



## Availability of Health Services in the Health Facilities of the Congolese National Police in North Kivu Province

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### Abstract

**Introduction:** The Democratic Republic of Congo (DRC) is facing challenges in implementing Universal Health Coverage due to gaps in its health system, particularly in terms of service delivery. The objective of this study was to identify the services available in the health facilities of the Congolese National Police in North Kivu Province (NKP).

**Methods:** This is a descriptive cross-sectional study carried out in the North Kivu Province of the DRC over a period of 3 months from 01 December 2019 to 29 February 2020. The study involved ten health facilities (HF) of the Congolese National Police (CNP) in North Kivu Province. No sample size was determined a priori in this study. Data on the availability of care services, basic equipment in the general outpatient department, basic infrastructure to meet the needs of patients in health facilities and the availability of tracer drugs were collected by observation and interviews with health facility managers, seizures and analyzed with Microsoft Excel 2016 software. An average availability score of HF with the item was calculated and expressed as a percentage.

**Results:** All HF of Congolese National Police in NKP organize curative care for children under 5 years of age and pregnant women, STI diagnosis or treatment services, noncommunicable disease diagnosis and management services, and minor surgery. About a third offer caesarean section, organizes the blood group analysis service and major surgery. One tenth organizes preventive care for children under 5 years of age and pregnant women, provides antiretroviral treatment and has communication equipment. No HF of CNP in NKP organizes an emergency and intensive care department, nutritional management, diagnostic confirmation services or the prescription of treatment, nor the provision of services or follow-up of tuberculosis treatment. None has a computer with internet connection, nor an ambulance on duty.

**Conclusion:** HF of Congolese National Police in North Kivu province have shortcomings in the provision of care, the availability of services, medical equipment and essential medicines. The results of this study suggest that efforts must be made to improve the provision of care for police populations as well as their dependencies in terms of service provision and equipment.

**Keywords:** Availability; Health Service; Health Facilities; National Police; Province; North Kivu

### Introduction

Universal health coverage [UHC] is one of the overarching goals for global health [1]. For about a decade, calls are pending around

the world to intensify and implement strategies to achieve UHC, the third Sustainable Development Goal that aims to ensure that every individual receives timely, safe, effective and equitable health care [3].

Expanding the range of health services covered, their provision and availability to the population is one of the elements of UHC measurement [4-6], which requires political will [7]. Service availability refers to “the physical presence of services and includes health infrastructure, primary health personnel and certain aspects of service utilization. It does not include more complex dimensions such as geographical barriers, travel time and user behaviour, which require more complex input data.” The availability of services is described using an index covering the three domains of the tracer indicators, which are health infrastructure, health personnel and service utilization [8].

The provision of health care services increases the likelihood of achieving desired health outcomes [9], which are person-centred, safe and effective and responsive to the preferences, needs and values of each individual [10]. Access to quality health services has a crucial impact on human development, increasing the capacity for individual productivity in particular and the community in general [11].

However, current data show that Africa faces challenges in implementing UHC. These challenges are linked in particular to the shortcomings that characterize its health system [12]. Available data report that health services provide 36% of essential health services to the population, of which only 32% have access to these services [13]. In the Democratic Republic of Congo, for example, existing data report that two-thirds of patients in the Democratic Republic of Congo use the informal health system to obtain health care, in particular as a result of the unavailability of services, poor quality of service or lack of financial means to access them [14].

The Congolese National Police [CNP], a public service responsible for the safety of persons and their property, has a health service whose purpose is to maintain the well-being of police officers, their dependents and the population in general by organizing quality health services, accessible to all [15,16], in such a way as to guarantee the right of everyone to health and health care [17].

However, the CNP health service is experiencing difficulties in its functioning and little information exists on the capacity of these health facilities to provide quality health care. It is to fill this gap that this study is initiated. It aims to answer the following research

question: what health services are available in the provision of health care within CPN NK health facilities? the objective of this study was to identify the health services available in the health facilities of the national police in The province of North Kivu.

