

XIII Nefrološka škola Udruženja za
dijalizu, nefrologiju i transplantaciju

NEFROLOGIJA 2018

Tešanj, 06.10.2018.



Kako poboljšati stopu darivanja organa?

Prof dr. sc. Željko Župan, dr. med.

NEFROLOGIJA 2018

Tešanj, 18. 10. 2018.



**GLOBAL ACTIVITY IN ORGAN TRANSPLANTATION
2015 ESTIMATES**

Kidney Transplants	Liver Transplants	Heart Transplants	Lung Transplants	Pancreas Transplants	Small Bowel Transplants
84347 41.8% (LD)	27759 21.0% (LD)	7023	5046	2299	196

- ~ 125 000 transplantacija solidnih organa godišnje
 - 31812 od umrlih darivatelja organa (25451 DBD + 5188/17% DCD)
 - ≤ 10% globalnih potreba
 - nedostatak organa vodi u smrt

"Bring back hope to the patients on the waiting list"

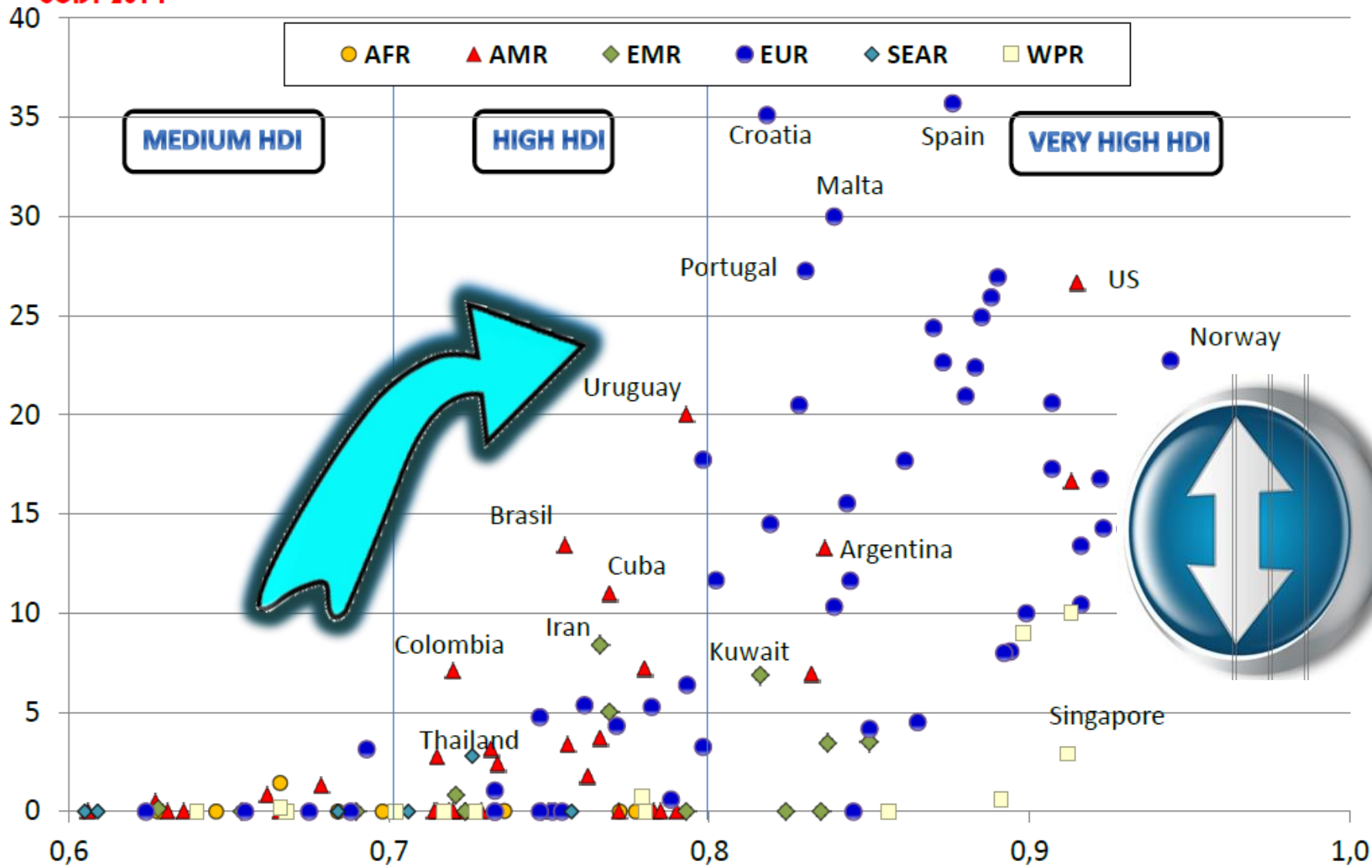
Council of Europe 2017

Each day, 18 European (BiH.....?) citizens die whilst waiting for a suitable organ transplant, that's almost 6,800 people on a yearly basis*

** 6702 deaths on the waiting list in 2015, Council of Europe data 2017*

Deceased donors per million population vs Human Development Index


GODT 2014

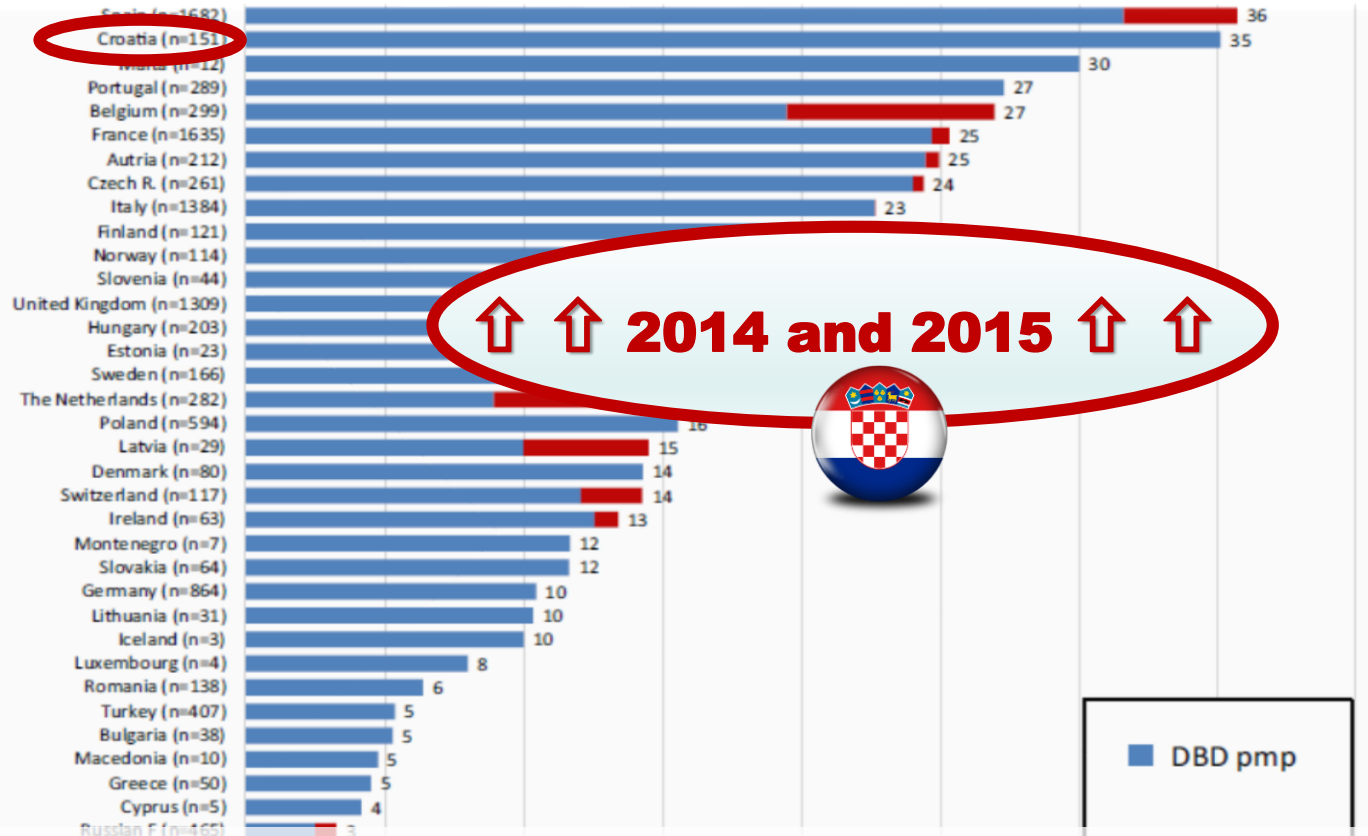


Organ donation in adults: a critical care perspective

Intensive Care Med (2016) 42:305–315

REVIEW

Giuseppe Citerio 
 Marcelo Cypel
 Geoff J. Dobb
 Beatriz Dominguez-Gil
 Jennifer A. Frontera
 David M. Greer
 Alex R. Manara
 Sam D. Shemie
 Martin Smith
 Franco Valenza
 Eelco F. M. Wijdicks



