of MERS-CoV from dromedaries in Kenya and how it compares with others.

We collected nasal swabs from 1560 dromedaries from September 2022 to March 2023 in the main abattoir in Isiolo County, Kenya, a migration hotspot for dromedaries during dry periods from different regions in Northern East Africa. We determined the PCR prevalence and genomic diversity by next-generation sequencing (NGS) and compared mutations between strains

MERS-CoV RNA was detected in 21 of 1560 nasal swabs. Seven of the 21 samples with concentrations above 1.14×10^4 copies/uL underwent NGS analysis. The generated sequences formed a distinct clade from other Clade C viruses but clustered with Clade C2, mostly prevalent in East Africa. All sequences had a 16 amino acid (aa) deletion at the C-terminus of ORF3 and a 4 aa insertion near the N-terminus of ORF5. Three sequences had a 4 aa deletion near the C-terminus of ORF4b. All sequences had mutations in the S1 and RBD domain.

The results indicate that the variants detected in the study are genetically different from other Clade C viruses, including those previously detected in Kenya. This finding emphasizes the importance of MERS-CoV genomic surveillance in African dromedaries to better understand their diversity. Further comparative analyses will be done.

Track 2: Infectious diseases and (neglected) tropical diseases
3.3: Infectious diseases, incl HIV/AIDS, tuberculosis and NTDs
SDG 3: Good health and well-being

428 | Costs faced by tuberculosis patients during diagnosis and treatment in Ethiopia. A systematic review and meta-analysis

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Understanding the catastrophic cost of TB would seem a relevant issue for policy- and decision making. There have not been a systematic review and meta-analysis of catastrophic cost of TB in Ethiopia.

The methods and findings of the review reported according to the PRISMA-2020. Studies which assess the cost of diagnosis and treatment of TB in Ethiopia were included. A systematic literature search was done from online databases. Data analysed using the R-studio software.

Eleven studies, with 4026 participants, were included in this review. At the 20% threshold of total expenses, 49 % (95% CI 46%–51%) faced catastrophic costs due to TB. Being rural residence, hospitalization for anti-TB treatment, the number of health care facilities, patient and provider delays were predictors of high mean pre- and post-diagnosis costs.

Private facility diagnosis, extra-pulmonary TB, TB/HIV co-infection, smoking, DR-TB and being poorest were very likely to have TB- related catastrophic cost. However, the application of patient centred digital medication event reminder and monitor-observed therapy and community DOT programs is associated with lower catastrophic costs compared with standard DOT. Also, the short MDR-TB treatment regimen has reduced health-system costs and lower financial burden for participants.

TB patients were suffering from out-of-pocket payments with catastrophic consequences. Promoting active case finding and home-based directly observed therapy programs, early care seeking behaviour, patient-centred care with digital health technologies and comprehensive health insurance coverage, providing social support at the start of treatment, and introducing reimbursement system for direct costs can help minimize financial burden to the patient.

Track 2: Infectious diseases and (neglected) tropical diseases
3.3: Infectious diseases, incl HIV/AIDS, tuberculosis and NTDs
SDG 3: Good health and well-being

435 | SARS-CoV-2 seroprevalence in Northern Mali: Results from two household-based surveys in urban and rural settings in 2021

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SARS-CoV-2 spread has been described using seroprevalence studies in low resource settings. Most studies were conducted in urban settings. The extent of the exposure in rural areas remains less well characterized. In Mali, data reflecting circulation outside Bamako is scarce, especially in Northern Mali where security issues added to the COVID-19 pandemic. We report seroprevalence in 2021 in Timbuktu district and in two villages of Dire district, Northern Mali.

We conducted two cross-sectional, household-based surveys, one in urban and one in rural setting. All household members aged >6 months agreeing to participate were eligible. We collected a venous blood sample (Timbuktu) or a dried blood spot sample (Dire villages). Antibodies targeting the SARS-CoV-2 Spike protein were detected by ELISA. Questionnaires documented individual and household characteristics.

SARS-CoV-2 seroprevalence was 33.5% (314/923) in urban population of Timbuktu in January 2021, and 82% (208/255) in rural population of Dire in June 2021. The

median age for SARS-CoV-2 seronegative individuals was 20 years (interquartile range (IQR) = 8–35) in January and 4 years (IQR = 2–10) in June. Analysis of factors associated with SARS-CoV-2 seropositivity is ongoing.

