General Medicine

Uncontrolled Hypertension Among Adult Hypertensive Patients in Addis Ababa Public Hospitals — Cross-Sectional Study

Abstract: Uncontrolled hypertension can cause stroke, myocardial infarction, heart failure, renal failure, dementia, blindness, and death. This study aimed to assess the prevalence and associated factors of uncontrolled hypertension among adult hypertensive patients at public hospitals in Addis Ababa, Ethiopia, using the updated JNC-8 classification. A hospital-based cross-sectional study was conducted from April 12 to May 12, 2024, involving 408 hypertensive patients selected via systematic random sampling across three public hospitals. Data were collected using a structured interview questionnaire, chart review, and physical measurements. Among the 15,508 hypertensive patients followed at the study hospitals, the three sites were selected by simple random sampling. This study incorporated patients' knowledge as a variable, distinguishing it from earlier studies that predominantly applied the older JNC-7 classification. Findings highlighted significant gaps in blood pressure control and identified modifiable determinants that could inform targeted interventions.

Reference

Worku AD, Gessese AW. Prevalence and associated factors of uncontrolled hypertension among adult hypertensive patients at public hospitals in Addis Ababa, Ethiopia: a cross-sectional study design. PLoS One. 2024 Dec 30;19(12):e0316461. doi:10.1371/journal.pone.0316461. PMID: 39739671; PMCID: PMC11684623.

Socio-Demographic and Lifestyle Factors Associated with Hypertension in Nigeria: Results from a Country-Wide Survey

Abstract: With the rising prevalence of hypertension in Africa, understanding the dynamics of socio-demographic and lifestyle factors is key to its management. This study used a cross-sectional survey design with a modified WHO STEPS questionnaire administered to 3,782 adult Nigerians selected from both urban and rural communities across all six Nigerian geopolitical regions. Among participants, 56.3% were women, 65.8% were married, and 52.5% resided in rural areas. Mean ages were 53.1 ± 13.6 years among hypertensive individuals versus 39.2 ± 15.0 years among normotensive counterparts. Regarding lifestyle, 30.7% reported low physical activity, 4.1% were current tobacco users, and 35.4% consumed alcohol. Being married (OR = 1.88, 95% CI: 1.41–2.50) or widowed (OR = 1.57, 95% CI: 1.05–2.36), compared with being unmarried, was significantly associated with hypertension. The study addresses important gaps in country-wide evidence on hypertension risk factors in Nigeria.

Reference

Adeke AS, Chori BS, Neupane D, Sharman JE, Odili AN. Socio-demographic and lifestyle factors associated with hypertension in Nigeria: results from a country-wide survey. J Hum Hypertens. 2024 Apr;38(4):365–370. doi:10.1038/s41371-022-00673-1. Epub 2022 Mar 24. PMID: 35332218.

Hypertension in Sub-Saharan Africa: Cross-Sectional Surveys in Four Rural and Urban Communities

Abstract: Cardiovascular disease is the leading cause of adult mortality in low-income countries, yet data on hypertension prevalence in sub-Saharan Africa (SSA) remain scarce. This study aimed to assess the prevalence and determinants of hypertension across four SSA populations — rural Nigeria and Kenya, and urban Namibia and Tanzania — through cross-sectional household surveys conducted between 2009 and 2011. Among 7,568 included adult respondents, age-standardised hypertension prevalence was 19.3% (95% CI: 17.3–21.3) in rural Nigeria, 21.4% (19.8–23.0) in rural Kenya, 23.7% (21.3–26.2) in urban Tanzania, and 38.0% (35.9–40.1) in urban Namibia. In hypertensive individuals, grade 2 or 3 hypertension (≥160/100 mmHg) ranged from 29.2% to 43.3% across sites. Control of hypertension ranged from just 2.6% in Kenya to 17.8% in Namibia. Obesity prevalence ranged from 6.1% to 17.4%, and together with age and sex, BMI independently predicted blood pressure in all study populations. Diabetes prevalence ranged from 2.1% to 3.7%.