## Methodology

### Study environment

The province of North Kivu is located in the east of the Democratic Republic of Congo [DRC]. It is made up of 6 administrative territories named the territory of Beni, Lubero, Masisi, Nyiragongo, Rutshuru and Walikale and 3 cities: the city of Beni, Butembo and Goma. In terms of health organization, it is subdivided into 34 operational health zones, totalling 594 health areas with health centers [HC], 33 general reference hospitals, 106 hospitals and medical centers, 98 reference health centers, 263 health posts and dispensaries, a provincial reference hospital, a regional distribution center, three blood transfusion centres, one provincial blood transfusion centre and one provincial laboratory [18].

### Type of study

This study was descriptive cross-sectional, conducted in the period from December 1, 2019 to February 29, 2020, which concerned all HF CPN in North Kivu province, ten. It consisted of identifying the health facilities offering services to police officers and their dependencies in a specific way and describing the availability of service within HF CPN NKP. The study has been.

### Study population

The study population consisted of CPN health facilities in the six administrative territories of North Kivu [NK] province. Included in the study was any health facility created and managed by the CPN with the aim of ensuring the well-being of police officers and their dependents in particular.

No sample size was determined a priori in this study. The study involved all HF identified as belonging to the CPN in North Kivu province. Respondents were HF CPN leaders or their delegates.

### Data collection

The data were collected using a questionnaire sent to HF managers and or their delegates, the following data were collected: the availability of care services, the availability of basic equipment in the general outpatient service, the availability of basic

infrastructure to meet the needs of patients in health facilities and the availability of tracer drugs, to analyze the actual availability, in addition to the structured interview, the observation allowed the investigators to check the availability, then the operation of the equipment and the expiry date of the drugs on the day of the interview. During the data collection period, the date and time of the interview was decided bilaterally. The study aimed to explore the availability of care delivery and associated equipment. Health service availability was defined as effective when the health care service physically exists in HP and can be used at all times. In this study, equipment is available when it has been observed by the investigator on the day of the investigation in good condition and functional.

**Statistical processing and analysis**

The data was collected on paper and entered and analyzed with Microsoft Excel 2016 software. During the analyses, an

analysis matrix was created and a HP with a service was marked with a positive sign and the negative sign was written to signify unavailability. At the end, a sum was calculated and an average score of availability of tracer elements determined. This score can be converted to a percentage of HP with the item by dividing it by the total number of HP.

**Ethical considerations**

The study was approved by the Ethics Committee of the University of Lubumbashi under the number UNILU/CEM/080/2021 of 01/12/2021 and the national police health authority at the provincial level. In the field, the research team provides the respondent with information about the type of study, its purpose, the risk and benefits heard and the data was collected in anonymity and confidentiality.

**Results**

Health district hosting the HF of the CPN NK	Health areas of the district health hosting the HF of the CPN NK	Location of the district health	Name of the HF of the CPN NK Casting	Number of hospital beds mounted of the HF of the CPN NK
Karisimbi	19	Urban	Mugunga Police Academy Medical Center	5
		Urban	CH Bisengimana/camps Munzenze	22
Beni	18	Urban	CH PNC Beni	20
Butembo	15	Urban	CH PNC Butembo	5
Oicha	26	Rural	PNC/Oicha maternity dispensary	5
Lubero	19	Rural	Mutual Health PS/ NCP	3
Kirotshe	29	Rural	PS commissariat (ciat) PNC sake	2
Rutshuru	15	Rural	CH Bisengimana/Rutshuru	6
Katoyi	16	Rural	PS ciat PNC Kibabi	1
Walikale	18	Rural	Dispensaire PNC	3

**Table 1:** Location and capacity of CPN NK health facilities.

Of the 34 health district in North Kivu, nine health district host CPN HF and 10 health facilities have been identified. Table 1 reports the location and capacities of identified health facilities. In total, the

CPN NK has 10 HF including four hospitals, a health center, three health posts and two dispensaries. Three urban health district house four national police health facilities.