By June 2021, most population had likely been exposed to SARS-CoV-2 in Northern Mali. Our results suggest that the seroprevalence increase already described in Bamako following the third wave of clinical infections was likely generalised to the entire country.

Track 2: Infectious diseases and (neglected) tropical diseases
3.3: Infectious diseases, incl HIV/AIDS, tuberculosis and NTDs
SDG 3: Good health and well-being

437 | Evaluation of the long-term effects of COVID-19 on pulmonary functions in recovered patients

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It is documented that COVID-19 survivors have prolonged functional impairment for years. Data regarding post-COVID-19 lung functions is lacking from Indian population. We aim to evaluate the lung functions in such patients after 3–6 months of hospital discharge.

It was a prospective observational study which included patients who attended post-COVID-19 clinic in the Department of Internal Medicine and Pulmonary Medicine (January 2021–July 2022). Patients were assessed 3–6 months post-discharge and underwent standardized pulmonary function tests (PFT) and CT Thorax if required. The following parameters were correlated with the disease severity: Forced Vital Capacity (FVC), Forced Expiratory Volume in the First Second (FEV1), Forced Expiratory Flows at 25% and 75% of FVC (FEF 25%–75%), Peak Expiratory Flow (PEF) and FEV1 /FVC.

A total of 52 post-COVID-19 patients were enrolled in the study, with a median age of 43 years (78.8% males). Half required oxygen at hospital admission. A restrictive pattern was seen in 20.8%. After adjusting the confounding factors,

Table 1: Pulmonary function test values at 3-6 months follow up based on oxygen requirement(N=52)

	No oxygen requirement	Oxygen requirement	Unadjusted P value	Adjusted P value
FEV1	3.16±0.15	2.66±0.13	0.002	0.025
FVC	3.63±0.17	3.11±0.16	0.003	0.046
PEF	8.16±0.48	6.60±0.44	0.013	0.028
FEF 25%-75%	4.20±0.23	3.25±0.21	0.006	0.007

mean pulmonary function values were lower in patients who required oxygen with a significant difference in FEV1, FVC, PEF and FEF25%–75% with p values of 0.025, 0.046, 0.028 and 0.007, respectively. Abnormal HRCT findings were present in 66.67%. Age and high LDH were correlated with HRCT abnormality with p-values 0.015 and 0.024.

Patients with COVID-19 pneumonia who required oxygen at the time of hospitalization had a higher rate of abnormal spirometry. Follow-up CT scans obtained within six months of disease onset showed abnormalities in more than half of patients, particularly elderly patients.

Track 2: Infectious diseases and (neglected) tropical diseases
3.2: Newborn and child health 3.3: Infectious diseases, incl HIV/AIDS, tuberculosis and NTDs
SDG 3: Good health and well-being

441 | Mapping, prevalence and risk factors of unvaccinated children for DTP1 vaccine (zero-dose children) in Kikwit, Democratic Republic of the Congo, 2022

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Zero-dose children remain vulnerable to vaccine-preventable diseases and can sustain transmission even in populations with a high vaccination coverage. The WHO Immunization Agenda 2030 has identified reaching out to zero-dose children as a strategic priority.

We conducted a cross sectional survey in the city of Kikwit (urban and rural setting) between September 28, and October 14, 2022. The data were collected using a questionnaire, both at the household and health area levels. A mixed effect logistic regression model was used to identify risk factors and, SATscan and QGIS were used to describe and identify hotspots among zero-dose children in the city.

Overall, 1863 children between the ages of 12 and 23 months were enrolled (956 in urban and 907 in rural setting). Kikwit city has a zero-dose prevalence of 16%. Geospatial analysis revealed two hotspots for zero-dose children, each of which covered some health areas. In multivariate analysis, six characteristics remained related with zero-dose: no home visits by CHWs, no antenatal care, no tetanus vaccine, no knowledge of vaccine-preventable diseases, and elementary school of mother, while those from the Bunda ethnic were less at risk.

We observed a high prevalence of zero-dose children with a heterogeneous spatial distribution between and within health zones in the city. Due to sub-zonal diversity, a health zone's approach to zero-dose immunization appears limited. Zero-dose prevalence seems to be more related to the CHW home visit, and individual-level factors. Geospatial results could help in targeting priority health areas and communities for vaccination activities.