

DIAGNOSTICS

update.com

Issue No: 12 Third Quarter 2015

2015 World
Blood Donor
Day campaign

World
Sight Day

**PREVENT
HEPATITIS.
ACT
NOW**

**WORLD
FOOD DAY**

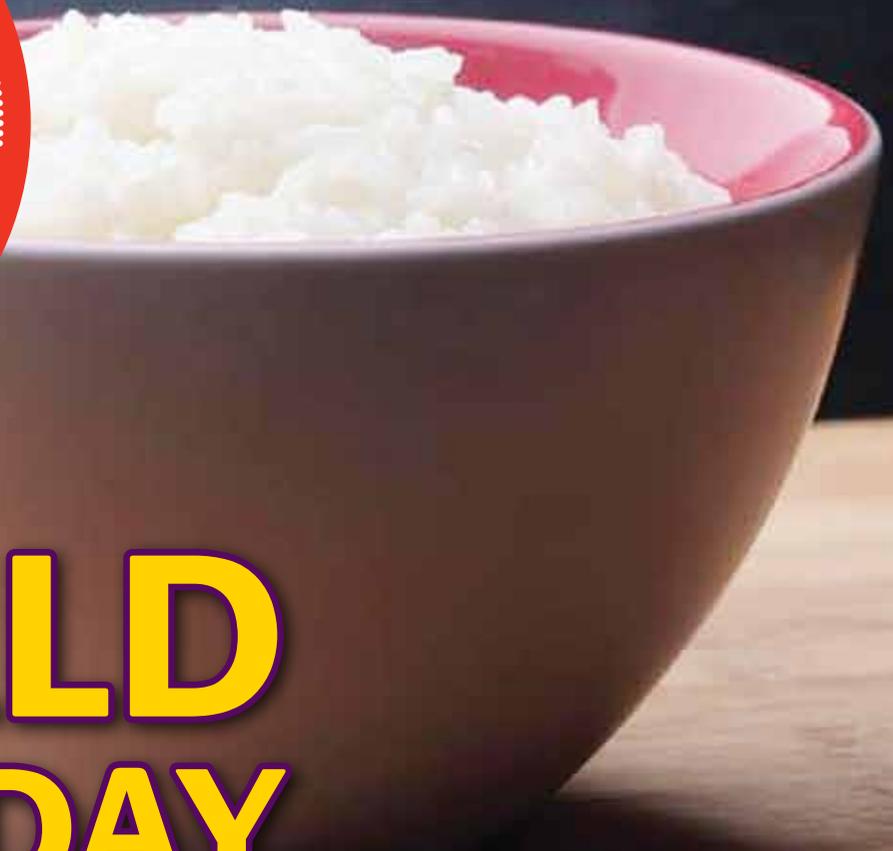


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rice-bowl



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Dear Reader,

One of the great aspects of this job is having the opportunity to talk with and listen to the many different manufacturers, distributors, and of course the huge network of dealers that is the backbone of our industry.

Years ago I never would have ever imagined I would be in this

position, and it is amazing. To say I really enjoy this job is an understatement.

What makes Diagnostics Update.com so unique is their informative and educative ways to the nation.

The staff and management is always looking for ways to inform their readers on how to tackle different medical issues. Basically, you want more people

to enjoy reading more and more.

That said, there is still the need to get more readers to embrace healthy routines within and outside the homestead. This October/November/December issue we focus more on the winter/spring season ailments. We take a look at different ways to keep healthy.

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treat, cure, or prevent any disease without the supervision of a medical doctor. Please be advised that medical information changes rapidly and new discoveries are being made on a daily basis.

Therefore, some information in this publication may have change by the time you read it.

WORLD SIGHT DAY



World Sight Day is a special annual day of awareness that is celebrated around the world each year in order to focus on blindness and vision impairment.

This day was created by the World Health Organization in collaboration with the International Agency for the Prevention of Blindness and awareness is spread through a large number of different events.

A large number of organisations around the world have been involved with World Sight Day for many years. Some people choose to show their support by planting trees, while other people get involved by submitting a photograph that will be used to create an international photograph montage focusing on the theme of blindness.

Other activities that take place on this day include special fund raising walks to help cover the costs of operations, book readings for the blind and a number of booklets and posters that are created in order to raise awareness of the issue.



WORLD SIGHT DAY



It is not everyday that you find an organization that really cares about the community that they serve and Diagnofirm is one such entity, which has put the interest

of the people ahead of anything else.

The local medical laboratory firm has been known to give generously to deserving sectors in the country and the latest one after a borehole donation in Mmathethe was the donation to the Princess Marina Hospital Pediatric Ward on Wednesday.

The company handed an assortment of baby products to be used by young children hospitalized in the ward much to the delight and appreciation of the caretakers.

“We decided to take heed of the request that was sent to us sometime by yourself seeking our intervention in this regard.

At Diagnofirm we strongly believe that our people especially the young children deserve more hence our presence here today to assist

with the little that we have brought you here,” said a representative from Diagnofirm - Boitumelo Setlhabi.