↑ ↑ 2014 and 2015 ↑ ↑



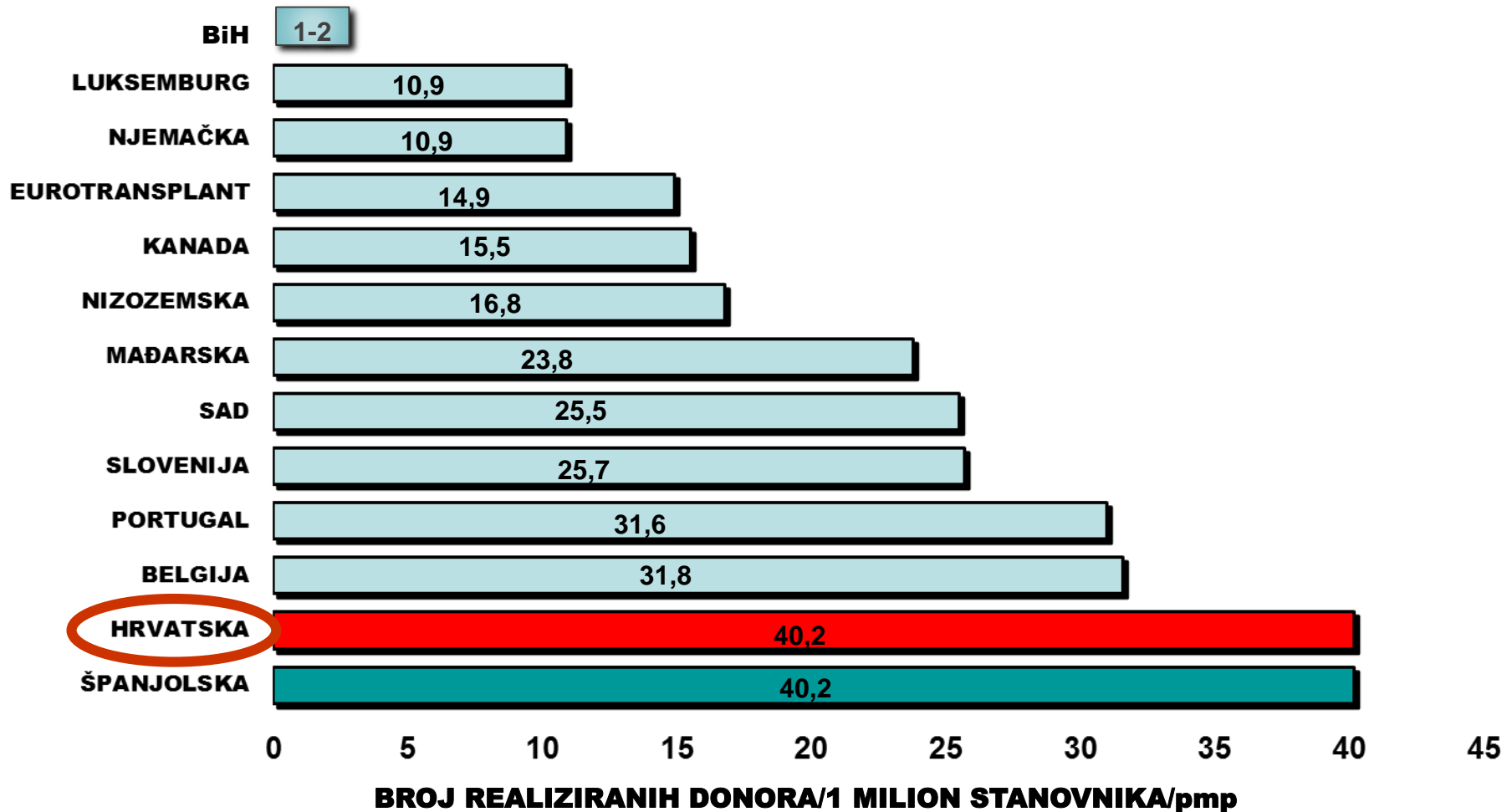
World Health Assembly:

... with special attention to maximizing donation from deceased donors; 75 country have DDPs

The Madrid Resolution - Third WHO Global Consultation on Organ Donation and Transplantation (2010):

...to achieve self-sufficiency in organ donation and transplantation (>20 donors pmp)

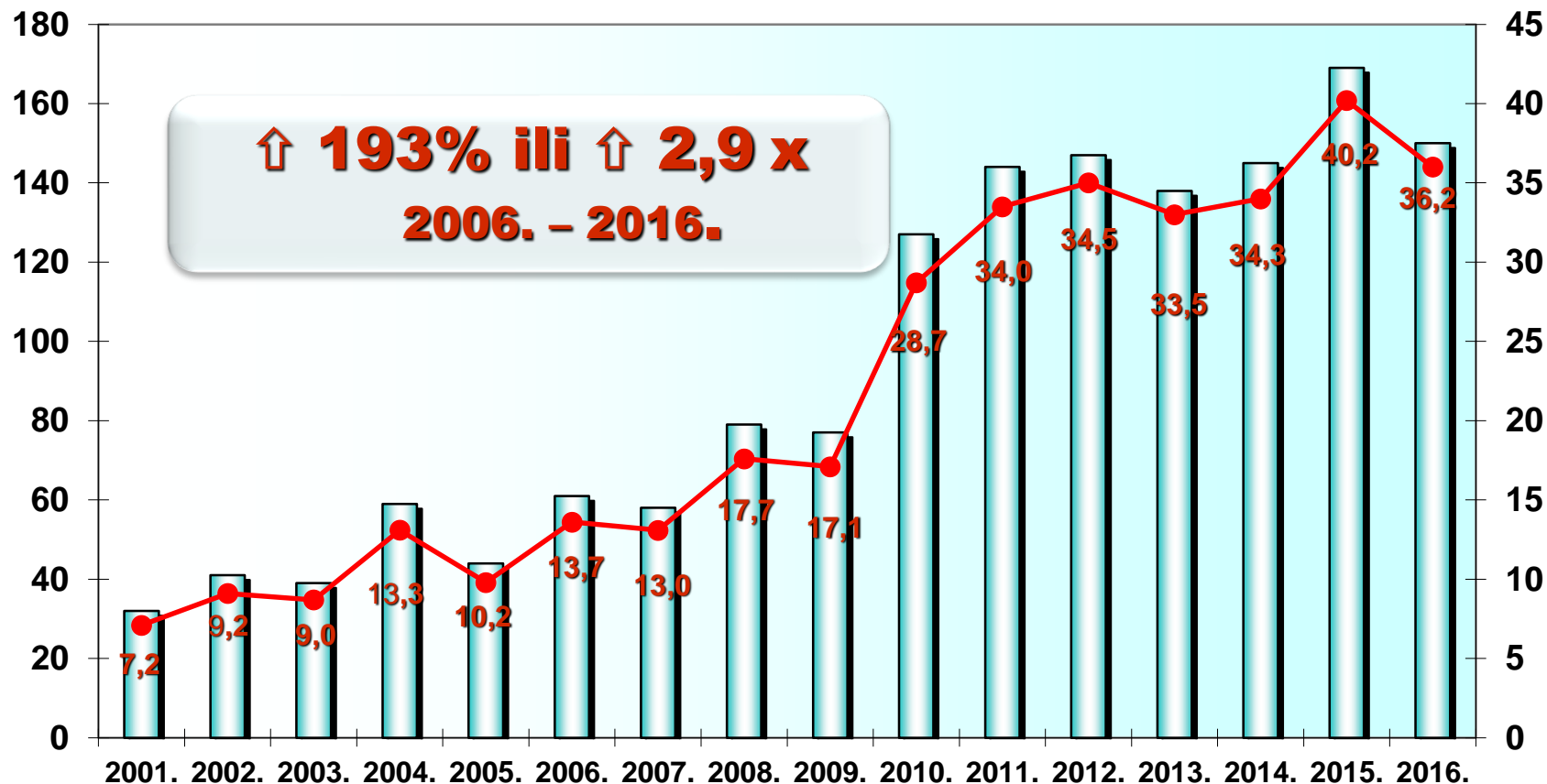
STOPA AKTUALNIH UMRLIH DARIVATELJA ORGANA U SVIJETU 2015.



