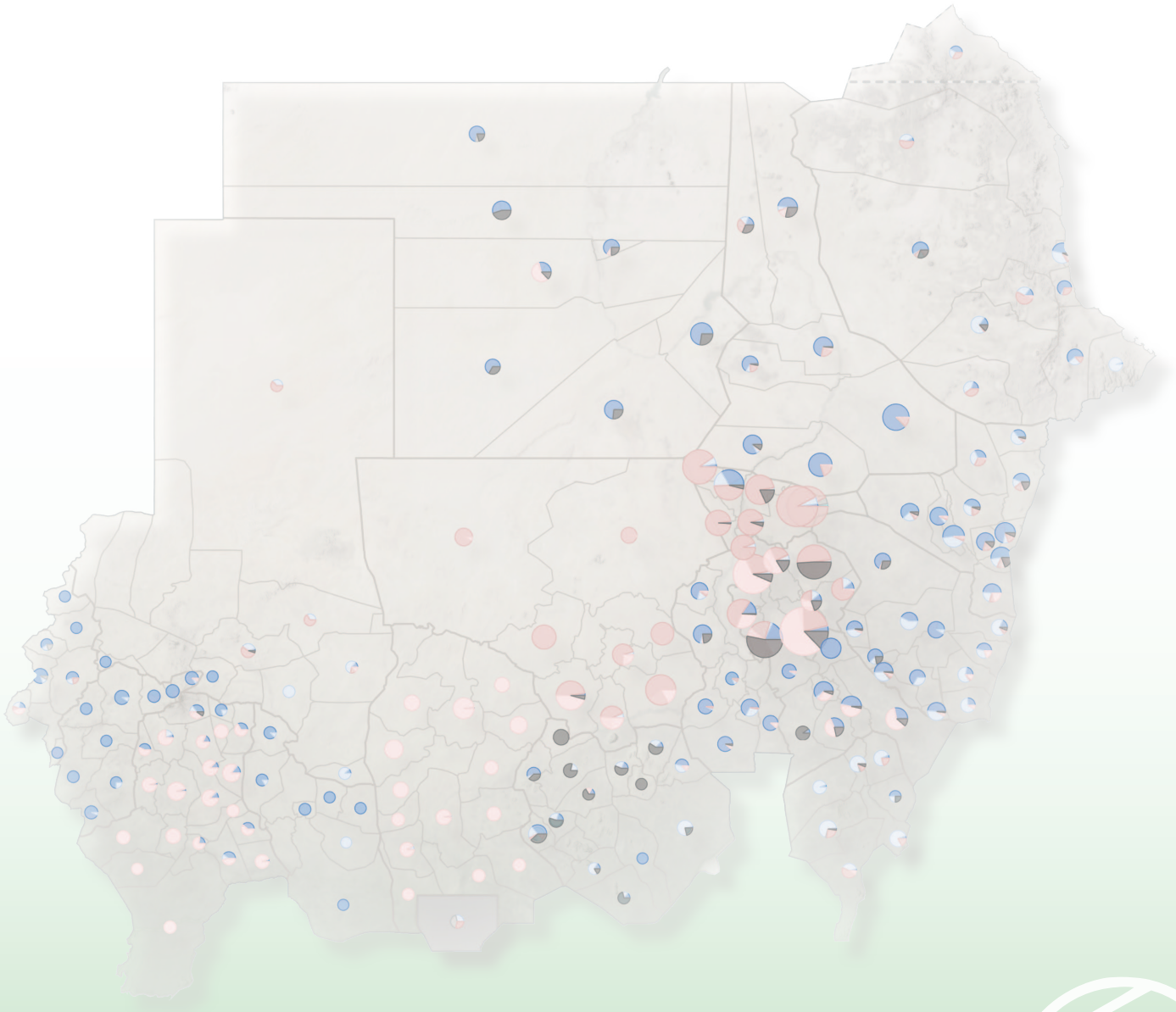
# HeRAMS Sudan

## Baseline report

**2025**



## General clinical and trauma care services

A comprehensive mapping of availability of essential services and barriers to their provision

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## Baseline report

## 2025

### General clinical and trauma care

A comprehensive mapping of availability of essential services and barriers to their provision


World Health Organization

HeRAMS
Health Resources and services Availability Monitoring system

# ACRONYMS

| | |
|---|---|
| **HeRAMS** | Health Resources and Services Availability Monitoring System |
| **HSDU** | Health Service Delivery Unit |
| **IV** | Intravenous |
| **NCD** | Noncommunicable Diseases |
| **OPD** | Outpatient Department |
| **ICU** | Intensive Care Unit |
| **MD** | Medical Doctor |
| **MRI** | Magnetic Resonance Imaging |
| **CT** | Computed Tomography |
| **OB-GYN** | Obstetrics and Gynecology |
| **WHO** | World Health Organization |

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# DISCLAIMER

Disruptions to health systems can impede provision of and access to essential health services. Communities' vulnerability to increased morbidity and mortality substantially increases when a lack of reliable information prevents sound decision-making, especially in rapidly changing environments that require continued assessment. The Health Resources and Services Availability Monitoring System (HeRAMS) aims to provide decision-makers and health stakeholders at large with vital and up-to-date information on the availability of essential health resources and services, help them identify gaps and determine priorities for intervention.

HeRAMS draws on the wealth of experience and knowledge gathered by the World Health Organization (WHO) and health sector actors, including nongovernmental organizations, donors, academic institutions and other technical bodies. It builds on a collaborative approach involving health service providers at large and integrating what is methodologically sound and feasible in highly constrained, low-resourced and rapidly changing environments such as humanitarian emergencies. Rapidly deployable and scalable to support emergency response and fragile states, HeRAMS can also be expanded to - or directly implemented as - an essential component of routine health information systems. Its modularity and scalability make it an essential component of emergency preparedness and response, health systems strengthening, universal health coverage and the humanitarian development nexus.

HeRAMS has been deployed in Sudan since 2023 and has allowed for the assessment of 4363 health service delivery units (HSDUs). This analysis was produced based on the data collected up to 01 July 2025. It is important to note that the deployment of HeRAMS is ongoing, including data verification and validation. Hence, this analysis is not final and was produced solely for the purpose of informing operations.

This is the second report of the **HeRAMS Sudan baseline report 2025** series, focusing on the availability of general clinical and trauma care services. It is a continuation of the first report on the operational status of the health system[1] and should always be interpret in conjunction with results presented in the first report. Additional reports are available covering essential child health and nutrition services[2], communicable diseases services[3], sexual and reproductive health services[4], and non-communicable diseases and mental health services 5.

Caution must be taken when interpreting the results presented in this report. Differences between information products published by WHO, national public health authorities, and other sources using different inclusion criteria and different data cut-off times are to be expected. While steps are taken to ensure accuracy and reliability, all data are subject to continuous verification and change.

For additional information, please see https://www.who.int/initiatives/herams or contact herams@who.int

[1] HeRAMS Sudan baseline report 2025 - Operational status of the health system: A comprehensive mapping of the operational status of HSDUs, https://www.who.int/publications/m/item/herams-en-baseline-report-2025-operational-status-of-the-health-system.

[2] HeRAMS Sudan baseline report 2025 - Child health and nutrition: A comprehensive mapping of availability of essential services and barriers to their provision, https://www.who.int/publications/m/item/herams-en-baseline-report-2025-child-health-and-nutrition.