The short handing over ceremony which was held in the hospital ward was a blessing to the children as now they will be able to get the necessary care from the donated items such as baby oils, pampers, feeding utensils, body creams and many others which we handed over on the day.

The Ward Matron who

Diagnofirm Gives to Princess Marina Pediatric Ward



received the items was beyond words as she wished the company well in their endeavors so that they can continue helping the disadvantaged members of the community.

“I wish to take this opportunity on behalf of the Hospital Management, the children as well as the whole staff members in this ward to thank you sincerely from the bottom of our hearts for this kind gesture.

Indeed we are blessed to have been assisted in this form by your esteemed company and we hope this will not end here but continue even in the future since we are always in need as you can for yourself,” Onicah Lefatshe said in her acceptance.

The donated goods were valuable and the intention was to help the Princess Marina Children’s ward to adequately provide for the hospitalized

children as some parents do not have the resources to purchase the items which are important to a child’s hygiene and growth.

The believe and hope is that the donated goods will go a long way in alleviating the emotional pain suffered by the parents as well as help the health workers to focus on fully providing for the children and ensure their speedy recovery unabated.



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2015 WORLD BLOOD DONOR DAY CAMPAIGN

The theme focuses on thanking blood donors who save lives every day through their blood donations and strongly encourages more people all over the world to donate blood voluntarily and regularly with the slogan "Give freely, give often. Blood donation matters."

The campaign aims to highlight stories from people whose lives have been saved through blood donation, as a way of motivating regular blood donors to continue giving blood and people in good health who have never given blood, particularly young people, to begin doing so.

Activities may include commemorative events, meetings, publication / dissemination of relevant stories on media outlets, scientific conferences, publication of articles on national, regional and international scientific journals, and other activities that would help in promoting the theme of this year's World Blood Donor Day (WBDD).

The objectives of this year's campaign are to:

- thank blood donors for their life-saving donations;
- promote regular voluntary unpaid blood donation;
- create wider public awareness of the need for regular donation because of the short shelf-life of blood components and to encourage existing and potential donors to donate blood at regular intervals
- focus attention on donor health and the quality of donor care as critical factors in building donor commitment and a willingness to donate regularly; and
- persuade ministries of health to show their appreciation of regular voluntary unpaid donors and provide adequate resources to provide quality donor care.

Host for World Blood Donor Day events - China
The host country for World Blood Donor Day 2015 is China through its blood center in Shanghai, Shanghai Blood Centre (SBC), also the WHO Collaborating Center for Blood Transfusion Services.

Background information

Every year, on 14 June, countries around the world celebrate World Blood Donor Day. The event serves to thank voluntary unpaid blood donors for their life-saving gifts of blood and to raise awareness of the need for regular blood donations to ensure quality, safety and avail-

The theme of this year's campaign is "Thank you for saving my life".



ability of blood and blood products for patients in need.

Transfusion of blood and blood products helps save millions of lives every year. It can help patients suffering from life-threatening conditions live longer and with higher quality of life, and supports complex medical and surgical procedures. It also has an essential, life-saving role in maternal and child care and during man-made and natural disasters.

However, in many countries, demand exceeds supply, and blood services face the challenge of making sufficient blood available, while also ensuring its quality and safety. An adequate supply can only be assured through regular donations by voluntary unpaid blood donors. WHO's goal is for all countries to obtain all their blood supplies from voluntary unpaid donors by 2020. Today, in just 62 countries, national blood supplies are based on close to 100% voluntary unpaid blood donations, with 40 countries still dependent on family donors and even paid donors.

Blood safety and availability

Key facts

- Of the 108 million blood donations collected globally, approximately half of these are collected in the high-income countries, home to 18% of the world's population. This shows an increase of almost 25% from 80 million donations collected in 2004.
- In low-income countries, up to 65% of blood transfusions are given to children under 5 years of age; whereas in high-income countries, the most frequently transfused patient group is over 65 years of age, accounting for up to 76% of all transfusions.
- Blood donation rate in high-income countries is 36.8 donations per 1000 population; 11.7 donations in middle-income and 3.9 donations in low-income countries.
- An increase of 8.6 million blood donations from voluntary unpaid donors has been reported from 2004 to 2012. In total, 73 countries collect over 90% of their blood supply from voluntary unpaid blood donors; however, 72 countries collect more than 50% of their

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Blood Donor Day Campaign

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blood supply from family/replacement or paid donors.

- Only 43 of 156 reporting countries produce plasma-derived medicinal products (PDMP) through the fractionation of plasma collected in the country, whereas the majority of the other 113 countries import PDMP from abroad.

National blood policy and organization
Blood transfusion saves lives and improves health, but many patients requiring transfusion do not have timely access to safe blood. Providing safe and adequate blood should be an integral part of every country's national health care policy and infrastructure.

