Ending preventable child deaths

HOW THE UK CAN STOP CHILDREN DYING FROM PNEUMONIA

Photo: Charlie Forgham-Bailey/Save the Children

Abrahim, age 7 months – Kenya

Seven-month-old Abrahim was fighting for breath.

"I noticed that his coughing was unusual. When he cried he produced a very low sound," says his mother, Mercy.

Mercy spent a month gathering the funds to pay for the 50km journey to Lodwar Hospital, where Abrahim was diagnosed with pneumonia.

Abrahim was one of the lucky ones – he won his battle, thanks in part to the equipment and the training of the staff at the hospital, supported by Save the Children. But only one in three children with pneumonia symptoms are treated with antibiotics, and oxygen treatment is rarely available to children who need it in the poorest countries. As a result, millions of children in poor countries are dying from this entirely preventable and treatable disease.

Photo: Nina Raingold/Save the Children

Edward, age 8 – England

"He woke up in the night gasping for breath. He was making a sound I'd never heard him make before. It was really scary," says Catherine, mother of Edward.

In 2019, Edward's mum Catherine called an ambulance after she noticed he was having difficulty breathing.

Edward was rushed to hospital, and diagnosed with severe pneumonia. The doctor took an x-ray of Edward's chest, which showed that his lung had collapsed.

"I knew people were hospitalised for pneumonia but I thought it was only really old people. I had no idea it could be so dangerous for young children. I was surprised how severely ill it made him," said Catherine.

Edward spent two weeks in hospital, where he was given antibiotics, oxygen, and physiotherapy to help clear his lungs. He has now recovered.

