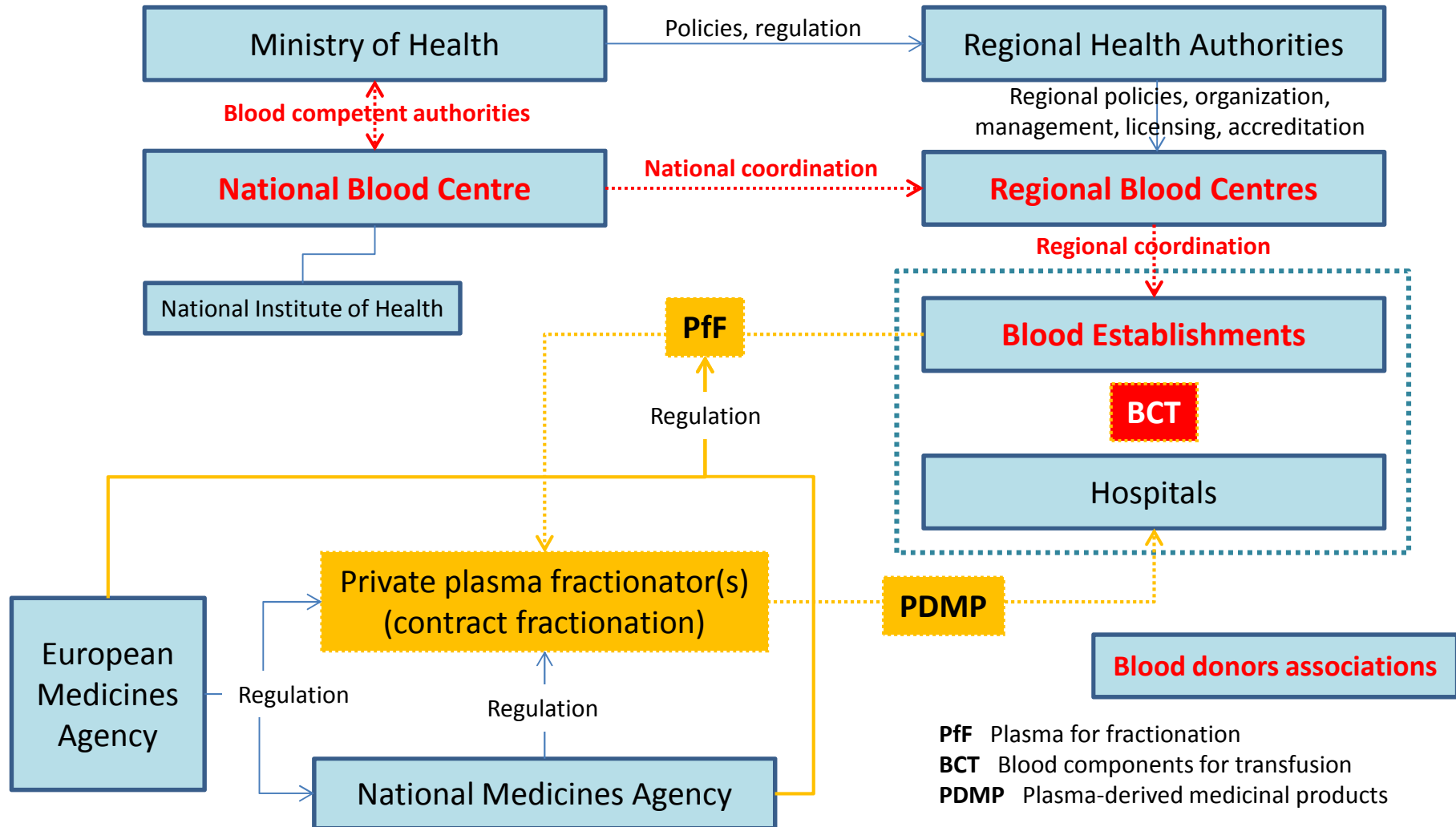
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Source: WHO Global Database on Blood Safety (GDBS), 2009 survey



**THE ITALIAN BLOOD SYSTEM, According to Law of 21 October 2005**  
*"New discipline for blood transfusion activities and national production of plasma-derived medicinal products"*

**Overview of the Italian national blood system**



**PfF** Plasma for fractionation  
**BCT** Blood components for transfusion  
**PDMP** Plasma-derived medicinal products

# ITALIAN BLOOD SYSTEM

## Founding principles - 1

- ✓ Voluntary, anonymous, non-remunerated blood donation is recognized as an essential activity for the National Health Service.
- ✓ The social value and the strategic role of qualified associations and federations of voluntary blood donors are institutionally recognized.

## ITALIAN BLOOD SYSTEM

### Founding principles - 2

- ✓ National self sufficiency of blood and blood products (including plasma-derived medicinal products) is recognized as a primary need for the Country.
- ✓ Blood transfusion and transfusion medicine (TM) activities are recognized as “*essential healthcare services*”, to be delivered equitably, impartially and free of charge to any citizen needing them.

# ITALIAN BLOOD SYSTEM

## Founding principles - 3

- ✓ Quality and safety of blood and blood products and of TM activities are primary goals of the blood system, to be pursued complying with the pertinent national and European regulatory provisions.
- ✓ Basic blood activities can be performed only by public blood transfusion centres (BTCs) (blood collection can be outsourced to qualified blood donor associations upon specific licensing and accreditation, under the technical supervision of public BTCs).



# ITALIAN BLOOD SYSTEM

## Founding principles - 4

- ✓ The vein-to-vein transfusion process, from blood donor selection to haemovigilance, can be managed and carried out only by specifically qualified professionals, according to defined licensing and accreditation requirements.
- ✓ Appropriateness of the management and utilization of blood and blood products is recognized as a primary goal, aimed at best transfusion practices and at contributing to local and national self sufficiency.

# The Italian Blood System: strategic goals – 1

Law 21 October 2005, n. 219

- **Self-sufficiency** of blood and blood products, including plasma-derived medicinal products (PDMPs) is a national *supra-regional* strategic goal, i.e. independent of the regionalized organization of health-care delivery.
- **Promotion and continuous development** of voluntary non-remunerated (VNR), regular/repeat blood donation, and VNR donor retention.
- High **quality and safety** of blood components, transfusion medicine activities and PDMPs.