[3] HeRAMS Sudan baseline report 2025 - Communicable diseases: A comprehensive mapping of availability of essential services and barriers to their provision, https://www.who.int/publications/m/item/herams-en-baseline-report-2025-communicable-diseases.

[4] HeRAMS Sudan baseline report 2025 - Sexual and reproductive health: A comprehensive mapping of availability of essential services and barriers to their provision, https://www.who.int/publications/m/item/herams-en-baseline-report-2025-sexual-and-reproductive-health.

[5] HeRAMS Sudan baseline report 2025 - Non-communicable diseases and mental health: A comprehensive mapping of availability of essential services and barriers to their provision, https://www.who.int/publications/m/item/herams-en-baseline-report-2025-non-communicable-diseases-and-mental-health.

# OVERVIEW OF HSDUS EVALUATED

## Data collection summary [6]

**6674** HSDUs targeted

642 Closed
15 Planned
1654 Not reporting

**4363** HSDUs reporting

### Building condition

119 Fully damaged
1140 Partially damaged

### Equipment condition

234 Fully damaged
885 Partially damaged

### Functionality

1615 Non-Functioning
527 Partially Functioning

### Accessibility

65 Inaccessible
180 Partially accessible

**2564** HSDUs at least partially operational
(out of 4363 HSDUs assessed)

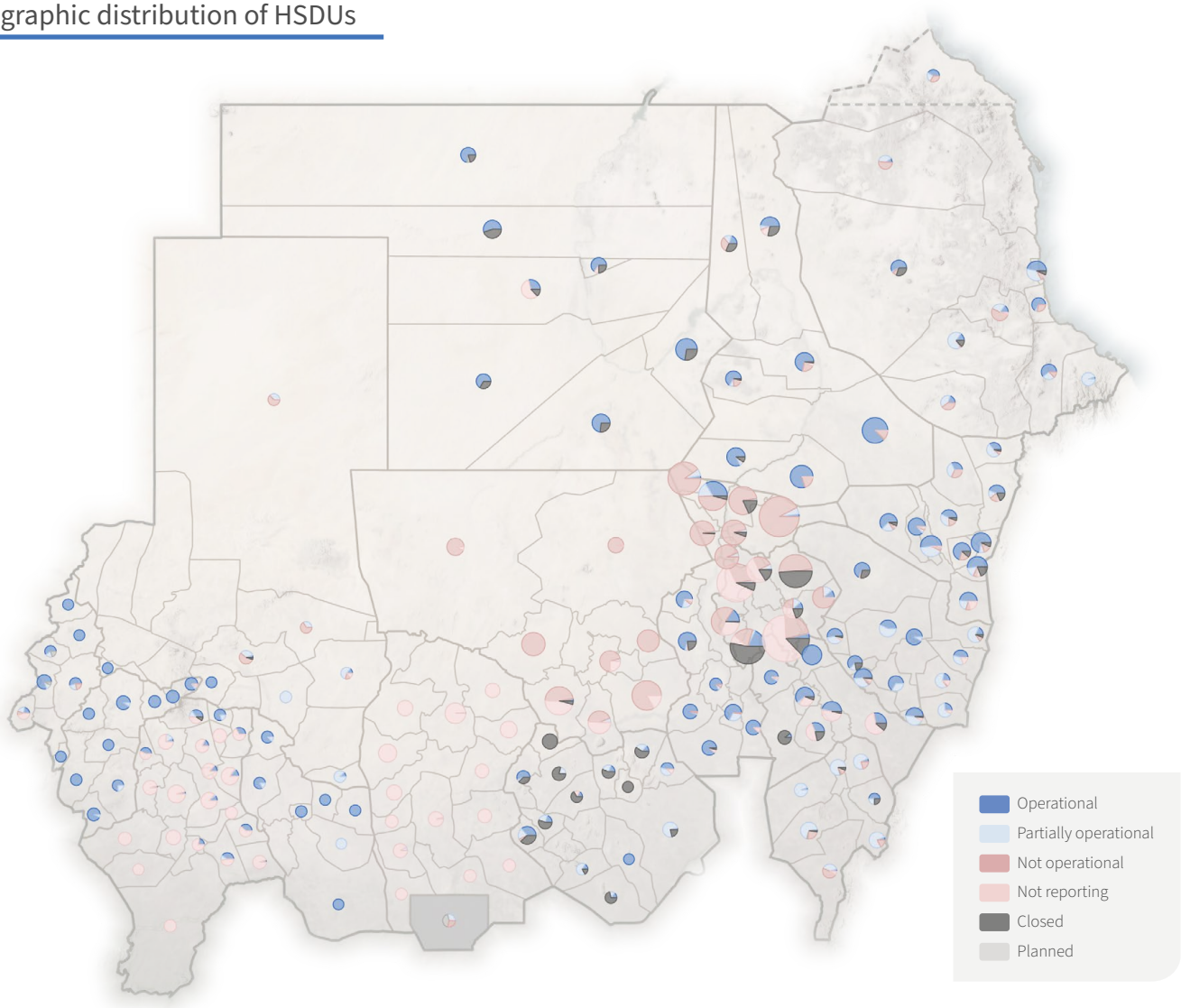
[6] HSDUs (Health Service Delivery Units) reported as destroyed, non-functioning, or inaccessible are deemed unable to provide any health services, hence categorized as non-operational. Consequently, reporting ends upon confirmation of an HSDU's non-operational status.