Service Availability	BENI	BUTEMBO	OICHA	LUBERO	SAKE	KIBABI	MUGUNGA	RUT-SHURU	MUN-ZENZE	WA-LIKALE
Diagnosis and/or treatment of malaria	+	+	+	+	+	+	+	+	+	+
Curative care for sick children	+	+	+	+	+	+	+	+	+	+
Diagnosis and/or treatment of STIs	+	+	+	+	+	+	+	+	+	+
Management of noncommunicable diseases	+	+	+	+	+	+	+	+	+	+
Diagnosis and/or treatment of TB	+	+	+	+	+	+	+	+	+	+
Caesarean section	+	-	+	-	-	-	-	-	+	-
Major surgery	+	-	+	-	-	-	-	-	+	-
Childbirth and newborn care	+	-	+	-	-	-	-	-	+	-
Prenatal care	-	-	-	-	-	-	-	-	+	-
Childhood vaccination	-	-	-	-	-	-	-	-	+	-
Monitoring children's growth	-	-	-	-	-	-	-	-	+	-
Family planning	-	-	-	-	-	-	-	-	+	-
PTME	-	-	-	-	-	-	-	-	+	-
HIV testing service CDV/CDIP	-	-	-	-	-	-	-	-	-	-
Management of malnutrition	-	-	-	-	-	-	-	-	-	-
HIV treatment services	-	-	-	-	-	-	-	-	+	-
Care and support for PHAs	-	-	-	-	-	-	-	-	-	-
Blood transfusion	-	-	-	-	-	-	-	-	-	-
Santé mental	-	-	-	-	-	-	-	-	-	-

**Table 2:** Availability of care services offered by CPN NK health facilities by territory.

Legend: + Existing; - Non Existing.

The health structures of the CPN organize several care services. The availability of care services offered by CPN NK health facilities by territory is reported in Table 2. All the health facilities of the national police organize curative care for children. However, vaccination services for children under one year of age are

only found in one in ten structures, as well as the Child Growth Monitoring Service [preschool consultation]. No health facility organizes the Malnutrition Management Service or the Pediatric Neonatology and Intensive Care Department.

With regard to maternal health services, the study showed that all the health facilities of the national police organize care for pregnant women, including prenatal care, three out of ten offer childbirth and caesarean section [30%]. One in ten HF organizes the service of the NPC, family planning than the PMTCT [10%].

One in ten health facilities in the national police organizes services for the provision of antiretroviral [ARV] treatment, but no health facility in the Congolese national police organizes the care and support service for people living with HIV. All the health structures of the Congolese national police organize services for the diagnosis or treatment of STIs and services for the diagnosis or management of noncommunicable diseases.

The study also showed that no national police health facility organizes services for diagnosis, treatment prescription or follow-up of CBT treatment or the provision of CBT services.

All the health facilities of the national police organize minor surgery and three out of ten do major surgery [30%]. However, no health facility of the national police organizes the emergency and intensive care service for adults. It was noted that three out of ten HF CPN organizes the blood group analysis service [30%]. The study did not note that no HF CPN in NK province organizes a mental health service.

Service Availability	BENI	BUTEMBO	OICHA	LUBERO	SAKE	KIBABI	MUGUNGA	RUTSHURU	MUNZENZE	WA-LIKALE
Scale for adults	+	+	+	+	+	+	+	+	+	+
Thermo-meter	+	+	+	+	+	+	+	+	+	+
Stethoscope	+	+	+	+	+	+	+	+	+	+
Sphygmoma-nometer	+	+	+	+	+	+	+	+	+	+
Thermo flash	+	+	+	-	-	-	-	+	+	-
Beds for ex-amination	+	+	+	-	-	-	-	+	+	-
Baby weighs	+	-	+	-	-	-	-	+	+	-
Fathom	+	-	-	-	-	-	-	-	+	-
Children's scale	-	-	-	-	-	-	-	-	+	-
Light source	-	-	-	-	-	-	-	-	-	-
Lowers tongue	-	-	-	-	-	-	-	-	-	-
ENT exam material	-	-	-	-	-	-	-	-	-	-

**Table 3:** Availability of basic equipment in the general outpatient service in CPN NK health facilities.

Legend: + Existing; - Non Existing.

