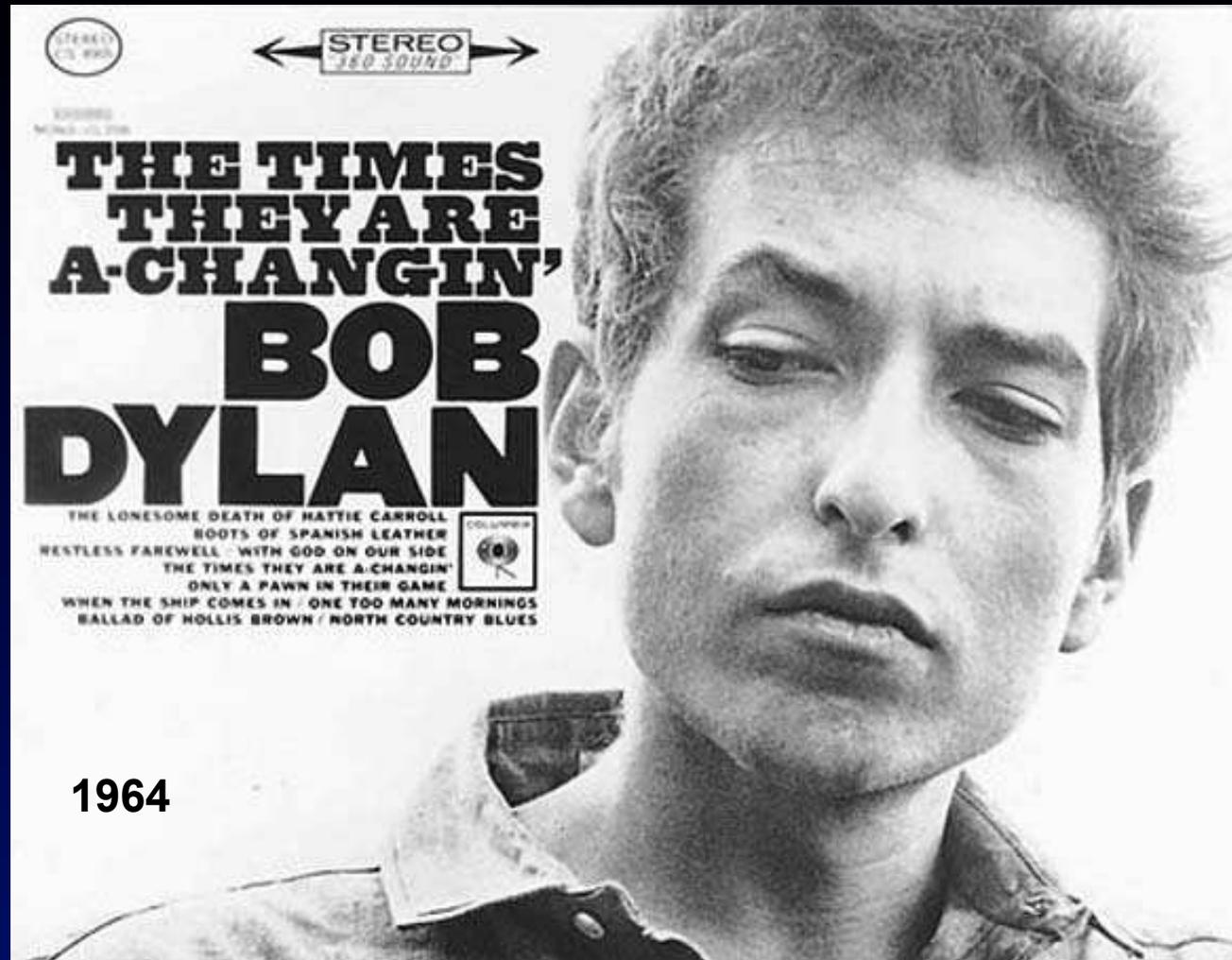


Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

Prof. dr. A.J. Duits



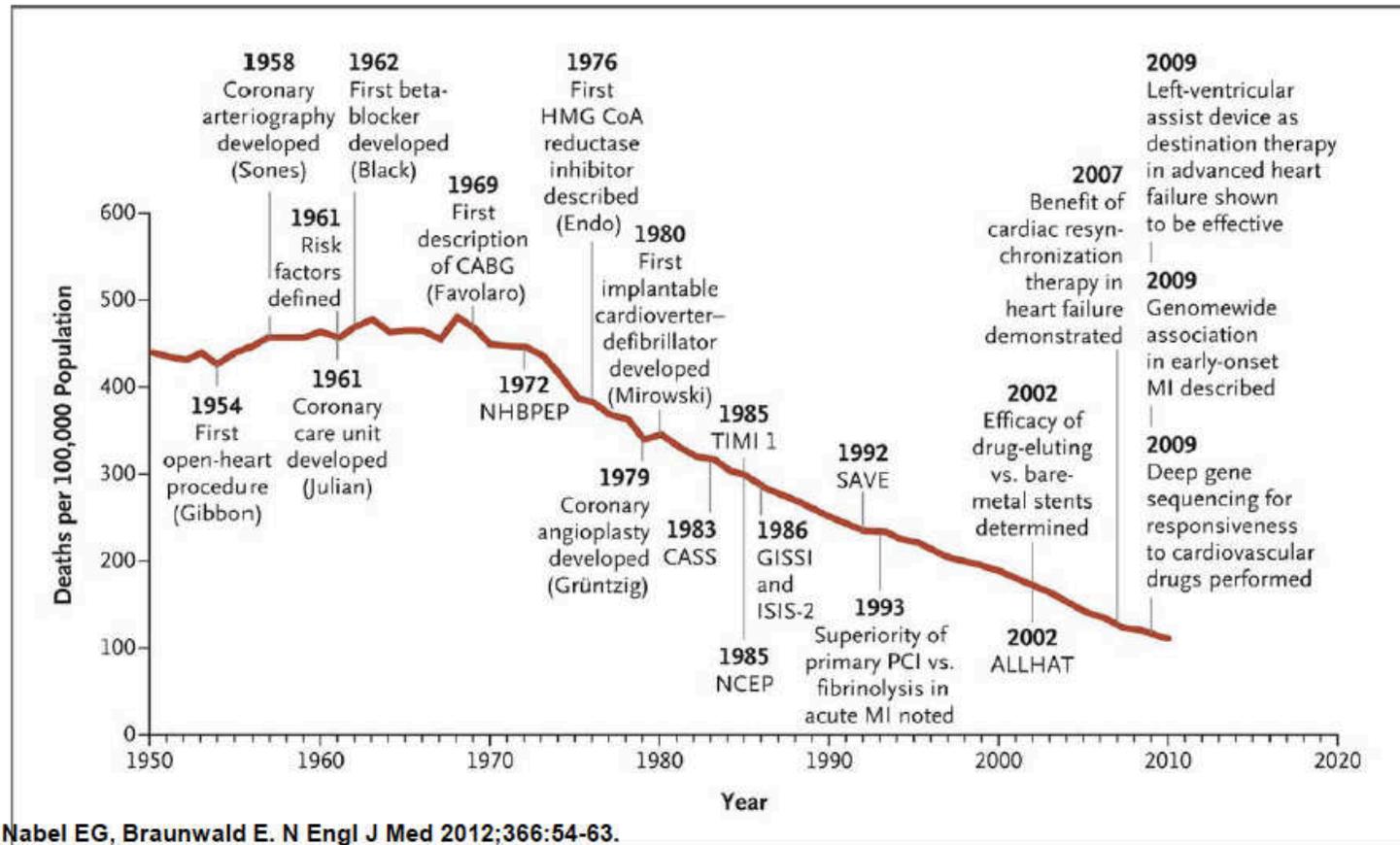
1964

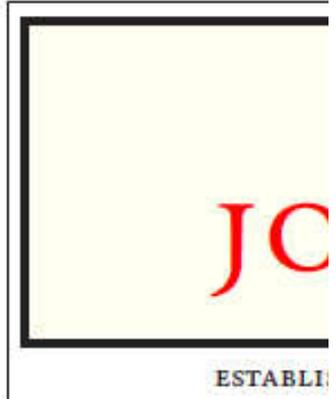
NOBEL PRIZE LITERATURE 2016

24051941

We Are Living in a Golden Age of Medicine

Decline in Deaths from Cardiovascular Disease in Relation to Scientific Advances





Dara

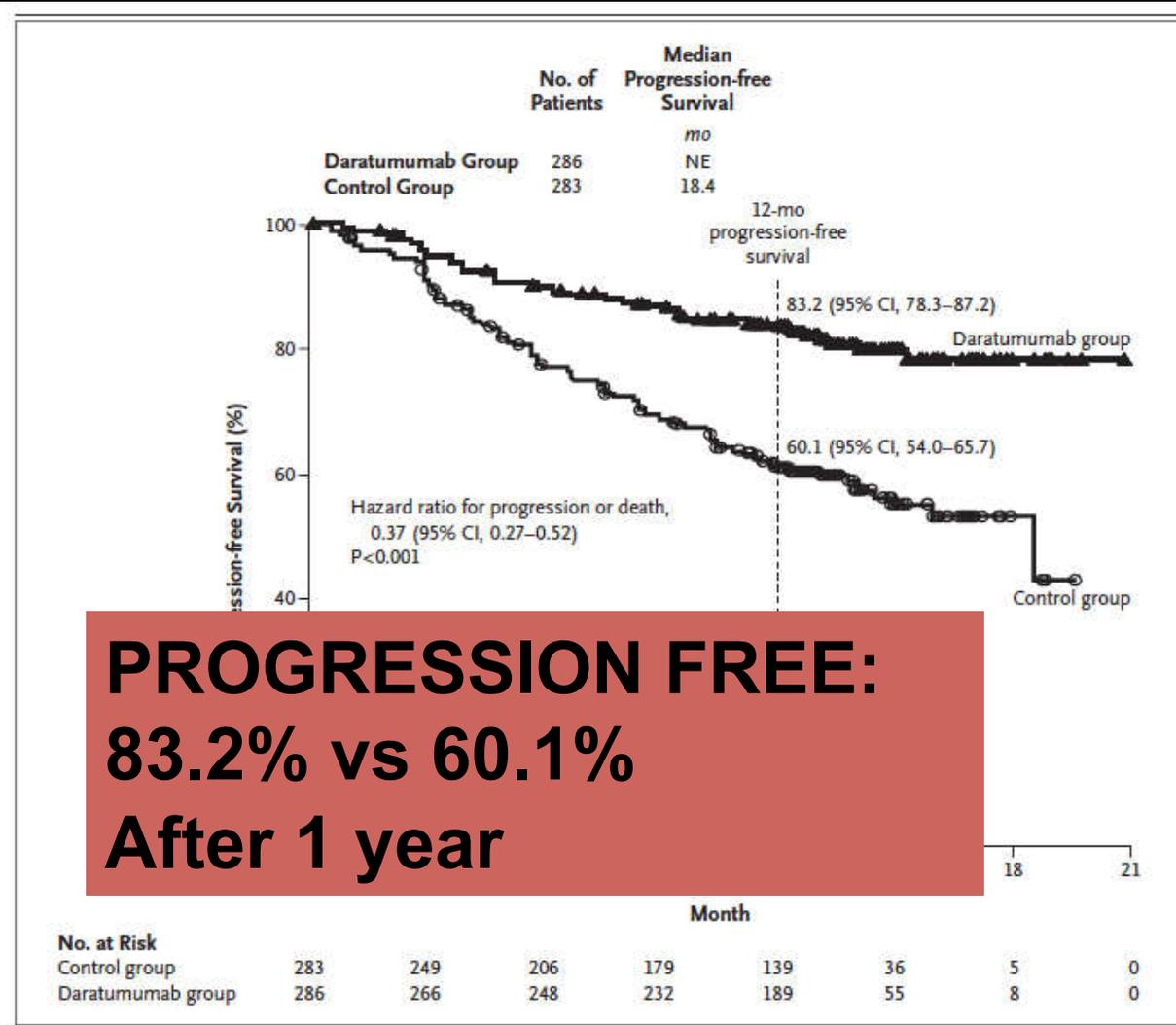


Figure 1. Progression-free Survival. Shown are the results of the Kaplan–Meier analysis of progression-free survival among patients in the intention-to-treat population, which included all patients who underwent randomization. The P value is based on a stratified log-rank test. The daratumumab group received daratumumab, lenalidomide, and dexamethasone, and the control group received lenalidomide and dexamethasone. NE denotes could not be estimated.



Zika Infection May Bring Future Immunity: Study





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Approved by the Inspectorate of Health



01-02-2016: 800 platelet units pooled (pools of 4).

- Curacao
- Aruba
- Sint Maarten
- Bonaire

Hemovigilance:

- No adverse effects reported
- Neonatal/UV treatment
- Pediatric Tx



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Dutch Caribbean

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AFTER 10-10-2010