## Reporting frequency and operational status by state

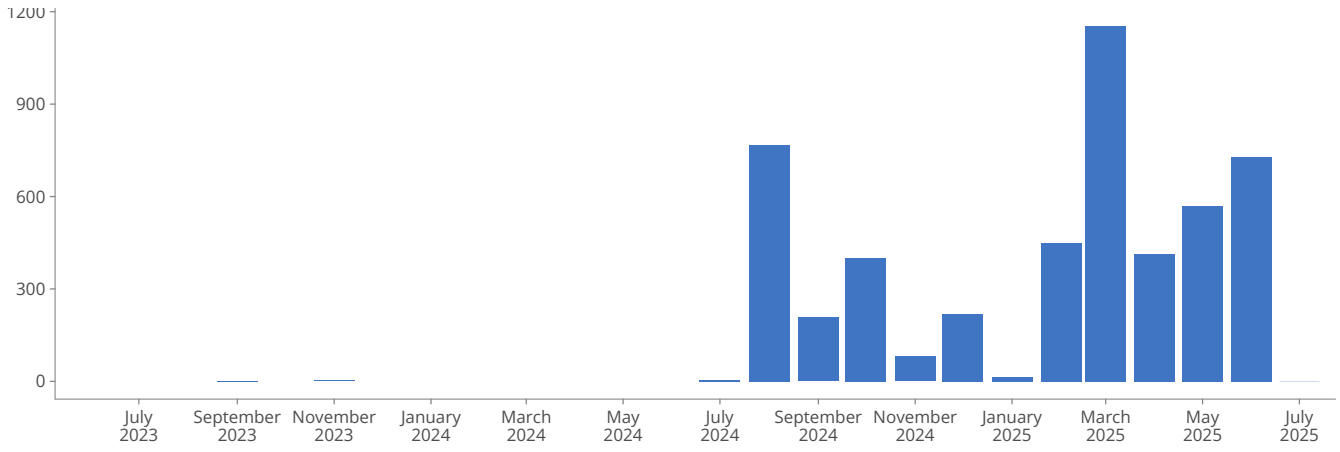
| | Hospital | | | | Rural hospital | | | | Family health unit | | | | Family health center | | | | Other | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | O | N/O | N/R | P/C | O | N/O | N/R | P/C | O | N/O | N/R | P/C | O | N/O | N/R | P/C | O | N/O | N/R | P/C | O | N/O | N/R | P/C |
| ABYEI PCA | - | - | - | - | 1 | - | - | - | 2 | - | - | 1 | 1 | 2 | - | 2 | - | 2 | - | 3 | **4** | **4** | - | **6** |
| AJ JAZIRAH | 10 | 3 | 12 | 9 | 20 | 12 | 18 | 16 | 27 | 169 | 178 | 97 | 52 | 177 | 176 | 109 | - | - | - | - | **109** | **361** | **384** | **231** |
| BLUE NILE | 5 | - | - | - | 8 | 1 | - | - | 56 | 24 | 2 | 2 | 66 | 12 | - | 4 | 3 | - | - | - | **138** | **37** | **2** | **6** |
| CENTRAL DARFUR | 3 | - | - | - | 1 | - | - | - | 32 | - | - | - | 42 | - | 1 | - | 6 | - | - | - | **84** | **-** | **1** | **-** |
| EAST DARFUR | - | - | - | - | 1 | - | - | - | 4 | - | - | - | 19 | - | - | - | 2 | - | - | - | **26** | **-** | **-** | **-** |
| GEDAREF | 6 | - | - | - | 30 | - | - | - | 206 | 6 | 18 | 18 | 114 | - | 1 | 3 | - | - | - | - | **356** | **6** | **19** | **21** |
| KASSALA | 29 | - | 4 | - | 14 | 2 | - | 2 | 148 | 36 | 13 | 13 | 202 | 13 | 9 | 18 | - | - | - | 1 | **393** | **51** | **26** | **34** |
| KHARTOUM | 16 | 66 | - | 4 | 11 | 4 | - | - | 4 | 160 | - | 10 | 74 | 489 | - | 18 | - | - | - | - | **105** | **719** | **-** | **32** |
| NORTH DARFUR | 3 | - | - | - | - | - | - | - | 16 | 8 | 1 | - | 15 | 13 | - | - | 2 | - | - | 1 | **36** | **21** | **1** | **1** |
| NORTH KORDOFAN | 1 | 3 | 1 | - | 5 | 16 | 6 | - | 2 | 294 | 72 | 1 | 3 | 149 | 58 | - | - | 12 | - | 4 | **11** | **474** | **137** | **5** |
| NORTHERN | 4 | - | - | - | 22 | - | 2 | - | 89 | - | 23 | 76 | 77 | - | 10 | 11 | - | - | - | - | **192** | **-** | **35** | **87** |
| RED SEA | 11 | - | 2 | - | 13 | 3 | - | 2 | 76 | 49 | - | 12 | 110 | 11 | 3 | 5 | 3 | - | - | - | **213** | **63** | **5** | **19** |
| RIVER NILE | 3 | - | - | 1 | 27 | 1 | 1 | - | 76 | 20 | 9 | 21 | 196 | 33 | 6 | 13 | - | - | - | - | **302** | **54** | **16** | **35** |
| SENNAR | 7 | - | - | 2 | 19 | - | - | 1 | 53 | - | 103 | 25 | 101 | - | 11 | 14 | - | - | - | - | **180** | **-** | **114** | **42** |
| SOUTH DARFUR | 1 | - | 1 | - | 4 | - | 10 | - | 15 | - | 200 | - | 48 | - | 144 | 2 | - | - | - | - | **68** | **-** | **355** | **2** |
| SOUTH KORDOFAN | 3 | - | - | - | 1 | - | - | 2 | 39 | 1 | 4 | 77 | 67 | - | - | 42 | - | - | - | - | **110** | **1** | **4** | **121** |
| WEST DARFUR | 3 | - | - | - | 4 | - | - | - | 2 | - | 2 | - | 32 | 3 | 2 | 1 | 2 | - | - | 2 | **43** | **3** | **4** | **3** |
| WEST KORDOFAN | 1 | - | 5 | - | 2 | - | 19 | - | - | - | 151 | - | 1 | - | 206 | - | - | - | - | - | **4** | **-** | **381** | **-** |
| WHITE NILE | 21 | - | 1 | - | 1 | - | - | - | 105 | 4 | 5 | 12 | 63 | 1 | 2 | - | - | - | - | - | **190** | **5** | **8** | **12** |
| ***GRAND TOTAL*** | 127 | 72 | 39 | 16 | 184 | 39 | 56 | 23 | 952 | 771 | 858 | 365 | 1283 | 903 | 701 | 242 | 18 | 14 | - | 11 | **2564** | **1799** | **1654** | **657** |

**O** = At least partially operational - **N/O** = Not operational - N/R = Not reporting - **P/C** = Planned / closed

## Geographic distribution of HSDUs




## Date of last update



# OVERVIEW OF SERVICE AVAILABILITY

## Service availability and main barriers

| Service | Availability (%) | | | | | | Barriers (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| Request for ambulance services by the patient | 4 | 4 | 5 | 46 | 41 | | 14 | 4 | 40 | 68 | 55 |
| Recognition of danger signs | 11 | 5 | 4 | 38 | 41 | | 29 | 38 | 66 | 47 | 18 |
| Acuity-based formal triage | 5 | 3 | 3 | 47 | 41 | | 35 | 45 | 56 | 46 | 17 |
| WHO Basic emergency care by prehospital provider | 8 | 5 | 4 | 42 | 41 | | 31 | 37 | 67 | 54 | 20 |
| WHO Basic Emergency Care | 6 | 5 | 6 | 42 | 41 | | 26 | 31 | 78 | 64 | 30 |
| Advanced Syndrome-based management | 2 | 2 | 2 | 53 | 41 | | 26 | 25 | 79 | 60 | 28 |
| Monitored referral | 7 | 4 | 6 | 41 | 41 | | 37 | 24 | 50 | 64 | 29 |
| Referral capacity | 9 | 7 | 2 | 41 | 41 | | 22 | 11 | 52 | 79 | 36 |
| Acceptance of referrals | 6 | 2 | 4 | 47 | 41 | | 30 | 18 | 71 | 72 | 27 |
| Acceptance of complex referrals | 4 | 1 | 2 | 52 | 41 | | 27 | 29 | 65 | 65 | 36 |
| Outpatient services for primary care | 14 | 6 | 3 | 37 | 41 | | 17 | 19 | 91 | 61 | 37 |
| Outpatient department for secondary care | 5 | 3 | 2 | 48 | 41 | | 34 | 15 | 89 | 58 | 20 |
| Home visits | 3 | 1 | 4 | 51 | 41 | | 51 | 22 | 68 | 49 | 26 |
| Procedures for mass casualty scenarios | 1 | 1 | | 55 | 41 | | 31 | 27 | 74 | 68 | 33 |
| Mass Casualty Management System | 2 | 2 | 3 | 53 | 41 | | 49 | 33 | 75 | 69 | 23 |
| WAR Surgery Protocols | 2 | 2 | | 54 | 41 | | 53 | 19 | 82 | 68 | 25 |
| Damage Control Surgery Protocols | | 2 | | 55 | 41 | | 55 | 17 | 78 | 71 | 27 |
| Minor trauma definitive management | 9 | 4 | 2 | 44 | 41 | | 36 | 20 | 87 | 48 | 16 |
| Emergency and elective surgery | 1 | 3 | | 54 | 41 | | 17 | 11 | 86 | 82 | 69 |
| Emergency and elective surgery with at least two operating theatres | | | | 56 | 41 | | 30 | 20 | 76 | 71 | 47 |
| Orthopedic/trauma ward | | | | 57 | 41 | | 41 | 22 | 78 | 74 | 41 |
| Short hospitalization capacity | 9 | 2 | 3 | 45 | 41 | | 24 | 11 | 81 | 73 | 52 |
| 20 Inpatient bed capacity | 4 | 3 | 2 | 50 | 41 | | 9 | 9 | 80 | 79 | 56 |
| 50 inpatient bed capacity | 1 | 2 | | 55 | 41 | | 22 | 17 | 64 | 73 | 42 |
| Inpatient critical care management | 1 | | | 56 | 41 | | 28 | 9 | 83 | 70 | 36 |
| Intensive care unit | 1 | | | 56 | 41 | | 29 | 15 | 73 | 67 | 46 |
| Basic laboratory | 22 | 7 | 3 | 26 | 41 | | 26 | 32 | 73 | 53 | 58 |
| Laboratory services secondary level | 5 | 3 | 1 | 50 | 41 | | 37 | 20 | 81 | 75 | 32 |
| Laboratory services tertiary level | 1 | 2 | | 55 | 41 | | 57 | 8 | 85 | 81 | 24 |
| Blood bank services | 2 | 1 | | 55 | 41 | | 32 | 22 | 82 | 78 | 47 |
| Hemodialysis unit | | | | 57 | 41 | | 65 | 9 | 87 | 78 | 24 |
| basic radiological unit | 2 | 3 | | 54 | 41 | | 22 | 11 | 89 | 88 | 69 |
| Radiology unit | | 1 | | 57 | 41 | | 62 | 13 | 78 | 76 | 40 |
| Medical evacuation procedures | | | | 57 | 41 | | 43 | 20 | 66 | 69 | 31 |