STOPA DARIVANJA ORGANA U RH

REALIZIRANI
DONORI

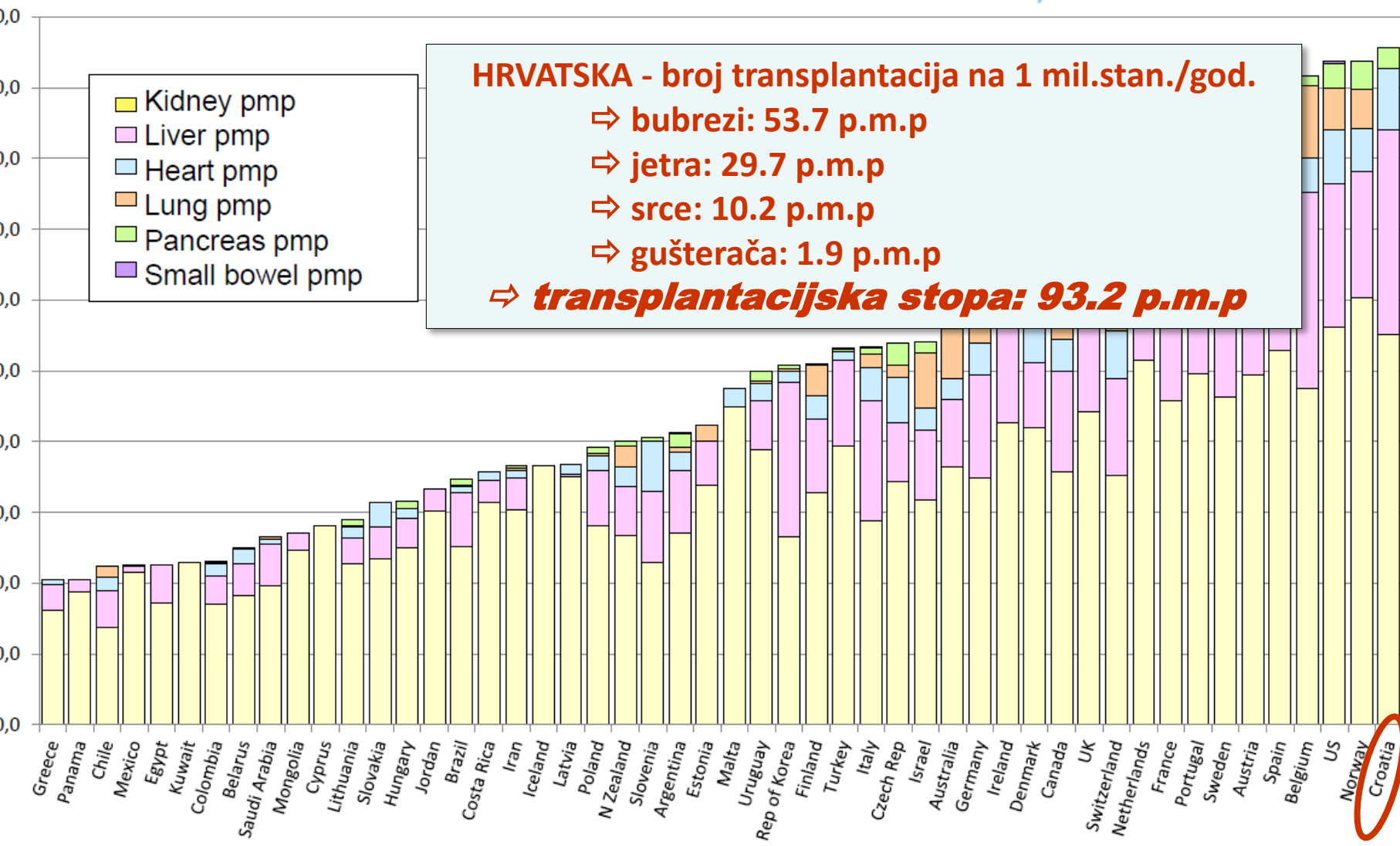
STOPA DARIVANJA
na 1 mil. stanovnika/pmp

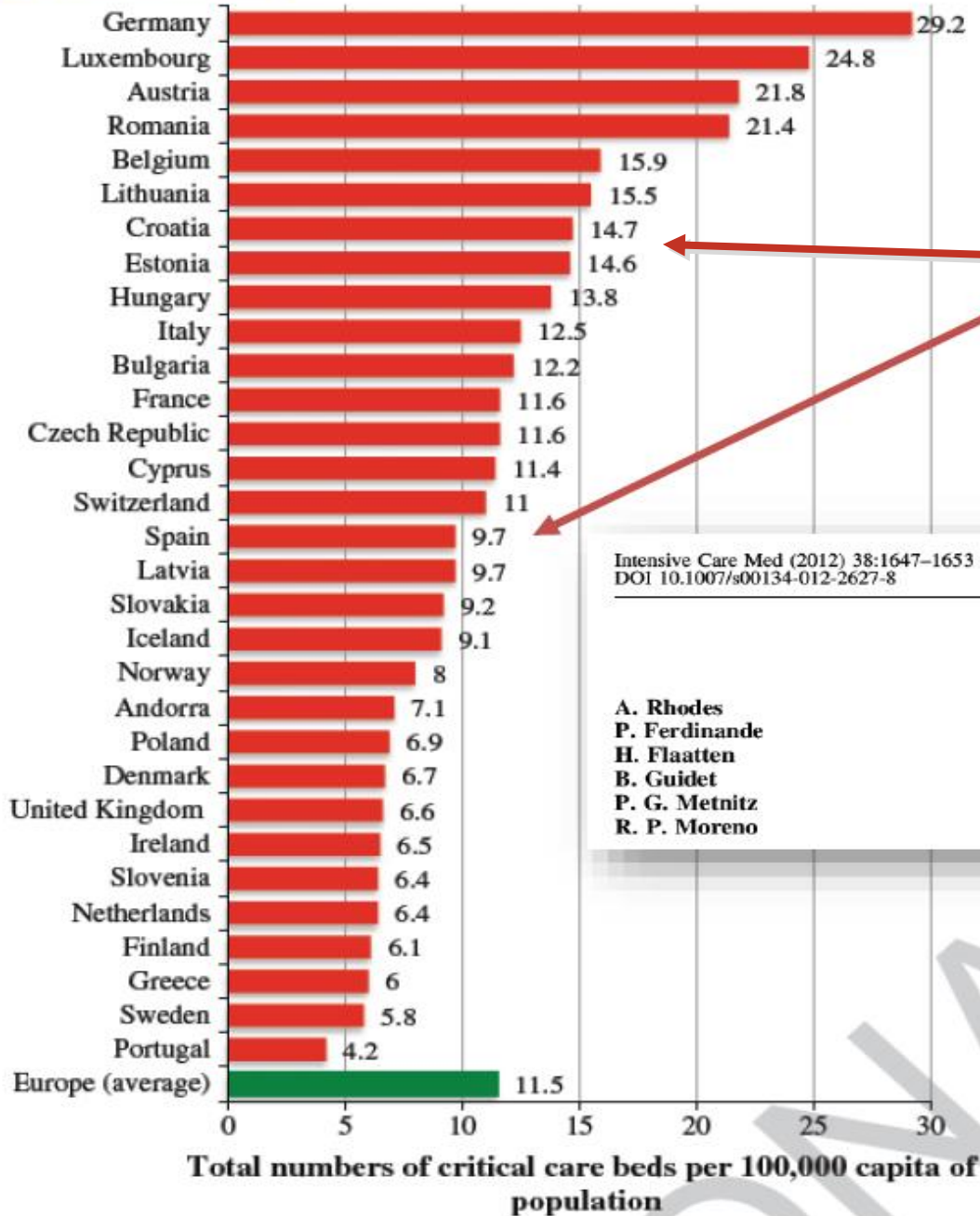


Podatci Ministarstva zdravlja RH, siječanj 2017. godine

Eurotransplant Annual Report, January, 2017

Transplanted Organs per Million Population 50 Most Active Countries Globally





WHY?