CAS



BES

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Aruba: 100.000

Sint Maarten: 40.000

Curacao: 150.000

Bonaire: 17.000



**Dr. Horacio
E. Oduber HOSPITAAL**



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Red Cross Blood Bank Foundation 

MEDISCHE SPECIALISTEN

USONA

WERKOMSTANDIGHEDEN EN INFRASTRUCTUUR

OFICINA'S

CBV

GMN

OFICINA'S

HNO

MS

ZIEKENHUIS:
FACILITEREND

VMSC

WET

ZIEKENHUIS:
GMSB/WERKGEVER

V
B
H
C

V
B
H
C

WETGEVING

FINAN
CIEN

SVB

WETGEVING +BIG
+DECLARATIEWET

FTE

HONORARIUM:
FEE FOR SERVICE

WORK

ADVENT

HONORARIUM:
BUDGET

ONDERNEMERSRISICO

SEHOS

AGE

GEEN
ONDERNEMERSRISICO

CHV

PRIMAIRE EN SECUNDAIRE ARBEIDSVOORWAARDEN

HUISARTSEN

PAT



Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

Sounds of Success

RED CROSS BLOOD BANK FOUNDATION



DONORS:

BLOOD PRODUCTS:

IDT:

QUALITY:

100% VOLUNTARY NON-REMUNERATED

100% LEUKOREduced

SEROLOGY (HIV, HCV, HTLV, SYPH, HBV)

NAT (HIV,HCV,HBV) WNV

GMP (EU/AABB)





PHARMACEUTICAL INSPECTION CONVENTION
PHARMACEUTICAL INSPECTION CO-OPERATION SCHEME

PF 005-3
25 September 2007

**PIC/S GMP GUIDE FOR
BLOOD ESTABLISHMENTS**

Guide to the
preparation, use and
quality assurance of
**BLOOD
COMPONENTS**



European Committee
(Partial Agreement)
on Blood Transfusion
(CD-P-TS)

