

Weekly epidemiological record

Relevé épidémiologique hebdomadaire

28 JULY 2023, 97th YEAR / 28 JUILLET 2023, 97^e ANNÉE

No 30, 2023, 98, 327–334

<http://www.who.int/wer>

used to estimate how NTD programmes might be affected by interruption of interventions and the remedial strategies that could be implemented once programmes resumed. The models suggested that the impact on some NTDs could ultimately be mitigated, provided the delay was minimal and that prompt remedial (and in some cases novel) action was taken.^{2, 3}

The effect of programme interruptions on the dynamics of 7 NTDs (soil-transmitted helminthiasis, schistosoma, visceral leishmaniasis [VL] in the Indian sub-continent and the form of human African trypanosomiasis [HAT]) was analysed by simulating each disease in different endemic settings. The transmission dynamics of each NTD and the level of endemicity at each transmission areas and diseases with the fastest recurrence

Initial modelling (in March 2020) suggested that, if the impact of COVID-19 on NTD services was as substantial as 1 to 2 years of cessation of interventions (e.g. annual for VL and HAT), it could in some cases delay achievement of elimination goals for longer than the duration of the interruption. For schistosomiasis, onchocerciasis, trachoma and visceral leishmaniasis, the mean delay due to a 1-year interruption was predicted to be 2–3 years in the areas of highest prevalence. Modelling suggested that delays could be mitigated by additional

According to the WHO

, January–March 2021,⁶ the second most frequently services disrupted by the pandemic were those for NTDs, with 48 of 109 responding countries (44%) reporting disruptions and 21 (19%) A follow-up pulse survey in November–December of the same year found a similar trend.⁷ As predicted, preventive chemotherapy was the intervention most frequently affected.

des MTN. On a eu recours à la modélisation mathématique pour estimer comment les programmes de lutte contre les MTN pourraient être affectés par l'interruption des interventions et quelles stratégies correctives pourraient être mises en œuvre une fois que les programmes reprendraient. Les modèles indiquent que l'impact sur certaines NTD pourrait être atténué, à condition que le retard soit minime et que des mesures correctives rapides (et dans certains cas nouvelles) soient prises.^{2, 3}

L'effet d'une interruption des programmes sur la dynamique de transmission de chaque MTN et le niveau d'endémicité dans le sous-continent indien et trypanosomiase humaine africaine (HTA) a été analysé en simulant chaque maladie dans différents contextes endémiques. La dynamique de transmission de chaque MTN et le niveau d'endémicité dans les zones de transmission des maladies avec la plus forte transmission et les maladies ayant le taux de recrudescence le plus rapide.

En termes d'impact de la COVID-19 sur les services de lutte contre les MTN, la modélisation initiale (en mars 2020) indiquait qu'une interruption des interventions (par exemple des campagnes annuelles d'AMM, de la recherche active des cas et du traitement de la LV et de la HTA) s'étendant sur 1 à 2 ans pourrait dans certains cas retarder la réalisation des objectifs d'élimination pendant une période plus longue que la durée de l'interruption. Pour la schistosomiase, l'onchocercose, le trachome et la leishmaniose viscérale, la modélisation prédisait que le retard moyen dû à une interruption de 1 an serait de 2 à 3 ans dans les zones de plus forte prévalence. La modélisation semblait indiquer que des campagnes d'AMM supplémentaires ou un renforcement de la recherche des cas

D'après le deuxième cycle de l'enquête nationale par sondage de l'OMS sur la continuité des services de santé essentiels pendant la pandémie de COVID-19 (janvier-mars 2021),⁶ les services les plus fréquemment perturbés par la pandémie étaient ceux consacrés aux MTN: 48 des 109 pays répondants (44%) ont signalé des perturbations et 21 (19%) de graves perturbations. Une enquête de suivi menée en novembre-décembre de la même année a révélé une tendance similaire.⁷ Conformément aux prédictions, la chimioprévention était l'intervention la plus fréquemment affectée.