IS IT BECAUSE OF THE NUMBER OF ICU BEDS?

Intensive Care Med (2012) 38:1647-1653
DOI 10.1007/s00134-012-2627-8

ORIGINAL

A. Rhodes
P. Ferdinande
H. Flaatten
B. Guidet
P. G. Metnitz
R. P. Moreno

The variability of critical care bed numbers in Europe



WOULD YOU DONATE YOUR ORGANS AFTER DEATH?



Special Eurobarometer



Europeans and organ donation

Fieldwork October - November 2006

Publication May 2007

Report

Country Results

	SE	81%
	MT	75%
	FI	73%
	BE	71%
	DK	69%
	NL	69%
	FR	67%
	IE	67%
	PT	66%
	UK	63%
	SI	63%
	LU	62%
	EE	58%
	ES	57%
	CY	57%
	EU25	56%
	EL	53%
	HU	51%
	PL	51%
	SK	50%
	LT	48%
	DE	46%
	IT	45%
	CZ	44%
	AT	33%
	LV	29%

WHY?



Legislative Responses to Organ Transplantation



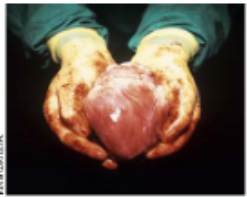
IS IT BECAUSE OF THE OPT-OUT SYSTEM?

... NOT LIKELY

WHY?

- THE FAMILIES ARE ALWAYS APPROACHED
- THEY HAVE ALWAYS THE LAST DECISION
- WE ALWAYS HAD THE SAME LAW
- GREAT VARIATIONS FROM REGION TO REGION
- NO EXAMPLE IN THE WORLD OF SUSTAINED INCREASES AFTER CHANGING THE LAW

ANALYSIS



Presumed consent is unnecessary

Spain has the highest rate of organ donation in the world, but its presumed consent legislation is dormant, say **John Fabre and colleagues**

Spain has by far the world's highest rate of organ donation from deceased donors (approximately 34-35 per million of population, which is more than twice that of the UK (approximately 15 per million of population).⁴ The vast majority of Spain's deceased donors are heart-beating donors diagnosed as brain stem dead in intensive care units (32 per million of population). Spain has a low rate for both live organ donation (five per million of population) and for non heart-beating donation (also known as donation after cardiac death, or DCD) (2.3 per million of population, entirely from patients in whom cardiac arrest

used as a key descriptive term, and every nation's organ donation system is described as "opt-in" or "opt-out." As a consequence, many calls have been made for the introduction of presumed consent legislation in the UK,^{4,5} on the assumption that this approach will increase rates of organ donation.

In 1980 a royal decree clarified several issues regarding Spanish citizens who did not wish to become organ donors, and is crucial to understanding the situation in Spain. The decree stated that opposition to organ donation could be expressed in any way, without formal proce-

A positive attitude to organ donation on the part of those approaching families of potential donors is frequently claimed as a major benefit of presumed consent legislation,⁶ but it is easily possible without such legislation. This situation has been described in the United States,⁴ which has an excellent deceased donor rate of greater than 25 per million population without presumed consent laws.

Presumed consent and actual consent

The appeal of presumed consent legislation is based on the belief that if consent is a prob-

The Lancet Gastroenterology & Hepatology

Editorial

Increasing organ donation rates: is legislation enough?

Opt-out policies on their own are unlikely to sufficiently boost organ donation rates.

Vol 2 April 2017



„KLASIČNE MJERE“ ZA POBOLJŠANJE DONIRANJA



Usvojene izmjene
o transplantacij
Propisan tzv.
pretpostavljeni
donora

- Promjene
- Prom
-

...TU ZNAČAJNIJEG UTJECAJA NA STOPU
DARIVANJA ORGANA!!!

...dozvola&donacija

'...Never blame the population. If people donate less, it must be something we have done wrong'

Rafael Matesanz. Lancet 2016

- Na
- ODL
- LJUL
- Prog
- koji j
- Broj:

Zagreb, 10. prosinca 2004.
Predsjednik
Republike Hrvatske
Stjepan Mesić, v. r.



About the opt-out system, live transplantation and information to the public on organ donation in

Spain ... Y olé!

Article type Editor

tation, 2017



family inter
approach is r
years after the

Spanish
until ten

was presented

Donorska kartica Donorske mreže u Kantonu Sarajevo

was 24 million people. This continuous approach to the public is necessary, but not sufficient. The critical moment comes up when the possible donor appears. Then, as Sharif points out, the other elements of the Spanish system, organization and training, become determinant.

PHILOSOPHY OF THE SPANISH MODEL

REASON

**IMPROVEMENT OF
ORGAN DONATION**

=

**IMPROVEMENT OF
ORGANIZATION**



Lead author **Rafael Matesanz**, MD, PhD, who is the director of ONT, highlighted that *“good organization in the process of deceased donation and continuous adaptations of the system to changes are always the basis of successful results in organ donation”*.

Rafael Matesanz, Beatriz Domínguez-Gil, Elisabeth Coll and all. How Spain reached 40 deceased organ donors per million population.

American Journal of Transplantation; Published Online: January 9, 2017 (DOI: 10.1111/ajt.14104).

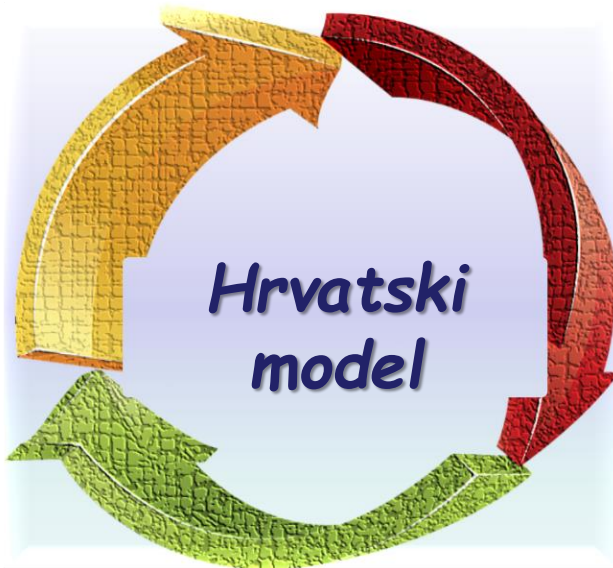
The so-called Spanish model ***relies on the designation of appropriate professionals (mostly intensive care doctors) to make donation happen when a patient dies in conditions that allow organ donation.*** These professionals are supported in their work by ONT and regional coordination offices.

The Spanish model also makes it a priority to identify donation opportunities not only ***in intensive care units, but also in emergency departments and hospital wards.***

“The most important success is that the system has made organ donation ***be routinely considered when a patient dies, regardless of the circumstances of death,***” said ONT’s Beatriz Domínguez-Gil, MD, PhD, co-author of the article highlighting the Spanish Model’s impact. “Professionals attending to these patients in our country consider that, ***in caring for patients at the end of their lives, it is their duty to systematically explore their wishes with regards to donating organs upon their death.***”

Furthermore, ***the model has considered donation after circulatory death.***

„TEMELJNI PRINCIPI“ HRVATSKOG MODELA DARIVANJA ORGANA & TRANSPLANTACIJE



**ZAVOD ZA
TRANSPLANTACIJU I
MEDICINU PRI MZ**

- Adekvatna legalna, zdravstvena i tehnička podloga
-
- Mreža donorskih koordinatora
- Specifičan stručni profil koordinatora (uglavnom intenzivisti > 90%), rade u bolnicama
- Adekvatan klinički pristup i optimalna skrb bolesnika te potencijalnih i aktualnih donora
- Centralni ured – potporna Agencija
- Kontinuirana revizija potencijalnih donora
- Velik napor u adekvatnoj edukaciji
- Puno pažnje prema javnim medijima
- Bolnička financijska nadoknada

SVE TOČKE ZAJEDNO !!!

KLJUČNI NEZAKONSKI, NEFINANCIJSKI FAKTORI?



USMJERENI, KONCENTRIRANI I
ORGANIZIRANI NAPORI
U SVAKODNEVNOJ KLINIČKOJ PRAKSI
NEOPHODNI SU DA BI SE UČINILE
ZNAČAJNE PROMJENE!!!

PROMJENE KLINIČKE PRAKSE?