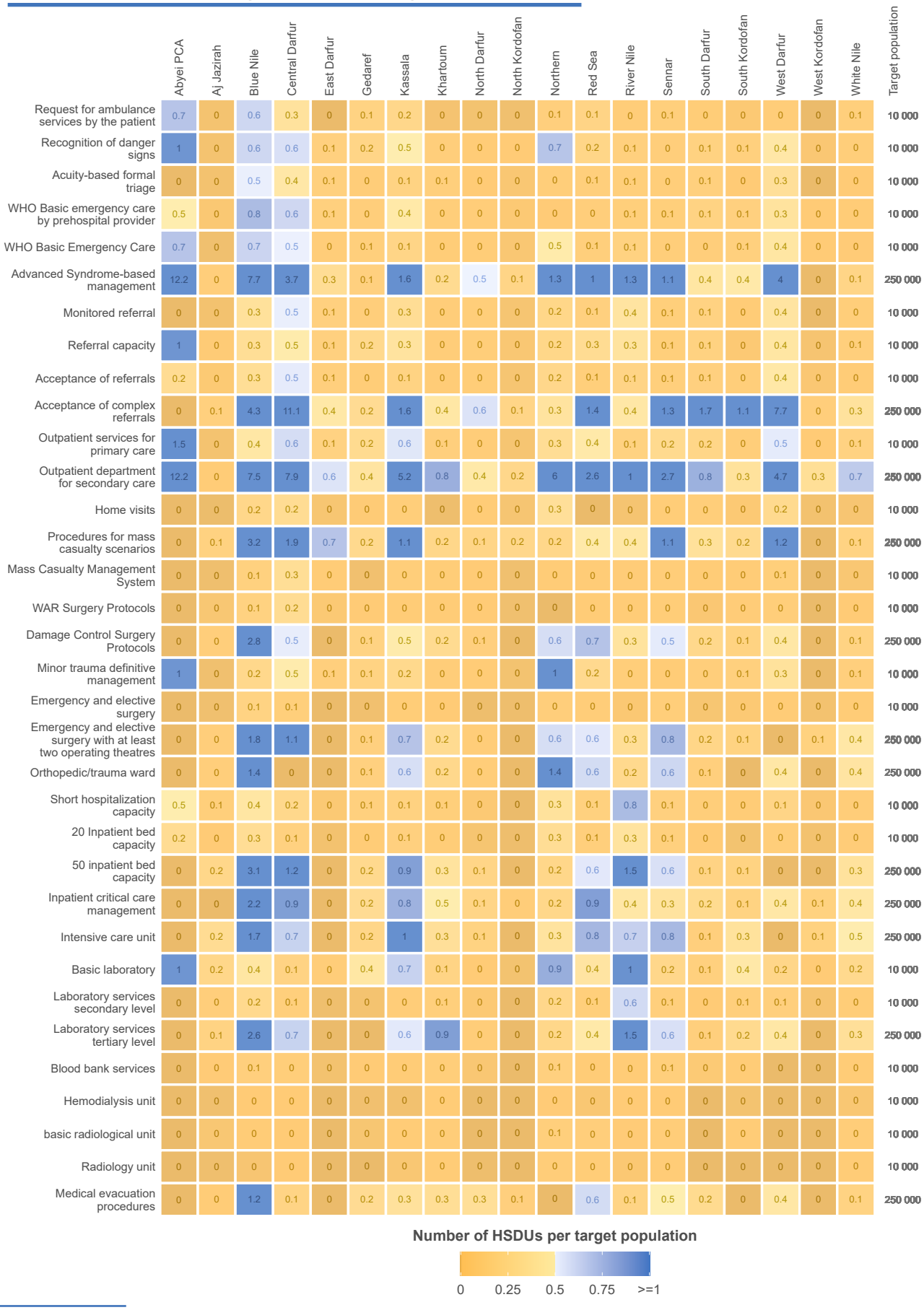
**Availability status**

Available · Partially available · Not available · Not operational

**Barriers** *for partial availability or non-availability.*

Lack of staff · Lack of supplies · Lack of financial resources · Lack of training · Lack of equipment

## Number of HSDUs providing services per target population [7]



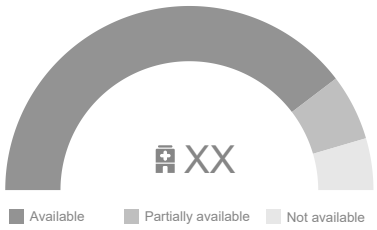

[7] To account for partially available services, a weighing was applied with a weight of 1 given to services reported as fully available and 0.5 for partially available services. As target populations may vary across services, an additional column has been included to the right of the graph to assist readers in comprehending the target populations associated with each service. See Annex I for population estimates per state.

# IN-DEPTH ANALYSIS BY HEALTH SERVICE

# INTERPRETATION GUIDE

## Service status

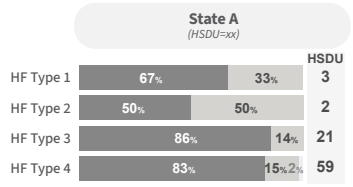
**Arc charts** provide an overview of the overall availability of a health service. The total number of HSDUs included in the analysis of a service is shown inside the arc chart.





For further insights, donut charts break down service availability by HSDU type. To improve readability, labels indicating the availability level for each category are provided either beside or below the chart. Additionally, to highlight the percentage of HSDUs where an service is available up to standard, the number may also be prominently placed inside the chart. Information on the total number of HSDUs included is clearly indicated above or below the respective donut.

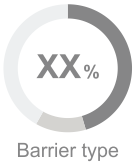
**Column charts** offer a breakdown of service availability by state. The numbers represented by the bars indicate the count of HSDUs that fall into the specified availability category. The length of each bar is determined by the total number of HSDUs in the state. The total number of HSDUs included in each state is indicated under the state name.