The study also explored the availability of some basic equipment. All national police health facilities have adult scales, thermometers, stethoscopes and blood pressure monitors. Five out of ten HF [50%] have examination beds and thermo flashes. Four

out of ten or 40% of health facilities have baby weights, two out of ten or 20% of height rod and one in ten child scales. However, no HF of the CPN has a light source, tongue lowering or material for ENT examination [Table 3].

Service Availability	BENI	BUTEMBO	OICHA	LUBERO	SAKE	KIBABI	MUGUNGA	RUTSHURU	MUNZENZE	WA-LIKALE
Regular electricity and or solar panel	+	+	+	+	+	+	+	+	+	+
Improved water source	+	-	-	+	+	-	+	+	+	+
Visual and auditory intimacy	+	+	+	+	+	+	+	+	+	+
Latrine for patients	+	+	+	+	+	+	+	+	+	+
Communication equipment	-	-	+	-	-	-	-	-	-	-
Computer with internet	-	-	-	-	-	-	-	-	-	-
Emergency transport	-	-	-	-	-	-	-	-	-	-
Fire extinguisher	-	-	-	-	-	-	-	-	+	-

**Table 4:** Availability of basic infrastructure to meet the needs of patients in CPN NK health facility.

Legend: + Existing; - Non Existing.

All national police health facilities in North Kivu have latrines for patients and regular electricity and or solar panels. Seven out of ten or 70% have an improved water source. However, there are reports of frequent power cuts especially during the dry season.

One in ten has communication equipment, but no national police health facility has a computer with an internet connection, nor the emergency means of transport to evacuate the sick [Table 4].

Tracer drugs	BENI	BUTEMBO	OICHA	LUBERO	SAKE	KIBABI	MUGUNGA	RUTSHURU	MUNZENZE	WA-LIKALE
Disinfectant solutions (Hydroalcoholic Solution + Dove-bral or Creolin or Cetrimide)	+	+	+	+	+	+	+	+	+	+
SRO Sachet	+	+	+	+	+	+	-	+	+	+
Metronidazole 250 CP	+	-	+	+	+	+	-	+	-	+
Syringes 5 ml	+	+	+	-	+	+	-	+	+	+
Paracetamol 500 mg Cp	+	+	+	+	-	-	-	+	-	+
ACT 12-59 month	+	+	+	+	-	-	-	+	-	+
Oxytocin 10 IU/ml inj	+	-	+	-	-	-	-	+	+	-

Iron Sulfate 325 mg Cp	+	-	+	-	+	-	-	+	+	-
Amoxicilline 500 mg Cp	+	+	-	-	+	+	-	-	-	+
Amoxicilline 125 mg/5ml suspension	-	+	-	+	+	-	-	+	-	-
Cotrimoxazole 480 mg Cp	+	-	+	+	+	-	-	+	-	-
Doxycycline Cp	+	-	-	+	-	-	+	+	-	-
Vitamin K	-	-	-	-	-	-	-	+	+	-
Sterile gloves	+	+	+	-	+	-	-	+	+	-
Sulfadoxine-Pyrimithamine 500mg Cp	+	-	+	-	-	-	-	-	+	-
Syringes 10 ml	-	-	+	-	-	-	-	-	-	-
Contraceptives	-	-	-	-	-	-	-	-	+	-
Injectable Contraceptives	-	-	-	-	-	-	-	-	+	-
Zinc Cp	-	-	-	-	-	-	-	-	-	-
ACT 2-11 month	-	-	-	-	-	-	-	-	-	-
Vitamin A	-	-	-	-	-	-	-	-	-	-

**Table 5:** Availability of tracer drugs in CPN NK health facilities.

Legend: + Existing; - Non Existing.