Photo: Save the Children

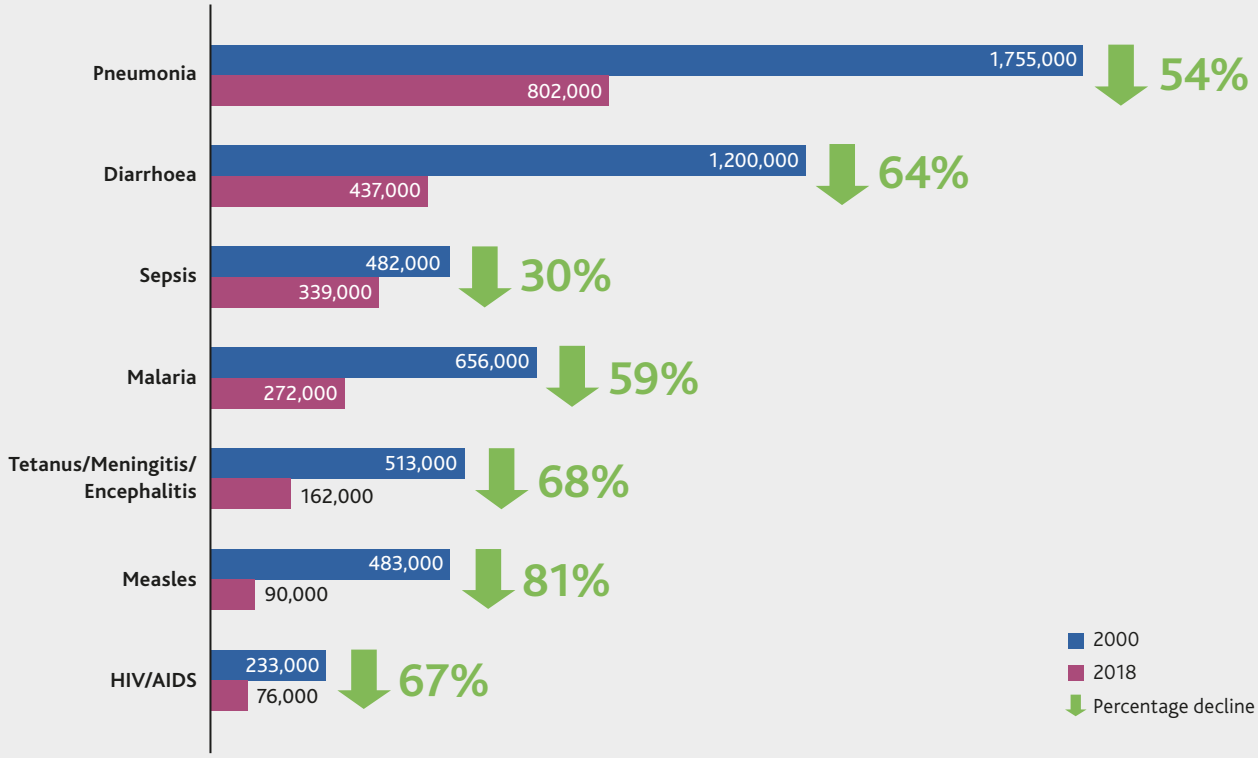
Biggest killer, yet forgotten

Happily, both Abrahim and Edward survived their illnesses, but their stories give an idea of just how dangerous pneumonia can be. In the UK, it remains a public health issue – in the year to March 2019, there were more than 56,000 child emergency admissions for pneumonia to NHS hospitals in England[1] and 27 deaths.[2] Children in poorer areas are disproportionately affected, with higher rates of admission observed in the most deprived parts of the country,[3] and a recent review suggests those who have had pneumonia in their early years are at greater risk of respiratory illness as an adult.[4] However, in the UK babies are routinely vaccinated with the pneumococcal conjugate vaccine (PCV), properly diagnosed, and generally given the appropriate treatment: antibiotics to battle the infection, oxygen to assist breathing, and fluids to fight dehydration. This means that almost all children who contract pneumonia make a full recovery, and the number of child deaths is vanishingly small compared with countries without universal health coverage (UHC).

In much of the rest of the world, pneumonia is not just a public health issue, but a crisis. Pneumonia is the world's leading infectious killer of children, claiming the lives of

more than 800,000 children every year, more than 2,000 every day.[5] It is a shocking demonstration of pervasive health inequities, and represents a violation of children's right to survival, as enshrined in the UN Convention on the Rights of the Child, which marks its 30th anniversary this year.[6] Yet pneumonia has been neglected on global and national agendas. We can and must change this, and the UK can play a key role. Almost all child pneumonia deaths are preventable, through universal health coverage, improved nutrition and vaccines. However, progress on reducing these deaths is slower than for most other major killers of children (Figure 1) – and too slow to achieve the Sustainable Development Goal (SDG) of ending preventable child deaths by 2030.[7]

Figure 1: Deaths of children under five by infectious disease, 2000 vs 2018[8]



Many countries are off track to reach globally agreed targets

In 2013, the World Health Organization and UNICEF published a comprehensive global framework – the Integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD) – with the goal to end preventable pneumonia and diarrhoea deaths by 2025. It set a target of reducing pneumonia deaths in children to less than three per 1,000 live births by 2025.[9] If current trends continue, the world will not meet this target, and will also fail to reach the SDG3 child mortality target.