⇒ Rano prepoznavanje, dojava te praćenje
(jednostavan “klinički alat” za prepoznavanje):

①

- bolesnika visokog rizika za razvoj smrti mozga
- potencijalnih donora

⇒ Prihvatanje i implementacija standardiziranog,
optimalnog zbrinjavanja bolesnika te potencijalnih i
aktualnih donora, „goal-directed” optimizacija donora

②

⇒ Pravovremeno utvrđivanje smrti mozga sukladno
mediko-legalnim standardima

③

⇒ Planiran pristup obitelji

④

⇒ Darivanje organa iz proširenih kriterija

⑤

Bušić M. Organ donation and transplantation - “Croatian model”. Medix 2011;144-49.

Župan Ž. The proposed 2011-2016 national strategy for timely and optimal management of organ and tissue donors. Medix 2011;149-55.

Action plan for improvement of the organ donation in Croatia from 2011 to 2016.

PUT K DONACIJI ORGANA!



Satima ili danima u trajanju

Patofiziološke promjene povezane s oštećenjem ili ozljedom mozga

Ekscesivna antiedematozna terapija, SIRS, Sepsa

Cirkulacijski arrest i cirkulacijska smrt

Organska disfunkcija – višeorgansko zatajivanje

PUT K DONACIJI ORGANA

TEŠKO OŠTEĆENJE
MOZGA

OSJETLJIVO RAZDOBLJE

**BROJ AKTUALNIH DONORA I ORGANA UZETIH PO DONORU
KORELIRA S KVALITETOM INTENZIVNOG LIJEČENJA
PROVEDENOG U PACIJENATA S TEŠKIM OŠTEĆENJEM MOZGA I
ADEKVATNIM ODRŽAVANJEM DONORA**

OSJETLJIVO RAZDOBLJE

Fiziološke promjene udružene s razvojem smrti mozga
„Goal-directed” ili „Aggressive Donor Management”

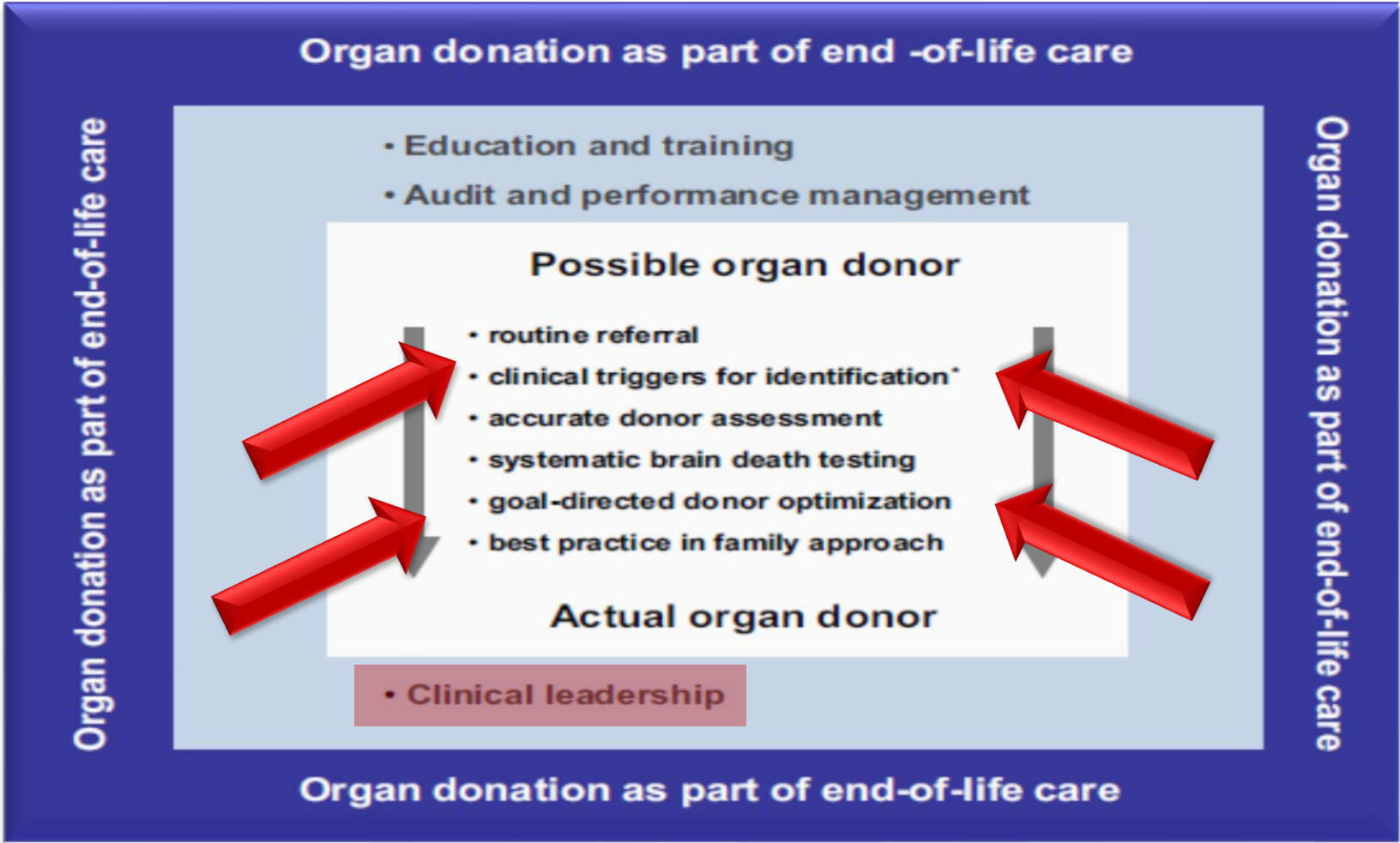
USTEZANJE
SKRBI-WLST

TOPLA ISHEMIJA

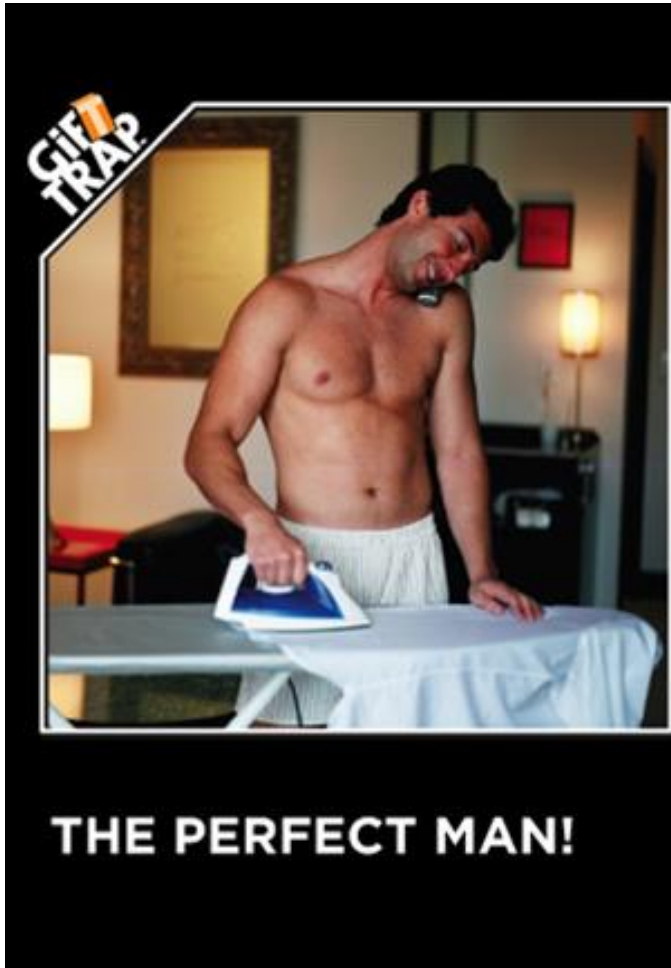


Ten changes that could improve organ donation in the intensive care unit

Beatriz Dominguez-Gill, Paul Murphy, Francesco Procaccio



VJEŠTINE TRANSPLANTACIJSKOG (DONORSKOG) KOORDINATORA



Motiviran, posvećen, velik radni kapacitet

Dobar odgovor na pritisak i stres

Kapacitet za brz odgovor na probleme (problem-solving capacity)