Table 5 shows that no health formation has Vitamin A, Zinc Cp, artemisinin combination base therapy [ACT] 2-11 months and syringes 10 ml. One in ten health facilities, or 10%, had oral and injectable contraceptives; two in ten had vitamin K; three out of ten health facilities or 30% had Sulfadoxine-Pyrimithamine 500mg Cp; four out of ten health facilities or 40% had Oxytocin 10 IU/ml injectable, Doxycycline Cp and Amoxicilline 125 mg/5ml suspension; five out of ten health facilities or 50% had Iron Sulphate 325 mg Cp, Cotrimoxazole 480 mg Cp and Amoxicilline 500 mg Cp six out of ten health facilities or 60% had Paracetamol 500 mg Cp, Sterile gloves and adult ACTs seven out of ten health facilities or 70% had Metronidazole 250 CP; eight out of ten health facilities, i.e. 80%, had Syringes 5 ml; nine out of ten health facilities, i.e. 90%, had SRO Sachet; all the health units of the national police have a Disinfectant Solutions [Hydro Alcoholic Solution + Bavécrole or Créoline or Cétrimide].

### Discussion

The present study explored the availability of services in the health facilities of the Congolese national police in North Kivu province.

#### Availability of health care services

Our results show that all the HF of the CPN NK organizes the curative care of children and outpatients. However, only 10% organize preventive care [vaccination, growth monitoring] and none of them organizes the nutritional care service. This situation is believed to be due to the fact that most of the CPN's HF from an operational point of view work as private HF not integrated into the Ministry of Health's network of health facilities. The results of this study are not consistent with those of the study conducted in 2018 in the DRC showing that 59% of health facilities offered outpatient child curative care services, 90% offered routine vaccination, 89% offered growth monitoring [19]. This difference is explained by



the fact that the CPN HF are neither supported nor accompanied by the Ministry of Health. These results suggest that populations dependent on police officers are forced to join other health training courses than those of the CPN to benefit from these benefits. Growth assessment is an indispensable tool for monitoring the growth of early childhood looking at its growth trajectories [weight, height or body mass index] [20-22], to assess its psychomotor development, health and nutritional status and to identify abnormal growth trajectories finally reduce the risk of inappropriate nutrition, promote rapid detection and referral of pathologies resulting from growth disorders [23,24]. Immunization of children is one of the most effective and efficient public health actions to significantly reduce infant and child mortality from infectious diseases and must be an integral part of primary health care and national strategies for universal health coverage [25,26].

This study found that all HF CPN NK organize curative care for pregnant women, but only 30% offer services for caesarean section and 10% organize preventive services [prenatal consultation, family planning, PMTCT]. The results of this study show that police populations and their dependencies in North Kivu are less covered for maternal health because this coverage is lower than that of the general population reported in the 2018 DRC service delivery study which showed that 96% of health facilities in the DRC offered antenatal consultations and 68% offered the family planning [FP] service [19]. The same observation was made by Akilimali, *et al.* who found that the Family Planning service among the military was lower than in the general population at 16% [27]. This situation is believed to be due to the lack of collaboration between the health services of the National Police and the Ministry of Health. The quality of care for the mother-child couple remains a challenge for developing countries [28]. Quality antenatal consultation reduces preventable maternal morbidity and mortality [29,30]. Family planning reduces maternal morbidity and mortality [31]. A study in eastern DRC found that family planning needs in the conflict-affected area in eastern Democratic Republic of the Congo were 38% [32].

Our results show that 10% of CPN NK HF organizes the provision of ARV treatment and none of them organizes supportive care for people living with HIV. This may explain why many newborns continue to be infected with HIV during pregnancy, childbirth and breastfeeding while transmission factors are preventable [33]. The PMTCT programme remains the best way to care for HIV/AIDS-

infected pregnant women and their newborns [34]. Women who have received little or no antenatal care and those who give birth without knowing their HIV status should be screened immediately. Appropriate antiretroviral therapy and screening for human immunodeficiency virus during pregnancy has well-established benefits [35]. The fight against sexually transmitted diseases as well as HIV/AIDS is a key issue for prevention in the armed forces because, consisting of a sexually active population more prone to risky behaviour [36]. Special access for the improvement of the prevention of HIV/AIDS and sexually transmitted diseases within the national police and the improvement of the testing service is crucial for the well-being of police officers. All HF of the CPN NK organizes the Sti Diagnosis or Treatment Services, the Noncommunicable Disease Diagnosis and Management Services and Minor Surgery, of which 30% do major surgery; none of them organizes the Emergency and Intensive Care Department for adults and children. our study shows that no HF CPN NK does not have the complete minimum package of activity or the complete package of activity. our observations agree with a WHO study that had found that Africa faces the challenge of insufficient supply of essential care services [13] and, while it does not agree with a study conducted in Goma which had found 50.3% of health training offer the complete package of activity while 49.6% offer the minimum activity package [37].