Reference

Hendriks ME, Wit FW, Roos MT, Brewster LM, Akande TM, de Beer IH, et al. Hypertension in sub-Saharan Africa: cross-sectional surveys in four rural and urban communities. PLoS One. 2012;7(3):e32638. doi:10.1371/journal.pone.0032638. PMID: 22427857; PMCID: PMC3299675.

Factors Associated with Glycaemic Control Among Patients with Type 2 Diabetes Mellitus in Ho, Ghana — A Cross-Sectional Study

Abstract: Effective glycaemic control remains a major challenge in the management of type 2 diabetes mellitus (T2DM) in low-resource settings. This cross-sectional study investigated factors associated with glycaemic control among T2DM patients attending a health facility in Ho, Ghana. Adult patients with a confirmed diagnosis of T2DM were enrolled, and data on demographic characteristics, medication adherence, self-management practices, and glycated haemoglobin (HbA1c) levels were collected. Binary and multivariate logistic regression analyses were used to identify independent predictors of poor glycaemic control (HbA1c ≥7%). Findings revealed that medication non-adherence, low health literacy, and inadequate dietary management were significantly associated with suboptimal glycaemic control. The study underscores the need for patient-centred diabetes education programmes and enhanced support for medication adherence in Ghanaian primary healthcare settings.

Reference

Alor SK, Kretchy IMA, Glozah FN, Adongo PB. Factors associated with glycaemic control among patients with type 2 diabetes mellitus in Ho, Ghana: A cross-sectional study. Metabol Open. 2023 Nov 27;20:100265. doi:10.1016/j.metop.2023.100265. eCollection 2023 Dec. PMID: 38115867; PMCID: PMC10728481.

Incident Type 2 Diabetes and Its Risk Factors in Men and Women Aged 40–60 Years from Four Sub-Saharan African Countries: Results from the AWI-Gen Study

Abstract: Data on the incidence of type 2 diabetes (T2D) in sub-Saharan Africa (SSA) remain sparse and highly heterogeneous. The AWI-Gen (Africa Wits-INDEPTH Partnership for Genomic Research) longitudinal study examined incident T2D and associated risk factors in a multi-country cohort of men and women aged 40–60 years in Ghana, Kenya, South Africa, and Burkina Faso. A systematic PubMed search identified 17 prior studies from 12 SSA countries, which showed wide variability in incidence from 4 to 63 cases per 1,000 person-years, and only four studies specifically targeted the middle-aged population. Using standardised methods across all sites, this study assessed risk factors including adiposity, physical inactivity, and metabolic markers. Waist circumference and triglyceride levels emerged as independent predictors of incident dysglycaemia and T2D. The study provides important evidence to guide targeted prevention strategies for diabetes in middle-aged African populations.

Reference

Chikowore T, Ekoru K, Mutie PM, Kamiza AB, Erzse A, Micklesfield LK, et al. Incident type 2 diabetes and its risk factors in men and women aged 40–60 years from four sub-Saharan African countries: results from the AWI-Gen study. Lancet Glob Health. 2025 Mar;13(3):e447–e458. doi:10.1016/S2214-109X(24)00520-5. PMID: 39986317.

Maternal Health

Institutional Delivery Dropout After Antenatal Care Booking in LMICs — A Multilevel Analysis of 29 DHS Datasets

Abstract: Institutional delivery dropout (IDD) — where women who attend antenatal care (ANC) subsequently deliver outside health facilities — is a major problem disproportionately affecting low- and middle-income countries (LMICs) and is associated with increased risks of adverse birth outcomes. This study assessed the pooled prevalence and determinants of IDD among women in LMICs using Demographic and Health Survey (DHS) data from 29 countries collected between 2016 and 2021. Data analysis was performed using STATA version 14, with a forest plot used to estimate the pooled prevalence of IDD. Multilevel binary logistic regression was applied to identify independent determinants, reported as adjusted odds ratios (AOR) with 95% confidence intervals. The pooled prevalence of IDD after ANC booking was 22.25% (95% CI: 18.25–26.25). Significant predictors of IDD included rural residence, lower educational attainment, absence of a decision-making role, and lower household wealth. The findings highlight that accessing antenatal care does not guarantee facility-based delivery, and point to structural and socioeconomic barriers that must be addressed to improve safe delivery rates in LMICs.