WHO recommends that all activities related to blood collection, testing, processing, storage and distribution be coordinated at the national level through effective organization and integrated blood supply networks. The national blood system should be governed by national blood policy and legislative framework to promote uniform implementation of standards and consistency in the quality and safety of blood and blood products.

In 2012, 70% countries had a national blood policy, compared with 60% countries in 2004. Overall, 62% countries have specific legislation covering the safety and quality of blood transfusion:

- 81% high-income countries ;
- 60% middle-income countries; and
- 44% low-income countries.

Blood supply

About 108 million blood donations are collected worldwide. More than half of these are collected in high-income countries, home to 18% of the world's population.

About 10 000 blood centres in 168 countries report collecting a total of 83 million donations. Collections at blood centres vary according to income group. The median annual donations per blood centre is 3100 in the low- and middle-income countries, as compared to 15 000 in the high-income countries.

There is a marked difference in the level of access to blood between low- and high-income countries. The whole blood donation rate is an indicator for the general availability of blood in a country. The median blood donation rate in high-income countries is 36.8 donations per 1000 population. This compares with 11.7 donations in middle-income countries and 3.9 donations in low-income countries.

75 countries report collecting fewer than 10 donations per 1 000 population. Of these, 40



countries are in WHO's African Region, 8 in the Americas, 7 in the Eastern Mediterranean Region, 6 in Europe, 6 in South-Eastern Asian and 8 in the Western Pacific. All are low- or middle-income countries.

Blood donors

Age and gender of blood donors

Data about the gender profile of blood donors show that globally 30% of blood donations are given by women, although this ranges widely. In 20 of the 111 reporting countries, less than 10% donations are given by female donors.

The age profile of blood donors shows that more young people donate blood in low- and middle-income countries, proportionally than in high-income countries (see Figure 1). Demographic information of blood donors is important for formulating and monitoring recruitment strategies.

Types of blood donors

There are 3 types of blood donors:

- voluntary unpaid;
- family/replacement; and
- paid.

An adequate and reliable supply of safe blood can be assured by a stable base of regular, voluntary, unpaid blood donors. These donors are also the safest group of donors as the prevalence of bloodborne infections is lowest among this group. World Health Assembly resolution (WHA63.12) urges all Member States to develop national blood systems based on voluntary unpaid donation and work towards the goal of self-sufficiency.

Data reported to WHO shows significant increases of voluntary unpaid blood donations in low- and middle-income countries:

- An increase of 8.6 million blood donations from voluntary unpaid donors from 2004 to 2012 has been reported by 162 countries. The highest increase of voluntary unpaid blood donations is in the South-East Asia (78%) and African (51%) Regions. The maximum increase in absolute numbers was reported in the Western

Pacific Region.

- 73 countries collect more than 90% of their blood supply from voluntary unpaid blood donations (38 high-income countries, 26 middle-income countries and 9 low-income countries). This includes 60 countries with 100% (or more than 99%) of their blood supply from voluntary unpaid blood donors.

- In 72 countries, more than 50% of the blood supply is still dependent on family/replacement and paid blood donors (8 high-income countries, 48 middle-income countries and 16 low-income countries).

- 25 countries still report collecting paid donations in 2012, around 1 500 000 donations in total.

Blood screening

WHO recommends that all blood donations should be screened for infections prior to use. Screening should be mandatory for HIV, hepatitis B, hepatitis C and syphilis. Blood screening should be performed according to the quality system requirements.

- 25 countries are not able to screen all donated blood for 1 or more of the above infections.

- Irregular supply of test kits is one of the most commonly reported barriers to screening.

- 97% blood screening laboratories in high-income countries are monitored through external quality assessment schemes, as compared to 33% in middle-income countries and 16% in low-income countries.

- The prevalence of transfusion-transmissible infections (TTI) in blood donations in high-income countries is considerably lower than in low- and middle-income countries (Table 1). Table 1. Prevalence of TTIs in blood donations (Median, Interquartile range (IQR)), by income groups

HIV HBV HCV

High-income countries 0.002% 0.02% 0.02%

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MMATHETHE RESIDENTS GET WATER RESPITE

A chilly and windy morning could not deter the thirsty residents of Mmathethe Village in the Ngwaketse District to track down south and witness the handing over of a borehole in Gasegwagwa by local medical laboratory firm Diagnofirm and the Chand family.

The area is one of the hardest hit by current water crisis that besiege the Southern part of the country and the situation is not helped by the dwindling underground water levels in the area.

"This day would not have happened had it not been for our House attendant Marea Simane who in December just before the Christmas break spoke to my wife in our kitchen about the plight of the Mathethe and the shortage of water," the project donor and Director of Laboratory Services at Diagnofirm Mr Mohammed Iqbal Chand said when giving the background of the project.

