The Global Picture in Blood Transfusions: A Quick Overview

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WHO 2016

- Of the 113 million blood donations collected globally, half are collected in high-income countries (HIC), home to 19% of the world's population; 113 million is a 6% increase from 2013
- In middle- and low-income countries (M/LIC), about 65% of transfusions go to children under five; in HIC, 76% go to those over 65
- Blood donation rate in HIC is 33 donations per 1000 population (down 15% from 2013). In MIC, the rate is 12/1000 (no change), and 5 donations in LIC (up 1)

WHO 2016

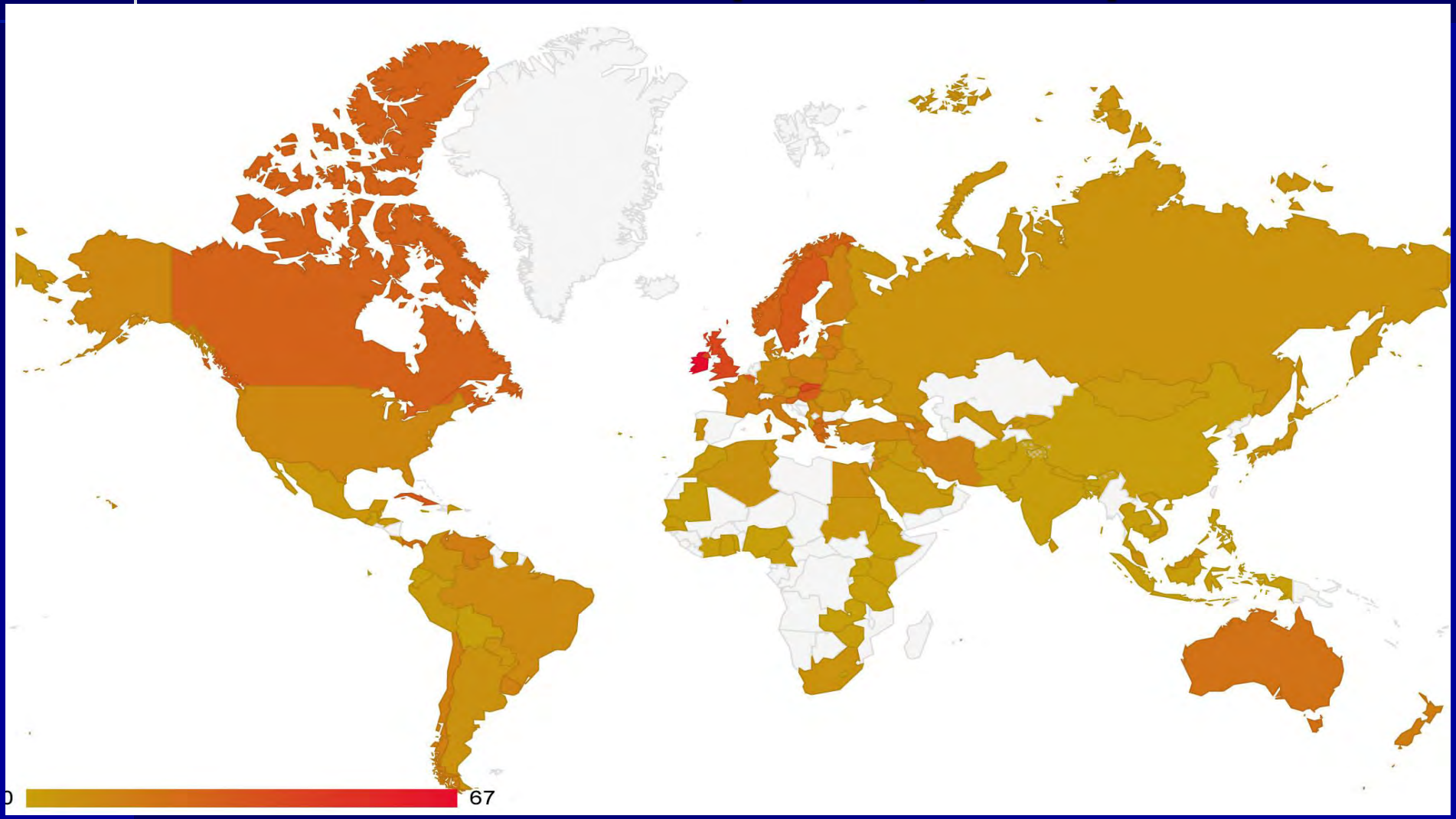
- 74 countries collect >90% of their blood supply from volunteer unpaid donors; 72 countries collect >50% from replacement or paid donors
- Only 43 of 175 reporting countries produce plasma-derived medicinal products (PDMP) through the fractionation of plasma collected in the country, whereas the majority of the other 132 countries import PDMP from abroad