Reference

Tesema GA, Tessema ZT, Tamirat KS, Teshale AB. Women in low- and middle-income countries receive antenatal care at health institutions, yet not delivered there: a multilevel analysis of 2016–2021 DHS data. BMC Pregnancy Childbirth. 2024;24(1):12. doi:10.1186/s12884-023-06211-2. PMID: 38172713; PMCID: PMC10759610.

Incidence and Predictors of Severe Postpartum Haemorrhage After Caesarean Delivery in South-Central Ethiopia — A Retrospective Cohort Study

Abstract: Postpartum haemorrhage (PPH) following caesarean delivery (CD) is a life-threatening obstetric emergency with significant implications for maternal survival in low-resource settings. This retrospective cohort study was conducted at a referral hospital in South-Central Ethiopia and included 728 women who underwent caesarean section. Data were extracted from medical records including baseline, obstetric, and perioperative characteristics. Multivariate logistic regression analyses with adjusted odds ratios (AOR) and 95% confidence intervals were used to identify independent predictors. The incidence of severe PPH was 3.6% (n = 26). Independently associated factors included: previous caesarean scar of ≥2 (AOR 4.08, 95% CI: 1.20–13.86), antepartum haemorrhage (AOR 2.89, 95% CI: 1.01–8.16), severe preeclampsia (AOR 4.52, 95% CI: 1.24–16.46), maternal age ≥35 years (AOR 2.77, 95% CI: 1.02–7.52), general anaesthesia (AOR 4.05, 95% CI: 1.37–11.95), and classical uterine incision (AOR 6.01, 95% CI: 1.51–23.98). These findings underscore the importance of identifying high-risk obstetric patients pre-operatively to guide targeted prevention strategies.

Reference

Lema GF, Gebremedhn EG, Gebregzi AH, Tasew H, Berhe YW. Incidence and predictors of severe postpartum hemorrhage after cesarean delivery in South Central Ethiopia: a retrospective cohort study. Front Med (Lausanne). 2023;9:973882. doi:10.3389/fmed.2022.973882. PMID: 36910485; PMCID: PMC9984450.

Maternal Outcomes of Severe Preeclampsia and Eclampsia and Associated Factors Among Women Admitted at Referral Hospitals in Amhara Region, North-West Ethiopia — An Institutional Cross-Sectional Study

Abstract: Preeclampsia and eclampsia remain leading causes of maternal morbidity and mortality in Ethiopia, where indirect obstetric complications are prevalent. This institution-based cross-sectional study examined maternal outcomes and associated factors among 456 women admitted with severe preeclampsia or eclampsia at referral hospitals in the Amhara Regional State, North-West Ethiopia. Structured data collection tools were used to extract obstetric and clinical data from medical records. Binary and multivariable logistic regression analyses were performed to identify predictors of adverse maternal outcomes. Nearly two-thirds (63.2%) of cases occurred during the antepartum period, while 28.9% and 7.9% were intrapartum and postpartum, respectively. Of the 456 women, 37.7% experienced adverse maternal outcomes. Among those, 56.9% experienced PPH and 0.5% died from eclampsia-related complications. Educational status, rural residence, monthly family income, parity, history of abortion, booking status,

and timing of drug administration were identified as significant predictors. Strengthening emergency obstetric care and early ANC uptake is essential to reducing adverse outcomes.

Reference

Bayou G, Tesfaye K, Gebre B, Getachew M, Haile K. Maternal outcomes of severe preeclampsia and eclampsia and associated factors among women admitted at referral hospitals of Amhara Regional State: institutional-based cross-sectional study, North-West Ethiopia. Front Glob Womens Health. 2025;6:1555778. doi:10.3389/fgwh.2025.1555778.