Water is a very important commodity in a human life and therefore Mr Chand and his family decided to assist the people of Mathethe with this precious gift from the Creator. All logistics were started with communication between the donors and the recipient and all stakeholders including the area leadership took it upon themselves to



fast track the realisation of this goal. "The area MP and Assistant Minister of Health Dr Alfred Madigele called me and appreciated the noble deed. He further brought with him surveys done on the water situation around Mathethe which showed that the water yield levels for the area were very low or non-existent," Mr Chand added. In view of this possible setback, an engagement of the Minister of mineral, water and energy resources Kitso Mokaila culminated in the offering of an old borehole in Gasegwagwa which was revamped and equipped with all the necessary require-

ments. "It is quite humbling to find that we still have those citizens among us who find it fit to assist the community and do not wait for government to always initiate. There is no doubt that a gift of such magnitude need our concerted applause and support and I believe this borehole will serve its intended purpose of providing for the village of Mathethe and surrounding areas," the area MP Honourable Madigele said in his address.

Various speakers took to the podium to show gratitude and appreciation for this kind gesture by the Chand family.



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CAPTIONS

1. An aerial view of borehole
2. Part of Diagnofirm staff
3. Diagnofirm Director, Mr Iqbal Chand
4. Mmathethe District, Commissioner
5. Director of Proceedings
6. Village Kgosi welcoming the guests
7. Area MP, Dr Alfred Madigele
8. The Project Initiator, Mare Simane
9. Gasegwagwa Kgosi closing with a vote of Thanks
10. Diagnofirm Director, Mr Iqbal Chand - receiving a prize from the community.
11. Mr Chand revealing his prize
12. The area MP Dr Madigele unveiling the plaque to receive the donation from Mr Chand and Family



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PREVENT HEPATITIS. ACT NOW

On World Hepatitis Day, 28 July 2015, WHO and partners will urge policy-makers, health workers and the public to act now to prevent infection and death from hepatitis.

Viral hepatitis – a group of infectious diseases known as hepatitis A, B, C, D, and E – affects hundreds of millions of people worldwide, causing acute and chronic liver disease and killing close to 1.5 million people every year, mostly from hepatitis B and C. These infections can be prevented, but most people don't know how.

In May 2014, World Health Assembly delegates from 194 governments adopted a resolution to promote global action to prevent, diagnose, and treat viral hepatitis.

On World Hepatitis Day, events will take place around the world focussing on preventing hepatitis B and hepatitis C.

The date of 28 July was chosen for World Hepatitis Day in honour of the birthday of Nobel Laureate Professor Baruch Samuel Blumberg, discoverer of the hepatitis B virus and developer of the first hepatitis B vaccine.

Prevent hepatitis – know the risks

Unsafe blood, unsafe injections, and sharing drug-injection equipment can all result in hepatitis infection.

Prevent hepatitis – demand safe injections

2 million people a year contract hepatitis from unsafe injections. Using sterile, single-use syringes can prevent these infections

Prevent hepatitis – vaccinate children

Approximately 780 000 persons die each year from hepatitis B infection. A safe and effective vaccine can protect from hepatitis B infection for life.

Prevent hepatitis – get tested, seek treatment

Effective medicines exist to treat hepatitis B and cure hepatitis C.

Hepatitis A

Key facts

- Hepatitis A is a viral liver disease that can cause mild to severe illness.
- The hepatitis A virus is transmitted through ingestion of contaminated food and water or through direct contact with an infectious person.

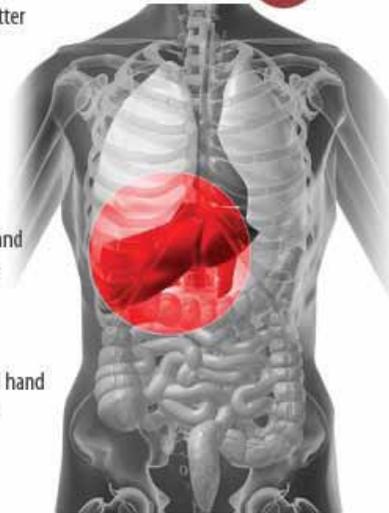
- 1 Is a viral infection of the liver spread when faecal matter enters the mouth



- 2 May last several weeks and can be debilitating but most people recover completely

- 3 Preventable with careful hand washing, keeping toilets and bathrooms clean, avoiding infected water sources

HEPATITIS A FACTS



SYMPTOMS INCLUDE

nausea



vomiting



SPREAD BY



direct contact



food & beverages



cups & spoons

and any other objects handled by the infected person

- Almost everyone recovers fully from hepatitis A, but very small proportions die from fulminant hepatitis.

- Hepatitis A infection risk is associated with a lack of safe water and poor sanitation.

- Epidemics can be explosive and cause significant economic loss.

- Improved sanitation and the hepatitis A vaccine are the most effective ways to combat the disease.

Hepatitis A is a liver disease caused by the hepatitis A virus. The virus is primarily spread when an uninfected (and unvaccinated) person ingests food or water that is contaminated with the faeces of an infected person. The disease is closely associated with unsafe water, inadequate sanitation and poor personal hygiene.

Unlike hepatitis B and C, hepatitis A infection does not cause chronic liver disease and is rarely fatal, but it can cause debilitating symptoms and fulminant hepatitis (acute liver failure), which is associated with high mortality.