Main Uses of Blood in Developing Countries

- Anemia
  - Secondary to malaria (Africa) – 15% of deaths in children due to malaria
  - β-Thalassemia (MENA) – 2 to 11% of births
  - Sickle cell (Africa) - >23,000 births annually
- Hemorrhage
  - Over 500,000 maternal deaths

Bleeding Disorders
WFH 2015 Survey

Number of Patients per 100,000 Population



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BLOOD COLLECTIONS & TRANSFUSION

A GLOBAL PERSPECTIVE

2014

June 2014 Rev.

Major Findings

- For HIC and MIC, the blood system usually matches it's healthcare system, which in turn is determined by its economy
  - When a country is growing economically, so does the level of its healthcare system and its blood system
    - The reverse is also true, e.g., Russia, Venezuela
  - For LIC, the adequacy of their blood systems tend to lag behind their healthcare system

Major Findings

- Out of 190 countries worldwide, only 6 are expected to see negative growth in 2017; only four in 2018. Thus, the economy for most countries is improving. (IMF)
- Overall, access to adequate healthcare and blood supplies is improving every year
- Access to safe and adequate blood supplies (and adequate healthcare) is more optimal in urban areas; the tendency for most countries is urbanization

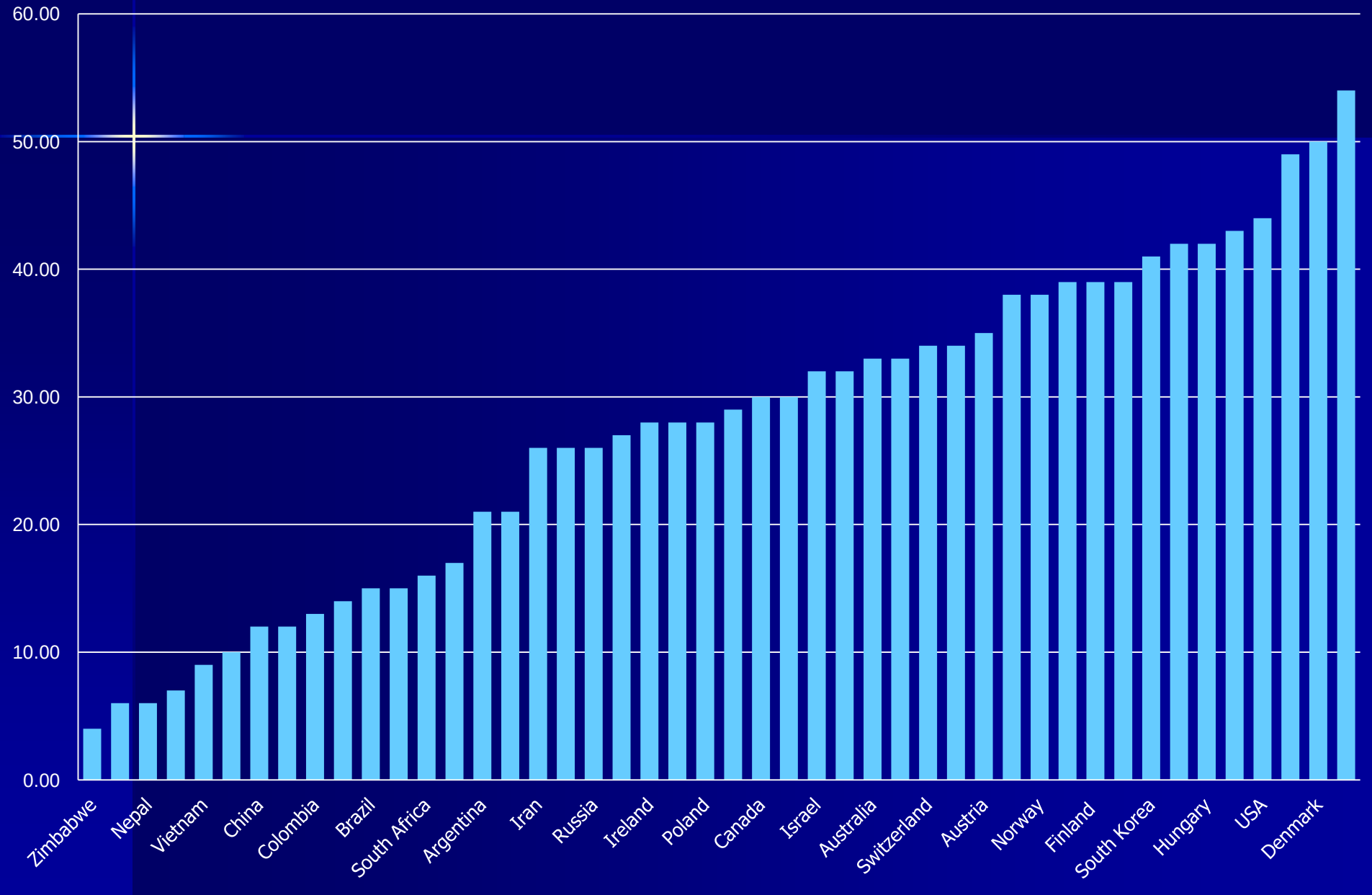
Major Findings
High Income Countries

- For most HIC, where blood demand had been growing every year, the message that blood (mainly RBCs) was overused has been embraced at hospitals. Consequently, blood use per capita has been declining since the global recession hit in 2009
- There is some evidence (e.g., US, Sweden and Norway) that, even as blood use has been declining, the number of patients annually transfused is slowly increasing; i.e., dosage has decreased
- The rate of decline in use has slowed in most HIC

Major Findings
Middle/Low Income Countries

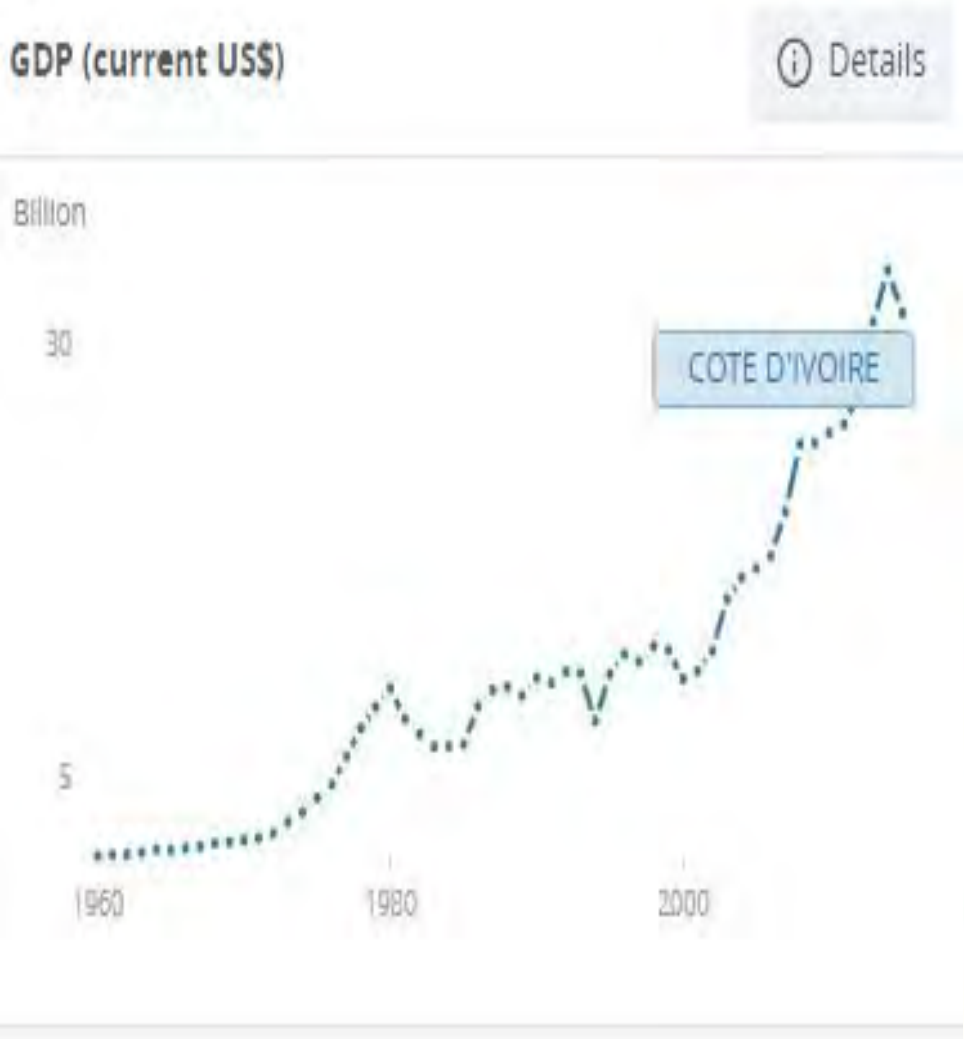
- For M/LIC with improving economies, blood demand has been increasing as access to healthcare improved
  - The majority of transfusions in these countries is used in children, often to support chronic anemia.
- Chronic shortages in LIC

