TRAFFICKING IN MEDICAL PRODUCTS IN THE SAHEL

TOCTA Sahel
Transnational Organized Crime Threat Assessment

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Trafficking in Medical Products in the Sahel

Transnational Organized Crime Threat Assessment – Sahel

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Contents

Key takeaways

- In the Sahel countries and their neighbours, the high prevalence of infectious diseases, including malaria, coupled with challenges in terms of the availability and affordability of and access to healthcare, creates an environment in which the demand for medical products and services is not fully met through formal channels.
- The disparity between the demand for and supply of regulated pharmaceutical products leaves room for trafficking, provides an incentive for the involvement of organized criminal groups and fuels the ongoing threat to public safety and public health in the Sahel countries.
- Between January 2017 and December 2021, at least 605 tons of different medical products were seized in West Africa during international operations.

While there are no reliable estimates of the overall quantities of medical products that are trafficked in different ways and forms in the Sahel countries, studies point to a percentage point to a percentage of substandard and falsified medicines in the medical market of between 19 and 50 per cent.

Some 40 per cent of the substandard and falsified medical products reported in the Sahel countries between 2013 and 2021 was discovered in the regulated supply chain. Just as regulated medical products can be diverted, illicitly manufactured medical products can find their way into authorized pharmaceutical outlets, which shows how much the regulated (legal) and unregulated (illicit) supply chains are interconnected.

The Sahel countries rely heavily on imports of medical products because their pharmaceutical industries are still in the early stages of development. Of total pharmaceutical expenditure in sub-Saharan Africa in 2019, imports represented as much as 70 to 90 per cent (roughly 14 billion United States dollars ($)).

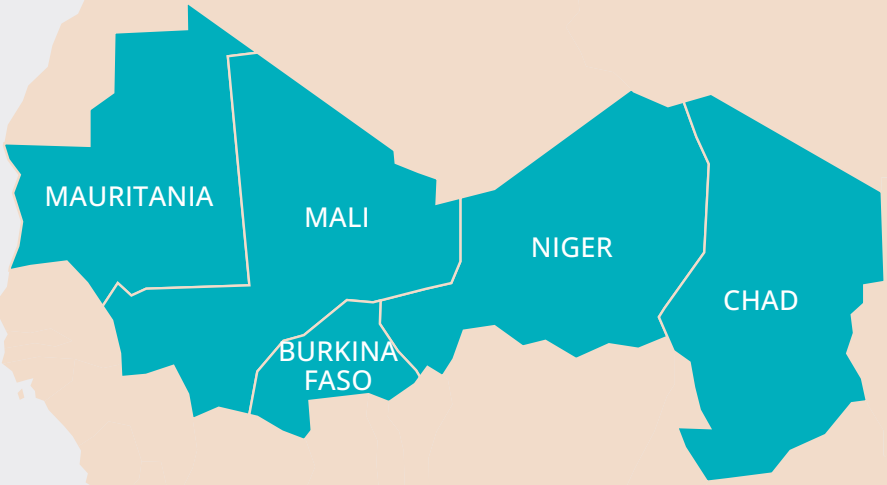
Medical products diverted from the legal supply chain often originate in the main exporting countries of medical products to the Sahel countries, in particular Belgium and France, and to a lesser extent China and India. Others are manufactured in neighbouring countries, including in North Africa and the Gulf of Guinea.

The seaports in the Gulf of Guinea, Conakry (Guinea), Tema (Ghana), Lomé (Togo), Cotonou (Benin) and Apapa (Nigeria) can be identified as major entry points for medical products destined for the Sahel countries. Trafficking by air, using postal shipments or carried out by commercial air passengers, is employed for smuggling smaller quantities of medical products. Once in West Africa, trafficked medical products reach the Sahel countries through smugglers who follow traditional trafficking routes using buses, trucks and private cars.

Investigations have revealed the involvement of a wide range of opportunistic actors in trafficking in medical products in the Sahel countries, from employees of pharmaceutical companies, public officials, law enforcement officers and health agency workers to street vendors, all motivated by potential financial gain.

Despite terrorist groups and non-state armed groups being commonly associated with trafficking in medical products in the Sahel, most reported cases in the region show that the involvement of such groups is limited and mainly revolves around consuming medical products or levying "taxes" on them in the areas under their control.

In sub-Saharan Africa, as many as 267,000 deaths per year are linked to falsified and substandard antimalarial medicines. In addition, up to 169,271 are linked to falsified and substandard antibiotics used to treat severe pneumonia in children.



For the purpose of this report, "Sahel countries" refers to Burkina Faso, Chad, Mali, Mauritania and the Niger.

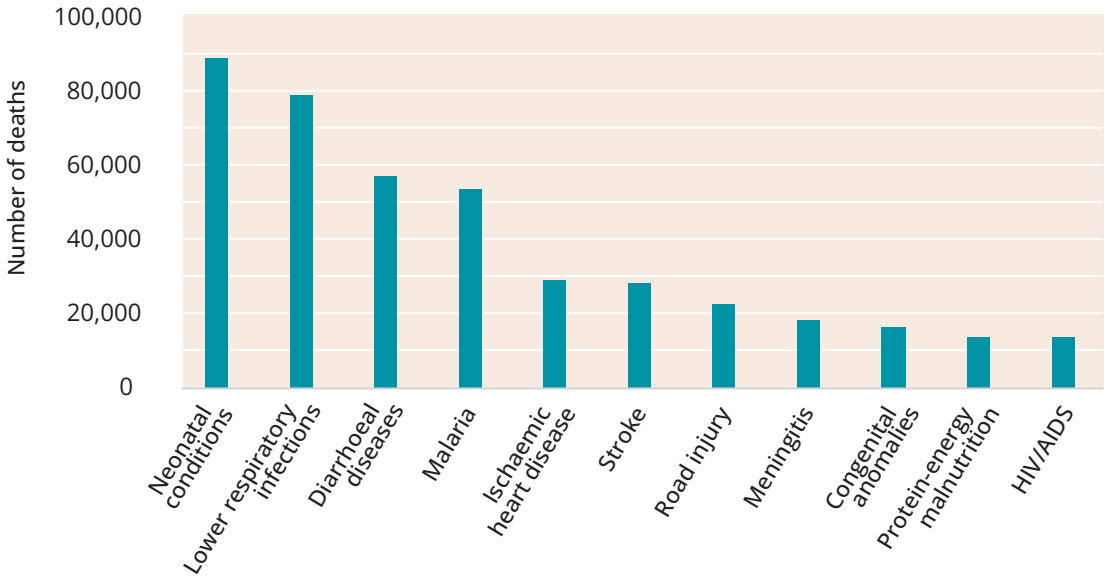
Trafficking in Medical Products in the Sahel

Market background

The Sahel has been a trade and migration route for centuries.[1] A convenient transit area for products transported by sea from coastal countries, the region has become the epicentre of a growing market for trafficked medical products. Factors such as limited access to quality, safe, effective and affordable medical products, corruption among law enforcement and customs officers and a lack of border controls have contributed to the creation of an environment conducive to trafficking in and beyond the Sahel countries, Burkina Faso, Chad, Mali, Mauritania and the Niger.[2] This situation has been exacerbated by the ongoing war in Mali, subsequent conflicts and the spread of insurgent and terrorist groups that threaten the peace and stability of the region.[3]