Hepatitis A occurs sporadically and in epidemics worldwide, with a tendency for cyclic recurrences. The hepatitis A virus is one of the most frequent causes of foodborne infection. Epidemics related to contaminated food

or water can erupt explosively, such as the epidemic in Shanghai in 1988 that affected about 300 000 people¹. Hepatitis A viruses persist in the environment and can withstand food-production processes routinely used to inactivate and/or control bacterial pathogens. The disease can lead to significant economic and social consequences in communities. It can take weeks or months for people recovering from the illness to return to work, school or daily life. The impact on food establishments identified with the virus, and local productivity in general, can be substantial.

Geographical distribution

Geographical distribution areas can be characterized as having high, intermediate or low levels of hepatitis A infection.

Areas with high levels of infection

In developing countries with very poor sanitary conditions and hygienic practices, most children (90%) have been infected with the hepatitis A virus before the age of 10 years². Those infected in childhood do not experience any noticeable symptoms. Epidemics are uncommon because older children and adults are generally immune. Symptomatic disease rates in these areas are low and outbreaks are rare.

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Areas with intermediate levels of infection

In developing countries, countries with transitional economies and regions where sanitary conditions are variable, children often escape infection in early childhood. Ironically, these improved economic and sanitary conditions may lead to a higher susceptibility in older age groups and higher disease rates, as infections occur in adolescents and adults, and large outbreaks can occur.

Areas with low levels of infection

In developed countries with good sanitary and hygienic conditions, infection rates are low. Disease may occur among adolescents and adults in high-risk groups, such as injecting-drug users, men who have sex with men, people travelling to areas of high endemicity, and in isolated populations, such as closed religious communities.

Transmission

The hepatitis A virus is transmitted primarily by the faecal-oral route; that is when an uninfected person ingests food or water that has been contaminated with the faeces of an infected person. Waterborne outbreaks, though infrequent, are usually associated with sewage-contaminated or inadequately treated water.

The virus can also be transmitted through close physical contact with an infectious person, although casual contact among people does not spread the virus.

Symptoms

The incubation period of hepatitis A is usually 14–28 days.

Symptoms of hepatitis A range from mild to severe, and can include fever, malaise, loss of appetite, diarrhoea, nausea, abdominal discomfort, dark-coloured urine and jaundice (a yellowing of the skin and whites of the eyes). Not everyone who is infected will have all of the symptoms.

Adults have signs and symptoms of illness more often than children, and the severity of disease and mortality increases in older age groups. Infected children under 6 years of age do not usually experience noticeable symptoms, and only 10% develop jaundice. Among older children and adults, infection usually causes more severe symptoms, with jaundice occurring in more than 70% of cases.

Who is at risk?

Anyone who has not been vaccinated or previously infected can contract hepatitis A.

In areas where the virus is widespread (high endemicity), most hepatitis A infections occur during early childhood. Risk factors include:

- poor sanitation;
- lack of safe water;
- injecting drugs;
- living in a household with an infected person;
- being a sexual partner of someone with acute hepatitis A infection; and
- travelling to areas of high endemicity without being immunized.

Diagnosis

Cases of hepatitis A are not clinically distinguishable from other types of acute viral hepatitis. Specific diagnosis is made by the detection of HAV-specific IgM and IgG antibodies in the blood. Additional tests include reverse transcriptase polymerase chain reaction (RT-PCR) to detect the hepatitis A virus RNA, but may require specialised laboratory facilities.

Treatment

There is no specific treatment for hepatitis A. Recovery from symptoms following infection may be slow and may take several weeks or months. Therapy is aimed at maintaining comfort and adequate nutritional balance, including replacement of fluids that are lost from vomiting and diarrhoea.

Prevention

Improved sanitation, food safety and immunization are the most effective ways to combat hepatitis A.

The spread of hepatitis A can be reduced by:

- adequate supplies of safe drinking water;
- proper disposal of sewage within communities; and
- personal hygiene practices such as regular hand-washing with safe water.

Several hepatitis A vaccines are available internationally. All are similar in terms of how well they protect people from the virus and their side-effects. No vaccine is licensed for children younger than 1 year of age.

Nearly 100% of people develop protective levels of antibodies to the virus within 1 month after a single dose of the vaccine. Even after exposure to the virus, a single dose of the vaccine within 2 weeks of contact with the virus has protective effects. Still, manufacturers recommend two vaccine doses to ensure a longer-term protection of about 5 to 8 years after vaccination.

Millions of people have been immunized worldwide with no serious adverse events. The vaccine can be given as part of regular

childhood immunizations programmes and also with other vaccines for travellers.

Immunization efforts

Vaccination against hepatitis A should be part of a comprehensive plan for the prevention and control of viral hepatitis. Planning for large-scale immunization programmes should involve careful economic evaluations and consider alternative or additional prevention methods, such as improved sanitation, and health education for improved hygiene practices.