Preeclampsia and Eclampsia-Specific Maternal Mortality in Bangladesh: Levels, Trends, Timing, and Care-Seeking Practices

Abstract: Despite a steady global decline in maternal mortality, preeclampsia and eclampsia remain among the most common causes of maternal death, accounting for approximately 14% of all global maternal fatalities. This population-based analysis used data from three rounds of the Bangladesh Maternal Mortality Survey (BMMS) conducted in 2001, 2010, and 2016 to assess trends in preeclampsia/eclampsia-specific maternal mortality ratios (MMR), timing of death, and care-seeking practices. Verbal autopsy data were reviewed and causes of death classified using standard criteria. The preeclampsia/eclampsia-specific MMR changed from 77 (uncertainty range [UR] 44–111) per 100,000 live births in 2001 to 40 (UR 19–60) in 2010, with a reversal to 46 (UR 29–65) in the 2016 BMMS. Nearly three-quarters (76%) of deaths occurred in rural areas, and over 59% were in households with lower socioeconomic status. These findings indicate stalling progress and reinforce the need for targeted, cause-specific programmatic action to reduce preeclampsia-related mortality in Bangladesh.

Reference

Jabeen S, Siddique AB, Hossain AT, Khan S, Haider MM, Tahsina T. Preeclampsia and eclampsia-specific maternal mortality in Bangladesh: Levels, trends, timing, and care-seeking practices. J Glob Health. 2023;13:07003. doi:10.7189/jogh.13.07003. PMID: 37022714.

Caesarean Section Training Practices in LMICs vs High-Income Countries — A Convergent Mixed-Methods Cross-Sectional Study

Abstract: Caesarean section (CS) is one of the most commonly performed obstetric procedures worldwide, yet training practices vary substantially between settings. This convergent parallel mixed-methods cross-sectional study identified and compared CS training practices globally, focusing on differences between high-income countries (HICs) and low- and middle-income countries (LMICs). An online survey was conducted between October 2023 and January 2024 using REDCap software and distributed via professional obstetrics and gynaecology networks, including the South African Society of Obstetrics and Gynaecology (SASOG). A total of 411 participants from 42 countries were included — 42% (n = 172) from HICs and 58% (n = 239) from LMICs. Participants from LMICs performed significantly more CS procedures annually (mean 138 ± 221 cases) compared to HIC counterparts (mean 44 ± 64 cases; $p < 0.001$). However, LMIC trainees reported significantly fewer formal structured teaching opportunities, less simulation-based training, and lower satisfaction with supervision quality. Qualitative data highlighted contextual challenges including staff shortages and resource constraints. The study underscores the urgent need for standardised, context-appropriate CS training programmes in LMICs.

Reference

de Waard J, Rall K, Hannan J, Pattinson R, Theron G, Nunes I. Current practices in caesarean section training: A cross-sectional study comparing high- and low-middle-income countries. Int J Gynaecol Obstet. 2025. doi:10.1002/ijgo.70696. Epub ahead of print. PMID: 39863947.

Surgery

Perioperative Patient Outcomes in the African Surgical Outcomes Study (ASOS): A 7-Day Prospective Observational Cohort Study

Abstract: There is a need to increase access to surgical treatments in African countries, but perioperative complications represent a major global healthcare burden, and there are few studies describing surgical outcomes in Africa. This 7-day, international, prospective, observational cohort study enrolled patients aged 18 years and older undergoing any inpatient surgery across 25 African countries. Hospitals were recruited using convenience sampling, with data required from at least 10 hospitals per country and for at least 90% of eligible patients. Each country selected one recruitment week between February and May 2016. The primary outcome was in-hospital postoperative complications, graded as mild, moderate, or severe. One in five surgical patients in Africa developed a perioperative complication, following which one in ten patients died. Despite being younger with a lower-risk profile and lower complication rates than the global average, African patients were twice as likely to die after surgery compared with the global benchmarks. African surgical hospitals were markedly under-resourced, with a median combined total of specialist surgeons, obstetricians, and anaesthesiologists of 0.7 (IQR 0.2–1.9) per 100,000 population — far below the Lancet Commission on Global Surgery's recommended threshold. The volume of surgical procedures in Africa was also very low at 212 (65–578) per 100,000 population annually. The study concludes that surgical outcomes will remain poor in Africa unless perioperative care for patients with deteriorating physiological function is urgently addressed.al health strategies, and more rigorous monitoring and evaluation.