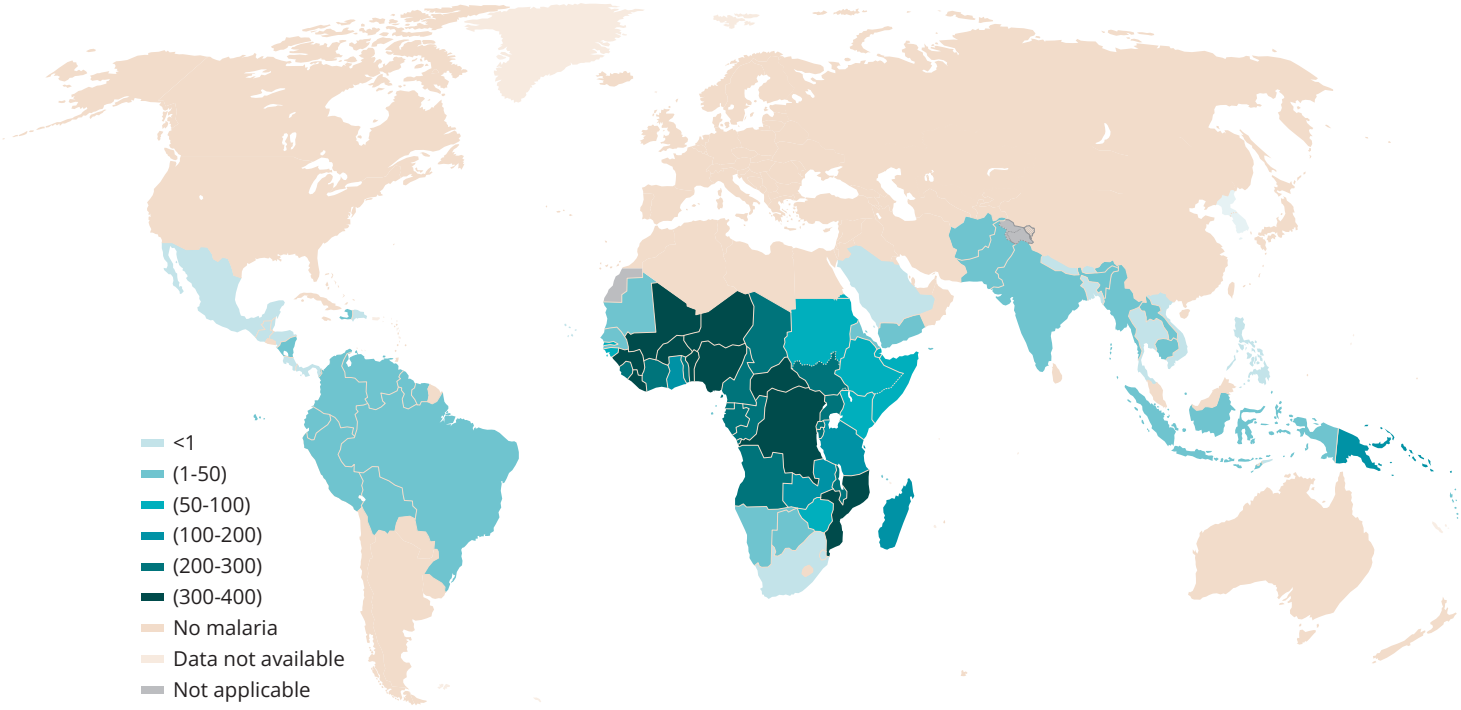
Infectious diseases are among the leading causes of death in the Sahel countries (figure 1), with the estimated incidence of malaria in the region being among the highest in the world (map 1). Yet the Sahel countries continue to face challenges in making healthcare available and accessible to their populations.[4] For instance, World Health Organization (WHO) data from a regional survey show that, in 2018, the Sahel countries had a health workforce density well below the Sustainable Development Goal minimum density threshold of 4.45 doctors, nurses and midwives per 1,000 population.[5] The density was 1.3 per 1,000 in Burkina Faso; 0.6 in Chad; 1.4 in Mali; 2.1 in Mauritania; and 0.4 in the Niger.[6] The Sahel countries also have some of the lowest densities of pharmacists in the world. The global average number of pharmacists per 10,000 inhabitants in 2018

FIG 1. Leading causes of deaths in the Sahel countries, 2019



Source: WHO, Global Health Observatory "Global health estimates: Leading causes of death, 2019".
Available at: https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death.

MAP 1. Estimated malaria incidence rate per 1,000 population at risk, by country, 2020



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

Source: WHO, Estimated malaria incidence (per 1,000 population at risk), 2020.
Available at: https://www.who.int/data/gho/data/indicators/indicator-details/GHO/malaria-incidence-(per-1-000-population-at-risk).

was 4, whereas the number was 0.15 in Burkina Faso, 0.033 in Chad, 0.095 in Mali, 0.18 in Mauritania and 0.027 in the Niger.[7] Health care is equally limited, with approximately 590 health centres not currently functional due to insecurity in the Central Sahel, according to the European Union.[8]

Affordability is another hindrance to accessing quality, safe and effective medical products, not least because universal health coverage (UHC) in the region remains low.[9] The UHC index measures the average coverage of essential services, including reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access. The index reflects a performance score where 100 indicates the Sustainable Development Goal aim of achieving universal health coverage for all by 2030 has been met. In 2019, the global average on this index was 67 per cent, but it was just 43 per cent Burkina Faso, 42 per cent in Mali, 40 per cent in Mauritania, 37 per cent in the Niger and 28 per cent in Chad. After Somalia (17 per cent), Chad has the next lowest universal health coverage index in the world.[10]

The high prevalence of infectious diseases, including malaria, in the Sahel countries and their neighbours, coupled with challenges in terms of the availability and affordability of and access to healthcare, creates an environment in which the demand for medical products and services is not fully met through formal channels. This disparity between the supply of and demand for medical care is at least partly filled by medicines supplied from the illegal market to treat self-diagnosed diseases or symptoms. Street markets and unauthorized sellers, in particular in rural areas and areas affected by conflict, are sometimes the only sources of medicines and pharmaceutical products.

Reliable studies on trafficking in medical products in the Sahel countries are few and far between, but the quantity of medical products seized by law enforcement agencies, coupled with regular medical product alerts from WHO,[11] on antimalarials in particular, suggest that falsified pharmaceutical products are circulating in the region. In countries with efficient regulatory systems, the quality, safety and efficacy of medical products are monitored at different points in the supply chain.[12] In the Sahel countries, as in the rest of West Africa, how-

BROAD DEFINITION OF TRAFFICKING IN MEDICAL PRODUCTS

Trafficking in medical products includes falsified medical products,[a] substandard medical products[b] and unregistered/unlicensed medical products,[c] notions that have been defined by WHO. However, it may also involve forms of disruption to or diversion of the legal supply chain, including at the production, distribution, sale or even dispensing stages.[d] Examples of trafficking in medical products as reported by law enforcement officials in the Sahel countries include:

- The distribution of medical products that are authorized by national regulatory bodies but illegally imported by authorized or unauthorized actors without the authorization to import.
- The distribution of authorized products legally imported by authorized actors through unauthorized channels (such as unlicensed street vendors or online sellers).
- The distribution of medical products stolen from the legitimate supply chain, including manufacturers, wholesalers, pharmacies or prescribers. In the Sahel countries, recorded cases of medical products that reach the informal market through the embezzlement of donations originally intended for non-governmental organizations (NGOs) and denominational health centres are among such examples.
- The distribution of medical products containing dosages of the active ingredient higher than the nationally approved or therapeutic dosage.
- The distribution of medical products obtained fraudulently through corrupt healthcare professionals or by using forged prescriptions.
- The distribution of medical products diverted from licit and legitimate use, as is the case when people who are prescribed opioids sell a proportion of their prescription.[e]