# The Italian Blood System: strategic goals – 2

Law 21 October 2005, n. 219

- **Compliance with European regulatory provisions** on blood and blood products (Italy has transposed and fully applies all the pertinent EU directives).
- **Appropriate management and clinical utilization** of blood resources [including PDMPs and *patient blood management* (PBM) programmes)].
- Continuous **development of transfusion medicine**, aligned with scientific progress.
- Blood system's accountability, effectiveness and sustainability.

## **Blood & blood product self-sufficiency in Italy – 3**

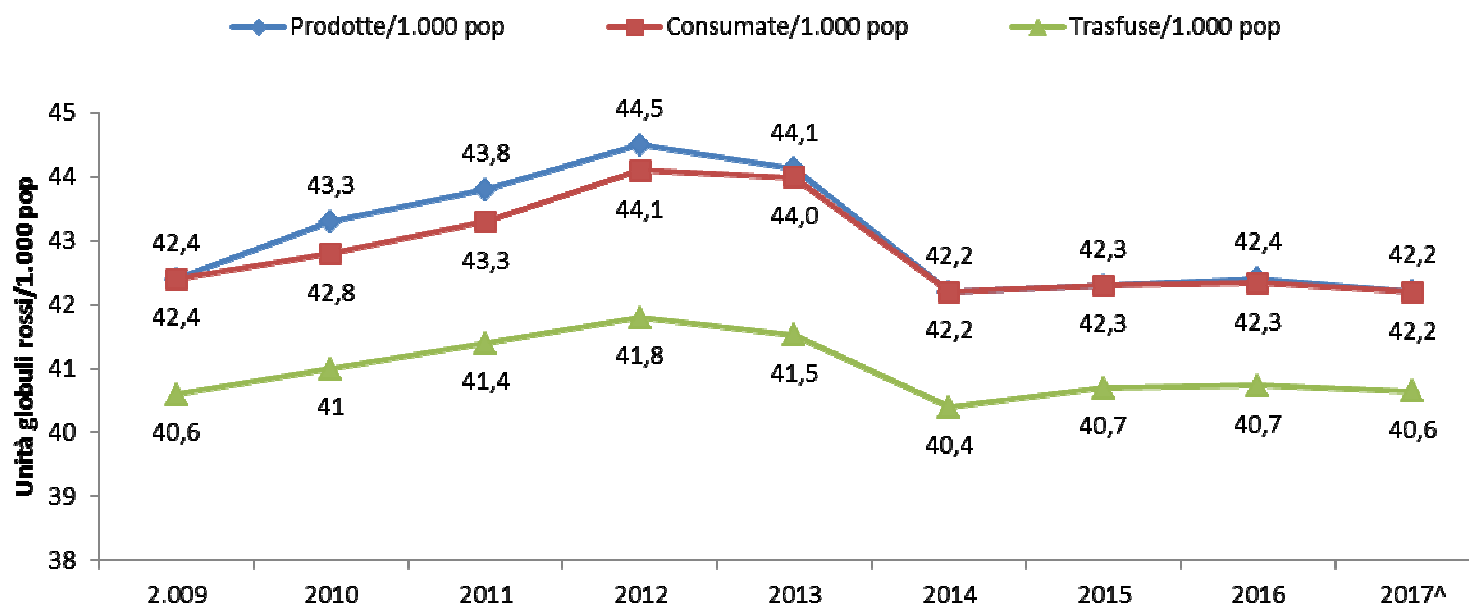
### ***Blood components for transfusion***

- Nineteen out of 21 regions are fully self-sufficient in **Red Blood Cells (RBC)** for transfusion.
- The two non self-sufficient regions (11 million pop) are supported by additional RBC production (~ 70,000 RBC units/year) annually planned by self-sufficient regions.
- All regions are basically self-sufficient for all other blood components for transfusion.

# Programma autosufficienza 2018

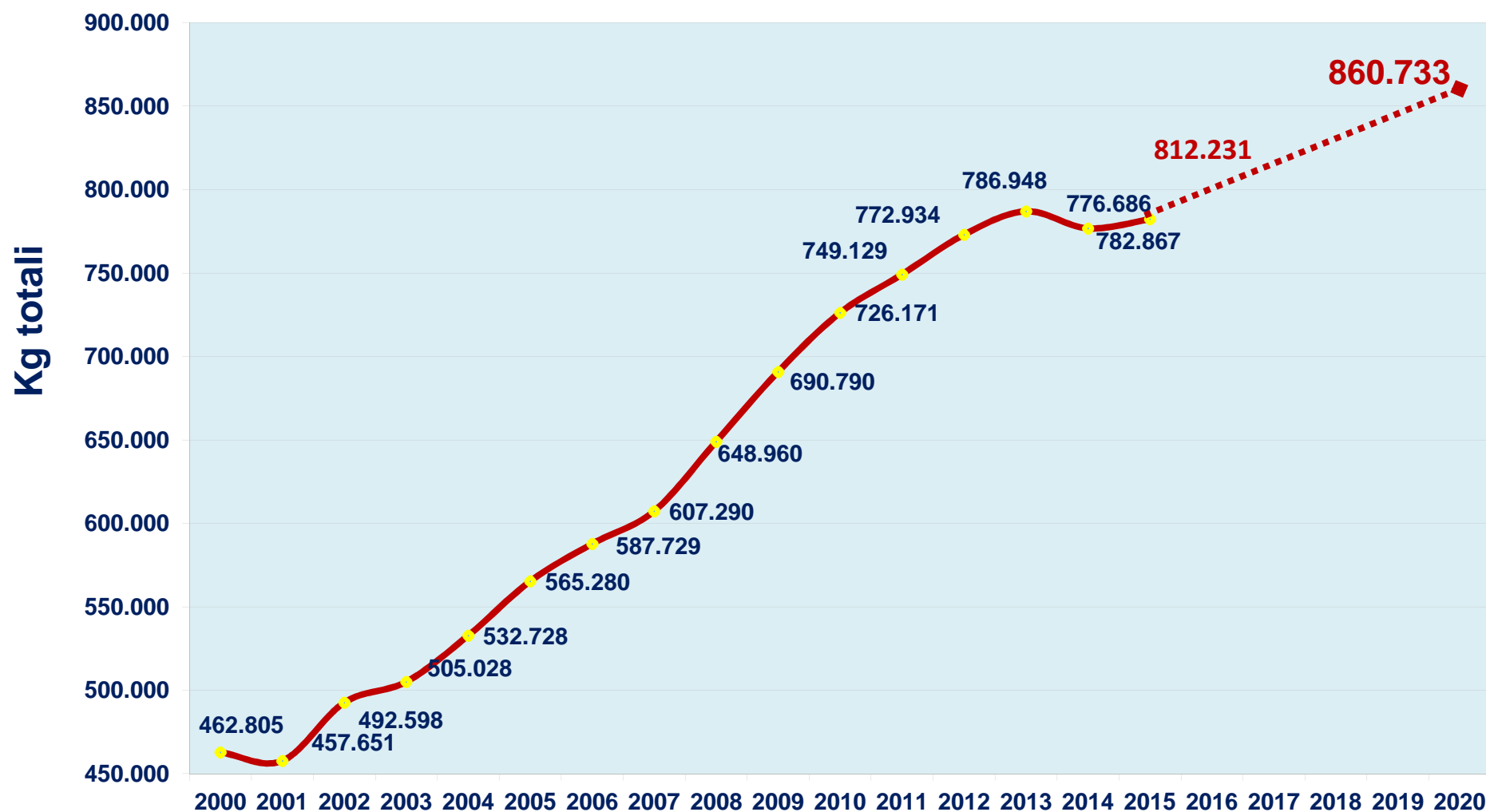
## globuli rossi prodotti, consumati e trasfusi /1.000 pop 2009-2017\*