Whether or not to include the vaccine in routine childhood immunizations depends on the local context. The proportion of susceptible people in the population and the level of exposure to the virus should be considered. Several countries, including Argentina, China, Israel, Turkey, and the United States of America have introduced the vaccine in routine childhood immunizations.

While the 2 dose regimen of inactivated hepatitis A vaccine is used in many countries, other countries may consider inclusion of a single-dose inactivated hepatitis A vaccine in their immunization schedules. Some countries also recommend the vaccine for people at increased risk of hepatitis A, including:

- travellers to countries where the virus is endemic;
 - men who have sex with men; and
 - people with chronic liver disease (because of their increased risk of serious complications if they acquire hepatitis A infection).
- Regarding immunization for outbreak response, recommendations for hepatitis A vaccination should also be site-specific. The feasibility of rapidly implementing a wide-spread immunization campaign needs to be included.

Vaccination to control community-wide outbreaks is most successful in small communities, when the campaign is started early and when high coverage of multiple age groups is achieved. Vaccination efforts should be supplemented by health education to improve sanitation, hygiene practices and food safety.

WHO response

WHO is working in the following areas to prevent and control viral hepatitis:

- raising awareness, promoting partnerships and mobilizing resources;
 - formulating evidence-based policy and data for action;
 - preventing transmission; and
 - executing screening, care and treatment.
- WHO also organizes World Hepatitis Day on July 28 every year to increase awareness and understanding of viral hepatitis.

DML MOBILE APP

Diagnofirm Medical Laboratories continue bringing innovative technology to benefit the Clients. Yes!! Yet another first in Botswana, Diagnofirm will soon launch its **MOBILE APPLICATION** for Clinical Reports which can be seamlessly accessed by Patients, Doctors and Referrals. The application will connect and synchronizes Clinical Reports through your Mobile devices confidentially.

The application supports Android and IOS mobile devices.

With DML Email & SMS reporting the sample action will be known upon Authorisation of Reports whereas **DML MOBILE APP** provides status of samples as it happens. Doctors, Referrers and Patients can view the sample action in every stage of processing.



ADVANTAGES:

- Status of test report(s) on the move, anytime.
- Report readiness alert once authorized, which eliminates frequent checking of App for the readiness.
- Department wise availability of test report.
- Eradication of frequent checks or phone calls to the laboratory for the sample status and test report
- Test reports in PDF format, allows the user to view in whatever ways they want, like Zoom, Search, etc., but not alter the same.
- Test report availability of Patients referred to the laboratory, when ready, eliminating the need of the patient to produce the test report physically.
- Enables high patient care, not only for the laboratory but to the Physicians also.
- Easy and user friendly to use

FEATURES:

- **PATIENT LOGIN** - Patients can log in using their account and their reports (including past and current reports) can be viewed at any point of time
- **DOCTOR / REFERRAL LOGIN** - Test reports of Patients referred by them can be viewed
- If logged in, once the final test report is Authorised, user will be alerted on the same
- Upon clicking the **OK** button of alert, Test Report will be viewed in PDF format
- Patient / Referrer profile with basic demographics can be viewed under Profile

DML MOBILE APP

FUTURE APP

- Doctor Request Form
- Clinical Notes



**Diagnofirm Mobile
Application
Screenshot**



DIAGNOFIRM
MEDICAL LABORATORIES
Pathology you can trust!

FOOD DAY

Food Day inspires people to change their diets and our food policies toward a greener diet

What is World Food Day?

World Food Day is a day of action against hunger. World Food Day is a day of action against hunger. On October 16, people around the world come together to declare their commitment to eradicate hunger in our lifetime. Because when it comes to hunger, the only acceptable number in the world is zero.

Food Day has since then been observed in almost every country by millions of people. Events and public awareness campaigns engage diverse audiences in action against hunger. From hunger walks and World Food Day dinners to meal packaging events and food drives, there are many ways for people to be a part of solutions to hunger.

Why care about hunger?

Because the right to food is a basic human right. In a world of plenty, 805 million people, one in nine worldwide, live with chronic hunger.¹ The costs of hunger and malnutrition fall heavily on the most vulnerable.

- 60% of the hungry in the world are women.
- Almost 5 million children under the age of 5 die of malnutrition-related causes every year.
- 4 in 10 children in poor countries are malnourished damaging their bodies and brains. Every human being has a fundamental right to be free from hunger and the right to adequate food.

The right to adequate food is realized when every man, woman and child has the physical and economic access at all times to adequate food or means for its procurement. Because we can end hunger in our lifetime. It's possible. The world produces enough food to feed every person on the planet.