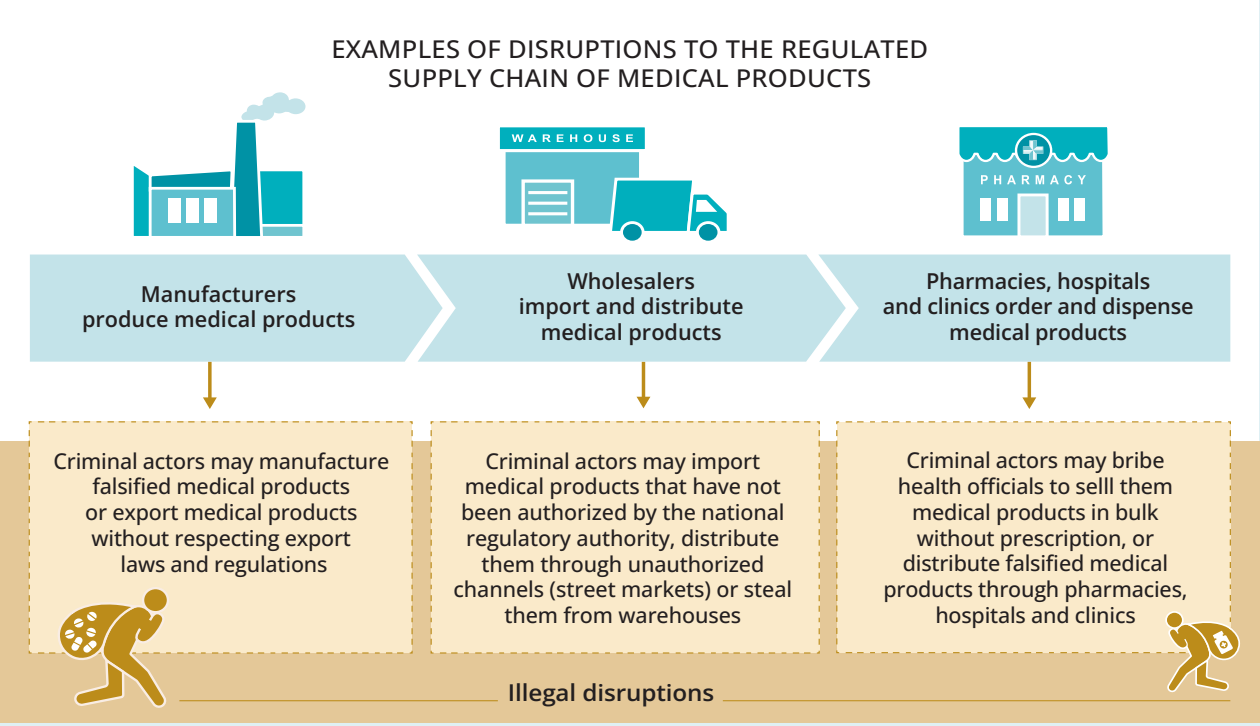
a Falsified medical products may contain no active ingredient, the wrong active ingredient or the wrong amount of the correct active ingredient (WHO, "Substandard and falsified medical products").

b Also called "out of specification", substandard medical products are authorized medical products that fail to meet either their quality standards or specifications, or both.

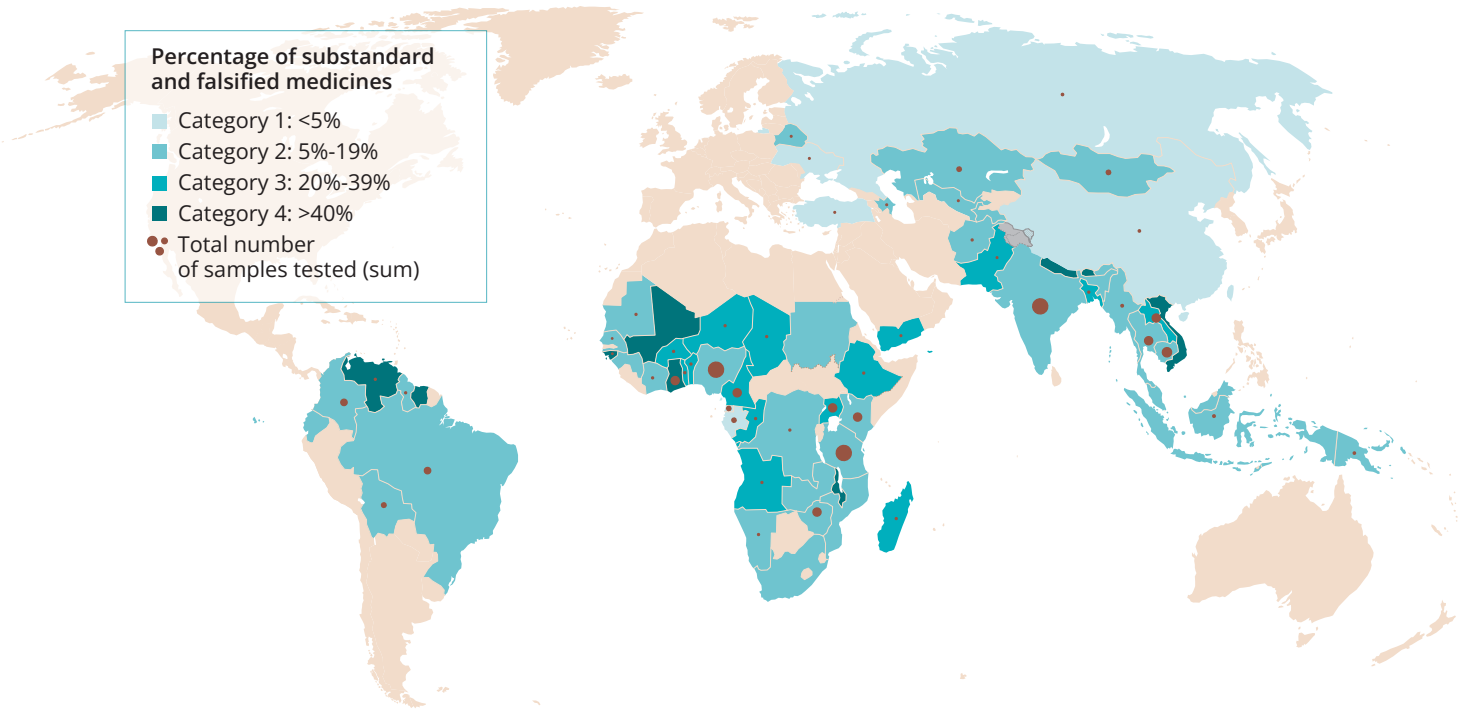
c Unregistered/unlicensed medical products are medical products that have not undergone evaluation and/or approval by the National or Regional Regulatory Authority for the market in which they are marketed/distributed or used, subject to permitted conditions under national or regional regulation and legislation.

d WHO, *Policy Paper on Traceability of Medical Products* (Geneva, 2021).

e Interviews with law enforcement officials from the Sahel, 2018–2021. See also the typology of links between the trafficking of medical products and money laundering provided in Inter-governmental Action Group Against Money Laundering in West Africa (GIABA), *Money Laundering Resulting from the Counterfeiting of Pharmaceuticals in West Africa* (Dakar, July 2017).



MAP 2. Reported national percentage of substandard and falsified medicines in the medical market, 2018



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

Source: Elaborated by UNODC from Sachiko Ozawa et al., "Prevalence and estimated economic burden of substandard and falsified medicines in low- and middle-income countries: a systematic review and meta-analysis", JAMA Network Open, 2018.

ever, medical products may be sold without having been approved, cleared or licensed, may have passed their expiry date, or may not contain the purported active ingredients. The disparity between the supply of and demand for regulated pharmaceutical products leaves room for trafficking, provides an incentive for the involvement of organized criminal groups and fuels the ongoing threat to public safety and public health both in the Sahel countries and in the world in general.