Our study shows that no CPN NK HF organizes diagnostic confirmation services, treatment prescription or follow-up of TBC treatment or the provision of TBC services. Tuberculosis is a public health problem and is the leading cause of death from infectious diseases, however Tuberculosis is a disease that can be cured and prevented [37].

No CPN HF organizes the mental health service in North Kivu province. Neuropsychiatric pathologies represent a very high disease burden worldwide [38]. The integration of mental health into primary health care is useful for providing care to patients with severe neuropsychiatric pathologies [39].

Universal health coverage requires promotional, preventive, curative, rehabilitative and palliative care of quality and efficiency to everyone, without the use of these services exposing the subject concerned to financial difficulties [40]. The management, monitoring and evaluation of the supply and quality of services are the health pillar of the solid system [8].



### Availability of basic infrastructure to meet the needs of patients

In North Kivu, all HF of the national police have latrines for patients however the number of latrines by users remains insufficient and regular electricity and or solar panel, however some panel does not work well. Just under three-quarters of HF [70%] have an improved water source, connected to the regideso public network. However, the supply of water is not always regular, to the point that in some sites, patients are called upon to bring water for their care and needs. It should be noted that this proportion is lower than that reported by the 2018 service delivery study in the DRC which showed that 29% of health facilities had latrines for patients in consultation for outpatient care. This will be due to the lack of funding for the CPN health service [19].

The study showed that only 10% of health facilities have communication equipment. No HF of the CPN has a computer with internet connection, nor the emergency means of transport to evacuate the sick.

In a study conducted in the DRC shows that, 52% of HF had communication equipment, 4% had a computer with internet access, 5% had a fire extinguisher, 65% had access to electricity regularly, 49% had access to water from an improved source, 19% had access to emergency transport for patients [19], ambulance services is an integral part of emergency care service, playing an important role in the provision of pre-hospital emergency care [41-43].

### Availability of basic equipment in the general outpatient department and availability of tracer drugs

Our study shows a lack of basic equipment in the general outpatient service as well as essential medicines in the HF of the CPN in North Kivu province. This would be due to the fact that the HF of the CPN operates with reduced financial means. Our study is consistent with that of the WHO which noted a shortage of essential medicines and equipment in Africa with an impact on the quality of patient care [44,45]: access to quality medicines improves health outcomes and reduces morbidity and mortality, is an integral part of human rights [46,47].

In a study conducted in the DRC shows that most HF had stethoscopes, thermometers, blood pressure monitors, adult scales

and beds for examination ;d children's scales, either a projector or a functional flashlight, which can be used for outpatient examination, and measuring rod; amoxicillin tablets or capsules, while less than half had baby scales, cotrimoxazole suspension and paracetamol [19]. the availability of these inputs in health facilities depends on the appropriations allocated, for the acquisition of medicines and equipment, for the effectiveness and efficiency of the supply system in place [48].

### Limitations of the Study

Our study did not look at Health Service Utilization Indicators, Health Status Indicators, Service Coverage Indicators and CPN NK Health System Indicators.

### Conclusion

The HF of the CPN in the province of North Kivu have inadequacies in the provision of care, the availability of services, medical equipment and essential medicines with consequences on the quality of medical care for police officers and their dependents.

There is a need to improve the provision of care to police officers and their dependencies in terms of the provision of services and medical equipment as well as the support and accompaniment of the Ministry of Health by integrating preventive and promotional care into the HF of the CPN NK.

### Conflict of Interest

The authors declare that they have no conflict of interest.

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