² Impact of the COVID-19 pandemic on seven neglected tropical diseases: a model-based analysis. Geneva: World Health Organization, 2021 (<https://apps.who.int/iris/handle/10665/343993>).
³ Borlase A et al. Evaluating and mitigating the potential indirect effect of COVID-19 on control programmes for seven neglected tropical diseases: a modelling study. *Lancet Glob Health*. 2022;10(11):e1600–11. doi:10.1016/S2214-109X(22)00360-6.
⁴ Toor J et al. Predicted impact of COVID-19 on neglected tropical disease programs and the opportunity for innovation. *Clin Infect Dis*. 2021;72(8):1463–6. doi:10.1093/cid/ciaa933.
⁵ Brooker SJ et al. Neglected tropical disease control in a world with COVID-19: an opportunity and a necessity for innovation. *Trans R Soc Trop Med Hyg*. 2021;115(3):205–7. doi:10.1093/trstmh/traa1157.
⁶ Second round of the national pulse survey on continuity of essential health services during the COVID-19 pandemic. Interim report. Geneva: World Health Organization; 2021 (<https://apps.who.int/iris/handle/10665/340937>).
⁷ See No. 38, 2022, pp. 465–80.

² Impact of the COVID-19 pandemic on seven neglected tropical diseases: a model-based analysis. Genève, Organisation mondiale de la Santé, 2021 (<https://apps.who.int/iris/handle/10665/343993>).
³ Borlase A et al. Evaluating and mitigating the potential indirect effect of COVID-19 on control programmes for seven neglected tropical diseases: a modelling study. *Lancet Glob Health*. 2022;10(11):e1600–11. doi:10.1016/S2214-109X(22)00360-6.
⁴ Toor J et al. Predicted impact of COVID-19 on neglected tropical disease programs and the

The WHO

⁸ shows that the number of people who received MDA in 2019 and 2020, with a small recovery in 2021. Fewer rounds of MDA were implemented overall than before the pandemic, and several MDA rounds did not achieve their target coverage. While 250 MDA campaigns were implemented in 83 countries in 2019, only 180 campaigns were implemented in 72 countries in 2020, a decrease of 28%. In 2021, the number of MDA campaigns was 187 in 66 countries, a slight increase over 2020.⁹ Major disruptions were also observed in health-facility services for NTDs, such as prevention, treatment and care.

Fewer cases of diseases that require individual management (e.g. VL, HAT and leprosy) were detected and treated in 2020 than in 2019. Although decreasing trends in the detection of new cases had been observed for some of these diseases for several years, it is unclear whether the greater reduction in the numbers detected and treated in 2020 was real or is attributable to disruptions in active and passive case detection due to movement restrictions for both health staff and patients, resulting in fewer services and worse health-seeking behaviour. It is difficult to estimate, as the actual rate of new infections is predicted to increase once active case detection is resumed.⁹ For example, the sharp decrease in the number of cases were undetected, also in other areas.¹⁰ It may take some time for the impact of COVID-19 on NTDs to be fully understood, with different impacts in different settings, depending on the public health response.

Impact of COVID-19 on interruption of vaccine-preventable diseases

The COVID-19 pandemic disrupted the delivery of vaccination campaigns and the roll-out of COVID-19 vaccines when they became available. Estimates of national coverage of DTP in 2021 indicated substantial decreases in the coverage of DTP in 2021, 6 million more than in 2019 and the highest number of “zero-dose” children, who had not received a single dose of

Le rapport mondial de l’OMS sur les maladies tropicales négligées 2023⁸ d’interventions contre les MTN a considérablement diminué entre 2019 et 2020, puis a légèrement augmenté en 2021. Dans l’ensemble, le nombre de tournées d’AMM mises en œuvre a diminué par rapport à ce qu’il était avant la pandémie, et plusieurs tournées d’AMM n’ont pas atteint la couverture cible. Alors que 250 campagnes d’AMM ont été mises en œuvre dans 83 pays en 2019, seules 180 campagnes ont été réalisées dans 72 pays en 2020, soit une baisse de 28%. En 2021, 187 campagnes d’AMM ont été menées dans 66 pays, soit une légère augmentation par rapport à 2020.⁹ Des perturbations majeures ont également été observées dans les services des établissements de santé consacrés aux MTN, tels que la prévention et le traitement.