**Column charts by HSDU type** display the availability of services by state and HSDU type. Each bar represents the percentage of HSDU falling into each category for the specified HSDU type and state. The grey bar on the right shows the number of HSDU falling into the category. By default these charts exclude HSDUs where a service was not normally provided or the HSDU did not report on it.

**Maps** use pie charts to depict the availability of an service at the locality level. The size of each circle represents the total number of HSDUs in the locality, while each slice reflects a specific availability level.

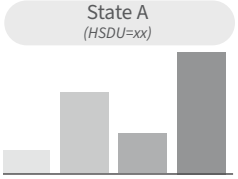
## Barriers




To gain a more comprehensive understanding of the challenges faced by HSDUs, whenever a service was not or only partially available, main barriers impeding availability were recoded.

Each **donut chart** indicates the percentage of HSDUs having reported a specific barrier. The total number of HSDUs reporting at least one barrier is shown below the chart header.

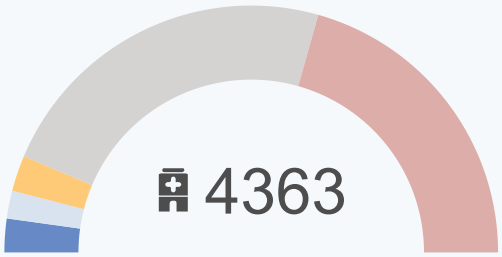
**Bar charts** further break down barriers by state. Each bar represents a specific barrier, with the percentage value indicating the proportion of HSDUs reporting that particular barrier. Additionally, the number of HSDUs reporting at least one barrier is displayed below the Locality's name.



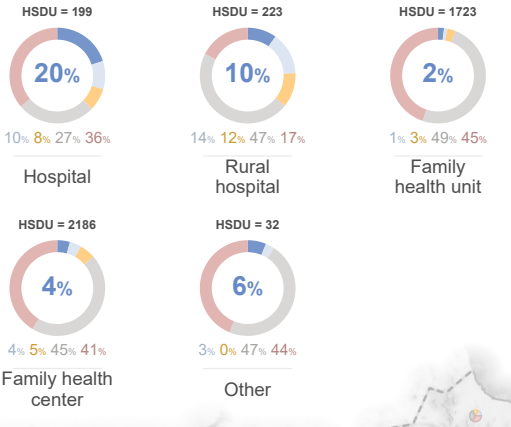

**Important:** The denominator for barrier charts excludes HSDUs where the service is fully available or not normally provided. It should further be noted that HSDUs can report up to three barriers for each service. Thus, the sum of all barriers may exceed 100%.

# REQUEST FOR AMBULANCE SERVICES BY THE PATIENT

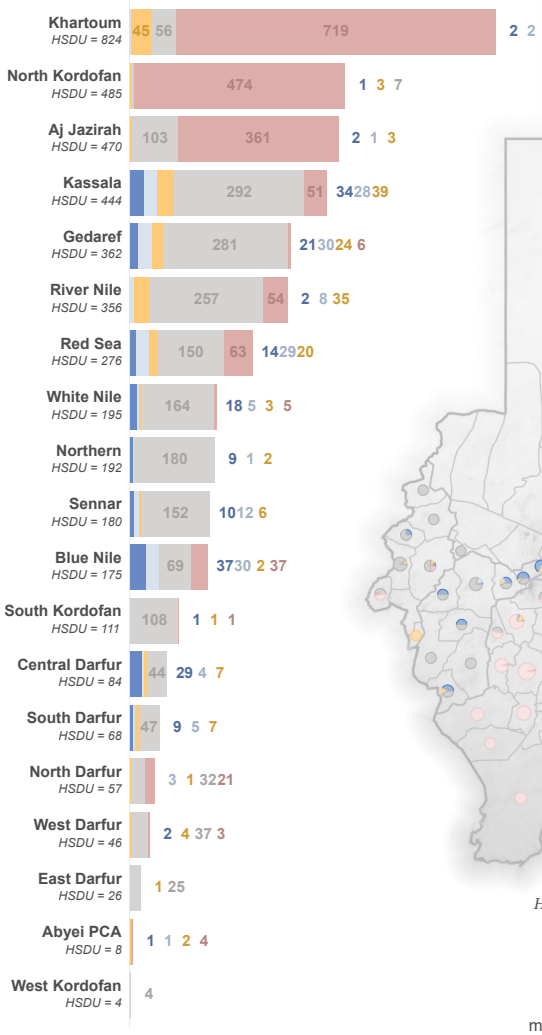
## Service availability[8]