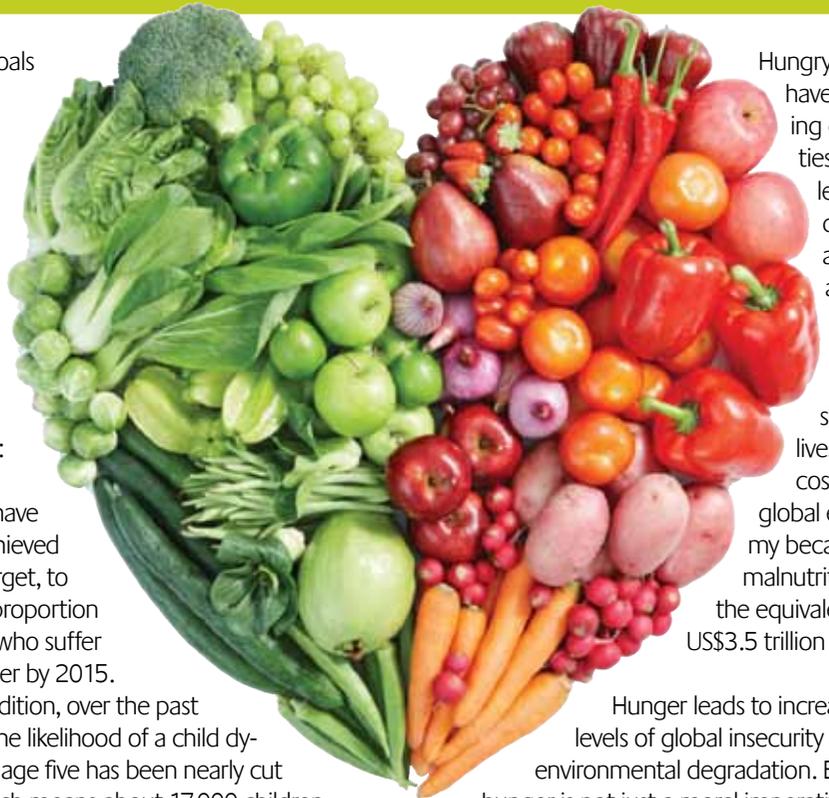
In September 2000, world leaders signed a commitment to achieve eight Millennium Development

Goals by 2015. MDG #1 is eradicate extreme poverty and hunger and includes three targets.

Since then:

- Forty countries have already achieved the first target, to halve the proportion of people who suffer from hunger by 2015.
- In addition, over the past 20 years, the likelihood of a child dying before age five has been nearly cut in half, which means about 17,000 children are saved every day.
- Extreme poverty rates have also been cut in half since 1990.

The challenge is significant, but these results show us that when we focus our attention, we can make big strides. Because the cost of neglect is too high. No one in the world should have to experience hunger. In addition to the cost of human suffering, the world as a whole loses when people do not have enough to eat.



Hungry people have learning difficulties, are less productive at work, are sick more often and live shorter lives. The cost to the global economy because of malnutrition is the equivalent of US\$3.5 trillion a year.

Hunger leads to increased levels of global insecurity and environmental degradation. Ending hunger is not just a moral imperative, but also a good investment for society. Because it can happen to anyone. Nutritious food can be expensive, making a balanced diet a luxury for many. Loss of a job, a family tragedy, poor health, or an accident can make anyone, anywhere, go hungry in a moment. Globally, extreme climate events, war, or even financial crisis can dramatically affect a person's ability to feed themselves and their families. Without social safety nets, resiliency measures and good policy in place, these small and large events can set off a cycle of hunger and poverty.

What's in a bowl?

The issue of hunger can seem complex and overwhelming at times. But, it's easy to see the impact donors, friends and partners have to help us solve hunger. Imagine in your hand you're holding 62 meals. And, imagine that while holding these

meals you can speak about hunger to an attentive crowd who hears your every word. And imagine you're doing this all with the power of one

bowl. No this, isn't a trick — this is a reality. And this reality is happening somewhere in the world right now. As part of Hunger Action Month, part of this inaugural campaign, companies of all sizes are partnering with the food bank to purchase the most bowls where participants are then encouraged to get on social media and use the bowls to tell the story of hunger to the public.



Blood Donor Day Campaign

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(0.0004%-0.02%) (0.008% - 0.24%)

(0.004% - 0.22%)

Middle-income countries 0.12% 0.64%

0.37%

(0.03% - 0.2%) (0.19% - 2.33%) (0.13% -

0.71%)

Low-income countries 0.85% 3.59% 1.07%

(0.48% - 2.0%) (2.01% - 6.08%) (0.63%

- 1.96%)

These differences reflect the variation in prevalence among population who are eligible to donate blood, the type of donors (such as voluntary unpaid blood donors from lower risk populations) and the effectiveness of the system of educating and selecting donors.

Blood processing

Blood collected in an anticoagulant can be stored and transfused to a patient in an unmodified state. This is known as 'whole blood' transfusion. However, blood can be used more effectively if it is processed into components, such as red cell concentrates, platelet concentrates, plasma and cryoprecipitate. In this way, it can meet the needs of more than one patient. The capacity to provide patients with the different blood components they require is still limited in low-income countries: 45% of the blood collected in low-income countries is separated into components, 80% in middle-income countries and 95% in high-income countries.