EDQM
18th Edition
2015



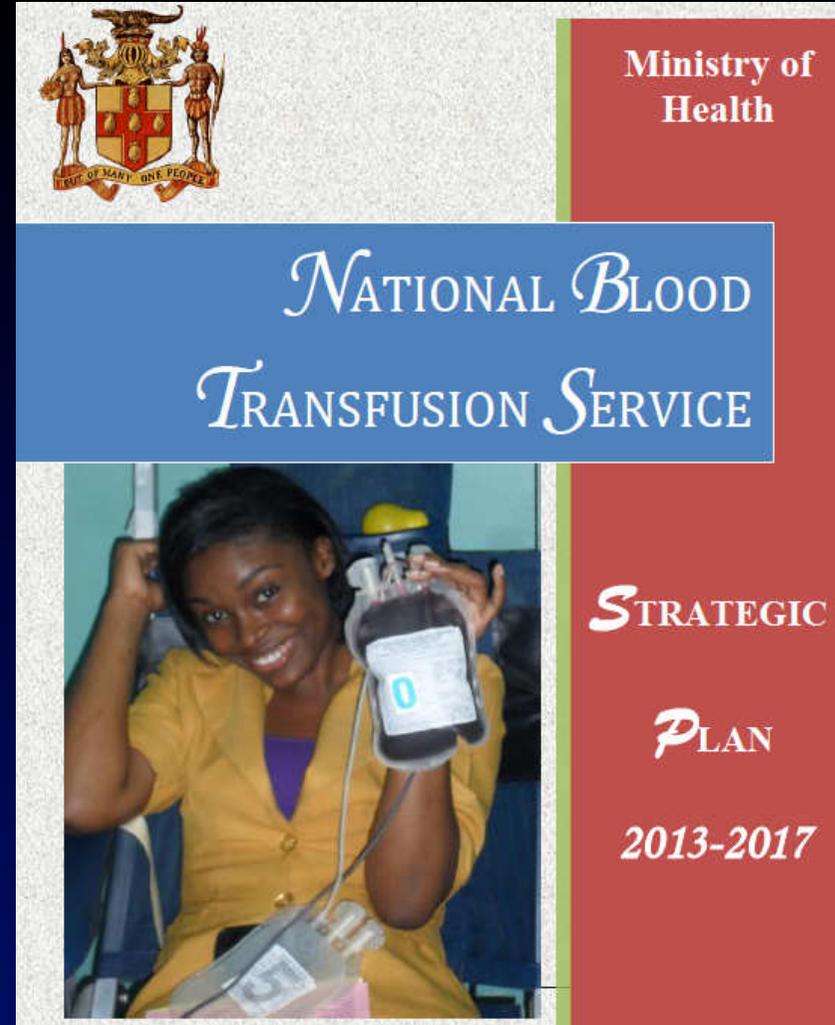
**SUSTAINABLE SMALL SCALE
BLOOD BANKS
COMPLYING WITH EU QUALITY
NORMS**



Caribbean Regional Standards for Blood Banks and Transfusion Services

Second Edition

 **Pan American
Health
Organization**
Regional Office of the
World Health Organization



Ministry of
Health

NATIONAL BLOOD TRANSFUSION SERVICE



*S*TRATEGIC
*P*LAN
2013-2017



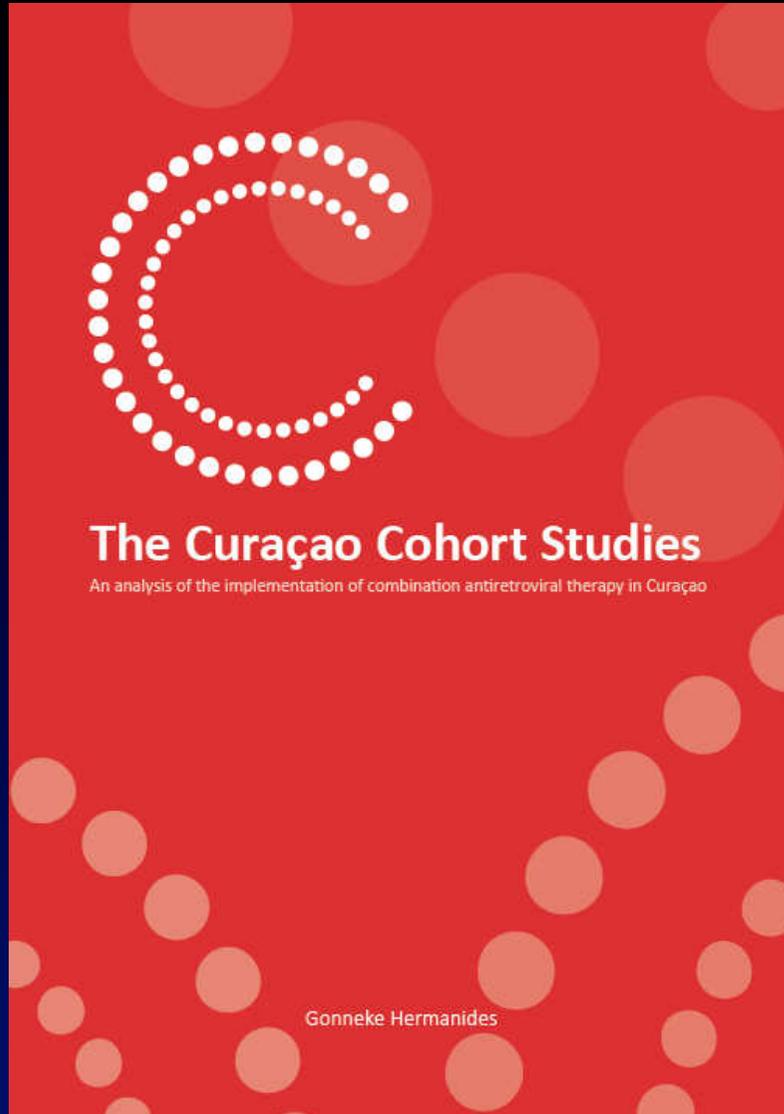
Dutch Caribbean labile blood provision

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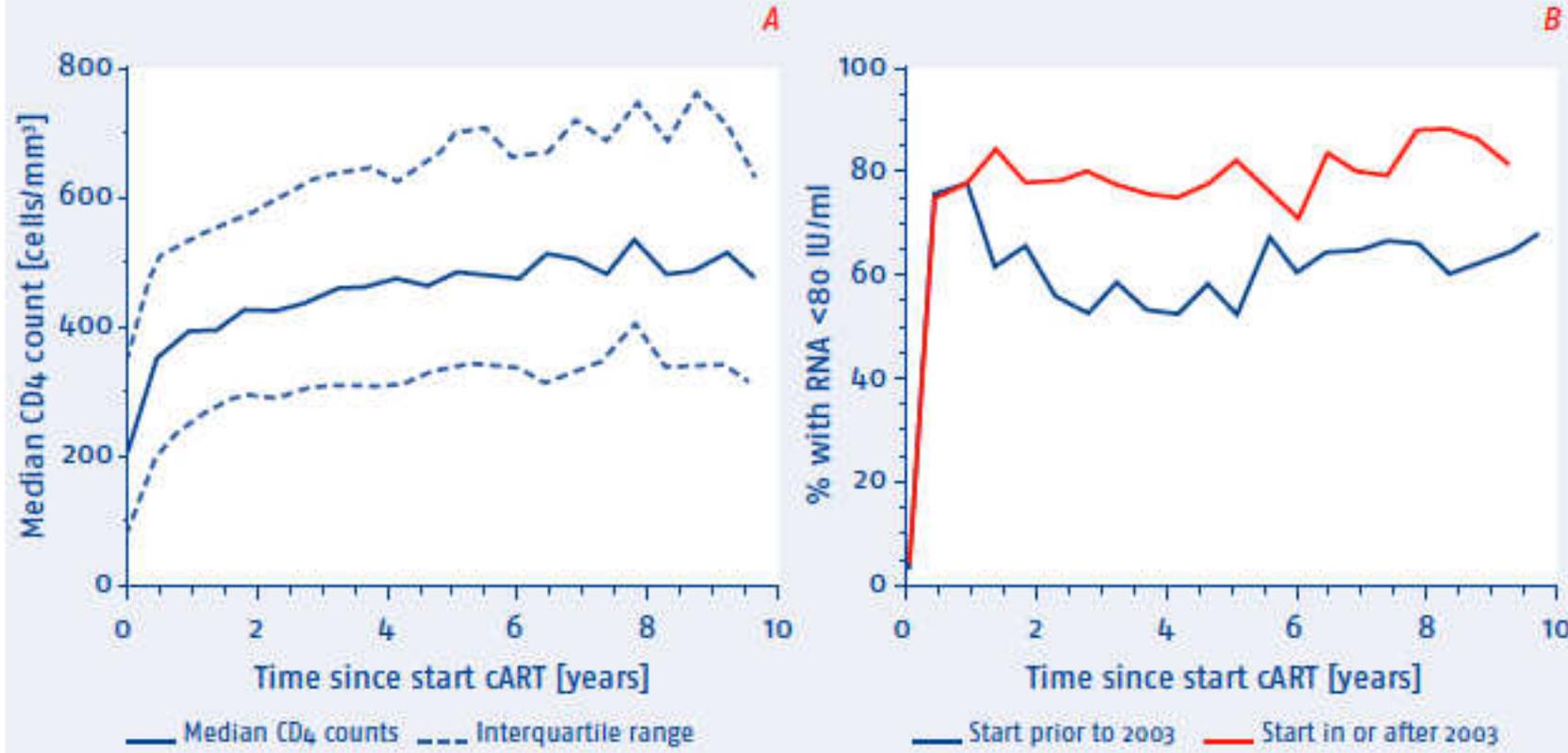