Fig. 1 - Unità di globuli rossi prodotte, consumate, trasfuse 1.000/pop 2009-2017\*



\*dati 3 trimestri 2017 + 4° trimestre 2016

# Plasma per frazionamento industriale 2000 - 2015 e obiettivo 2020 (2021) (Kg totali)



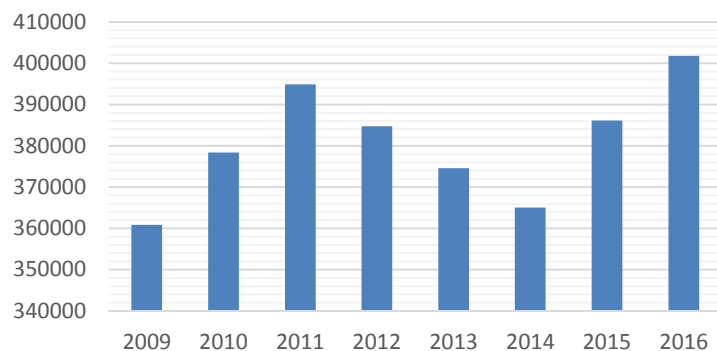
Data source:

Official Journal of The Italian Republic n. 9, January 12<sup>th</sup>, 2017. Ministerial Decree December 2<sup>nd</sup>, 2015

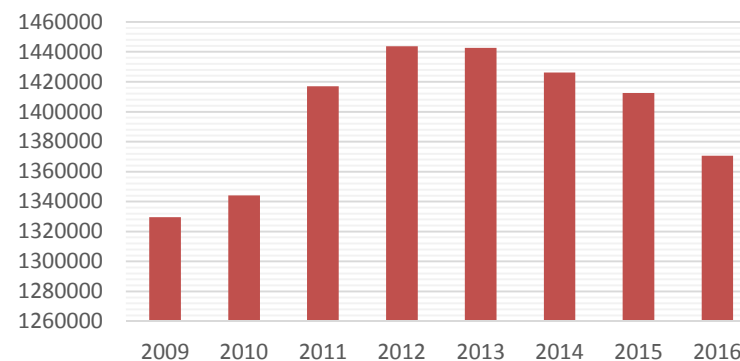
## Donatori, 2009-2015

Tipologia Donatori	2009	2010	2011	2012	2013	2014	2015	2016
<b>Donatori Nuovi</b>	360.835	378.390 (4.87%)	394.911 (4.37%)	384710 (-2.58%)	374.576 (-2.63%)	365.037 (-2.55%)	386.125 (5.78%)	401.748 (4.05%)
<b>Donatori Periodici</b>	1.329.591	1.344.113 (1.09%)	1.417.036 (5.43%)	1443770 (1.89%)	1.442.715 (-0.07%)	1.426.187 (-1.15%)	1.412.585 (-0.95%)	1.370.556 (-2.98%)
<b>Donatori Totali</b>	1.690.426	1.722.503 (1.90%)	1.727.483 (0.29%)	1.739.712 (0.71%)	1.734.669 (-0.29%)	1.712.456 (-1.28%)	1.717.520 (0.30%)	1.687.627 (-1.74%)