the DTP vaccine since birth. An estimated 40 million children were un- or under-vaccinated against measles, 25 million children not having received any dose of measles vaccine, resulting in the lowest coverage since

supply chains for critical commodities, including anti-malarials and diagnostics, and that the treatment-seeking behaviour of febrile individuals might change or health facilities become overburdened. To better understand these concerns, WHO engaged several malaria modelling groups to estimate the impact of different scenarios. Now that the initial waves of COVID-19 have passed, the modelled estimates can be compared with what transpired.

Models of the potential impact of severely disrupted or totally interrupted mass LLIN distribution campaigns indicated that a 50% reduction in delivery would result in over 18 million additional malaria cases globally in 2020²² and that totally interrupted LLIN campaigns with interrupted SMC would result in approximately 300 000 additional deaths from malaria in sub-Saharan Africa.²³ Most countries, however, maintained LLIN distribution campaigns, with 74% of the nets scheduled for distribution globally in 2020 distributed.²⁴ SMC was provided in all 13 West African countries in which it was planned, and indoor insecticide spraying was completed in 25 of the 37 countries for which it was intended.⁶

chaînes d'approvisionnement pour les produits essentiels, notamment les médicaments antipaludiques et les produits de diagnostic, une baisse de la propension des personnes fébriles à se faire soigner ou une surcharge des établissements de santé. Pour mieux comprendre ces préoccupations, l'OMS a fait appel à plusieurs groupes de modélisation du paludisme pour estimer l'impact de différents scénarios. Les premières

Tw 9.5 0 0 9.5 293.4

The modelled impact of disruptions to diagnosis and treatment that a 75% reduction in diagnosis and treatment would result in a 13% increase in malaria incidence.⁴ In another study, it was estimated that complete suspension of COVID-19 would result in an additional 164 000 deaths from malaria per year.⁵ Many fewer tests for malaria were conducted in 2020 than in 2019, perhaps due to changes in treatment-seeking behaviour and the availability of diagnostics.⁶ The number of cases of malaria reported globally increased between 2019 and 2021, with an estimated 13.4 million cases and 63 000 deaths attributed to service disruptions due to COVID-19.²⁵ Because of poor-quality data on both interventions delivered and malaria cases detected, however, conditions on the malaria burden in more detail, as different impacts were observed in different settings. The greatest impact on MDA services for NTDs, among the 3 public health systems and categories considered at the

²² Weiss EJ et al. Indirect effects of the COVID-19 pandemic on malaria intervention coverage, morbidity, and mortality in Africa: a geospatial modelling analysis. *Lancet Infect Dis.* 2021;21(1):59–69. doi:10.1016/S1473-3099(20)30700-3.

²³ Sherrard-Smith E et al. The potential public health consequences of COVID-19 on malaria in Africa. *Nat Med.* 2020;26(9):1411–6. doi:10.1038/s41591-020-1025-y.

²⁴ World malaria report 2021. Geneva: World Health Organization, 2021 (<https://apps.who.int/iris/handle/10665/350147>, accessed July 2023).

²⁵ World malaria report 2022. Geneva: World Health Organization, 2022 (<https://apps.who.int/iris/handle/10665/365169>, accessed July 2023).

The outputs of modelling were used by global malaria control programmes, and many national malaria programmes used the outputs to justify continuing planned interventions. Even though the worst-case scenarios considered by modellers did not transpire, the outputs provided a valuable tool for advocacy to highlight the potentially devastating situation and to join malaria stakeholders in a common aim.

Conclusions and recommendations

1. The ITFDE underscores the need for caution in interpreting the impact of the COVID-19 pandemic. Modelled estimates often provide “worst-case scenarios” for advocacy and planning. The ITFDE recommends that