Znanje, kompetetnost, klinički autoritet

Prilagodljivost, kreativnost, kapacitet za improvizaciju

Leadership sposobnosti

Komunikacijske vještine, dobar kapacitet za odnose i empatiju

PRIMORSKO GORANSKA ŽUPANIJA I KBC RIJEKA



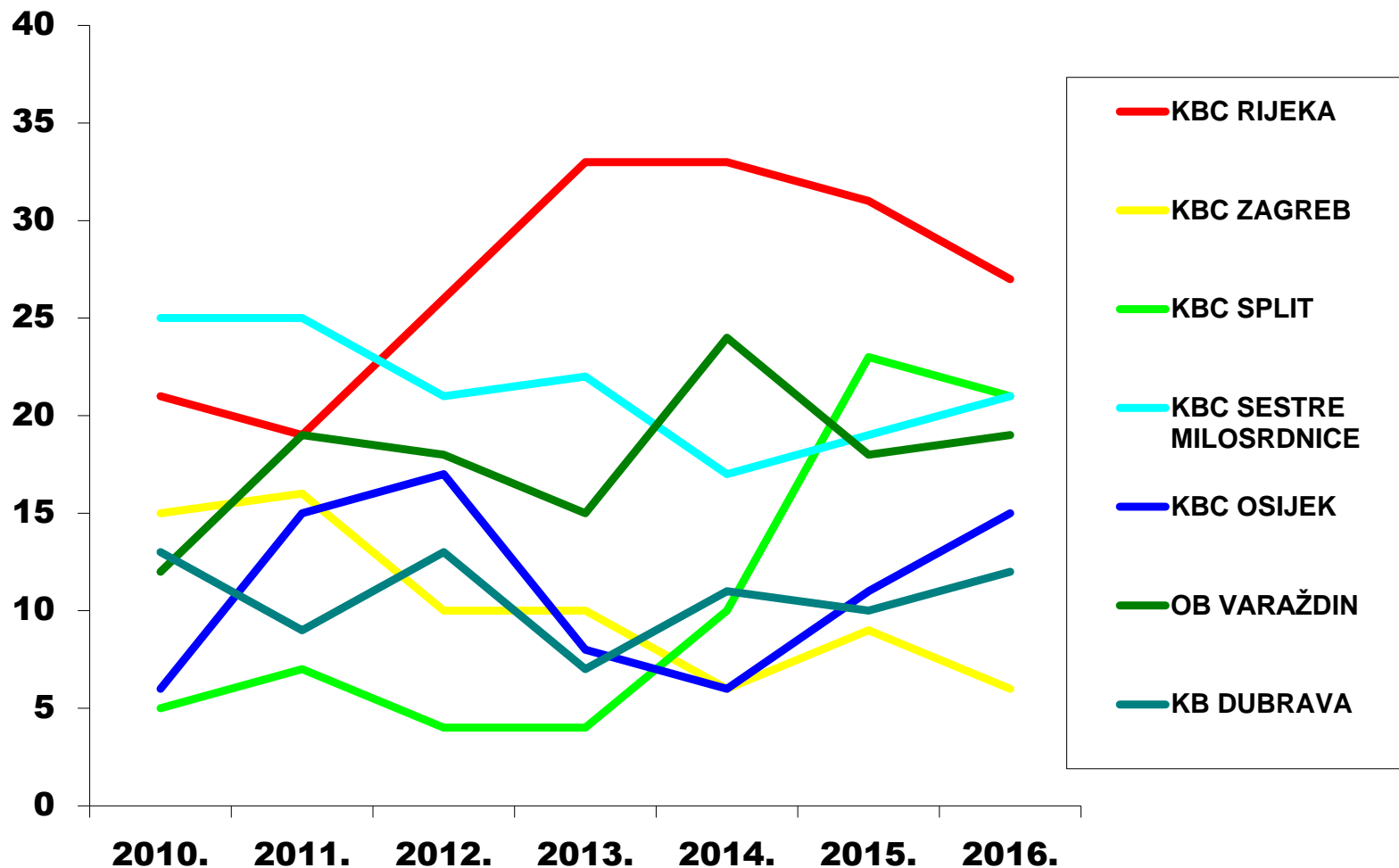
- Površina: 3588 km² / 6,3% površine RH (56542 km²)
- Broj stanovnika: 291 694 / 6,5% stanovnika, RH (4171000)
- Naseljenost: 82,5/km² stanovnika / u RH 75,8/km²
- Rijeka: 121 190 (2015.) stanovnika

KBCRI
KLINIČKI BOLNIČKI CENTAR RIJEKA



REALIZIRANI DARIVATELJI ORGANA U HRVATSKOJ od 2010. do 2016.