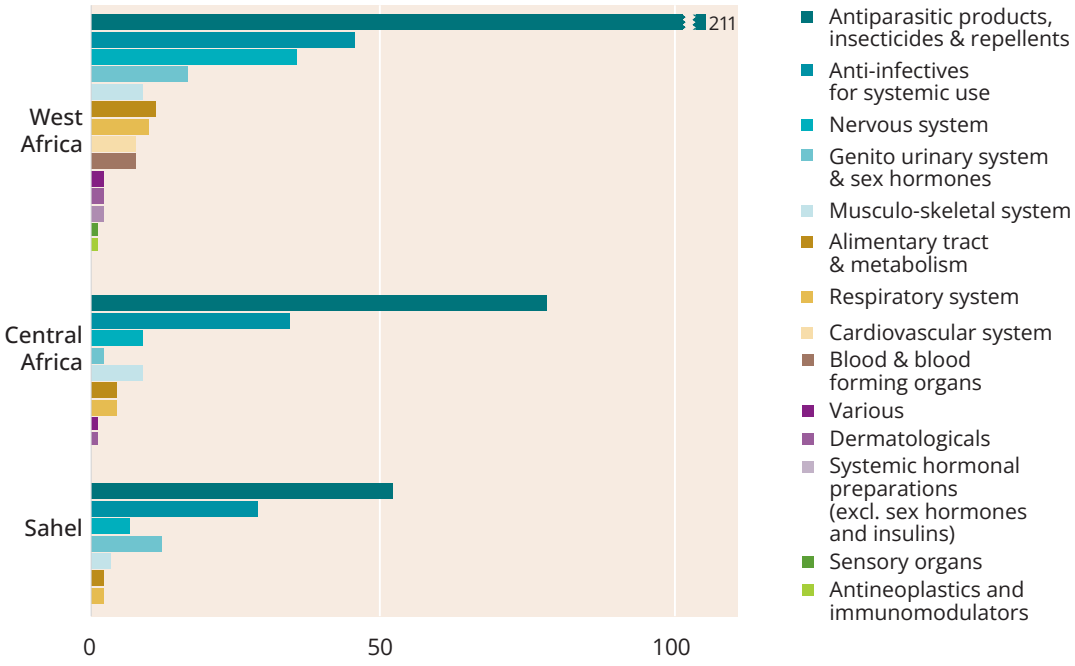
Trafficking in medical products can be defined as the production, distribution, sale and dispensing of medical products outside the legal supply chain, that is "the supply chain paths and participants that are recognized and authorized by the government(s) of jurisdiction".[13] Although trafficking in medical products in the Sahel countries is widely acknowledged, its complexities are poorly understood. It stems primarily from the poor traceability of medical products, which in turn relates to poor infrastructure and poor tracking across borders. Trafficking in medical products is a multifaceted activity that includes but is not limited to substandard, falsified or unregistered/unlicensed medical products as defined by WHO.[14] It also refers to other forms of disruptions to the legal supply chain, such as the diversion of medical products (see box on previous page).

It is important to note that nuances in the terminology used generally confound the discussion around the issue of trafficked medical products and may hamper progress in defining and controlling this public health problem. While the UNODC mandate specifically covers falsified medical products, the present report also discusses other forms of trafficking in medical products because the available evidence and data on falsified medicines cannot be disentangled from other issues related to their trafficking.[15]

Nature of the market

Between January 2017 and December 2021, at least 605 tons of different medical products were seized in West Africa during international operations. The operations included Operation Heera I and Heera II (The International Criminal Police Organization (INTERPOL)), Operation CRIPHARM III (World Customs Organization (WCO)), Operation Pangea XIV (INTERPOL) and those under the

FIG 2. Number of falsified products reported, by anatomical group and subregion, 2013–2022



Source: WHO, Global Surveillance and Monitoring System confidential thematic report for UNODC, July 2022.
Note: The total number of medical products is 623.

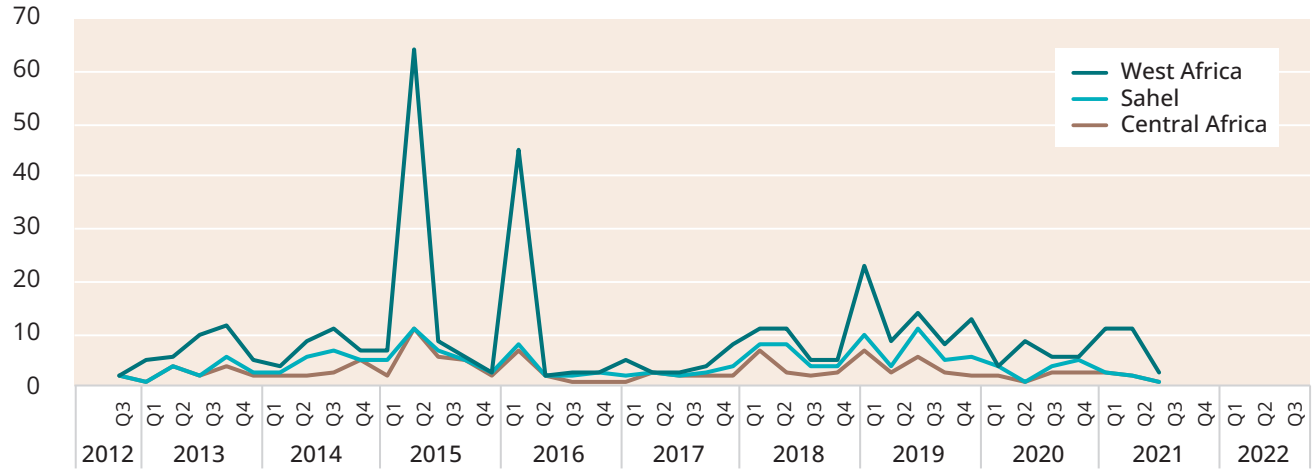
UNODC-coordinated programmes, UNODC–WCO–INTERPOL airport communication project (AIRCOP) and UNODC–WCO Container Control Programme (CCP)).[16]

Large seizures of medical products are also reported by law enforcement agencies in the Sahel countries, although not on a consistent basis and the nature of the products seized is not always known or confirmed, preventing the production of reliable aggregated estimates. In Mali, the Rapid Intervention Brigade within the General Directorate of Customs seized nearly 20 tons of illicitly supplied medical products in the country between 2015 and 2018.[17] More recently, the Sikasso branch of the Central Narcotics Office (OCS) reported various seizures, including 4 cartons of amoxicillin (antibiotic), 54 cartons of paracetamol (analgesic) and 40 cartons of liquid cevamec (antiparasitic) in June 2020, and more than 3 tons of medical products in July 2020, reportedly from an organized group that was trafficking unauthorized medicines between Mali and Burkina Faso.[18]

In the Niger, a police officer reported that the Central Office for the Repression of Illicit Drug Trafficking (OCRTIS) seized almost 52 tons of unauthorized medical products between late 2017 and late 2019.[19] In Burkina Faso, according to a police officer, more than 75 tons of prohibited medical products were seized in 2018, mainly by customs officials.[20] In Mauritania, according to the national news agency, 6 tons were seized in Nouadhibou in 2020 and unreported quantities of medical products were seized along the border with Senegal in Rosso and in Tiguent, a city 100 km south of Nouakchott.[21] Seizures included medicines illegally diverted from the legal supply chain (prohibited or restricted medicines, non-declared medicines and medicines purchased by unlicensed wholesalers) and substandard (expired medicines).[22]

While there are no reliable estimates of the overall quantities of medical products that are trafficked in different ways and forms in the Sahel countries, studies related to different geographical coverage and different product types point to a percentage of substandard and falsified medicines in the medical market of between 19 and 50 per cent. A 2016 study in the Central African Economic and Monetary Community, which includes Chad, found that trafficked medical products accounted for between 20 and 55 per cent of the products in the medical mar-

FIG 3. Recorded incidents per quarter involving falsified medical products in West Africa, Central Africa and the Sahel countries



Source: WHO, Global Surveillance and Monitoring System confidential thematic report for UNODC, July 2022.
Note: The total number of incidents is 345.

ket.[23] According to the Economic Community of West African States (ECOWAS) Medical Product Anti-Counterfeit Committee, in 2014 the figure ranged between 17 and 50 per cent in West Africa, which includes Burkina Faso, Mali and the Niger.[24] Some of the pharmacists working in the Sahel countries who were interviewed in the framework of the research indicated that the percentage of trafficked medical products in the medical market may be significantly higher, with a range of between 65 and 80 per cent.[25]

A global systematic review of 265 studies published in 2018 estimated that the highest percentage of substandard and falsified medicines in the medical market was observed in Africa (18.7 per cent of the samples analysed (map 2)).[26] Although the basis of this and other estimates are sometimes unclear, the figures are alarming, especially given the lack of capacity for monitoring, reporting and investigating infringements in the Sahel countries, indicating that the scale of the illicit market may be significantly bigger.