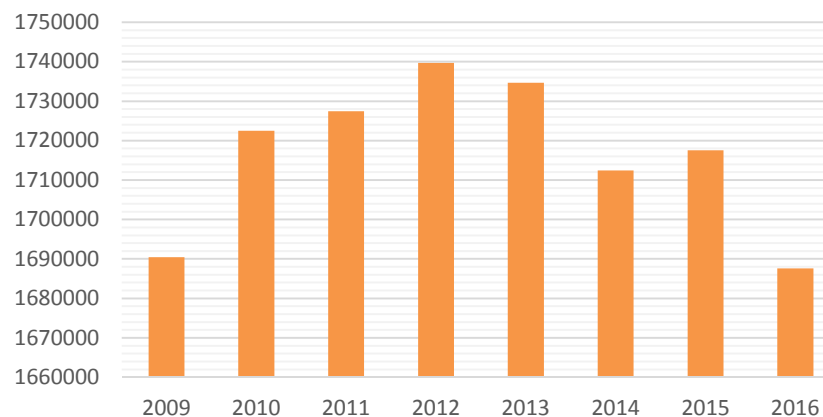
### Donatori Nuovi



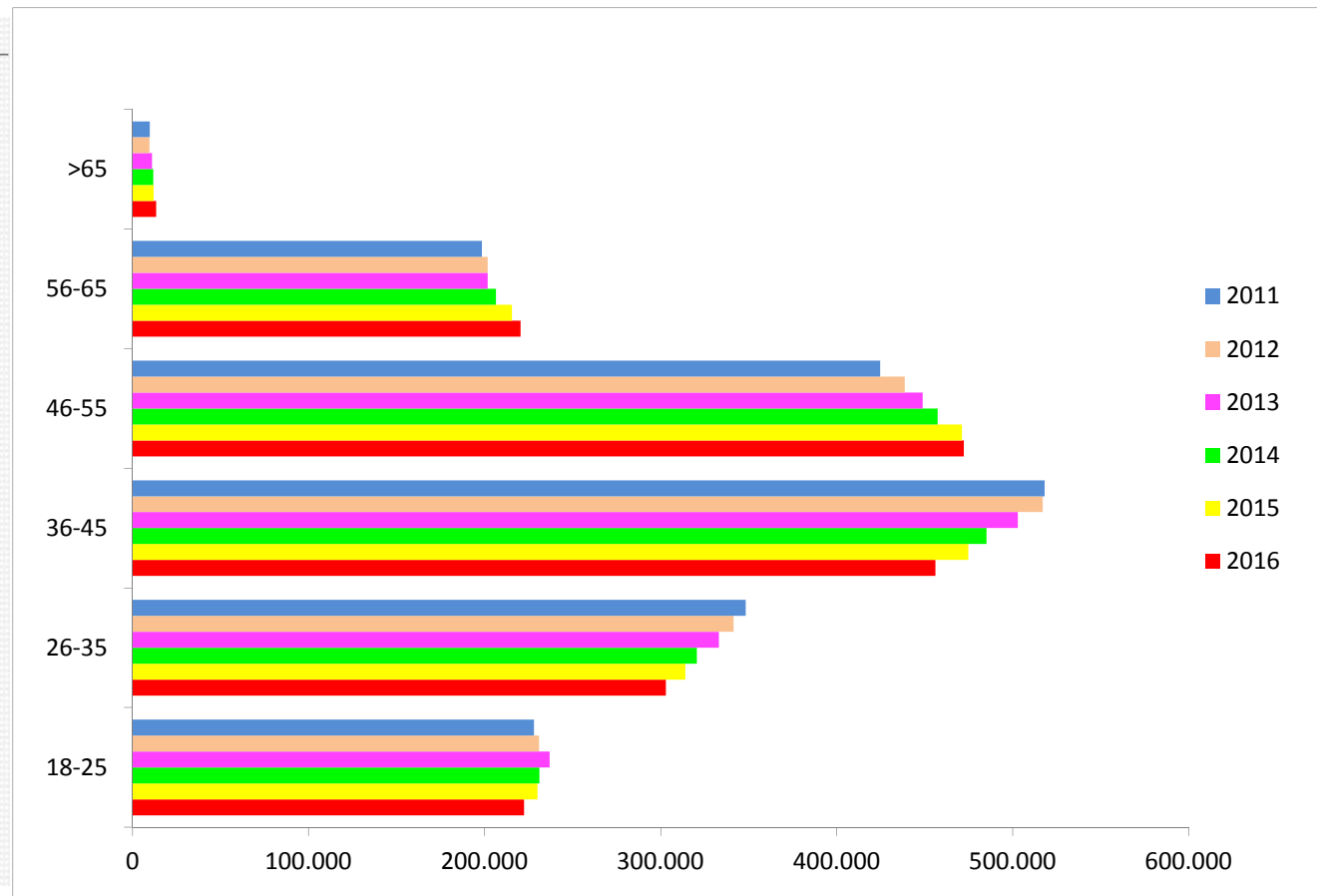
### Donatori Periodici



### Donatori Totali

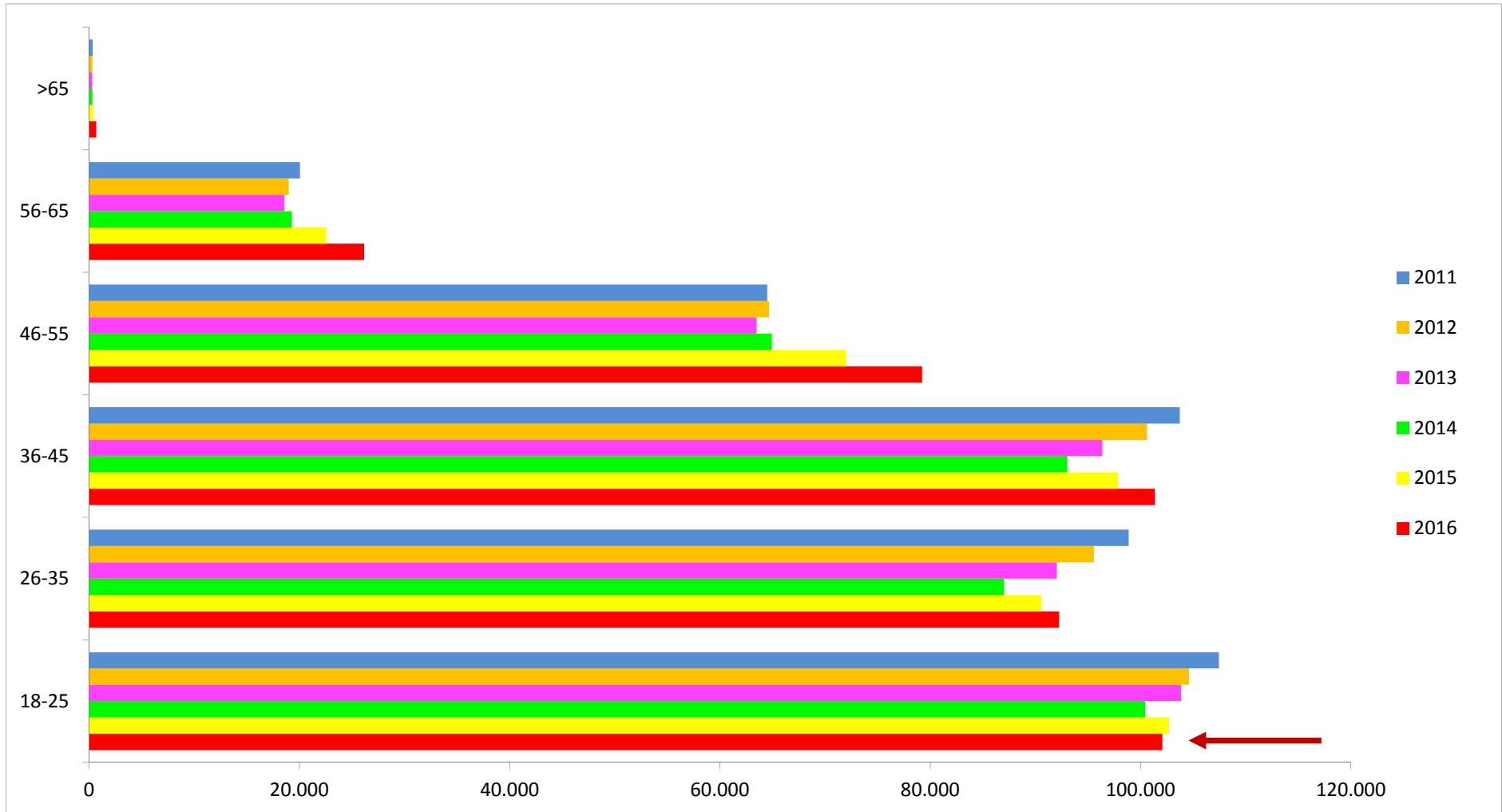


# Donatori totali per classi di età: 2011-2016



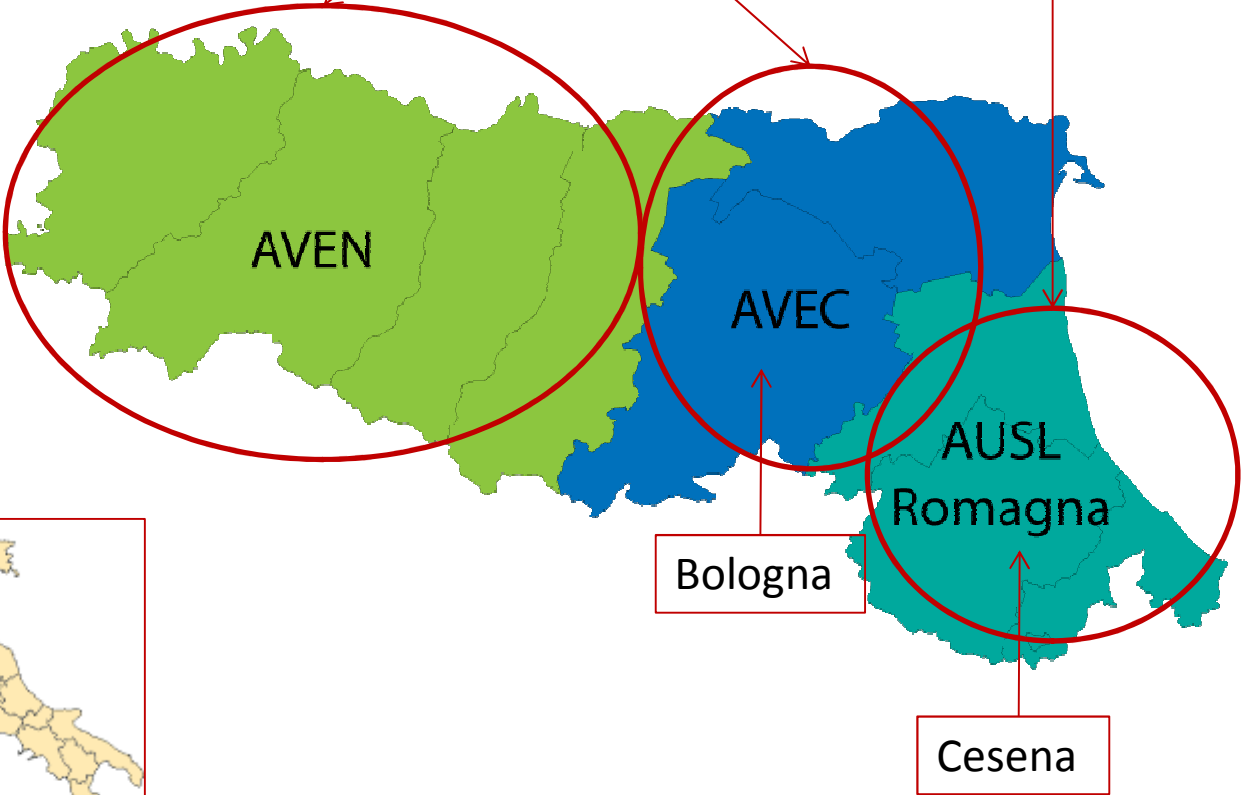


# Donatori nuovi per classi di età: 2011-2016



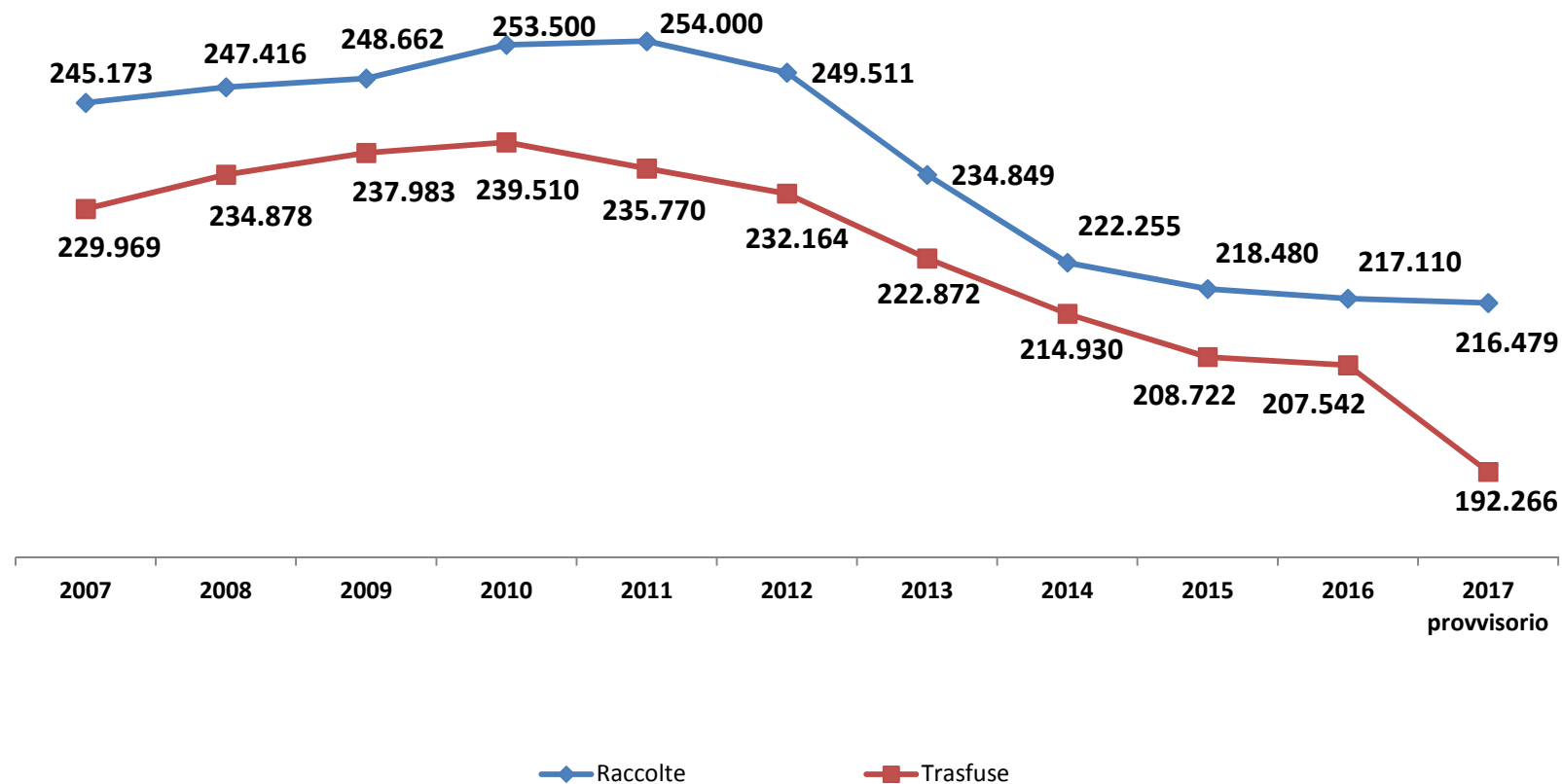