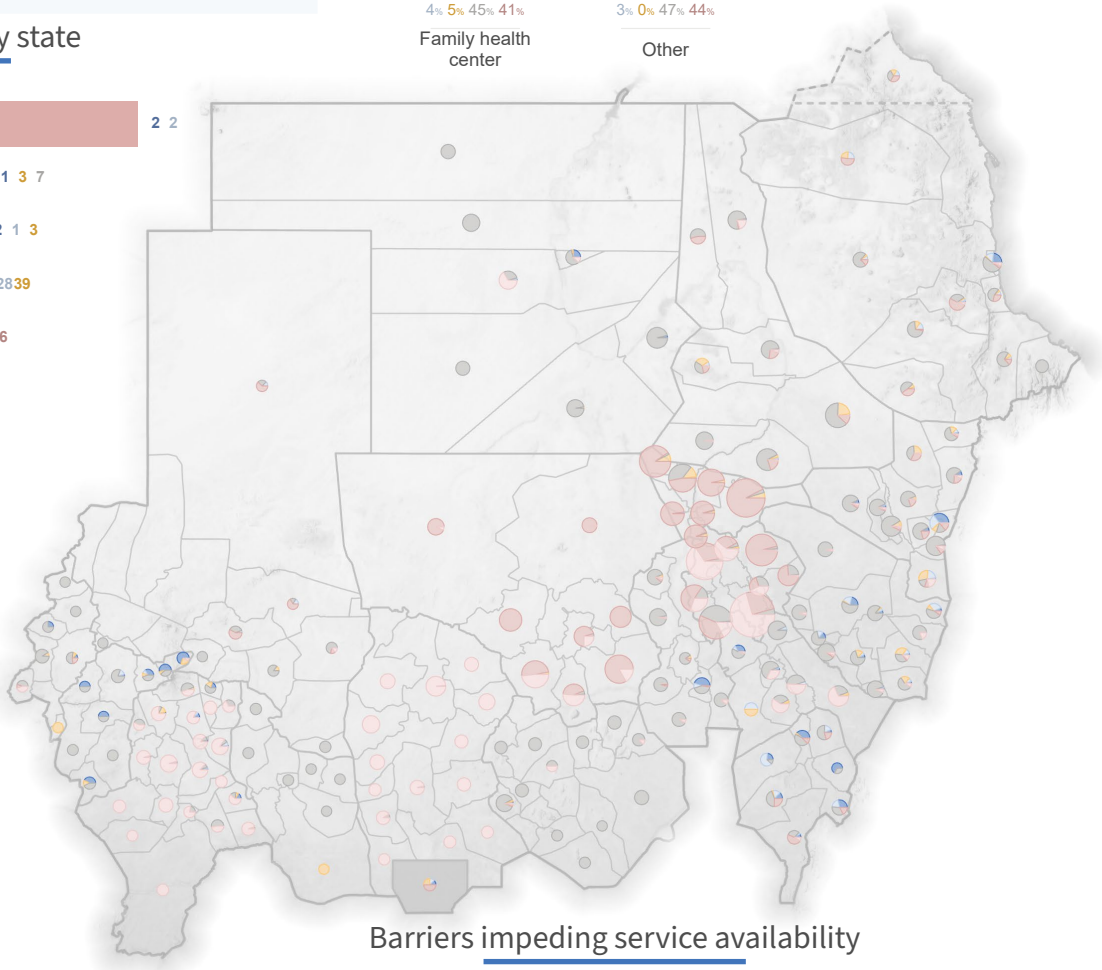



## Service availability by HSDU type

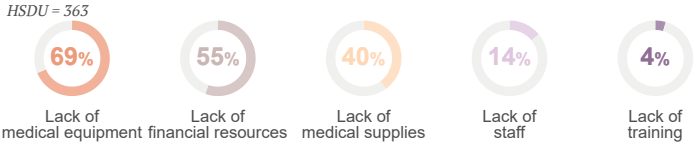



## Service availability by state

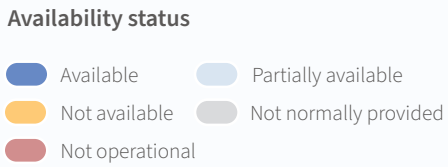


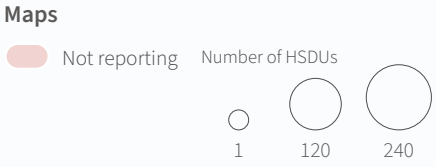



## Barriers impeding service availability

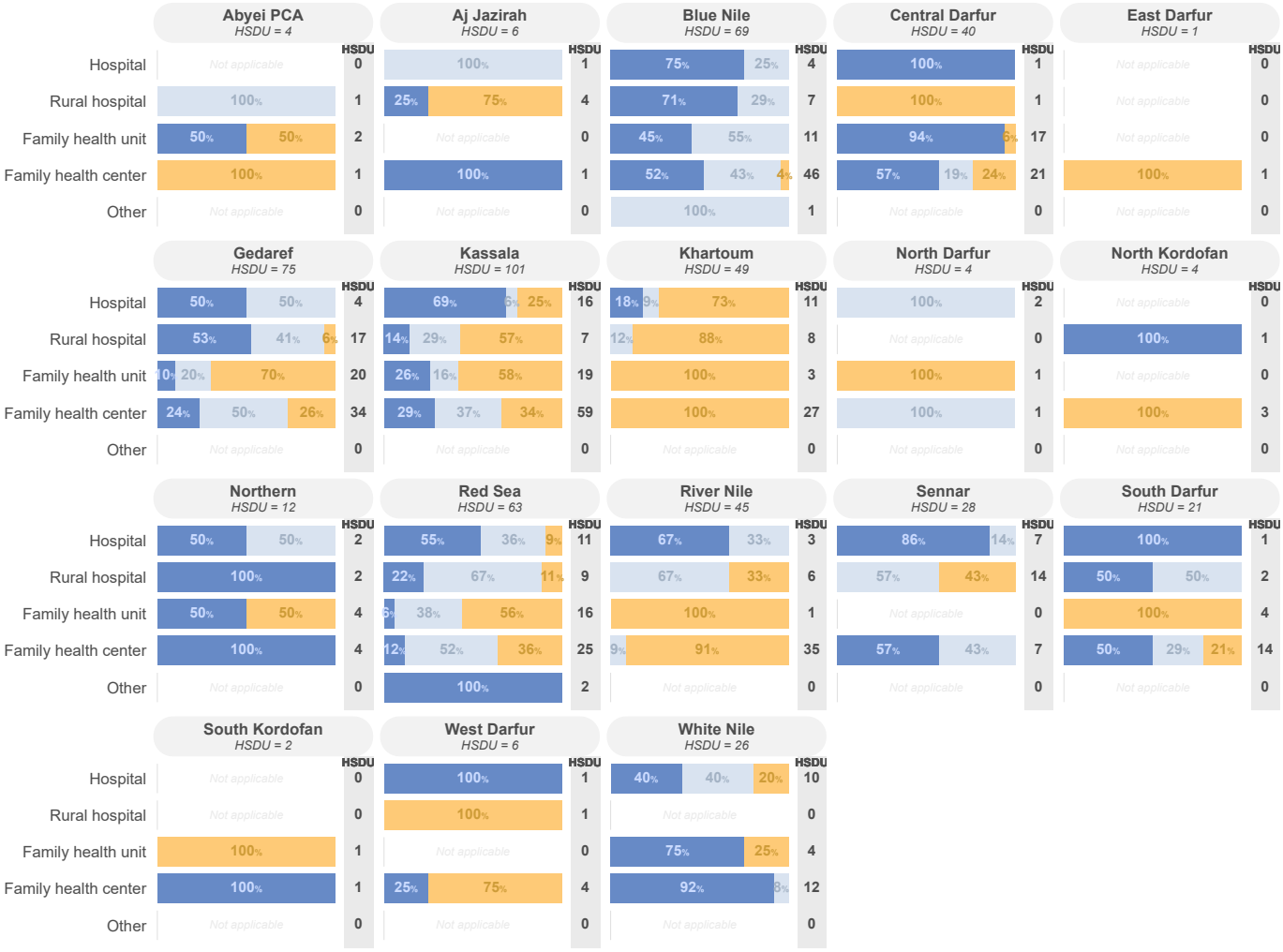



8 User-activated dispatch of basic ambulance services from district-level staging center (e.g., ambulance pool).

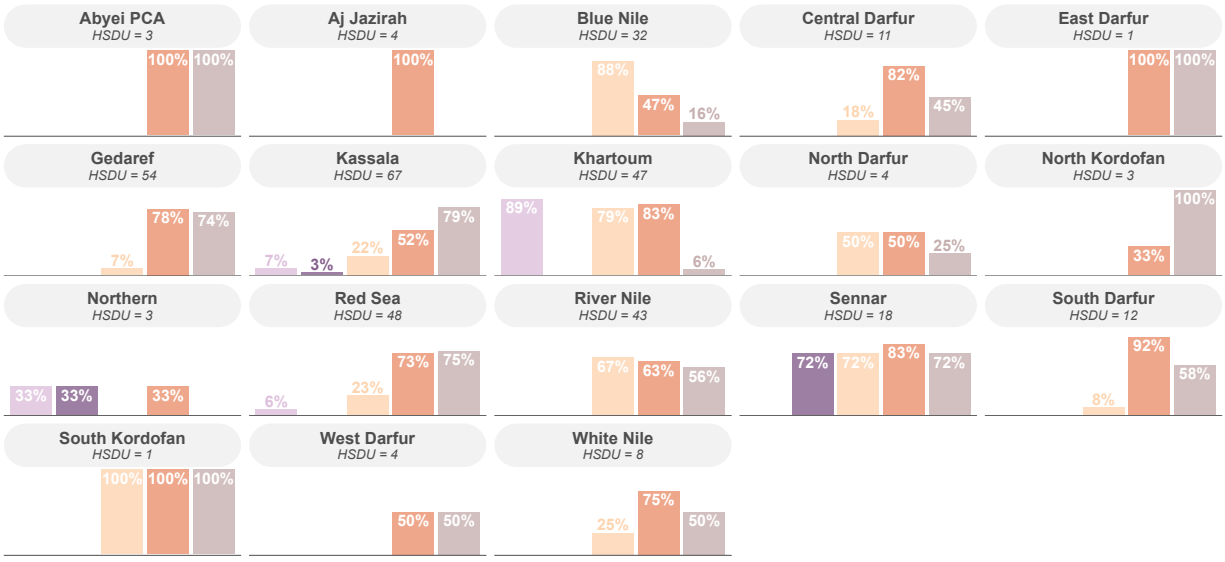


## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

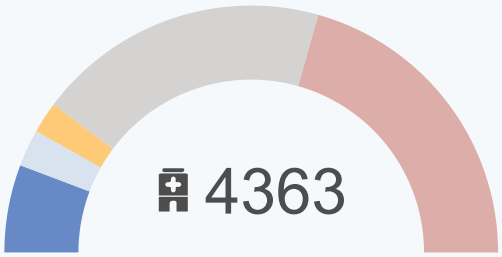
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# RECOGNITION OF DANGER SIGNS