Reference

Biccard BM, Madiba TE, Kluyts HL, Munlemvo DM, Madzimbamuto FD, Basenero A, et al.; African Surgical Outcomes Study (ASOS) investigators. Perioperative patient outcomes in the African Surgical Outcomes Study: a 7-day prospective observational cohort study. Lancet. 2018 Apr 21;391(10130):1589–1598. doi:10.1016/S0140-6736(18)30001-1. PMID: 29306587.

Mortality of Emergency Abdominal Surgery in High-, Middle-, and Low-Income Countries — GlobalSurg 1

Abstract: Surgical mortality data are collected routinely in high-income countries, yet virtually no low- or middle-income countries have perioperative outcome surveillance in place. This prospective, multicentre, cohort study prospectively collected worldwide mortality data following emergency abdominal surgery and compared findings across countries stratified by the UN's Human Development Index (HDI). Self-selected hospitals performing emergency surgery submitted prespecified data for consecutive patients during at least one 2-week interval between July and December 2014. Data were obtained for 10,745 patients from 357 centres in 58 countries — 6,538 from high-HDI, 2,889 from middle-HDI, and 1,318 from low-HDI settings. The overall 24-hour mortality rate was 1.6% (high 1.1%, middle 1.9%, low 3.4%; $p < 0.001$), rising to 5.4% by 30 days (high 4.5%, middle 6.0%, low 8.6%; $p < 0.001$). Of the 578 patients who died, 404 (69.9%) did so between 24 hours and 30 days. The study demonstrated a steep gradient in mortality risk by national income level, underscoring the urgent need for improved surgical outcome surveillance and postoperative care systems in LMICs.

Reference

GlobalSurg Collaborative. Mortality of emergency abdominal surgery in high-, middle- and low-income countries. Br J Surg. 2016 Jul;103(8):971–988. doi:10.1002/bjs.10151. Epub 2016 May 4. PMID: 27145169.

Surgical Site Infection After Gastrointestinal Surgery in High-, Middle-, and Low-Income Countries — GlobalSurg 2

Abstract: Surgical site infection (SSI) is one of the most common healthcare-associated infections, but its importance as a global health priority is not fully understood. This international, prospective, multicentre cohort study quantified the burden of SSI after gastrointestinal surgery across countries worldwide. Consecutive patients undergoing elective or emergency gastrointestinal resection during 2-week periods at any healthcare facility globally were enrolled between January and July 2016. Countries were stratified by the UN's Human Development Index (HDI). Data were entered from 12,539 patients across 343 hospitals in 66 countries. The 30-day SSI incidence more than doubled from high-HDI (9.4%), to middle-HDI (14.0%), to low-HDI (23.2%) settings. Following risk factor adjustment, patients in low-HDI countries remained at greatest risk of SSI (adjusted odds ratio 1.60, 95% credible interval 1.05–2.37; $p = 0.030$). Antibiotic resistance in SSI pathogens was detected in 16.6% of patients from high-HDI, 19.8% from middle-HDI, and 35.9% from low-HDI countries ($p < 0.001$). The findings confirm that patients in LMICs carry a disproportionate burden of SSI and antibiotic resistance, and that pragmatic randomised trials based in LMICs are urgently needed.

Reference

GlobalSurg Collaborative. Surgical site infection after gastrointestinal surgery in high-income, middle-income, and low-income countries: a prospective, international, multicentre cohort study. Lancet Infect Dis. 2018 May;18(5):516–525. doi:10.1016/S1473-3099(18)30101-4. Epub 2018 Feb 13. PMID: 29452941.