PAHO TRAINING GEORGETOWN GUYANA
19-21/09/2016

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**PREVENTION OF
TRANSMISSION**



Legend: cART=combination antiretroviral therapy.

CHARACTERISTICS OF HIV INFECTED POPULATION IN CURAÇAO

"The HIV-1 Epidemic Amongst Men Having Sex With Men in the Netherlands is Dispersed Amongst a Large Number of Self-sustaining and Persistent Transmission Clusters: A Combined Mathematical and Phylogenetic Study on Observational Data" (PMEDICINE-

D.14.01427D2)

by Daniela Bezemer, Ph.D.; Anne Cori; Oliver Ratmann; Ard van Sighem; Gonneke Hermanides; Bas E. Dutilh; Luuk Gras; Nuno Rodrigues Faria; Rob van den Hengel; Ashley Duits; Peter Reiss; Frank de Wolf; Christophe Fraser



Accepted for publication

HIV:

- SHM (Netherlands)
- SRKB/SEHOS (Curacao)
- FMD (Bonaire)

Treating physicians/infectiologists:

- SXM/Aruba/Bonaire/Curacao
- DATA sharing!
- Training personnel

Neurosurgery (Aruba and Curacao)

Intensive care (Bonaire and Aruba)

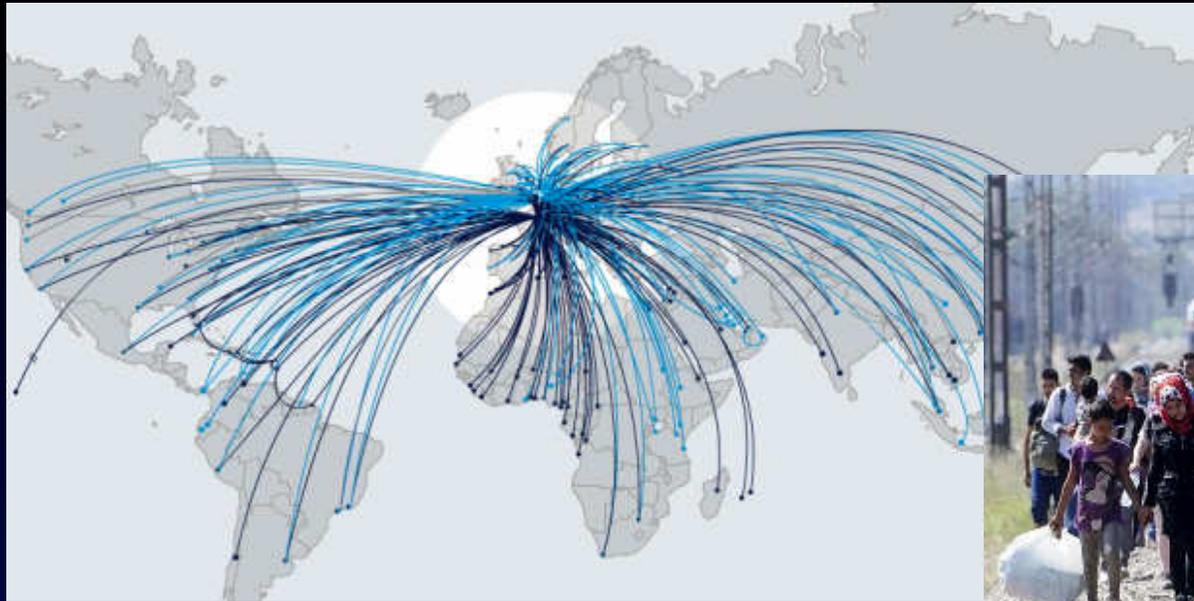
NICU (Curacao, Bonaire and Aruba)

Oncology (Curacao, Bonaire, Sint Maarten)

Rheumatology (Curacao, Bonaire)

Infectious Diseases (Curacao, Aruba, Bonaire)

Public Health (Curacao, Bonaire)



GLOBAL HEALTH: LOCAL PUBLIC HEALTH

- DISEASES
- MULTI-CULTURAL SOCIETY

Infectious C

Globalization
leading to
notion that
single-hand
must rely t
response.

INTERNATIONAL HEALTH

REGULATIONS

(2005)

SECOND EDITION



World Health
Organization

health threats,
ence — the
to address
t instead
nt an effective

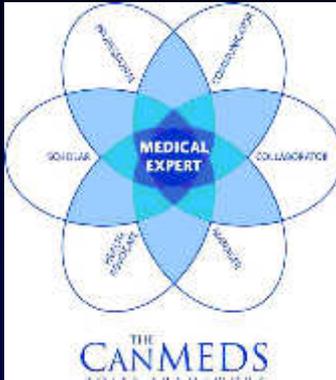


INNOVATIVE EARLY WARNING SYSTEM



GP medical center/Surveillance center

Education



- Residents
- Interns
- Nurses
- Medical Specialists
- Medical professionals

Curacao,
Aruba,
Bonaire,
Sint Maarten

TEACHING HOSPITAL
UMCG AFFILIATE





Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

Under construction/design

HEALTHCARE SERVICES

Figure 2. The relationship between fragmentation and health services performance



SOURCE: Own elaboration.



SERIES
**Renewing Primary Health Care
in the Americas**

No. 4

Integrated Health Service Delivery Networks

*Concepts, Policy Options and a Road Map for
Implementation in the Americas*



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Red Cross Blood Bank Foundation 



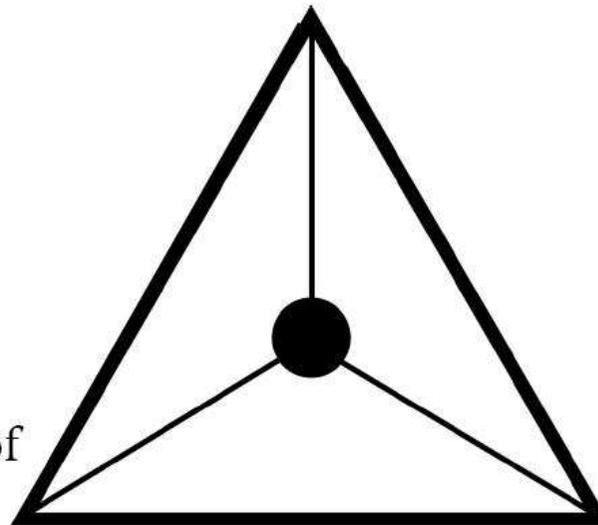
CURAÇÃO HEALTH CARE SYSTEM

Integrated Health Services Delivery Networks (IHSDNs)

a network of organizations that provides, or makes arrangements to provide, equitable, comprehensive and integrated health services to a defined population and is willing to be held accountable for its clinical and economic outcomes and the health status of the population served.