Categories of medical products reported in the Sahel countries

Within the seizure records of medical products seized in the Sahel countries and in WHO records of reported incidents relating to medical products, all the main pharmacological groups are represented.[27] The main therapeutic categories of the medical products reported include:

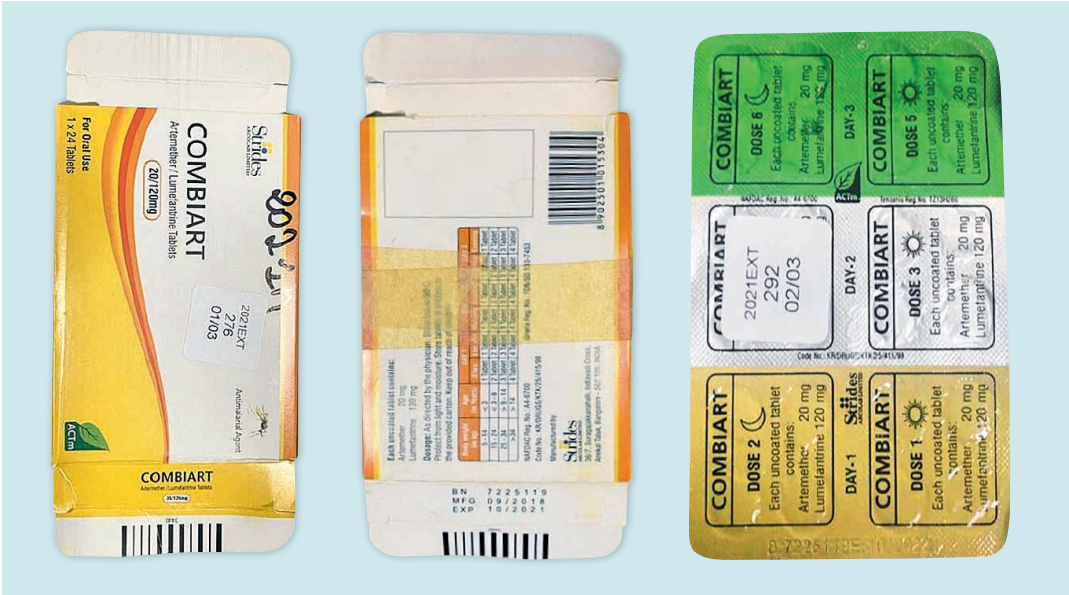
- Antiparasitic products, insecticides and repellents (mainly antimalarials)
- Anti-infectives for systemic use (mainly antibiotics)
- Nervous system (mainly analgesics and in particular pharmaceutical opioids such as tramadol)
- Genito-urinary (mainly products used to treat erectile dysfunction, but also hormonal contraceptives – a concern in countries where access to reproductive health is limited)[28]

The presence of antimalarials and antibiotics in this list is consistent with the high incidence of infectious diseases such as malaria in the Sahel countries, as shown in figures 1 and 2.

In West Africa, available evidence shows that large-scale trafficking in the analgesic tramadol is linked to its non-medical use.[29] If and to what extent trafficking in analgesics in the Sahel countries is related to the disparity between the legitimate demand for painkillers and their lack of availability through authorized channels remains unclear due to a lack of evidence.[30] The licit per capita use of internationally controlled opioids amounted to just 42 defined daily dose for statistical purposes (S-DDDs) [31] per million inhabitants per day in Africa in 2020, far lower than the global average of 3,334.[32]

An analysis of recent drug seizures demonstrates that tramadol has emerged as the opioid most often involved

FIG 4. Photographs of a product that was the subject of WHO medical product alert N°8/2021: falsified combiart, lot 7225119 identified in Chad, Côte d'Ivoire and Mali, 2021



INCREASE IN TRAFFICKING IN MEDICAL PRODUCTS DURING THE COVID-19 PANDEMIC

Trafficking in medical products increased during the COVID-19 pandemic.[f] Operation Pangea, coordinated by INTERPOL in 90 countries and targeting the online sale of pharmaceutical products, showed an increase of approximately 18 per cent in seizures of unauthorized antivirals, while seizures of unauthorized chloroquine increased by 100 per cent.[g]

Interviews conducted with law enforcement officers and members of civil society in the Sahel countries led to a similar observation. Following reports from health experts that chloroquine could be effective in treating the coronavirus, chloroquine became more prevalent in the informal market in West and Central Africa and purchases of the product increased dramatically.[h] Recent studies have found that the chloroquine "rush" led to an increase in its price in the informal market in the region. Prior to the COVID-19 pandemic, a Nirupquin tablet (corresponding to 100 mg of chloroquine) was sold in Senegal for 250 CFA francs (CFAF), the equivalent of $0.40, but this rose to 1,500 CFAF ($2.40) during the pandemic.[i]

During the course of the pandemic, WHO also issued an alert documenting cases of falsified chloroquine identified in Burkina Faso, Cameroun, the Democratic Republic of the Congo, France and the Niger. These products were confirmed as falsified on the basis that their their identity, composition or source were deliberately/fraudulently misrepresented.[j]

The joint United Nations/INTERPOL operation KAFO II, targeting the ports, airports and land borders of Burkina Faso, Côte d'Ivoire, Mali and the Niger, led to large seizures of hand sanitizer, gel, and gloves, as well as 2,263 boxes of medical products.[k]

f UNODC, "COVID-19-related trafficking of medical products as a threat to public health", Research brief, July 2020.

g INTERPOL, "Global operation sees a rise in fake medical products related to COVID-19," Press release, 19 March 2020.

h Interviews with law enforcement officers and members of civil society, Côte d'Ivoire, Mali and Senegal, August 2021.

i Mouhamadou Kane, "How COVID-19 is fuelling the trafficking of fake chloroquine in Senegal", ENACT, July 6, 2020.

j WHO, "Medical product alert no. 4/2020: falsified chloroquine (update)", 9 April 2020.

k United Nations, UN News, "Joint UN–INTERPOL operation disrupts firearms supply to terrorist networks in West Africa and Sahel," 21 December 2020.

in trafficking in medical products in the Sahel countries. In 2017, tramadol accounted for 91 per cent of all quantities of pharmaceutical opioids seized in West Africa.[33] As confirmed by data and information shared by Member States in the UNODC annual report questionnaire, seizures of pharmaceutical opioids were already being dominated by tramadol in 2015.[34] Indeed, the non-medical use of pharmaceutical opioids is not a new phenomenon and has been observed in many regions for decades as part of the polydrug use pattern seen among high-risk or regular opioid users.[35]

Focus on falsified medical products

Estimating the percentage of falsified medical products in the market is a challenge considering the weak regulatory framework in the Sahel countries as well as the absence of an established operational system and equipment for the analysis of medical products seized.[36] At the national or regional levels, no systematic testing procedure is enforced to identify a geographical origin, a clandestine laboratory, a production batch or a physical unit of the medical product seized, nor is there a network of laboratories using harmonized methods for the analysis of illicitly sourced drugs.[37]