REGIONE EMILIA  
ROMAGNA

CENTRO REGIONALE  
SANGUE



# Unità raccolte e trasfuse in Regione Emilia Romagna

## Anni 2007 – 2017 *(dato provvisorio)*



# Emazie prodotte ed eliminate nei due Poli di Produzione ed in Area Vasta Nord (Dato 2017 non consolidato)

## Produzione - Polo di Lavorazione Servizio Metropolitan di Bologna

Emazie prodotte 2017	<b>67.547</b>
Emazie eliminate 2017 AVEC	<b>1.275 (1,8%)</b>



## Produzione - Polo di Lavorazione Pievesestina/ Cesena

Emazie prodotte 2017	<b>54.542</b>
Emazie eliminate 2017 AVR	<b>789 (1.4%)</b>



## Produzione – Area Vasta Emilia Nord

Emazie prodotte 2017	<b>90.086</b>
Emazie eliminate 2017 AVEN	<b>2.456 (2.7%)</b>



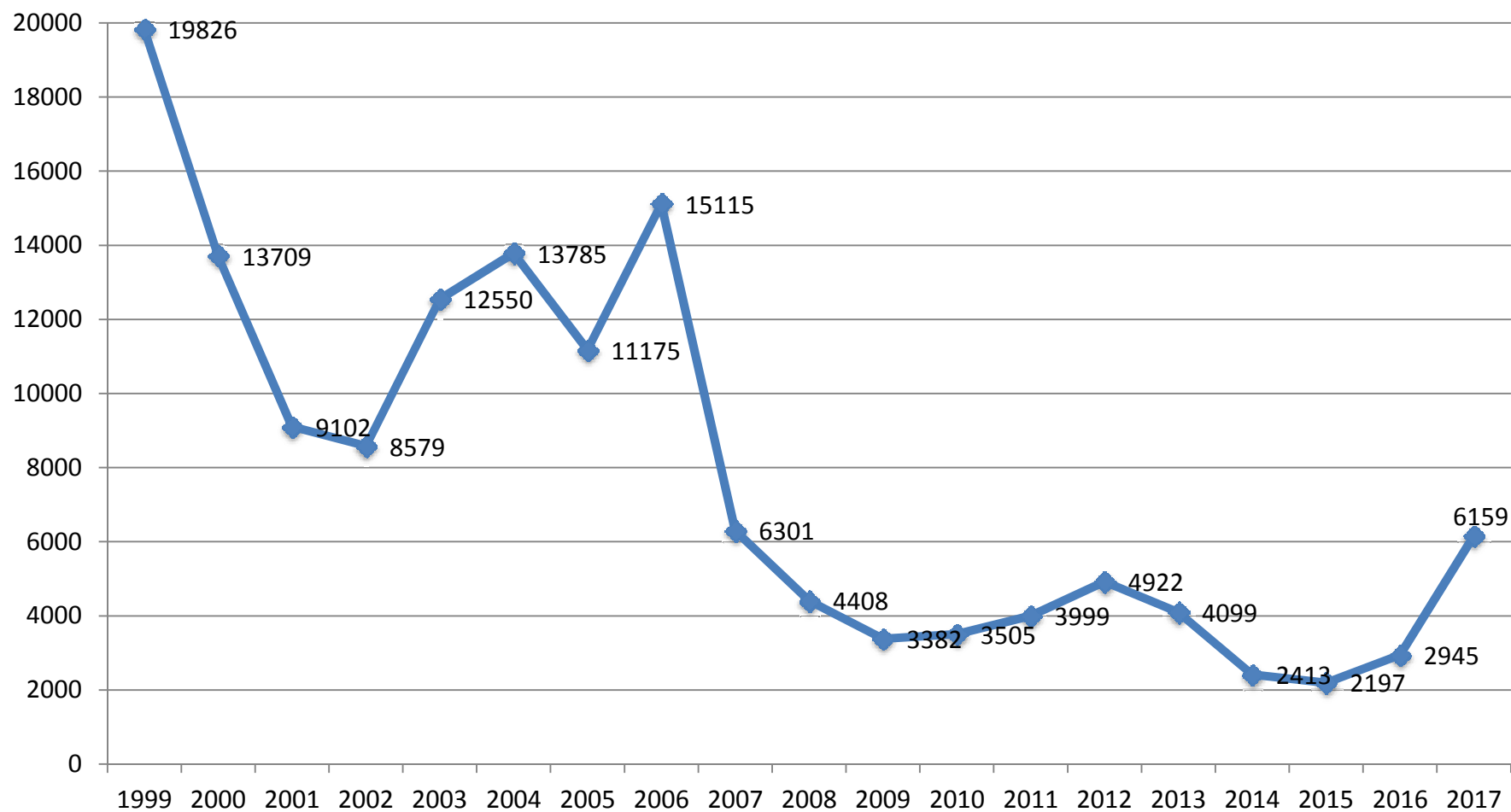
Standard regionale unità eliminate: ≤ a 3%