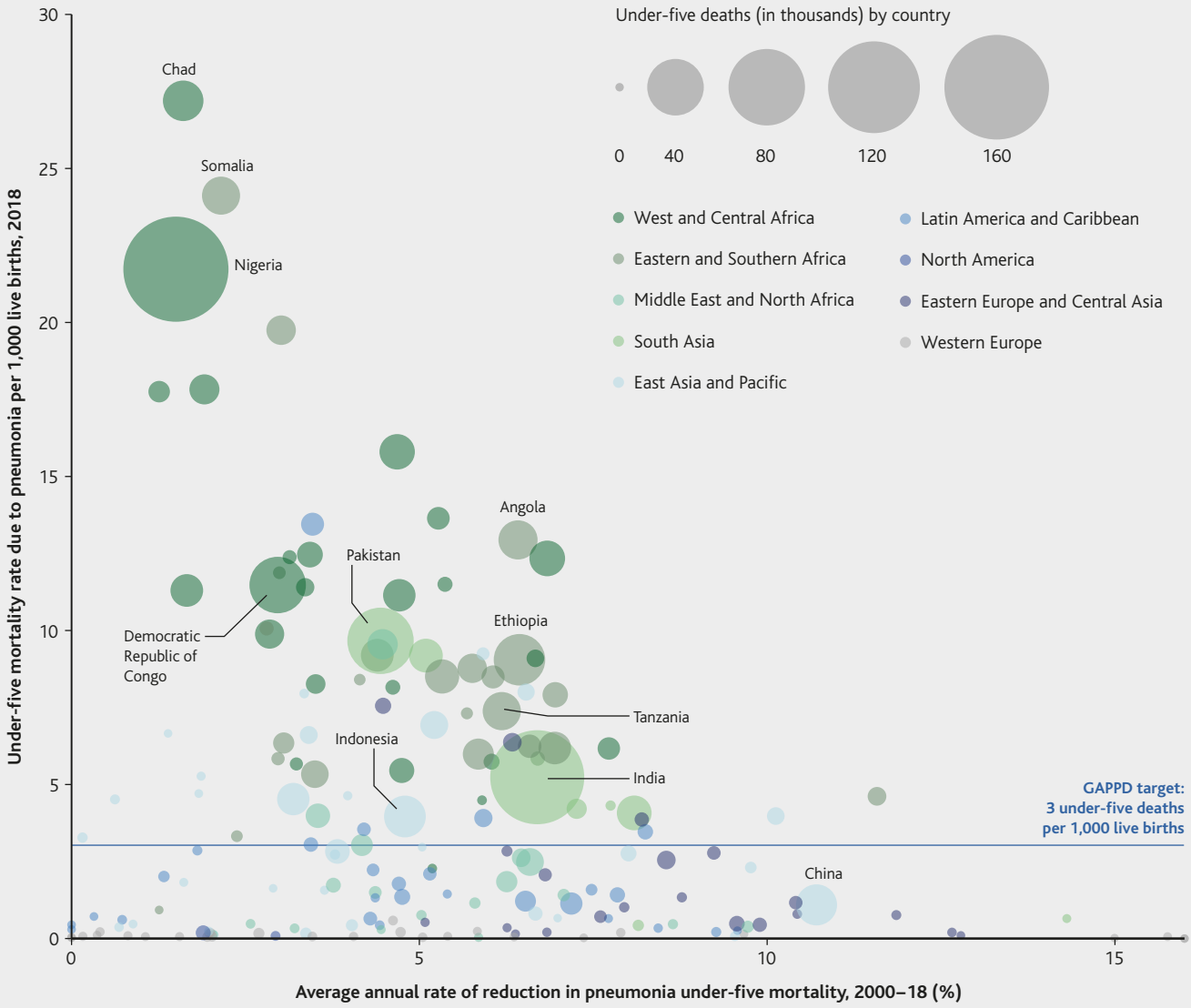
Further, half the world's population does not have access to the full range of essential health services, and about 100 million people are being pushed into extreme poverty by the cost of healthcare.[10] India had the largest number of childhood pneumonia deaths in 2017, followed by Nigeria, Pakistan, the Democratic Republic of Congo and Ethiopia – together accounting for half of all deaths due to pneumonia among children under five years. All 23 countries featured in the 2019 Pneumonia and Diarrhoea Progress Report Card fell short of the targets for the overall GAPPD score, the GAPPD Pneumonia score, and/or the GAPPD Diarrhoea score.

Figure 2 looks at how child pneumonia death rates are changing over time. The vertical axis charts the death rate and the size of the bubble indicates the number of deaths caused by pneumonia in 2018 for each country, while the horizontal axis measures the rate of decline.