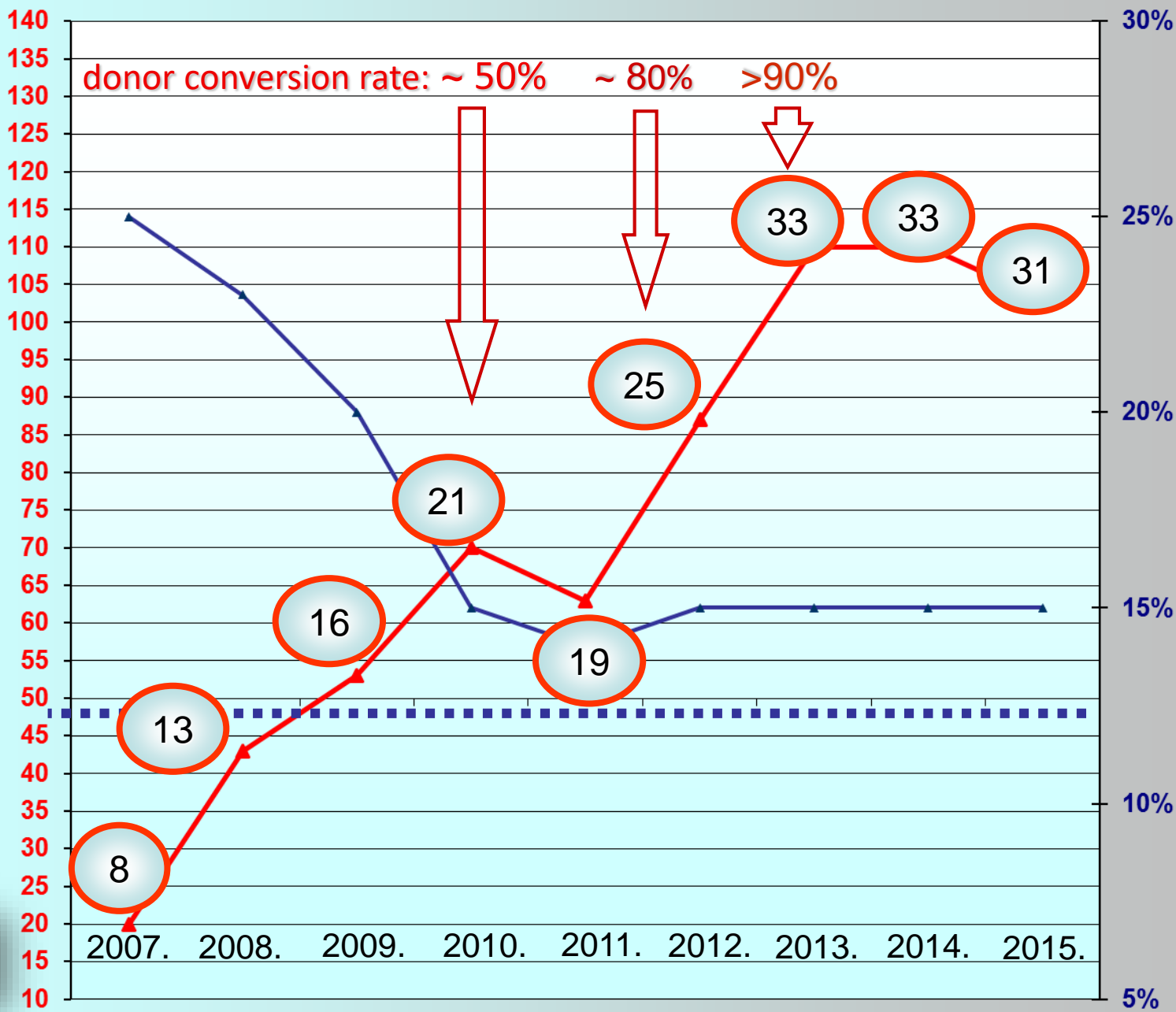
**BROJ REALIZIRANIH
DONORA ORGANA**



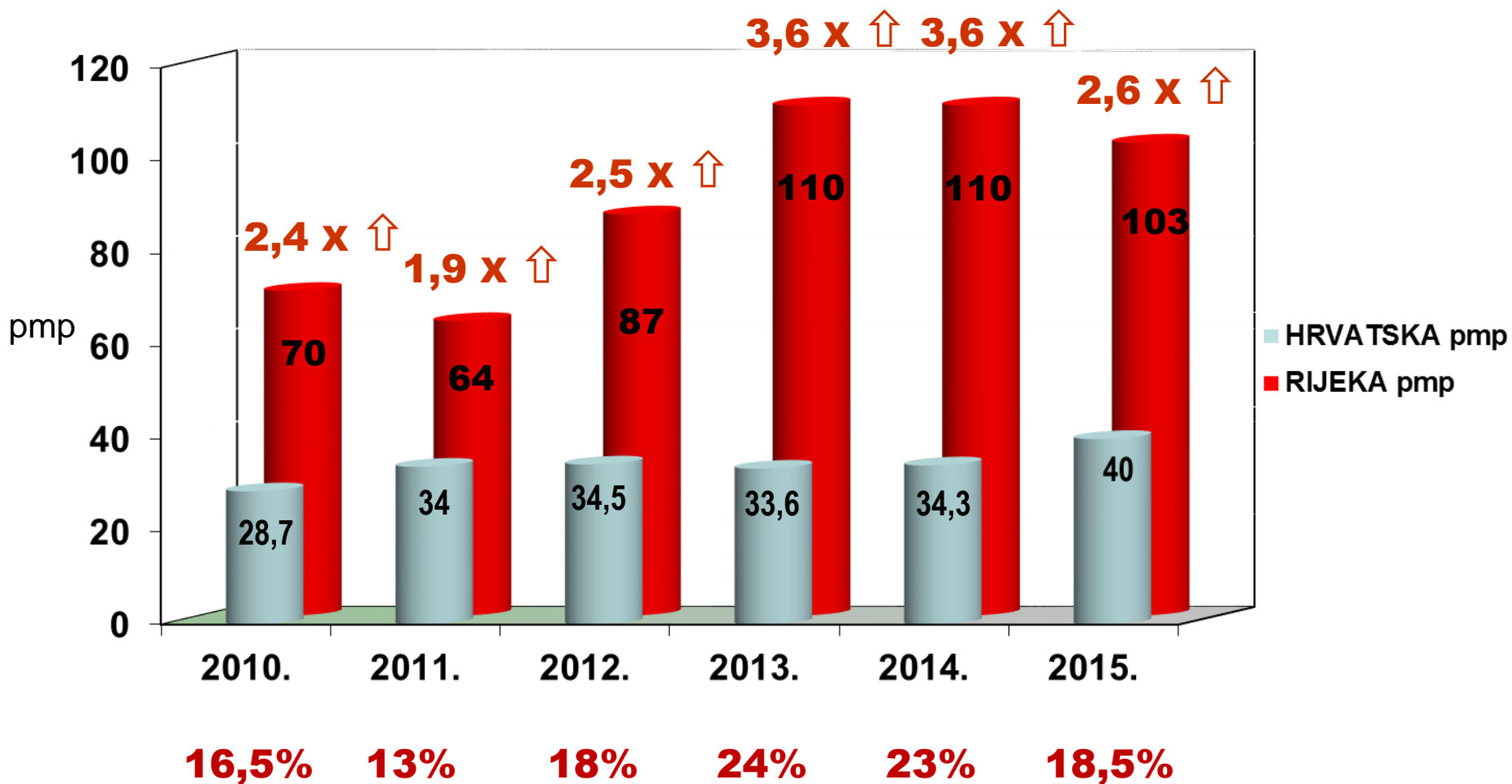
KBC RIJEKA

DONIRANJE ORGANA OD UMRLIH OSOBA

University Hospital Rijeka
Regional donor rate / pmp
pro 300 000 inhabitants



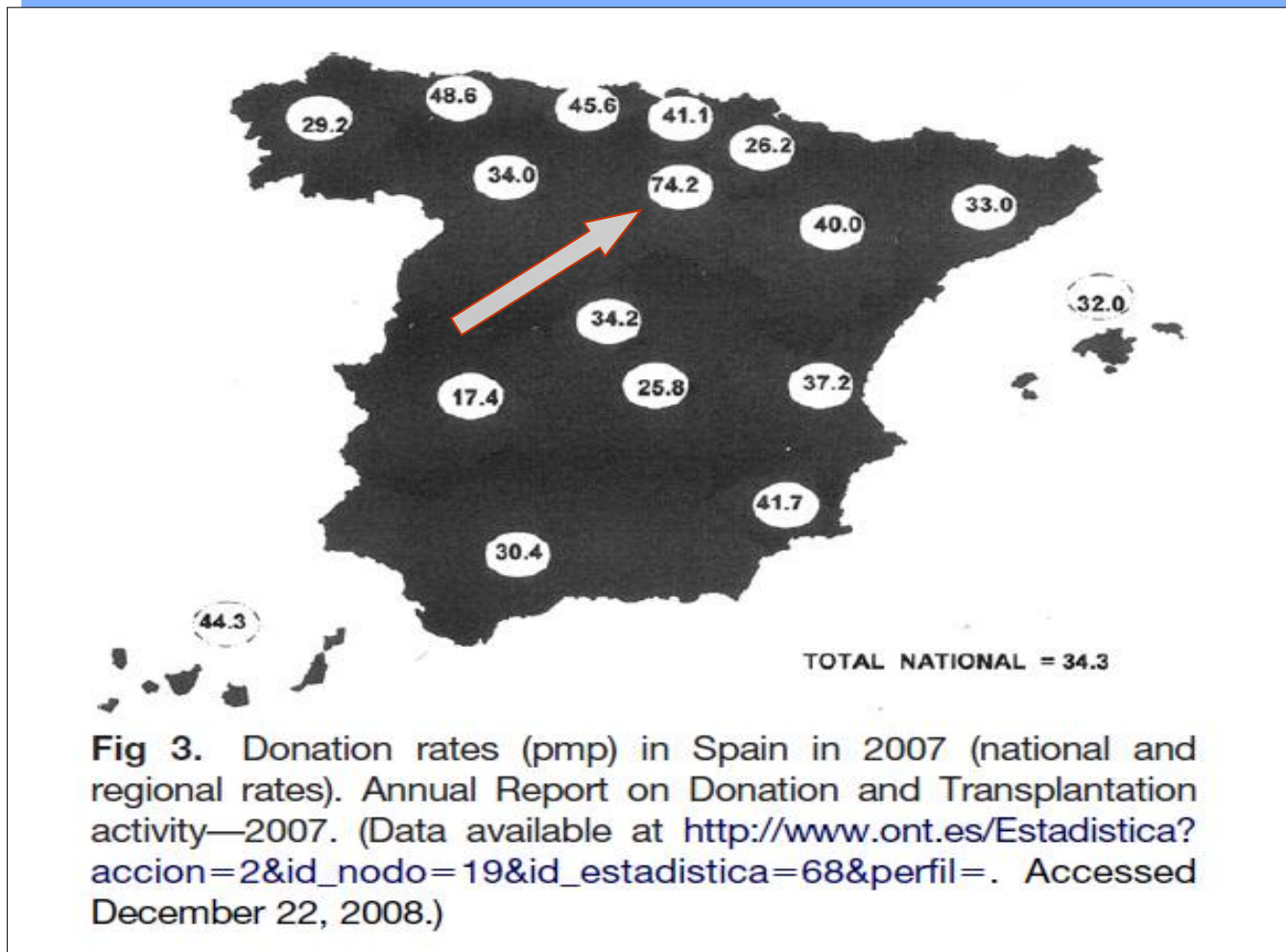
REGIONALNA (KBC RIJEKA) vs. REPUBLIČKA STOPA DONORA od 2010. do 2015.



udio (%) donora iz KBC Rijeka u ukupnom broju donora u RH

The 40 Donors Per Million Population Plan: An Action Plan for Improvement of Organ Donation and Transplantation in Spain

R. Matesanz, R. Marazuela, B. Domínguez-Gil, E. Coll, B. Mahillo, and G. de la Rosa



BROJ TRANSPLANTIRANIH ORGANA PO DONORU U KBC RIJEKA vs. RH u 2015.