Supply of plasma-derived medicinal products (PDMP)

World Health Assembly resolution (WHA63.12) urges Member States to establish, implement and support nationally-coordinated, efficiently-managed and sustainable blood and plasma programmes according to the availability of resources, with the aim of achieving self-sufficiency.

It is the responsibility of individual governments to ensure sufficient and equitable supply of plasma-derived medicinal products namely immunoglobulins and coagulation factors, which are needed to prevent and treat a variety of serious conditions that occur worldwide. 43 countries (23 high-income, 18 middle-income, 2 low-income) of the 156 reporting countries, reported producing all or part of the PDMP through the fractionation (e.g. domestic or/and contract fractionation) of plasma collected in the country.

● 35 of the 43 countries report plasma fractionation carried out within the country.

● 8 of the 43 countries report plasma sent

for contract fractionation in another country. 95 countries report that all PDMP are imported: 15 countries report that no PDMP were used during the reporting period; 3 countries report that plasma collected in the country was sold to the manufacturers of plasma-derived medicinal products and products purchased from PDMP suppliers in the market.

Around 10 million litres plasma from 35 reporting countries (22 high-income countries, 12 middle-income countries and 1 low-income countries, covering a population of 2.76 billion) was fractionated for the production of PDMP during the year. This includes around 50% plasma recovered from the whole blood donations.

Clinical use of blood

Unnecessary transfusions and unsafe transfusion practices expose patients to the risk of serious adverse transfusion reactions and TTI. Unnecessary transfusions also reduce the availability of blood products for patients who are in need. WHO recommends the development of systems to monitor and improve the safety of the transfusion process such as hospitals transfusion committees and haemovigilance.

● 111 countries have national guidelines on the appropriate clinical use of blood.

● Transfusion committees are present in 70% of the hospitals performing transfusions in high-income countries and in about half of the hospitals in middle- and low-income countries.

● Clinical audits are conducted in 89% of hospitals performing transfusion in the high-income countries and in 52% of hospitals in the middle- and low-income countries.

● Systems for reporting adverse transfusion events are present in 93% of hospitals performing transfusion in high-income countries and 63% in middle- and low-income countries.

● 77% high-income countries have a national haemovigilance system, compared to only 30% of middle- and low-income countries.

Blood transfusions

There are great variations between countries in the age distribution of transfused patients. For example, in the high-income countries, the most frequently transfused patient group is over 65 years, which accounts for up to 76% of all transfusions. In the low-income countries, up to 65% of transfusions are for children under the age of 5 years.

In high-income countries, transfusion is most commonly used for supportive care in cardiovascular surgery, transplant surgery, massive trauma, and therapy for solid and haematological malignancies. In low- and middle-income countries it is used more often to manage pregnancy-related complications and severe childhood anaemia.

WHO response

The risk of transmission of serious infections, including HIV and hepatitis, through unsafe blood and chronic blood shortages brought global attention to the importance of blood safety and

availability. With the goal of ensuring universal access to safe blood and blood products, WHO has been at the forefront to improve blood safety and availability, and recommends the following integrated strategy for blood safety and availability:

● Establishment of a national blood system with well-organized and coordinated blood transfusion services, effective evidence-based and ethical national blood policies with the goal of achieving self-sufficiency, and legislation and regulation, that can provide sufficient and timely supplies of safe blood and blood products to meet the transfusion needs of all patients.

● Collection of blood, plasma and other blood components from low-risk, regular, voluntary unpaid donors through the strengthening of donation systems, the phasing out of family/replacement donation, the elimination of paid donation, and effective donor management, including care and counselling.

● Quality-assured screening of all donated blood for transfusion-transmissible infections (TTI), including HIV, hepatitis B, hepatitis C and syphilis, confirmatory testing of the results of all donors screen-reactive for infection markers, blood grouping and compatibility testing, and systems for processing blood into blood products (blood components for transfusion and plasma derived-medicinal products), as appropriate, to meet health care needs.

● Rational use of blood and blood products to reduce unnecessary transfusions and minimize the risks associated with transfusion, the use of alternatives to transfusion, where possible, and safe and good clinical transfusion practices, including patient blood management.

● Step-wise implementation of effective quality systems, including quality management, standards, good manufacturing practices, documentation, training of all staff and quality assessment.

Through its Blood and Transfusion Safety programme, WHO supports countries in developing national blood systems to ensure timely access to safe and sufficient supplies of blood and blood products and good transfusion practices to meet the patients' needs. The programme provides policy guidance and technical assistance to countries for ensuring universal access to safe blood and blood products and work towards self-sufficiency in safe blood and blood products based on voluntary unpaid blood donation to achieve universal health coverage.

Data source: This fact sheet is based on the data obtained through the WHO Global Database on Blood Safety (GDDBS) for the year 2012 which were reported by 100 countries. To give a more complete overview of the global situation, data for the year 2011 have been used from 68 countries and data for the year 2010 have been used from 11 countries, where current data are not available. Overall, responses received from 179 countries cover 98.6% of the world's population.

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