Children left behind

As Figure 2 indicates, child deaths from pneumonia are concentrated in the world's poorest countries. Within those countries, it is the most deprived and marginalised groups who suffer the most. Children from the poorest families living in low- and middle-income countries are nearly twice as likely to die before their fifth birthday as children from better-off families,[12] primarily due to social and economic inequalities and poor access to basic, good-quality health services. They are further disadvantaged by high rates of malnutrition; exposure to polluted air; limited availability of clean water, sanitation and hygiene; and reduced access to healthcare facilities.

Figure 2: Child pneumonia mortality rate and average annual rate of reduction by country, 2000–18[11]



The UK as a leading voice

As we have seen above, the UK faces tens of thousands of cases of pneumonia each year, and in the vast majority of cases, the NHS prevents the affected children from dying. Now it is vital that the UK plays its role on the global stage to ensure that all children, regardless of where they live, have that same chance.

In October 2019, the Secretary of State for International Development reiterated the UK's commitment to ending preventable childhood deaths by 2030.[13] The UK has historically addressed childhood pneumonia through three workstreams: promoting vaccination programmes through Gavi, the Vaccine Alliance; tackling malnutrition, with major financial and policy pledges through Nutrition for Growth; and building strong health systems by supporting global universal health coverage. This work has been transformative for communities blighted by poor access to health services and malnutrition around the world, but more must be done if the UK is to play its full part in delivering on the Secretary of State's pledge. Specifically, ambitious action is needed to target the end of pneumonia deaths globally.

Global Forum on Childhood Pneumonia

In January 2020, an opportunity presents itself for action. Spain plays host to Fighting for Breath: the Global Forum on Childhood Pneumonia. As we reflect on the recent UN High-Level Meeting on Universal Health Coverage and look forward to the upcoming Gavi replenishment and the Tokyo 2020 Nutrition for Growth Summit, we urge

the UK government to take this chance to lead the world in tackling the biggest infectious killer of children through:

1) Using upcoming global moments to help end preventable child deaths:

- **Gavi replenishment – vaccines are an essential component of preventing pneumonia, and the UK must:**
  - commit to maintaining at least its current contribution of 25.5% to the total Gavi envelope, ensure a successful replenishment, and support Gavi to deliver on its 2021–25 strategy.
  - as a major donor within the Advanced Market Commitment, ensure the Commitment fulfils its objective of ensuring availability and affordability of PCV.
  - leverage its research expertise to build the evidence base to aid reduction in PCV dosing schedule, which will have cost savings for immunisation and health budgets.
- **Nutrition for Growth – malnutrition is the most significant driver of childhood pneumonia cases. The UK should:**
  - intensify the fight against malnutrition by pledging £800 million a year from 2021 to 2025 at the Tokyo Nutrition for Growth Summit's springboard moment, the SDG Goalkeepers' Event, on 23 July 2020.
  - focus on scaling up proven malnutrition interventions, improving nutrition for the most vulnerable populations, boosting political ownership and investment in countries with a high pneumonia burden, and full integration of malnutrition efforts across the UK Department for International Development (DFID) to ensure we meet the global objective to end preventable child deaths by 2030.
- **COP26 – environmental risk factors, most notably air pollution, increase the likelihood of contracting pneumonia. We want to see the UK:**
  - recommit to ending child pneumonia deaths by tackling poor air quality and other environmental risk factors.
  - fully acknowledge the mutual impact of climate change with health and nutrition issues, and improve the integration of climate change adaptation and mitigation policies with the universal health coverage agenda.

2) Championing the universal health coverage agenda

- **We cannot end pneumonia deaths without achieving universal health coverage and particularly, building strong primary health care systems. The UK must continue its leadership on driving the primary health care for universal health coverage agenda and must:**
  - enshrine pneumonia reduction as a key success indicator in DFID's health systems strengthening support to countries with a high pneumonia burden.
  - ensure UK support drives progress on the 'leave no one behind' agenda, focusing on access to health and nutrition services for the most deprived and marginalised communities.
  - ensure UK aid is transformative, driving country-owned universal health coverage plans, supporting countries to increase domestic fiscal space for health and nutrition, and strengthening equitable health and nutrition financing systems.