# Unità di emazie raccolte e trasfuse per Aree Vaste Anni 2016, 2017 *(dato provvisorio)* e variazione percentuale

	Raccolte			Trasfuse		
	2017	2016	Δ	2017	2016	Δ
Piacenza	13.754	13.455	2%	9.998	11.311	-12%
Parma	23.355	24.758	-6%	19.788	21.553	-8%
Reggio E.	20.522	19.899	3%	14.114	16.017	-12%
Modena	34.544	33.670	3%	27.513	29.523	-7%
<b>AVEN</b>	<b>92.175</b>	<b>91.782</b>	<b>0%</b>	<b>71.413</b>	<b>78.404</b>	<b>-9%</b>
Bo IOR				4.372	5.295	-17%
Bo S.Orsola	6.593	7.067	-7%	24.451	26.112	-6%
Bo AUSL	40.689	40.982	-1%	20.574	24.804	-17%
Ferrara	21.732	21.736	0%	23.398	23.922	-2%
<b>AVEC</b>	<b>69.014</b>	<b>69.785</b>	<b>-1%</b>	<b>72.795</b>	<b>80.133</b>	<b>-9%</b>
Forli	7.686	7.685	0%	6.001	6.581	-9%
Cesena	10.620	10.454	2%	7.526	7.320	3%
Rimini	15.489	15.566	0%	13.669	13.487	1%
Ravenna	21.495	21.838	-2%	20.862	21.617	-3%
<b>AVR</b>	<b>55.290</b>	<b>55.543</b>	<b>0%</b>	<b>48.058</b>	<b>49.005</b>	<b>-2%</b>
<b>TOTALE</b>	<b>216.479</b>	<b>217.110</b>	<b>0%</b>	<b>192.266</b>	<b>207.542</b>	<b>-7%</b>

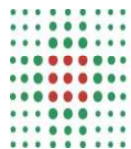
## Dati di attività Regione Emilia Romagna: Unità cedute extraregione 2017

### unità cedute extra regione





Descrizione Anno 2016	18-25		26-35		36-45		46-55		56-65		over 65		Totale		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Totale
Aspiranti donatori	4.224	4.941	3.204	2.870	3.096	2.572	1.891	1.693	586	381	49	24	<b>13.050</b>	<b>12.481</b>	<b>25.531</b>
Donatori alla prima donazione differita	2.647	2.877	2.225	1.755	2.238	1.601	1.478	1.132	401	261	13	6	<b>9.002</b>	<b>7.632</b>	<b>16.634</b>
Donatori alla prima donazione non differita	49	45	90	68	124	80	116	59	40	24	8	5	<b>427</b>	<b>281</b>	<b>708</b>
<b>Totale nuovi donatori</b>	<b>2.696</b>	<b>2.922</b>	<b>2.315</b>	<b>1.823</b>	<b>2.362</b>	<b>1.681</b>	<b>1.594</b>	<b>1.191</b>	<b>441</b>	<b>285</b>	<b>21</b>	<b>11</b>	<b>9.429</b>	<b>7.913</b>	<b>17.342</b>
Donatori periodici	7.337	5.888	13.417	5.937	25.868	8.886	28.249	9.719	14.115	5.394	1.322	386	<b>90.308</b>	<b>36.210</b>	<b>126.518</b>
<b>Totale Donatori</b>	<b>8.987</b>	<b>8.093</b>	<b>14.829</b>	<b>7.362</b>	<b>27.211</b>	<b>10.103</b>	<b>29.146</b>	<b>10.557</b>	<b>14.373</b>	<b>5.585</b>	<b>1.336</b>	<b>390</b>	<b>95.882</b>	<b>42.090</b>	<b>137.972</b>

