International Pathology Day
Celebrating the importance of pathology and laboratory medicine services

**International Pathology Day** was established by the Royal College of Pathologists (RCPPath) to recognise and celebrate the contribution and important role played by pathology and laboratory medicine services in addressing global health challenges and improving the health outcomes of people and communities around the world.

As the medical specialty concerned with determining the cause and nature of disease, pathology is critical for the prevention, early detection, diagnosis and treatment of many of the leading causes of disease.

Pathologists, scientists and laboratory professionals, also play a vital role in public health by defining disease patterns in populations, maintaining cancer registries, lowering rates of medical errors and infections and improving the overall quality of healthcare.

It is estimated that pathology services provide over 70% of all the diagnoses which doctors use as the basis of their clinical decisions, whilst making up just 2% of global healthcare spending\(^1\),\(^2\). As a clinical knowledge service, pathology is fundamental to modern medical practice and healthcare.

**WHY PATHOLOGY MATTERS**

**Key global health facts**
International Pathology Day provides an opportunity to highlight the global health challenges that pathologists, scientists and laboratory professionals work tirelessly to address:

**Tuberculosis (TB)**

- Tuberculosis (TB) ranks alongside HIV/AIDS as a leading cause of death worldwide. In 2014, 9.6 million people fell ill with TB, including 1.2 million people living with HIV. TB is one of the top five killers of women among adult women aged 20–59 years. 480,000 women died from TB in 2014, including 140'000 deaths among women who were HIV-positive.

- In 2014, 51% of TB patients globally had a documented HIV test result. In the African region, that has the highest TB/HIV burden, 79% of TB patients knew their HIV status.

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2. [http://cms.mngt.waikato.ac.nz/Portals/2/WP76%20France%20Francis%20Lawrence.pdf](http://cms.mngt.waikato.ac.nz/Portals/2/WP76%20France%20Francis%20Lawrence.pdf)
Child mortality

- Child mortality is a core indicator for child health and well-being. 5.9 million children under age five died in 2015 – 16,000 children every day.

- The risk of a child dying before completing five years of age is still highest in the WHO African Region (81 per 1000 live births) - about 7 times higher than that in the WHO European Region (11 per 1000 live births).

- In 2015, the under-five mortality rate in low-income countries was 76 deaths per 1000 live births – about 11 times the average rate in high-income countries (7 deaths per 1000 live births). Reducing these inequities across countries and saving more children’s lives by ending preventable child deaths are important priorities.

Maternal mortality

- Every day in 2015, about 830 women died due to complications of pregnancy and child birth. Almost all of these deaths occurred in low-resource settings, and most could have been prevented. The primary causes of death are haemorrhage, hypertension, infections, and indirect causes, mostly due to interaction between pre-existing medical conditions and pregnancy.

- Of the 830 daily maternal deaths, 550 occurred in sub-Saharan Africa and 180 in Southern Asia, compared to 5 in developed countries.

- The risk of a woman in a developing country dying from a maternal-related cause during her lifetime is about 33 times higher compared to a woman living in a developed country.

- Almost all (99%) of the approximate 287,000 maternal deaths every year occur in developing countries.

Blood Transfusions

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.

- Of the 112.5 million blood donations collected globally, approximately half of these are collected in the high-income countries, home to 19% of the world’s population.

- 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.
• The blood donation rate in high-income countries is 33.1 donations per 1000 people; 11.7 donations in middle-income countries and 4.6 donations in low-income countries.

Cancer

Cancer is often considered a disease of affluence, but about 70% of cancer deaths occur in low- and middle-income countries.

• Cancers figure among the leading causes of morbidity and mortality worldwide, with approximately 14 million new cases and 8.2 million cancer related deaths in 2012.

• The number of new cases is expected to rise by about 70% over the next 2 decades.

• Among men, the 5 most common sites of cancer diagnosed in 2012 were lung, prostate, colorectum, stomach, and liver cancer.