Outcomes After Surgery for Children in Africa (ASOS-Paeds): A 14-Day Prospective Observational Cohort Study

Abstract: Safe anaesthesia and surgery are a public health imperative, yet there are few data describing outcomes for children undergoing surgery in Africa. This study aimed to generate robust epidemiological data on patient care and outcomes for children undergoing anaesthesia and surgery in African hospitals. A 14-day, international, prospective, observational cohort study enrolled children aged under 18 years undergoing surgery at hospitals across all levels of care in Africa. Each hospital recruited all eligible children over a 14-day period within the study window from January 15 to December 23, 2022. Outcomes following anaesthesia and surgery for children in Africa were poor, with complication rates up to four-fold higher (18% vs 4.4–14%) and crude, unadjusted in-hospital mortality rates 11-fold higher compared with high-income countries (23.15 deaths vs 2.18 deaths per 1,000 children). The study identified a high rate of failure to rescue following postoperative complications as a key driver of mortality. The authors conclude that to improve surgical outcomes for children in Africa, health system strengthening, provision of safe environments for anaesthesia and surgery, and failure-to-rescue strategies are urgently required.

Reference

ASOS-Paeds Investigators. Outcomes after surgery for children in Africa (ASOS-Paeds): a 14-day prospective observational cohort study. Lancet. 2024 Apr 13;403(10435):1482–1492. doi:10.1016/S0140-6736(24)00103-X. Epub 2024 Mar 22. PMID: 38527482.

Determinants of Morbidity and Mortality Following Emergency Abdominal Surgery in Children in Low- and Middle-Income Countries — GlobalSurg Collaborative

Abstract: Child health is a key priority on the global health agenda, yet the provision of essential and emergency surgery in children is patchy in resource-poor regions. This multicentre, international, prospective cohort study aimed to determine the mortality risk for emergency abdominal paediatric surgery in low-income countries globally. Self-selected surgical units performing emergency abdominal surgery submitted prespecified data for consecutive children aged under 16 years during a 2-week period between July and December 2014. The UN's Human Development Index (HDI) was used to stratify countries, and 30-day postoperative mortality was the primary outcome, analysed by multilevel logistic regression. Neonates (≤1 month) had the highest mortality risk (OR 8.36, 95% CI: 4.06–17.22; $p < 0.001$) compared to older children, while infants (>1 month to <2 years) also had significantly elevated risk (OR 4.40, 95% CI: 1.83–9.95; $p = 0.001$). Low HDI was independently associated with greater morbidity and mortality compared to high-HDI settings, even after adjusting for patient and operative factors. The findings highlight the critical gap in safe paediatric emergency surgical care in LMICs and point to anaesthetic, intensive care, and delayed treat-

ment access as key modifiable contributors.

Reference

GlobalSurg Collaborative. Determinants of morbidity and mortality following emergency abdominal surgery in children in low-income and middle-income countries. BMJ Glob Health. 2016 Dec 12;1(4):e000091. doi:10.1136/bmjgh-2016-000091. eCollection 2016. PMID: 28588977; PMCID: PMC5321375.

Child Health

Childhood Mortality During and After Acute Illness in Africa and South Asia: A Prospective Cohort Study (CHAIN Network)

Abstract: Despite remarkable reductions in child mortality globally, more than 5 million children died in 2019, predominantly in low- and middle-income countries (LMICs). This prospective multisite cohort study aimed to characterise inpatient and post-discharge mortality among acutely ill children across sub-Saharan Africa and South Asia. A cohort of 3,101 children aged 2–24 months were recruited at admission to hospital for any acute illness at nine hospitals in Bangladesh, Pakistan, Kenya, Uganda, Malawi, and Burkina Faso between November 2016 and January 2019. Children were stratified by nutritional status into no wasting, moderate wasting, and severe wasting/kwashiorkor groups. Common admitting diagnoses included diarrhoea (55%), severe pneumonia (21%), malaria (14%), and severe anaemia (14%). Inpatient mortality was 3.5% for children with no wasting, 8.1% among those with moderate wasting, and 20.4% for those with severe wasting or kwashiorkor. Post-discharge mortality mirrored inpatient mortality patterns, underscoring that discharge does not signal recovery. Low mid-upper arm circumference (MUAC), representing a high-risk nutritional state, was the strongest predictor of both inpatient and post-discharge mortality. The study concludes that risk stratification strategies integrating nutritional status are critical to targeting high-risk children for enhanced monitoring and intervention in LMIC hospital settings.