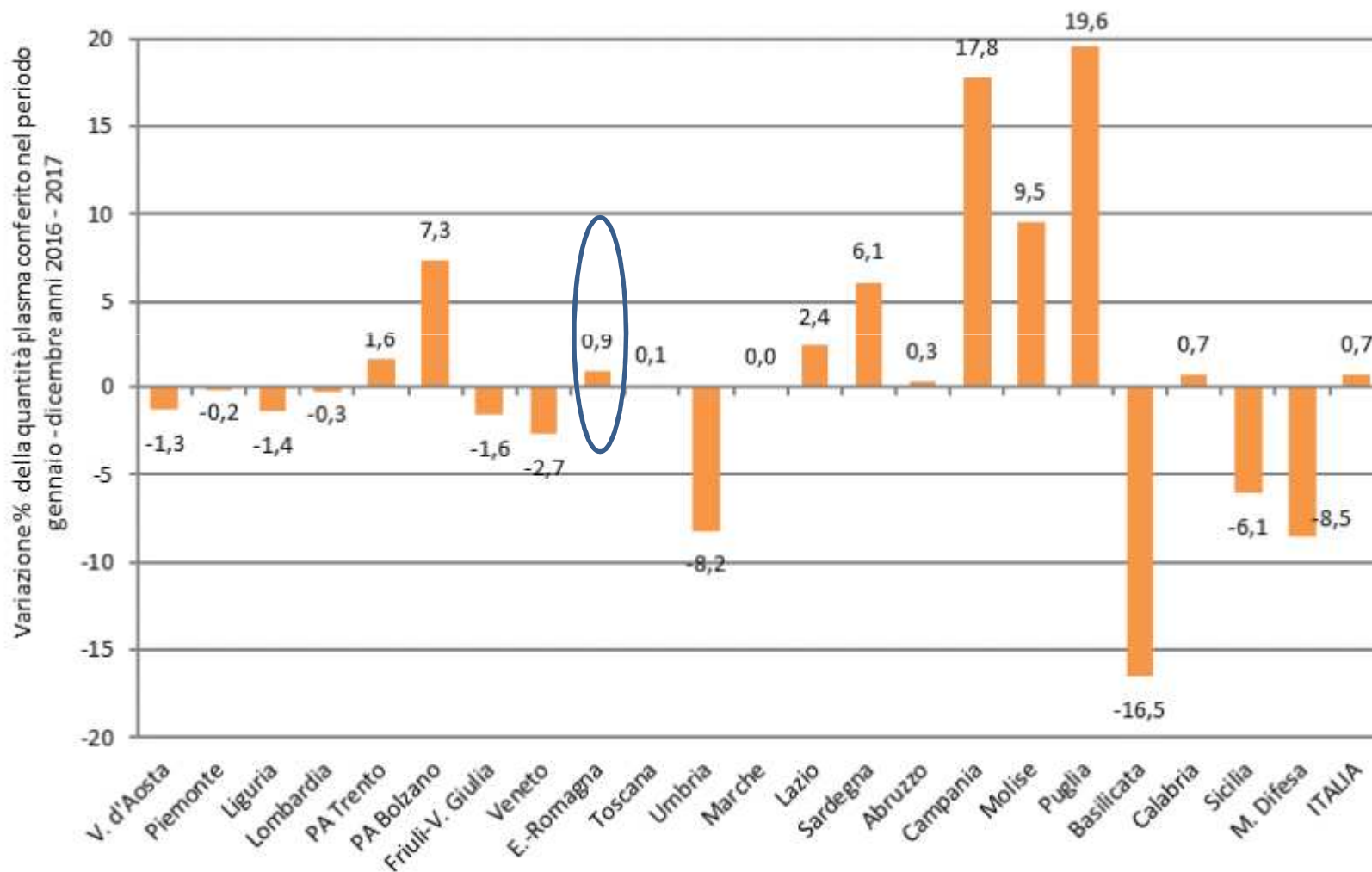


	DONATORI 2016			DONATORI 2015		
	M	F	Totale	M	F	Totale
Aspiranti donatori	13.050	12.481	25.531	11.320	10.633	21.953
Donatori alla prima donazione differita	9.002	7.632	16.634	7.922	6.307	14.229
Donatori alla prima donazione non differita	427	281	708	569	394	963
<b>Totale nuovi donatori</b>	<b>9.429</b>	<b>7.913</b>	<b>17.342</b>	<b>8.491</b>	<b>6.701</b>	<b>15.192</b>
Donatori periodici	90.308	36.210	126.518	90.846	36.098	126.944
<b>Totale Donatori</b>	<b>95.882</b>	<b>42.090</b>	<b>137.972</b>	<b>95.936</b>	<b>40.912</b>	<b>136.848</b>
Donatori di aferesi	15.017	11.965	26.982	15.068	11.915	26.983
<i>Donatori di sola aferesi</i>	6.351	8.137	14.488	6.463	8.107	14.570

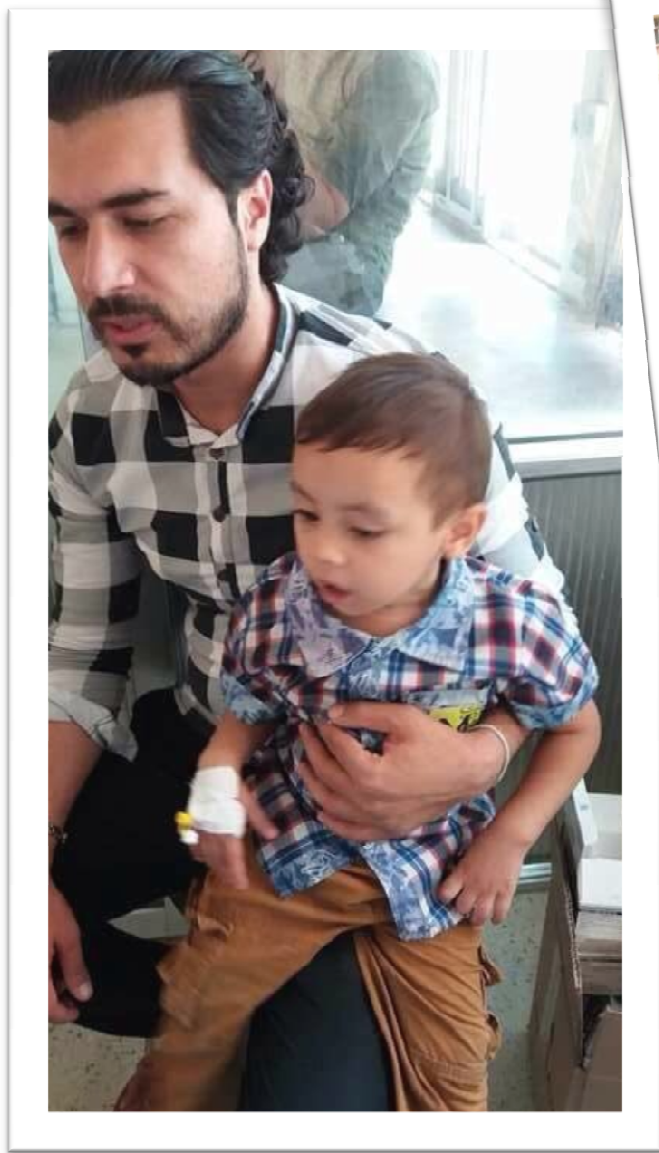


## Variazione percentuale della quantità di plasma conferito dalle Regioni e PPAA alle aziende Convenzionate nel periodo gennaio – dicembre, anni 2016 –2017

*Dati CNS*



# Ospedale "Indira Ghandi" di Kabul



*Grazie per l'attenzione!*



*Vanda Randi*