Red Blood Cell or Whole Blood Use / 1,000 Population 2011-13



M/LIC	Direction of Collections	Collections Per 1000 2014-16	HIC	Direction of Collections	Collections Per 1000 2014-16
Zimbabwe	≈	3	New Zealand	≈	22
Tajikistan	≈	5	Netherlands	≈	25
Nepal	↑	8	France	≈	25
Honduras	↑	8	Japan	≈	26
Ivory Coast	↑	8	Australia	≈	27
Indonesia	↑	11	Canada	≈	27
Nigeria	↑	11	Ireland	≈	27
China	↑	13	UK	↓	29
Columbia	↑	14	Spain	≈	32
Pakistan	↑	17	USA	↓	35
South Africa	↑	17	S Korea	↑	42
Kazakhstan	↑	19	Italy	↑	43
Iran	↑	27	Germany	≈	45
Turkey	↑	27	Taiwan	≈	48

Ivory Coast
GDP vs. Blood Collections



Major Findings
Middle/Low Income Countries

- High outdate rates in MIC using replacement donors
- Most LIC transfuse whole blood: low tech, low cost
  - Blood is used within hours/days of collection
- Plasma discarded for most MIC

View larger image

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Disposable blood bag

FOB **Reference** Price: Get Latest Price

US $1-5 / Piece 20000 Piece/Pieces Disposable blood bag (Min. Order)

Supply Ability: 100000 Piece/Pieces per Month Disposable blood bag

Port: Shanghai for Disposable blood bag

Contact Supplier

Leave Messages Add to Favorites

Seller Support: Trade Assurance
100% Payment protection 100% On-time shipment 100% Product quality protection

Payment: VISA T/T e-Checking More

Product Details Company Profile Transactions Overview Report Suspicious Activity

Overview

Specifications

What is an "adequate" blood supply?

- Where no one dies for lack of access
- WHO sets 10 RBC/1000 population as "minimal need"
  - Most LIC well below that number
- Six transfusions needed annually for chronic anemias; over 300,000 births per year
- Anemia a complication in 50% of deaths in 2015 from malaria

Lancet Commission: Global Surgery 2030

(Vol 386 August 8, 2015)

- Of the 313 million procedures undertaken worldwide each year, only 6% occur in the poorest countries, where over a third of the world's population lives
- 143 million additional surgical procedures are needed in L/MIC each year to save lives and prevent disability
- About 28% of such surgeries will need blood with an average need of three units, or a total of 116 million

In Summary

- Healthcare is improving worldwide
- The minimum lifesaving need for blood and plasma today in M/LIC is likely twice current collections
- To meet needs in M/LIC, including lifesaving surgery, demand likely will triple

In Summary

- Where will the money come for development work to improve blood and plasma quality and availability?
- Private philanthropy is now the largest source for development (Hudson Institute)
  - Private funds from 23 HIC to developing nations was over $800B in 2014, a nearly 60% increase from 2012
  - Government aid was $137B in 2014 (<15% of the total)

In Summary

- Millions of children and mothers in labor will die this year for lack of blood and plasma
- How is it that this “curable” problem is not a global healthcare priority for HICs?
- Who can best help us make the case for support from private philanthropy and governments?

Thank you!