Don Berwick, Tom Nolan, and John Whittington

Health of a
Population



Experience of

Care

- Safe
- Effective
- Patient centered
- Efficient
- Timely
- Equitable

Per Capita
Cost

The IHI *Triple Aim*

Better care for individuals, better health for populations, lower per capita costs

CAS



BES

The Hague

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BEFORE 10-10-2010:

- Healthcare: island responsibility

AFTER 10-10-2010:

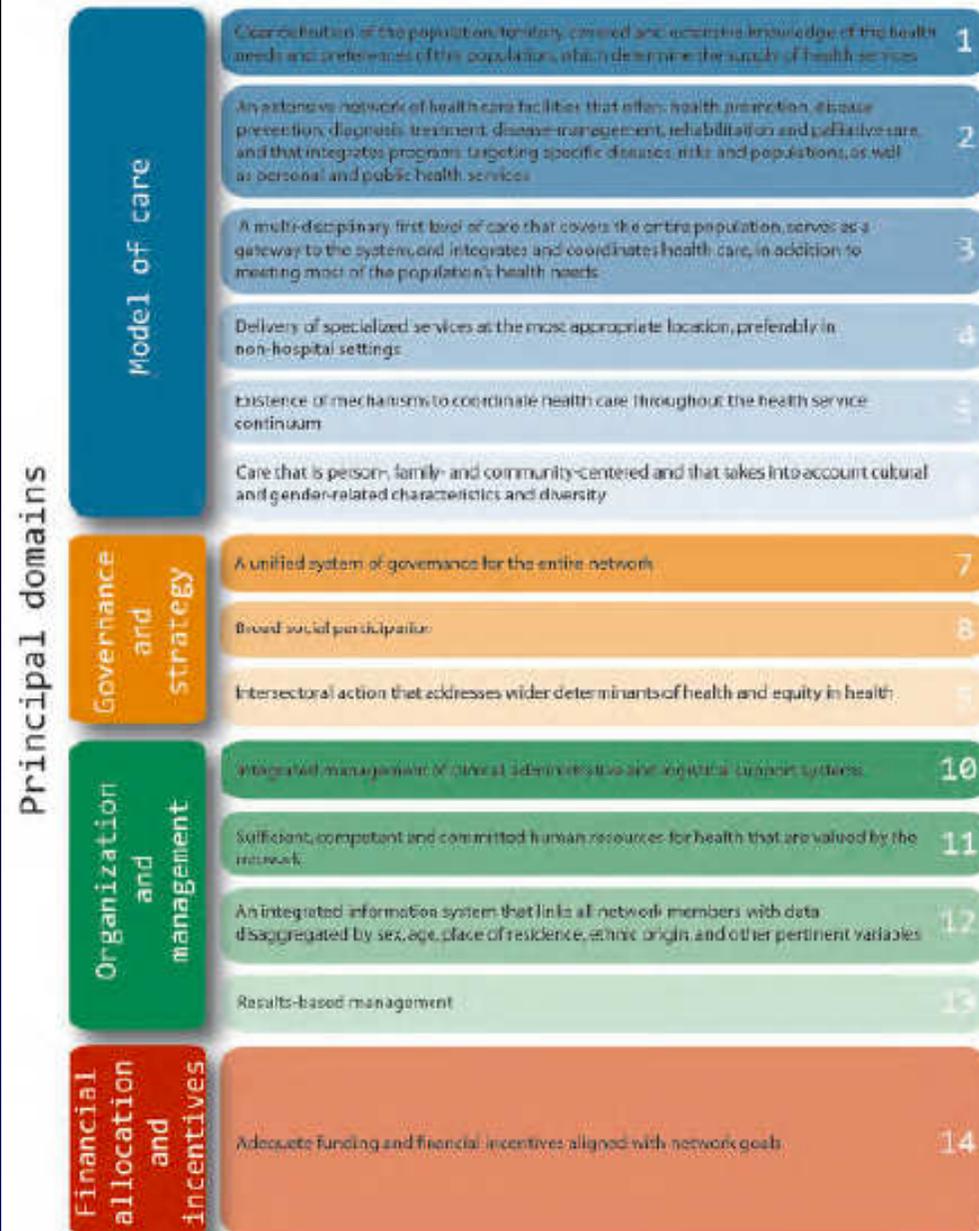
- CAS: Healthcare: island responsibility
- BES: Healthcare: Holland responsibility



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Graph 2. List of essential attributes of IHSDNs according to principal domain

List of essential attributes of IHSDNs



SOURCE: Own elaboration.

CARIBBEAN PERSPECTIVE

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Box 1. "Shared Services" in Caribbean Countries

A special case of health services integration is that of "shared services," which relates to arrangements for the purchase of services, particularly at the third level of care, among some small Caribbean countries. From the historical standpoint, cooperation and integration efforts in this region have been present since the end of the nineteenth century and include the creation of the Caribbean Free Trade Association (CARIFTA) in 1968 and the Caribbean Community (CARICOM) in 1974. There are also agreements for the purchase of services among some countries in the region (e.g., Dominica purchases services from Martinique, Guadeloupe, Barbados and the USA). Several countries in the region such as Barbados and the Eastern Caribbean countries (Anguilla, Antigua and Barbuda, British Virgin Islands, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent) continue to be interested in expanding existing exchange agreements. Within this framework, arguments in favor of the implementation of shared services are usually made in the case of small populations (e.g., Montserrat has only 4,800 inhabitants), limited development of the health services infrastructure, budget constraints, geographic proximity, existence of good transportation links between the islands, and similar epidemiological and health profiles. In the past, related efforts have included services for surgery and anesthesia, medicine, obstetrics, gynecology, pediatrics, psychology and mental health, laboratory, radiology, and equipment maintenance. At present, unmet needs also include services for traumatology, neurosurgery, orthopedics, heart surgery, pediatric surgery, oncology, clinical laboratory, and pathology. Other areas of potential collaboration include chronic diseases, mental health, dialysis, rehabilitation, health worker training, and shared databases.

SOURCE: Potter, Irad. Plenary presentation "Shared Services In the Caribbean Countries." Sub-Regional Consultation on PAHO/WHO's Integrated Health Service Delivery Networks Initiative. PWR-ECC Office, Bridgetown, Barbados, October 23-24, 2008.





ESSENTIAL = TRUST

- **OPEN COMMUNICATION**
- **SHARING RELEVANT DATA/INFORMATION**
- **SHARED VISION**
- **LESSONS LEARNED SUCCESSFULL
COLLABORATIONS**





EP

Shared
infrastructure:

Volume, quality
and costs

- Dedicated facilities
- Single Island Hospital location

FACILITIES:

- Redundant
- Cooperation in teams!