Endnotes

1 Save the Children's analysis of provisional NHS Digital data for emergency hospital admissions for children aged 18 years and younger. Between April 2018 and March 2019 there were 56,210 emergency admissions for pneumonia, defined as a primary diagnosis at admission of one of the following International Classification of Disease (ICD) codes: J12, J15, J16, J21, J10.0, J11.0, J11.1, J13.X, J14.X, J18.0, J18.1, J18.9. That represents a 50% increase in the last decade. Between April 2008 and March 2009 there were 36,862 child emergency admissions for pneumonia.

2 Save the Children's analysis of deaths recorded by the Office for National Statistics in 2018 of children aged 18 years and younger, where pneumonia was the primary cause of death. Defined as one of the following ICD codes: J12, J15, J16, J21, J10.0, J11.0, J11.1, J13.X, J14.X, J18.0, J18.1, J18.9.

3 Save the Children's analysis of provisional NHS Digital data. In 2017/18, the latest year for which detailed mapping of deprivation to admissions is available, the 10% most deprived areas of England recorded 525.6 admissions for all-cause pneumonia per 100,000 population, compared to 381.2 in the 10% least deprived. The worst affected areas in the 2018/19 financial year were:

Clinical Commissioning Group	Rate of admissions per 100,000 patients	Number of admissions
NHS Scarborough and Ryedale	1,058	220
NHS Oldham	993.7	640
NHS Blackpool	899	310
NHS South Tees	885.8	570
NHS Heywood, Middleton and Rochdale	875.4	495
England	455.8	56,210

4 Grimwood, K and Chang, A (2015), Long-term effects of pneumonia in young children. Pneumonia, 6, p.101, https://pneumonia.biomedcentral.com/articles/10.15172/pneu.2015.6/671/tables/1

5 UNICEF analysis based on WHO and Maternal and Child Epidemiology Estimation Group interim estimates produced in September 2019, applying cause fractions for the year 2017 to United Nations Inter-agency Group for Child Mortality Estimation estimates for the year 2018

6 UNICEF (2019), *Global action on the 30th anniversary of the Convention on the Rights of the Child*, https://www.unicef.org/child-rights-convention/global-action

7 WHO and Maternal and Child Epidemiology Estimation Group (MCEE) estimates 2017. Between 2000 and 2017, child pneumonia deaths fell by 54% compared to 81% for measles, 69% for tetanus, meningitis and encephalitis, 68% for HIV/AIDS, 63% for diarrhoea, and 60% for malaria

8 Source: UNICEF analysis based on WHO and Maternal and Child Epidemiology Estimation Group interim estimates produced in September 2019, applying cause fractions for the year 2017 to United Nations Inter-Agency Group for Child Mortality Estimation estimates for the year 2018

9 WHO and UNICEF (2013) Ending Preventable Child Deaths from Pneumonia and Diarrhoea by 2025: The integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD)

10 World Health Organization (2019), *Universal Health Coverage (UHC)*, https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-%28uhc%29

11 Source: UNICEF analysis based on WHO and Maternal and Child Epidemiology Estimation Group interim estimates produced in September 2019, applying cause fractions for the year 2017 to United Nations Inter-agency Group for Child Mortality Estimation estimates for the year 2018.

12 Comparison of under-five mortality rates in richest and poorest quintile for 74 countries with last data point 2012 or later. Source of data is DHS or MICS, accessed via GRID, Save the Children's Child Inequality Tracker. Data is weighted by number of births per country

13 Sharma, A (2019), 'We must end preventable deaths of mothers, new-born babies, and children', *The Times*, https://www.thetimes.co.uk/article/we-must-end-preventable-deaths-of-mothers-new-born-babies-and-children-377dwbplj