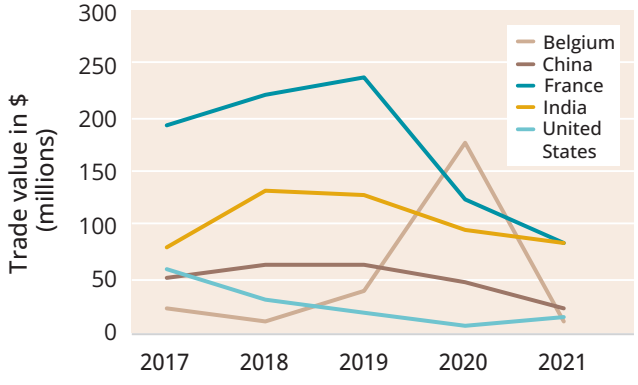
The WHO Global Surveillance and Monitoring System, which captures data on incidents of substandard and falsified medical products received from various sources,[38] contains useful information on trafficking in falsified medical products in the Sahel countries.[39] This includes just under 150 product records created between 2013 and 2021, of which over 75 per cent have been either confirmed as, or suspected of being, falsified on the basis that their identity, composition or source have been deliberately misrepresented; the remainder includes either substandard or unregistered products. WHO highlights that both substandard and falsified medical products represent a threat to public health, and that unregistered, substandard and falsified products indicate a weak oversight infrastructure across all governmental departments. The WHO Global Surveillance and Monitoring System is a case-reporting database, however, and estimates cannot be extrapolated from the figures cited.[40]

Some 40 per cent of the substandard and falsified medical products reported in the Sahel countries was discovered in the regulated supply chain (figure 4). Just as regulated medical products can be diverted, illicitly manufactured medical products can find their way into authorized pharmaceutical outlets, which shows how much the regulated (legal) and unregulated (illicit) supply chains are interconnected.

In the Niger, for example, when the country experienced an outbreak of meningitis C in 2015, as the vaccine in stock was not sufficient to meet demand, the Government and pharmacies had to turn to wholesalers in neighbouring countries to bridge the gap. After a healthcare worker noticed suspiciously packaged vaccines, laboratory analysis demonstrated that some expected antigens were missing from the product.[41] Similar falsified vaccines were reported to WHO during a subsequent outbreak of meningitis C in the country in 2017. The use of vaccine labels and cartons bearing plausible product information that misrepresented the nature of the product suggested that the manufacturing of falsified products during the 2017 meningitis C outbreak had become an organized criminal activity on an industrial scale.[42] Similar products were reported during another outbreak in 2019.[43]

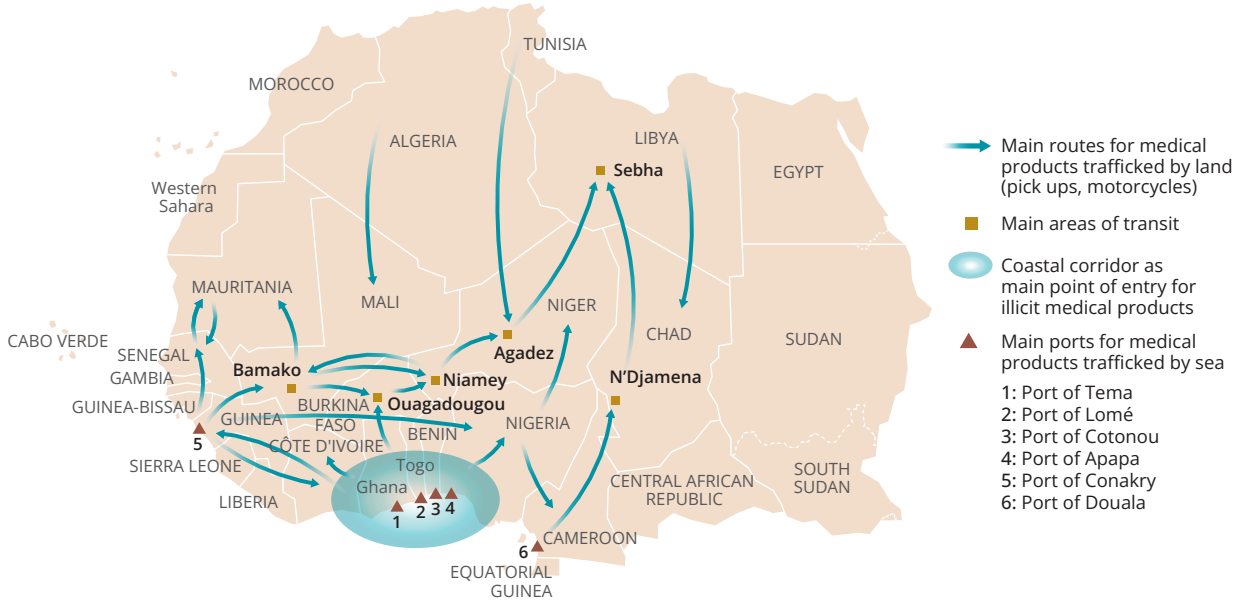
WHO has also issued regular alerts on antimalarial drugs. In 2019, for example, quinine sulfate on sale in Chad was revealed to be falsified. Laboratory tests did not show the presence of the active ingredient and the packaging cited manufacturers that were not legally established in the countries of origin (Bulgaria and Kenya).[44] Moreover, in 2020, WHO reported that quinine sulfate in Chad, bearing an obsolete logo from the WHO essential medicines programme, was falsified.[45] In November 2021, cases of falsified combiart, a combination of artemether and lumefantrine indicated for

FIG 5. Pharmaceutical imports into the Sahel countries from Belgium, China, France, India and the United States of America, in $ millions, 2017–2021



Source: UNODC elaboration of COMTRADE data.

MAP 3. Routes used for trafficking medical products to the Sahel



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Source: Interviews with law enforcement officials in the Sahel, 2018–2021.

the treatment of malaria, were reported in Chad and Mali.[46] Other antimalarial drugs identified in Burkina Faso and the Niger were classified as falsified insofar as their identity, composition or source were deliberately or fraudulently misrepresented.

During the COVID-19 pandemic, WHO also issued a medical product alert on reported cases of falsified chloroquine, an antimalarial that was presented as an effective treatment against COVID-19 (see box on page 15).[47]

Provenance and transit of medical products

Sub-Saharan countries, including those in the Sahel, rely heavily on imports of medical products because their pharmaceutical industries are still in the early stages of development. Of total pharmaceutical expenditure in sub-Saharan Africa in 2019, imports represented as much as 70 to 90 per cent (roughly $14 billion).[48] As products are diverted from legal supply chains, the medical products seized often originate in the main exporting countries of medical products to the Sahel countries, in particular Belgium and France (figure 5).