- Patient population
- Costs
- Volume

- Availability



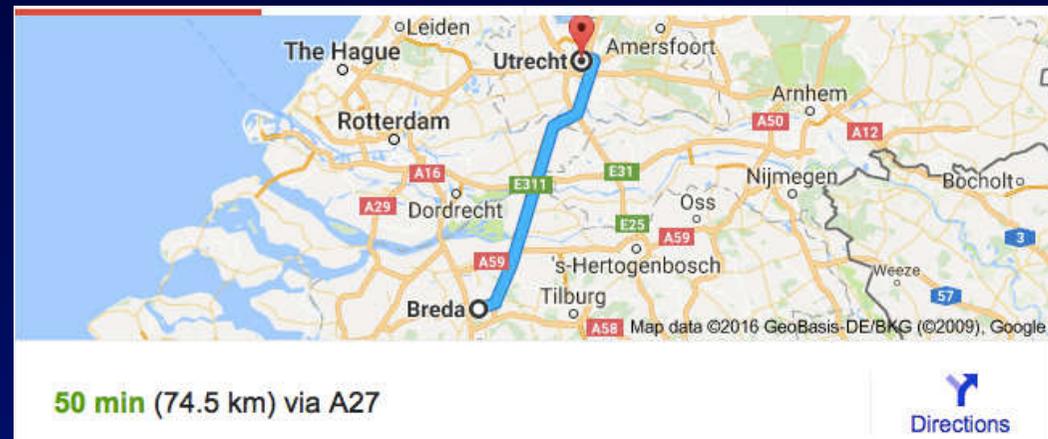
CP

79.1 km

Distance from Curaçao to Bonaire



CP/EP



MYTHS DEBUNKED



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Relationship between volume and quality in healthcare

Tijd voor een brede benadering



IQ Scientific Institute for
Quality of Healthcare

Erasmus
ERASMUS UNIVERSITEIT ROTTERDAM
INSTITUUT BELEID & MANAGEMENT
GEZONDHEIDSZORG

CONSORTIUM
ONDERZOEK
KWALITEIT
VAN ZORG

REDACTIE

Teun Zuiderent-Jerak

Tijn Kool

Jany Rademakers

2012



Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

Policy of collaborative efforts should focus on quality optimization of organization and delivery of healthcare and not focus unilaterally on a so-called sufficient quantity of patients

For high-risk complicated surgical interventions volume-quality rate influenced by:

- surgical expertise
- Support by the hospital organization
- Multidisciplinary collaboration

Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

Other factors:

- Diagnostic and supporting service teams
- Staff composition
- Information system supporting pre- and postoperative processes

Other crucial factor:

- * Obtaining and maintaining expertise of medical professionals

Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

Volume-quality debate:

- Different evaluation criteria from different perspectives
- Society perspective
- Organizational perspective
- Professional' perspective
- Patient' perspective

Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

Society perspective:

- Volume initiatives contribute to quality, accessibility and affordability healthcare

Organizational perspective:

- Efficient organization of healthcare, strategic positioning, collaboration and competition

Professional perspective:

- Sufficient expertise
- Multidisciplinary collaboration
- Career development

Patient perspective:

- Individual results
- Freedom of choice
- Geographical accessible care

LEAST DISCUSSED!

Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

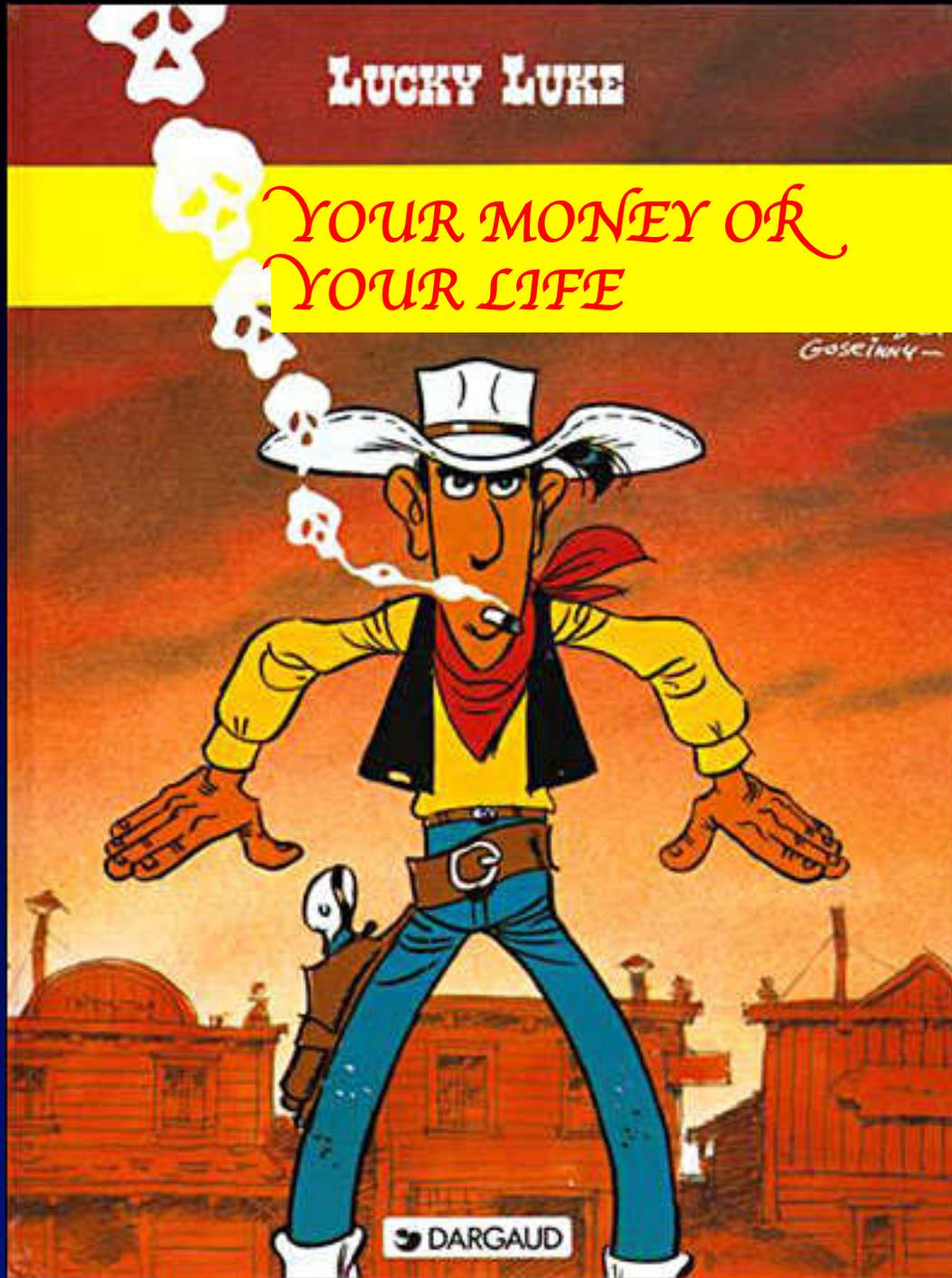
Results: hernia, obstetrics, bariatric surgery, breast cancer and hemophilia