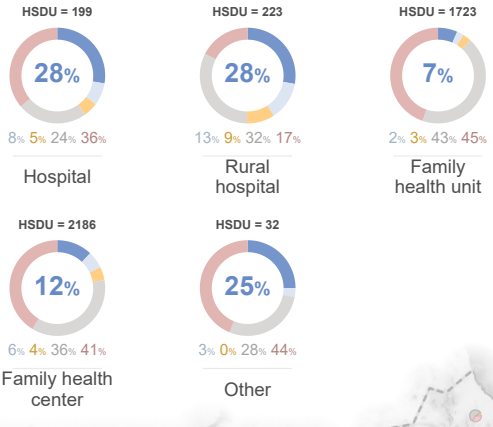
## Service availability[9]



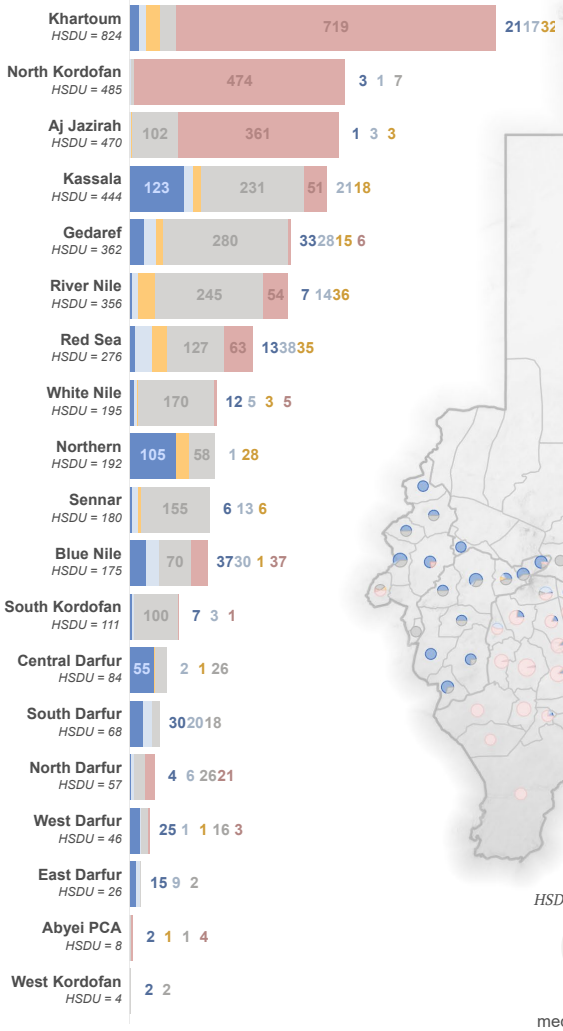

Labels

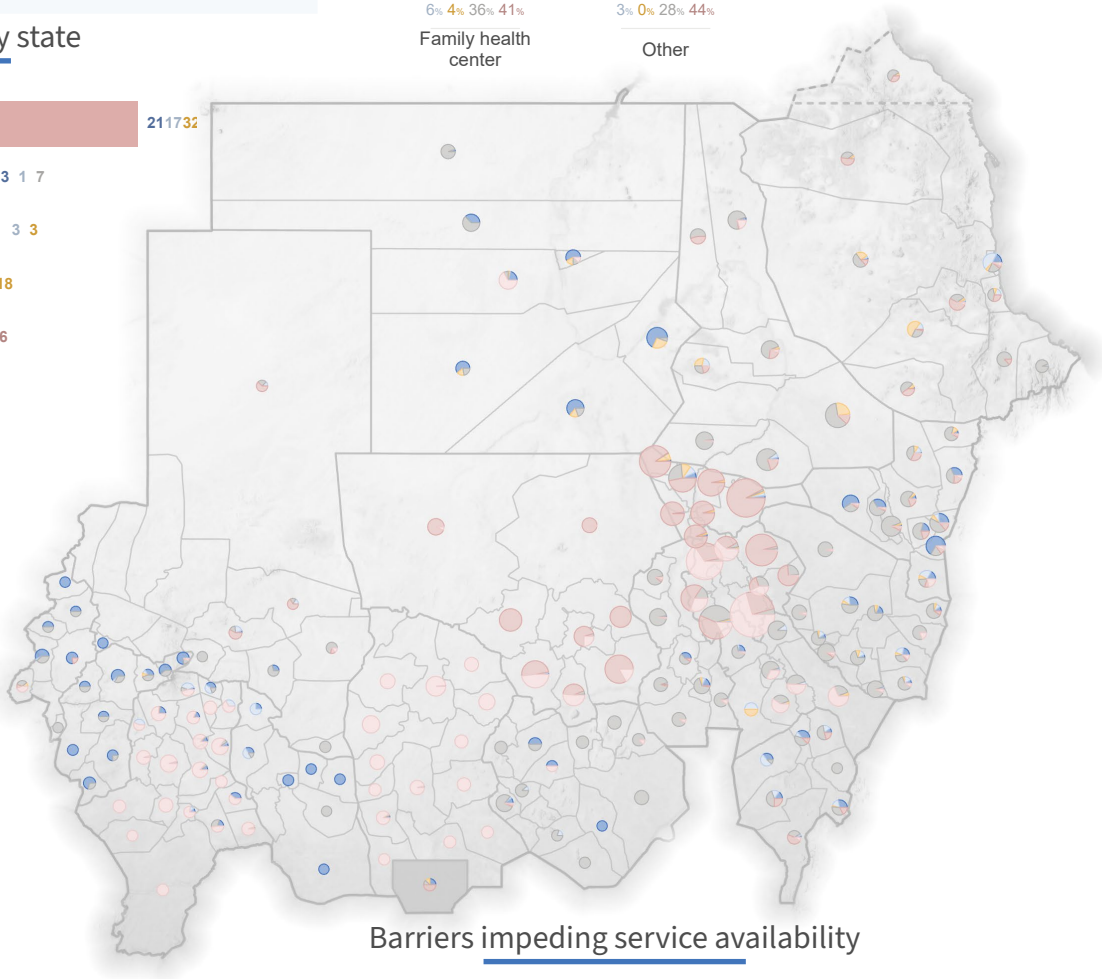
11% | 501
5% | 212
4% | 180
38% | 1671
41% | 1799

## Service availability by HSDU type




## Service availability by state



## Barriers impeding service availability


9 Recognition of danger signs in neonates, children, and adults, including early recognition of signs of serious infection, with timely referral to higher-level care.