A study conducted in Cotonou, Benin, between 2005 and 2007 investigated the origin of the medical products sold on the informal market at the city's Dantokpá market, one of the largest markets in West Africa.[49] The analysis transcended the local context in order to provide a regional understanding of the market, as some of the products under investigation transited neighbouring countries, including Burkina Faso, Mali and the Niger. Among a sample of 1,492 products identified on the market, approximately 40 per cent of those that had been diverted from the legal supply chain originated in Europe and North America.[50] This analysis is consistent with data from the United Nations Conference on Trade and Development (UNCTAD), which indicate that 48.3 per cent of medical products in the legal supply chain in Africa are imported from the European Union and the United States.[51]

Between 2017 and 2021, the Sahel countries imported roughly $103–$194 million worth of pharmaceutical products from China and India.[52] A study conducted by UNODC in 2021 documented that while most tramadol trafficked from Asia was manufactured for non-medical use (as evidenced by seizures of the drug with dosages higher than those approved for medical use), some tramadol was also diverted from the legal supply chain.[53]

Other medical products trafficked in the Sahel were manufactured in neighbouring countries, including in North Africa and the Gulf of Guinea. In the ECOWAS

States, Ghana, Nigeria and, to a lesser extent, Côte d'Ivoire and Senegal have relatively sizeable pharmaceutical industries, enabling them to manufacture products for their domestic markets as well as export them to neighbouring countries.[54] Based on interviews with vendors and observations conducted in the Niger, some medical products found on the country's informal market that are unauthorized for sale through formal pharmaceutical channels, originate in Ghana and Nigeria.[55] The same observation can be made when analysing the import of pharmaceutical products from North Africa, in particular from Algeria, Morocco and Tunisia.[56]

Medical products often proceed to their destination through mainstream international trade channels. Roughly 80 per cent of all global trade by volume and over 70 per cent of global trade by value are transported by sea.[57] Based on interviews with law enforcement agencies, including the police, health inspection services and customs officials, and the analysis of datasets related to seizures, the following seaports in the Gulf of Guinea can be identified as major entry points for medical products destined for the Sahel countries: Conakry (Guinea), Tema (Ghana), Lomé (Togo), Cotonou (Benin) and Apapa (Nigeria). Data on total seizures made at those seaports are unavailable, but the UNODC–WCO Container Control Programme operating in the main seaports of West Africa recorded the seizure of 41.18 tons of medical products in those ports alone between 2018 and 2021.[58]

Trafficking by air, using postal shipments or carried out by commercial air passengers, is employed for smuggling smaller quantities of medical products. While there are no data on total airport seizures, the AIRCOP programme recorded seizures of over 5.2 tons of medical products at airports in the region between 2018 and 2021, with Abidjan Airport being one of the main transit hubs.[59] Traffickers use a variety of methods to conceal medical products at the shipment stage, including:

- Issuing forged legal documents, known as cargo manifests, which are issued by a carrier (transportation company) to a shipper that details the type, quantity and destination of the goods being carried
- Knowingly misrepresenting, post-dating or ante-dating shipment documents
- Using the identities of legitimate import companies on customs forms so as to deceive customs brokers and customs officials
- Concealing illicit medical products within containers, sometimes among legally imported and authorized pharmaceutical products
- Repackaging medical products to conceal their origin or content
- Using fake authorizations or bribing customs, port, airport or health officials to authorize import or sale[60]

Once in West Africa, trafficked medical products reach the Sahel countries through smugglers who follow traditional main trafficking routes using buses, trucks and private cars (see map 3).[61] Given their unique familiarity with the terrain, the smugglers also follow secondary routes to avoid border controls.[62]

Main actors involved in trafficking medical products

Investigations have revealed the involvement of a wide range of opportunistic actors in trafficking in medical products in the Sahel countries, from employees of pharmaceutical companies, public officials, law enforcement officers and health agency workers to street vendors, all motivated by potential financial gain. Some operate individually, such as pharmacists selling illicitly acquired medicines on the informal market, while others operate at different levels of the supply chain together with others, thus constituting organized criminal groups as defined by article 2 of the United Nations Convention against Transnational Organized Crime.[63]

An example of an organized criminal network trafficking in medical products was reported by local media in the Niger after l'Office Central de Répression du Trafic Illicite des Stupéfiants (OCRTIS) dismantled a network of criminals in Yaboni, a village close to the capital, Niamey, on 26 July 2022. Law enforcement officers seized 229,364 Royal 225 mg tramadol tablets, 8,000 exol tablets and traced the supply chain. The five individuals arrested were Nigerien nationals who were operating in conjunction with partners based in India to export medical products through the port of Tema, Ghana. Once in the Niger, some of the medical products were dispatched in-country, in particular to the Djado and Tchibarakaten gold-mining areas, where the prices of such products are expected to triple, while some were trafficked to Libya.[64]

It appears that some members of African diaspora communities in Asia and of Asian diaspora communities in West Africa play a special role in facilitating trafficking

in medical products. Recent examples mentioned in media reports include the arrest, in 2019, of four Chinese nationals in Côte d'Ivoire in relation to a record seizure of 200 tons of medical products.[65] Furthermore, in Senegal, a network trafficking in medical products, which involved the collaboration of a Chinese national and Senegalese pharmacists, was dismantled in April 2021.[66]

Recent prosecutions in the Sahel countries demonstrate the involvement of wholesalers and distributors in trafficking in medical products.[67] They usually import medical products (falsified or not) illegally with the help of the Asian networks mentioned above, sell them directly without prescription, keep some for the informal market, or dilute shipments of legitimate medical products by replacing part of their stock with falsified or substandard medical products, retaining the remainder for resale. In the Niger, following inspections in 2019, some wholesalers were shut down after evidence showed that a portion of the stock involved was intended for the informal market.[68] In July 2021, a former employee of a wholesaler in the country was arrested after evidence showed the use of old forms and stamps to import medical products illegally.[69]

As in the rest of West Africa, most large-scale trafficking in medical products in the Sahel countries hinges on corruption. Following an analysis of 11 case studies in the region, the Inter-Governmental Action Group against Money Laundering in West Africa (GIABA) concluded: "The fundamental problem that impedes a real fight against the counterfeiting of drugs resides in the preponderance of corruption within the supervisory, control and enforcement agencies."[70] An example of this is the conviction in Chad in July 2020 of 10 people, including senior security and intelligence officials, for trafficking in tramadol that originated in India.[71]

Armed groups and trafficking in medical products

Terrorist groups and non-state armed groups are commonly associated with trafficking in medical products in the Sahel. However, most reported cases in the region show that the involvement of such groups is limited and mainly revolves around consuming medical products or levying "taxes" on them in the areas under their control.

Examples of terrorist group members using pharmaceuticals for non-medical purposes have been reported in the media. In March 2016, for example, following attacks by Al-Qaida in the Lands of the Islamic Maghreb (AQIM) in Grand-Bassam, Côte d'Ivoire, investigations revealed the group's attempts to buy rivotril (clonazepam), a synthetic opioid-like drug.[72] Similarly, in June 2018, former Boko Haram recruits in Nigeria were reported to be using rivotril.[73] In November 2018, the Appeal Court of the Niger sentenced an individual to 10 years in prison for criminal conspiracy in connection with a terrorist enterprise and financing terrorism. The individual, who had been arrested at the border with Mali carrying over €75,745 in cash, declared that he was a "trader in Nigerian pills" in Gao, Mali, although he clarified that the funds came from other sources.[74]

In northern Mali and the northern Niger, many groups have an influence on segments of the smuggling route that fall within their territory. Such groups include jihadist groups designated as terrorists, various armed groups that form part of the coalition that signed the 2015 Agreement on Peace and Reconciliation in Mali, those that broke away from the signatory groups, as well as local militias and gangs. These groups usually levy "taxes" on different products trafficked in Mali (Gao and Timbuktu) and the Niger (Zinder), as well as on the border with Nigeria in the south and Libya in the north.[75]

Impact and policy implications

Trafficking in medical products is an obstacle to development in the Sahel countries. This phenomenon is part of the larger cyclical problem of health-care delivery in the region, which is a combination of converging factors: a lack of public sector health-care delivery centres as well as of skilled staff and resources; the poor quality of the health-care system; corruption, mismanagement and quality of education. Health-care delivery is also hampered by the absence of adequate social security or meaningful commitment to the welfare of those most affected among the population, as well as by increasing competition between drug peddlers and private clinics.[76]

Medical products that circulate without regulatory oversight or market control measures may contain harmful substances, or not contain the active ingredients for which they have been prescribed. They may have expired or may have deteriorated due to poor storage conditions, or they may be sold without prescription for purposes other than their medical use.[77] For all these reasons, they may be ineffective and cause harm, including by contributing to antimicrobial resistance.[78] Moreover, falsified medical products are often produced in poor

TABLE 1. Overview of legal provisions relating to trafficking in medical products