*organizational and professional perspective

LUCKY LUKE

YOUR MONEY OR
YOUR LIFE

GOSCINNY



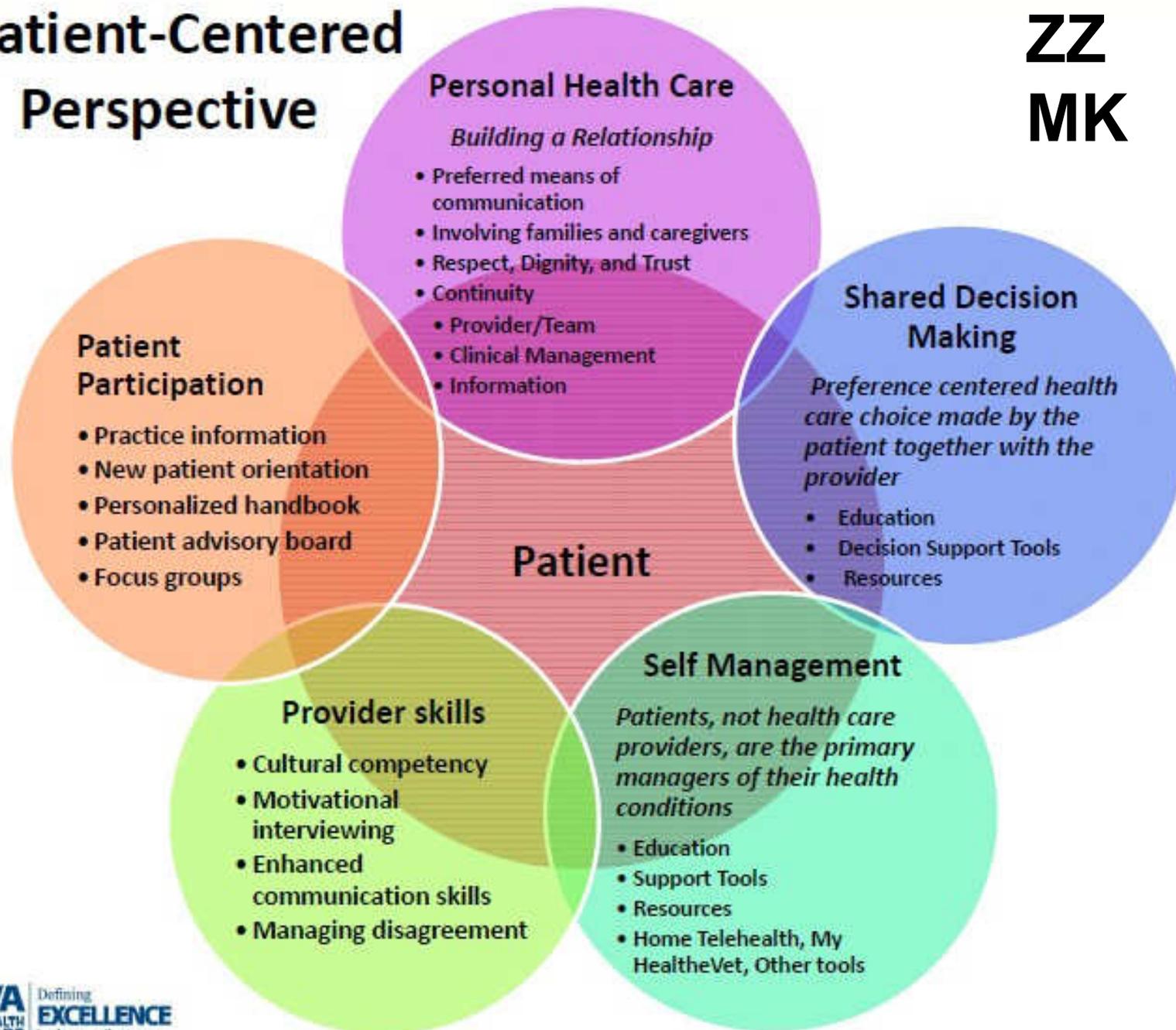
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DARGAUD

Cross Blood Bank Foundation 

Patient-Centered Perspective

ZZ
MK





4 perspectives:

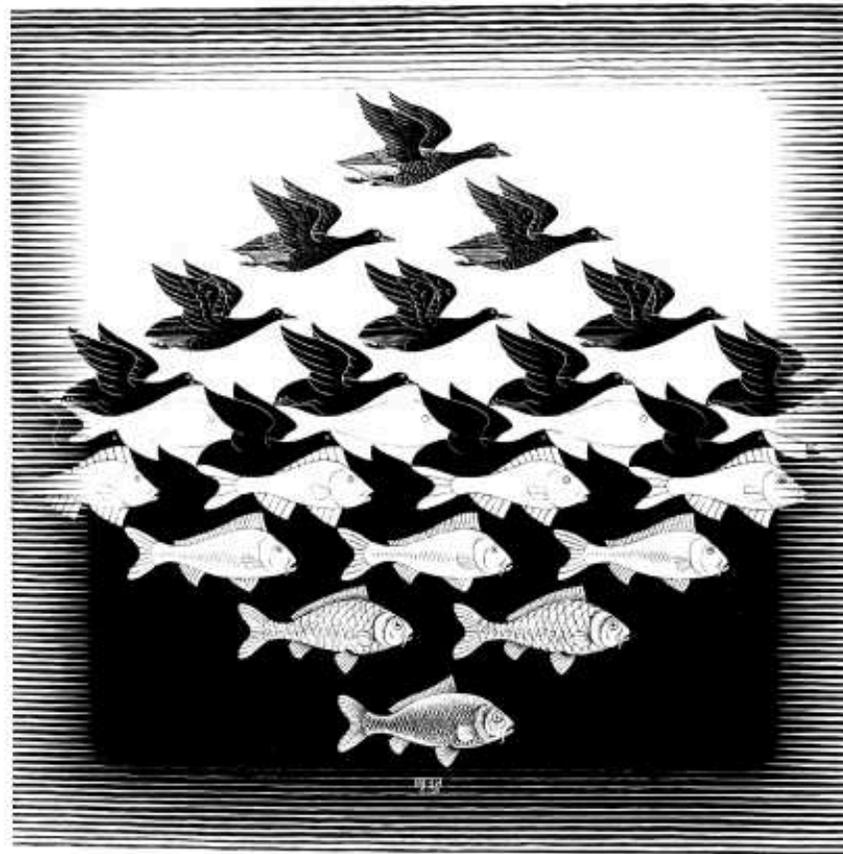
- **Society**
- **Organizational**
- **Professional**
- **Patient**

COLLABORATION IN HEALTH SERVICES

- **SHARED RESPONSIBILITY**
- **SHARED OPPORTUNITY**
- **SCIENTISTS/PROFESSIONALS/INSTITUTES COLLABORATE**
- **GOVERNMENTS/ SHOULD FURTHER FACILITATE (IMPROVEMENT)**

CHANGING MINDSETS

STRATEGY ON HEALTH POLICY AND SYSTEMS RESEARCH



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NW

Call for proposals

**Caribbean Research:
a multi-disciplinary approach**

2016 2nd call for proposals

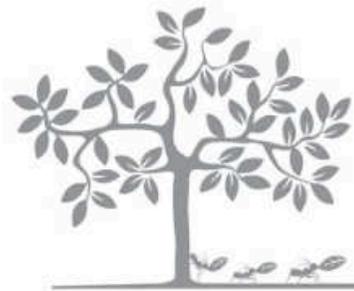
**HEALTHY LIFESTYLE:
*CURACAO & BONAIRE***

**INFECTIOUS DISEASES:
*CURACAO & ARUBA***

**CLINICAL GENETICS:
*CURACAO & ARUBA***

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CBHRI

Curaçao Biomedical &
Health Research Institute



Santa Rosaweg 122-124
Willemstad, Curaçao

Tel: +5999 522 6613

Email: info@cbhri.com

Hours: Monday - Friday

9:00 AM - 6:00 PM

CBHRI Chamber of Commerce number: 139600

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Red Cross Blood Bank Foundation 

Clinical Review & Education

JAMA | Special Communication

The High Cost of Prescription Drugs in the United States Origins and Prospects for Reform