• Among women the 5 most common sites diagnosed were breast, colorectum, lung, cervix, and stomach cancer.

• Around one third of cancer deaths are due to the 5 leading behavioural and dietary risks: high body mass index, low fruit and vegetable intake, lack of physical activity, tobacco use, alcohol use.

• Tobacco use is the most important risk factor for cancer causing around 20% of global cancer deaths and around 70% of global lung cancer deaths.

• Cancer causing viral infections such as HBV/HCV and HPV are responsible for up to 20% of cancer deaths in low- and middle-income countries.

• More than 60% of world’s total new annual cases occur in Africa, Asia and Central and South America. These regions account for 70% of the world’s cancer deaths.

Malaria

Malaria is an entirely preventable and treatable mosquito-borne illness. In 2015, 95 countries and territories had ongoing malaria transmission and an estimated 3.2 billion people – nearly half the world’s population – were at risk of malaria.

• There were an estimated 214 million cases of malaria worldwide in 2015, and an estimated 438,000 deaths. Approximately 90% of all malaria deaths occur in Africa.

• In 2015, an estimated 292 000 African children died before their fifth birthday due to malaria. Globally, the disease caused an estimated 306 000 under-five deaths in 2015.
• Between 2000 and 2015, an expansion of malaria interventions helped to reduce malaria incidence by 37% globally, and by 42% in Africa.

• During the same period, malaria mortality rates decreased by an estimated 60% worldwide and by 66% in Africa. In the under-five age group, mortality rates have declined by 65% globally, and by 71% in Africa.

• Other regions have achieved impressive reductions in their malaria burden. Since 2000, the malaria mortality rate declined by 72% in the Region of the Americas, by 65% in the Western Pacific Region, by 64% in the Eastern Mediterranean Region and by 49% in the South-East Asia Region. In 2015, for the first time, the European Region reported zero indigenous cases of malaria.

HIV/ AIDS

• According to the World Health Organisation (WHO), there were approximately 36.9 million people worldwide living with HIV/AIDS at the end of 2014. Of these, 2.6 million were children (<15 years old).

• An estimated 2 million individuals worldwide became newly infected with HIV in 2014. This includes over 220,000 children (<15 years). Most of these children live in sub-Saharan Africa and were infected by their HIV-positive mothers during pregnancy, childbirth or breastfeeding.

• A UNAIDS report shows that of the 36.9 million people living with HIV globally, 17.1 million do not know they have the virus and need to be reached with HIV testing services, and around 22 million do not have access to HIV treatment, including 1.8 million children.

• The vast majority of people living with HIV are in low- and middle-income countries - sub-Saharan Africa is the most affected region, with 25.8 million people living with HIV in 2014. Sub-Saharan Africa also accounts for almost 70 percent of the global total of new HIV infections.

International Pathology Day – Participating Organisations

Around the world, International Pathology Day is being supported by the following organisations:

• American Society for Clinical Pathology
• Association of Clinical Pathologists
• Academy of Medicine of Malaysia – College of Pathologists
• British Division of the International Academy of Pathology
• College of American Pathologists
• Canadian Association of Pathologists
• College of Pathologists of the Colleges of Medicine of South Africa
• College of Pathologists of East, Central and Southern Africa
• Hong Kong College of Pathologists
• Faculty of Pathology, Royal College of Physicians of Ireland
• Royal College of Pathologists of Australasia
• Labs Are Vital
• West African Division of the International Academy of Pathology
• World Association of Societies of Pathology and Laboratory Medicine
• Pakistan Association of Pathologists
• World Association of Societies of Pathology and Laboratory Medicine
• Labs Are Vital
• European Society of Pathology
• East Africa Division of the International Academy of Pathology
• Pathological Society
• West African Division of the International Academy of Pathology
• International Federation of Clinical Chemistry and Laboratory Medicine
• World Association of Societies of Pathology and Laboratory Medicine