Country	Crime committed	Prison sentence	Fine	Other applicable provisions	Regulatory reference text
Burkina Faso	Unlawful use of the pharmacist title to engage in the practice of pharmacy	From 1 month to 1 year in prison	From 500,000 to 1,000,000 CFAF (from $800 to $1,600)	Temporary or permanent closure of the pharmacy	Law No. 23/94/ADP in the Public Health Code, article 155
	Illegal possession and sale of medical products on public markets			Confiscation of the medical products Closure of the sales outlet	Law No. 23/94/ADP in the Public Health Code, article 187
	Possession and sale of unauthorized medical products	From 1 year to 5 years in prison	From 5,000,000 to 10,000,000 CFAF (from $8,000 to $16,000)	Confiscation of the medical products and prohibition to engage in the practice of pharmacy as a pharmacist	Law No. 23/94/ADP in the Public Health Code, article 291
	Possession and sale of falsified medical products		From 20,000 to 300,000 CFAF (from $32 to $480)	Prohibited products for sale	Law No. 23/94/ADP in the Public Health Code, article 251
Chad	Import or manufacture of unauthorized medical products	From 3 months to 1 year in prison	From 300,000 to 3,000,000 CFAF (about $480 to $4,800)		Law No. 024/PR/2000 on Pharmacy, article 131
	Unlawful use of the pharmacist title to engage in the practice of pharmacy	From 3 months to 1 year in prison	From 100,000 to 1,000,000 CFAF (from $160 to $1,600)		Law No. 024/PR/2000 on Pharmacy, article 130

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Country	Crime committed	Prison sentence	Fine	Other applicable provisions	Regulatory reference text
Mali	Possession and sale of falsified medical products	From 3 months to 3 years in prison	From 50,000 to 300,000 CFAF (from $80 to $480)		Penal Code, article 251, Section 1 The following decrees and laws do not mention applicable penalties but criminalize offenses related to the illicit manufacture, production, and supply of medical products Decree 02-075/P-RM on the National Commission for the Fight against the illicit sale of medical products 15 February 2002 Law n°2017-031 on the creation of the Order of Pharmacists of Mali 14 July 2017
Mauritania	Illegal opening of a pharmacy	From 6 months to 1 year in prison	From 2,000,000 to 3,000,000 Mauritanian ouguiyas (UM)[l] (from $5,251 to $7,877)	Temporary or permanent closing of the establishment	Law No. 2010 022 on pharmacy, 10 February 2010, article 136
	Unlawful use of the pharmacist title to engage in the practice of pharmacy	From 6 months to 1 year	From 1,000,000 to 2,000,000 UM (from $2,625 to $5,251)	Prohibition to practice as a pharmacist	Law No. 2010 022 on pharmacy, 10 February 2010, article 133
Niger	Unlawful use of the pharmacist title to engage in the practice of pharmacy	From 10 days to 6 months	From 100,000 to 500,000 CFAF (from $160 to $800)		Ordinance No. 97-002 on pharmaceutical legislation, section 5, chapter 4, article 41, 10 January 1997
	Possession and sale of unauthorized medical products	From 10 days to 6 months	From 100,000 to 500,000 CFAF (from $160 to $800)		Ordinance No. 97-002 on pharmaceutical legislation, section 2, article 10, 10 January 1997

l Currency code: MRO.

Source: Data available on the SHERLOC portal, which centralizes legislative texts related to the implementation of the United Nations Convention against Transnational Organized Crime and its three protocols. Legal references related to the Niger are retrieved from the National Drug Policy adopted in 2021.

and unhygienic conditions by unqualified personnel, they may contain unknown impurities and are sometimes contaminated with bacteria. By their very nature, falsified medical products are difficult to detect, as they are often designed to appear identical to the genuine product and may not cause an obvious adverse reaction. However, they often fail to adequately treat the disease or condition for which they were intended and can lead to serious health consequences, including death.[79]

In sub-Saharan Africa, WHO estimates that between 72,000 and 267,000 deaths per year are linked to falsified and substandard antimalarial medicines. In addition, up to 169,271 are linked to falsified and substandard antibiotics used to treat severe pneumonia in children.[80] In relation to the falsified meningitis vaccines found in the Niger in 2015, WHO noted that 8,580 cases of meningitis C were reported in 2015 and that nearly 600 people died. The organization clarified that there is no way of knowing how many of those cases might have been averted if every vaccine administered had been a quality-assured product.[81]

Ineffective treatments related to trafficking in medical products also erode public confidence in health services and the Government as service provider. Doubts on treatment quality may lead people to not comply with health measures recommended by health services, refuse vaccinations for themselves or their children, or avoid health facilities.[82]

Furthermore, trafficking in medical products has a direct economic impact. According to WHO, the cost of caring for people who have used falsified or substandard medical products for malaria treatment in sub-Saharan Africa ranges from $12 million to $44.7 million per year.[83] The economic impact is also indirect since trafficking in medical products affects the competition between stakeholders selling medicines in the regulated formal sector, while the saturation of the market with unauthorized products creates an obstacle to the development of the pharmaceutical industry in the region.[84] In addition, the proceeds from trafficking in medical products are reinvested in the formal economy through laundering schemes that threaten the integrity of the economic and financial systems of the countries concerned.[85]

Finally, people involved in trafficking undermine the rule of law through the corruption of health and law enforcement officials and through their use of violence to protect their interests. GIABA reports that many police operations targeting people who traffic in medical products result in exchanges of fire or even death, with specific reference made to heavily armed men protecting convoys of falsified medical products between Mauritania and Senegal.[86]

- The threat to public health caused by trafficking in medical products requires a stronger and more coordinated response at the national and international levels in order to improve access to medical products through legal supply chains (to address demand), while effectively detecting and combatting disruptions in those supply chains (to address supply). Demand and supply need to be addressed simultaneously because focusing solely on curbing the supply of medical products is unlikely to yield results and could be counterproductive as people in the Sahel are sometimes left with no alternative but to purchase medicines through informal markets.

  The African Medicines Regulatory Harmonization initiative is an attempt by the African Union to improve existing levels of regulatory capacity, encourage local production and build a regional harmonized approach. Recently, all the Sahel countries but Mauritania ratified the Treaty for the establishment of the African Medicines Agency (AMA).[87]

- All the Sahel countries have legal provisions in place relating to trafficking in medical products (table 1) but some laws are outdated. They need to be revised if they are to remain applicable to the increasingly complex nature of pharmaceutical markets and pharmaceutical crimes. For example, law enforcement officials have raised concerns that sentences, which can be limited to a fine, are not sufficient to deter criminals.[88]

- Greater efforts to introduce new or revise existing legislation are needed to prevent all offences related to falsified medicines, such as smuggling, money-laundering and corruption. The confiscation and disposal of criminal assets, extradition and mutual legal assistance need to be introduced to ensure that no stage in the supply chain of falsified medicines is overlooked. Where this is not provided for under existing legislation, countries may decide to state that either all of the offences relating to falsified medical products are predicate offences to money-laundering or that falsified medical

product-related crimes constituting serious crimes are predicate offences.[89]

- Since medical products entering the Sahel countries can easily be transported and sold across the region, cross-border cooperation should be strengthened to systematically gather data and information, to enhance timely information-sharing and collaborative action on the quality of suspected falsified and substandard medicines among regulators and partners, and to facilitate enforcement and judicial responses. Considering the estimates of falsified medical products finding their way into authorized outlets in the Sahel, law enforcement and judicial efforts that safeguard the legal supply chain should be a priority.

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TRAFFICKING IN MEDICAL PRODUCTS IN THE SAHEL

TOCTA Sahel
Transnational Organized Crime Threat Assessment

Trafficking in Medical Products in the Sahel is part of a series of transnational organized crime threat assessment reports on the Sahel.

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