Aaron S. Kesselheim, MD, JD, MPH; Jerry Avorn, MD; Ameet Sarpatwari, JD, PhD

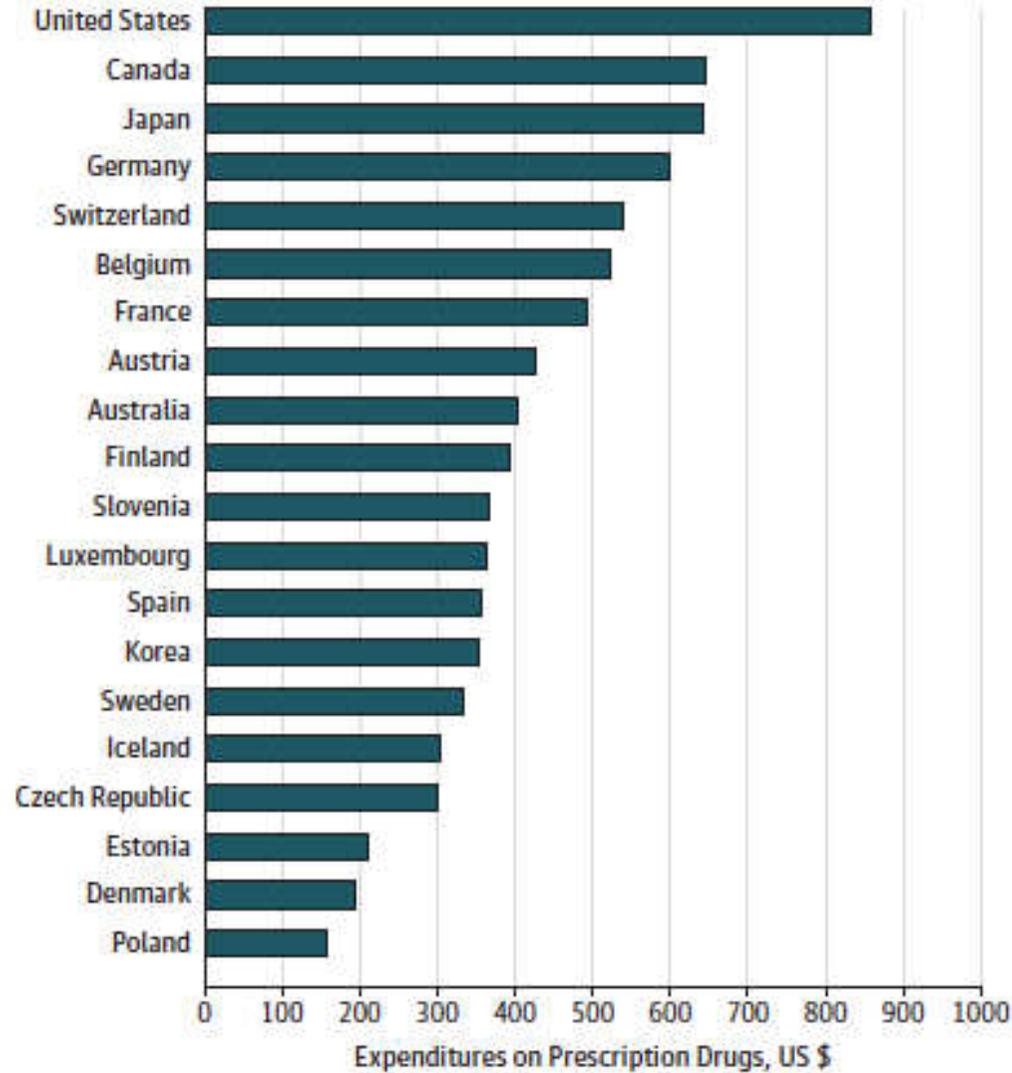
JAMA. 2016;316(8):858-871. doi:10.1001/jama.2016.11237

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Figure 1. Per Capita Spending on Prescription Pharmaceuticals



Data are derived from the Organisation for Economic Cooperation and Development (OECD), reflect expenditures in 2013 (or the nearest year), and include all countries for which values were reported. Data used with permission from OECD, *Health at a Glance 2015: OECD Indicators*, 2015.⁸

Table 1. Examples of Country-Specific Average Drug Prices for Top-Selling Drugs in 2015

Drug	Monthly Price, US \$				
	United States		Canada	France	Germany
	Nondiscounted Price	Estimated Discounted Price			
Adalimumab (Humira), 40 mg biweekly	3430.82	2504.50	1164.32	981.79	1749.26
Fluticasone/salmeterol (Advair), 250 µg, 50 µg daily	309.60	154.80	74.12	34.52	37.71
Insulin glargine (Lantus), 50 insulin units daily	372.75	186.38	67.00	46.60	60.90
Rosuvastatin (Crestor), 10 mg daily	216.00	86.40	32.10	19.80	40.50
Sitagliptin (Januvia), 100 mg daily	330.60	168.61	68.10	35.40	39.00
Sofosbuvir (Sovaldi), 400 mg daily	30 000.00	17 700.00	14 943.30	16 088.40	17 093.70
Trastuzumab (Herceptin), 450 mg every 3 wk	5593.47	4754.45		2527.97	3185.87

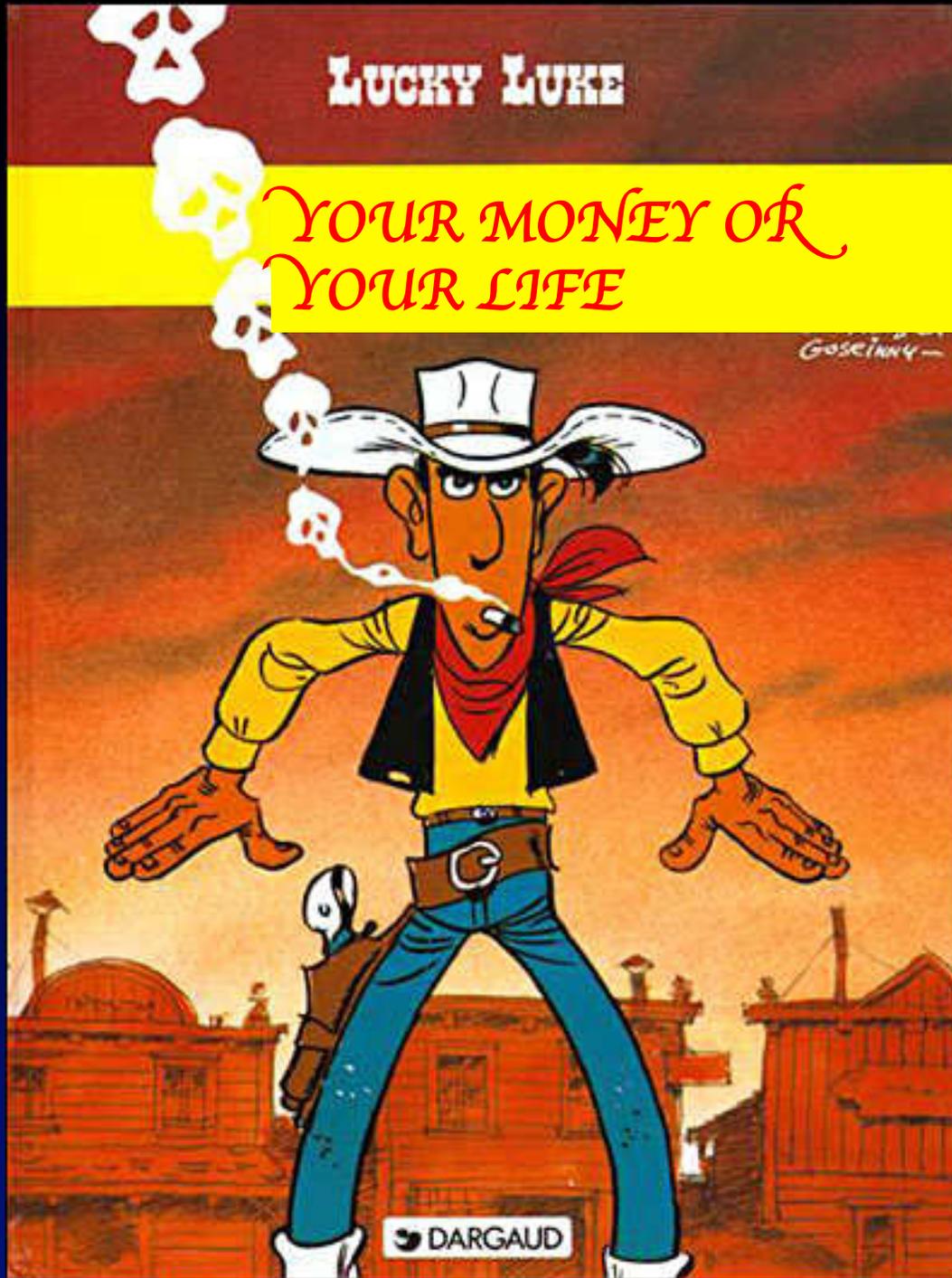
Source: Bloomberg Business report and SSR Health.¹⁰

EPO: 50x more expensive!

LUCKY LUKE

YOUR MONEY OR
YOUR LIFE

GOSLINNY



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Increasing Collaboration in Health Services Management and Delivery in the Dutch-Caribbean

Prof. dr. A.J. Duits