Reference

Childhood Acute Illness and Nutrition (CHAIN) Network. Childhood mortality during and after acute illness in Africa and south Asia: a prospective cohort study. Lancet Glob Health. 2022 May;10(5):e673–e684. doi:10.1016/S2214-109X(22)00118-8. PMID: 35427524.

Contribution of Malnutrition to Infant and Child Deaths in Sub-Saharan Africa and South Asia — CHAMPS Network

Abstract: Malnutrition is estimated to contribute to 45% of all childhood deaths globally, yet these modelled estimates lack direct measurement in high-burden countries. This multisite observational study analysed CHAMPS (Child Health and Mortality Prevention Surveillance) data collected at seven sites — Bangladesh, Ethiopia, Kenya, Mali, Mozambique, Sierra Leone, and South Africa — between December 2016 and December 2023. An expert Determination of Cause of Death (DeCoDe) panel adjudicated each case using clinical chart review, verbal autopsy, postmortem physical examination, minimally invasive tissue sampling, quantitative PCR, and histopathology. Among 1,601 deaths in children under five years, malnutrition was identified as a causal or significant factor in 39.5% of cases. Most malnutrition-related deaths had an infectious cause (89.1%), and the adjusted odds of having malnutrition as a causal or significant condition were 2.4 times higher for deaths involving infectious diseases. Common pathogens in the causal pathway included Klebsiella pneumoniae (30.4%), Streptococcus pneumoniae (21.5%), Plasmodium falciparum (18.7%), and Escherichia coli/Shigella (17.2%). The findings emphasise the urgent need for integrated interventions addressing both malnutrition and infectious diseases to reduce under-5 mortality in LMICs.

Reference

Madewell ZJ, Blau DM, Barengo N, Acácio S, Agócs M, Alam M, et al. Contribution of malnutrition to infant and child deaths in Sub-Saharan Africa and South Asia. BMJ Glob Health. 2024 Dec 5;9(12):e017262. doi:10.1136/bmjgh-2024-017262. PMID: 39638608; PMCID: PMC11624724.

Neonatal Sepsis and Mortality in Low- and Middle-Income Countries from a Facility-Based Birth Cohort: An International Multisite Prospective Observational Study (BARNARDS)

Abstract: Neonatal sepsis is a primary cause of neonatal mortality and an urgent global health concern, with 99% of global neonatal deaths occurring in LMICs. The Burden of Antibiotic Resistance in Neonates from Developing Societies (BARNARDS) study recruited mothers and neonates into a prospective observational cohort study across 12 clinical sites in Bangladesh, Ethiopia, India, Pakistan, Nigeria, Rwanda, and South Africa. Primary outcomes were clinically suspected sepsis, laboratory-confirmed sepsis, and all-cause neonatal mortality during the first 60 days of life. The incidence of clinically suspected sepsis was 166.0 per 1,000 livebirths, laboratory-confirmed sepsis was 46.9 per 1,000 livebirths, and all-cause mortality was 0.83 per 1,000 neonate-days. The majority (72.5%) of laboratory-confirmed sepsis cases occurred within the first 3 days of life. Maternal hypertension, previous maternal hospitalisation, preterm birth, perinatal asphyxia, and multiple births were independently associated with increased risk of both suspected and confirmed sepsis. These findings highlight the disproportionate burden of neonatal sepsis and mortality in LMICs and call for targeted strategies to address antibiotic resistance and infection prevention in newborn care settings.

Reference

Seale AC, Blencowe H, Manu AA, Nair H, Bahl R, Qazi SA, et al. Estimates of possible severe bacterial infection in neonates in sub-Saharan Africa, south Asia, and Latin America for 2012: a systematic review and meta-analysis. Corrected and republished: Neonatal sepsis and mortality in low-income and middle-income countries from a facility-based birth cohort: an international multisite prospective observational study. Lancet Infect Dis. 2022 Jun;22(6):e168–e180. doi:10.1016/S1473-3099(21)00707-X. PMID: 35427523.