⇒ 169 donora, sr. dob 57 god.
**2,87 ± 3,2 organa transplantirano
po donoru**

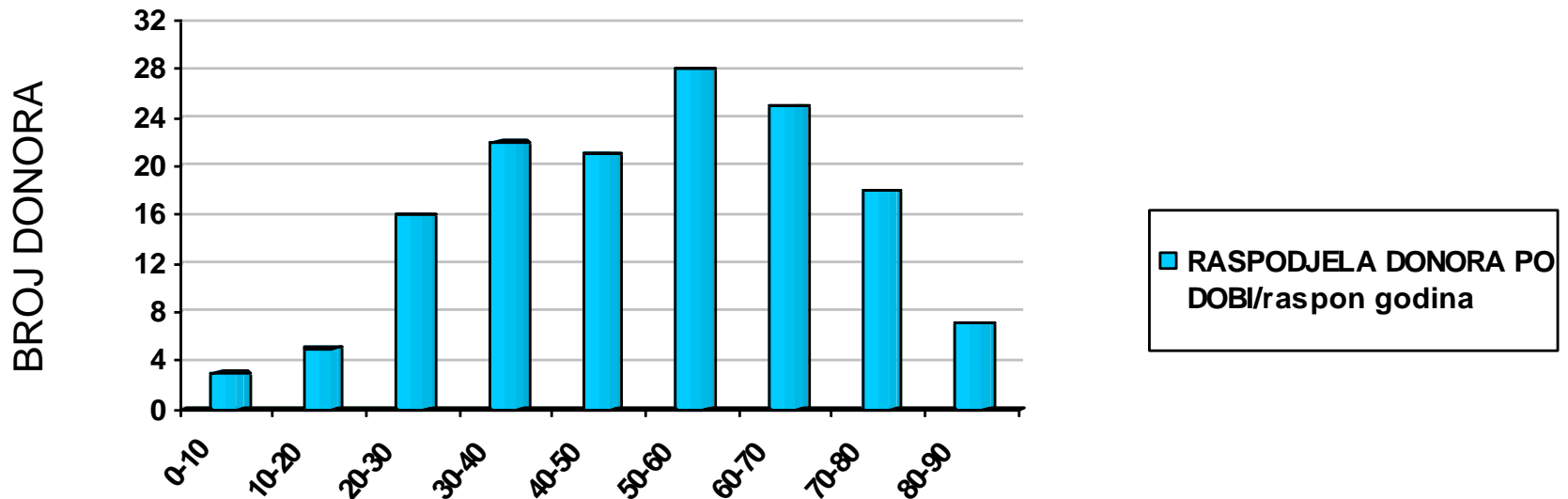


⇒ 31 donor, sr. dob 56,3 god.
**3,48 ± 2,6 organa transplantirano
po donoru**



Podatci Ministarstva zdravlja Republike Hrvatske i KBC Rijeka, siječanj 2016.

DOB DONORA U KBC RIJEKA od 2011. do 2015.



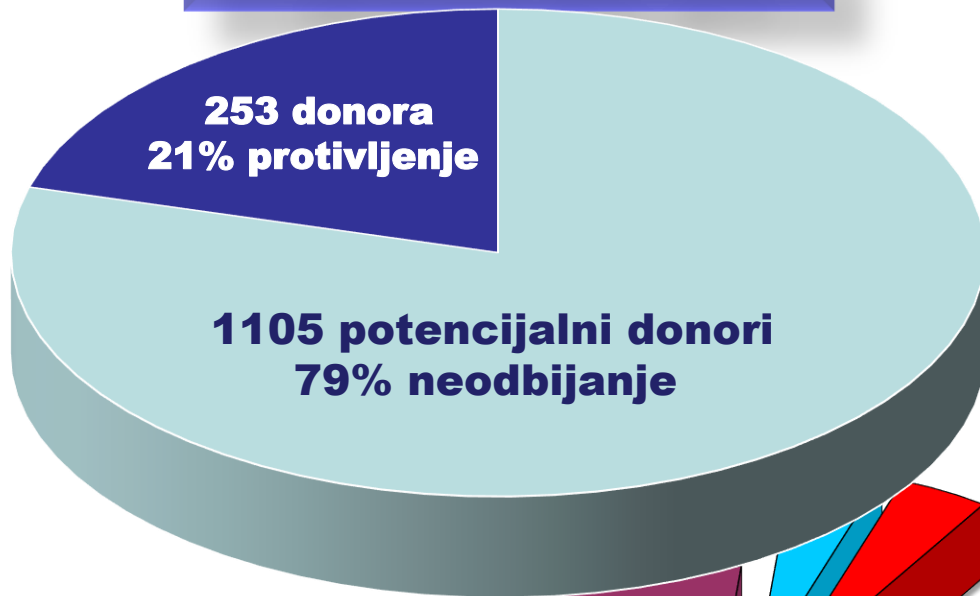
DOB DONORA, ukupno 141 donor - srednje dobi = 55,3 vs. 56,8 godina u RH

- najmlađi darivatelj = 17 dana beba

- najstariji darivatelj = 86 godina

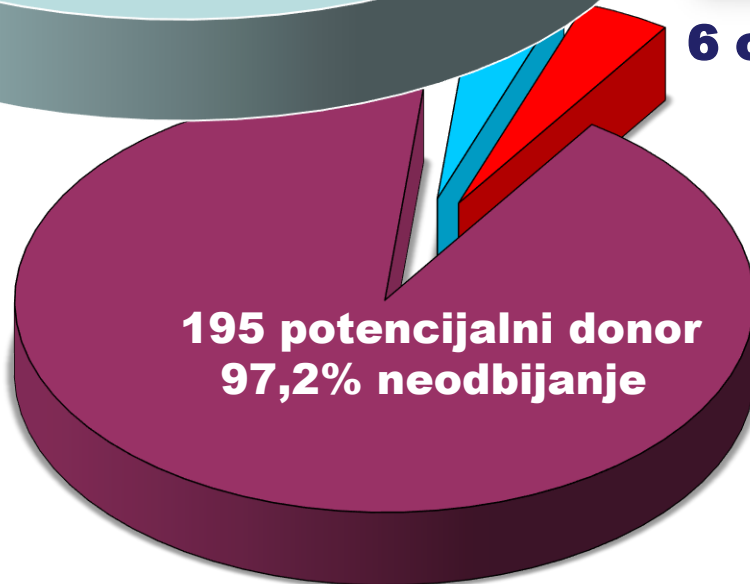
STOPA PROTIVLJENJA OBITELJI

HRVATSKA: 2011.- 2017.



KBC RIJEKA: 2011. - 2017.

6 odbijanja obitelji 3,1%



■ NEPRISTANAK OBITELJI

■ UKUPAN BROJ DONORA

Podaci Ministarstva Zdravstva RH i KBC Rijeka, siječanj 2018.

BROJ TRANSPLANTIRANIH SOLIDNIH ORGANA DONIRAN U KBC RIJEKA OD 2011. - 2015.

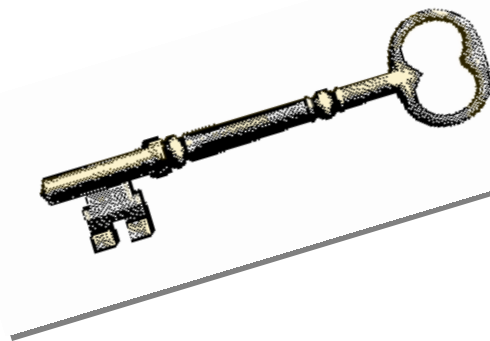


ORGANI/ TKIVA	2011.	2012.	2013.	2014.	2015.	UKUPNO
JETRA	18	25	31	30	30	134
BUBREZI	37	48	56	56	60	257
PLUĆA	3	6	10	10	11	40
SRCE	3	9	10	9	7	38
GUŠTERAČA	1	3	5	1	1	11
UKUPNO	62	91	112	106	109	480

Podaci Ministarstva zdravlja Republike Hrvatske i KBC Rijeka, siječanj 2016.



ZAKLJUČCI



Nedostatak organa za transplantacijsko liječenje predstavlja vrlo bitan javno-društveni problem u nizu zemalja svijeta te daleko nadmašuje okvire zdravstvenog sustava.

Visoko motivirani transplantacijski koordinatori i angažirani intenzivisti ključan su faktor uspješnog bolničkog modela darivanja organa od umrlih osoba.

Organizacijski model, legislativa te svijest javnosti neophodan su okvir, ali sveobuhvatan proaktivan pristup darivanju organa unutar bolnica presudan je za osiguranje adekvatnog broja organa za transplantaciju.



**DONIRANJE ORGANA
ŽIVOT NA DAR**