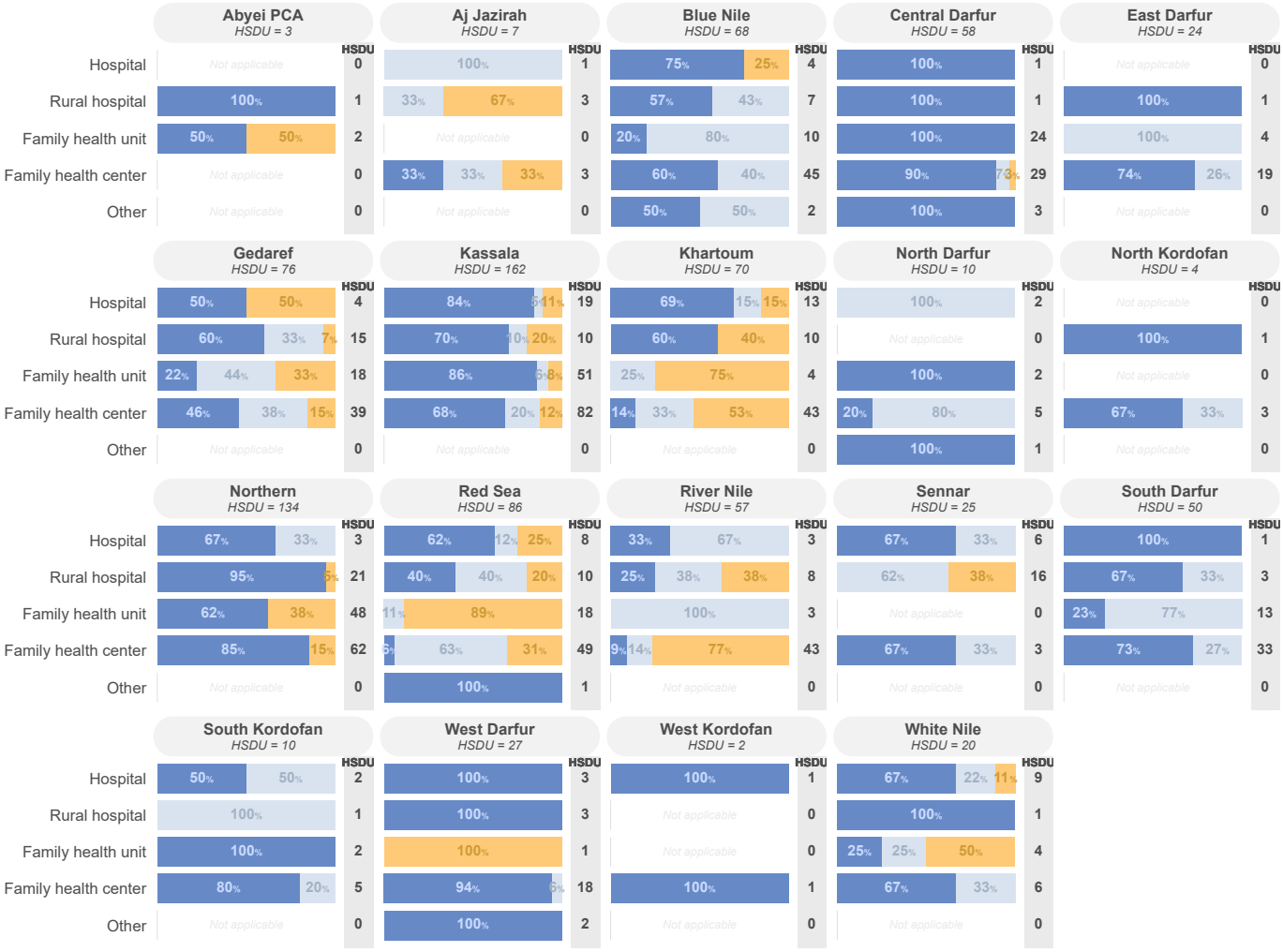
Availability status

Available
Partially available
Not available
Not normally provided
Not operational

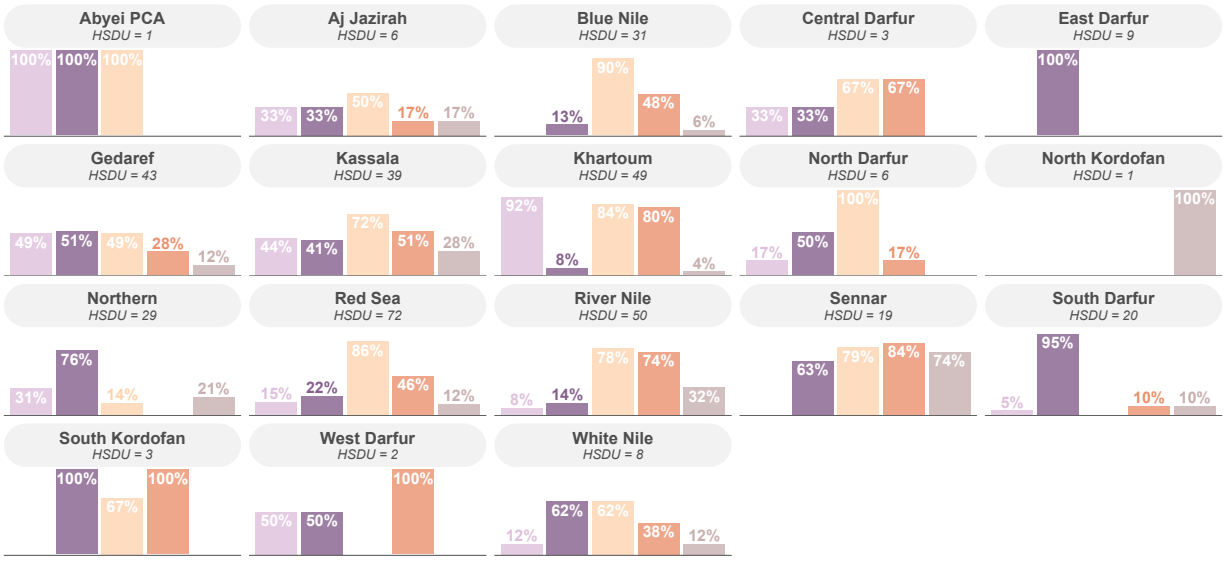
Maps

Not reporting
Number of HSDUs
1
120
240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

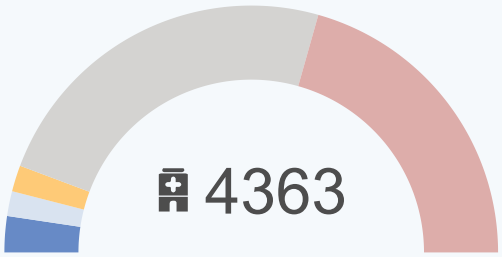
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

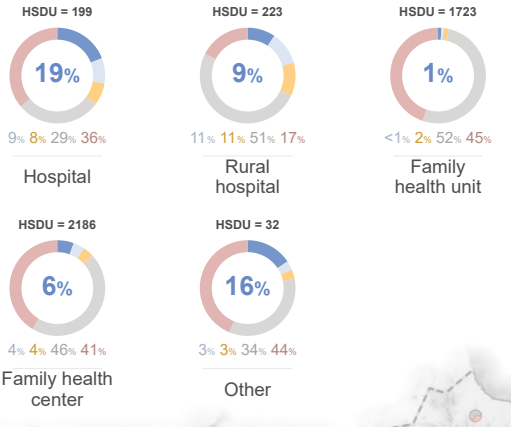
# ACUITY-BASED FORMAL TRIAGE

## Service availability[10]

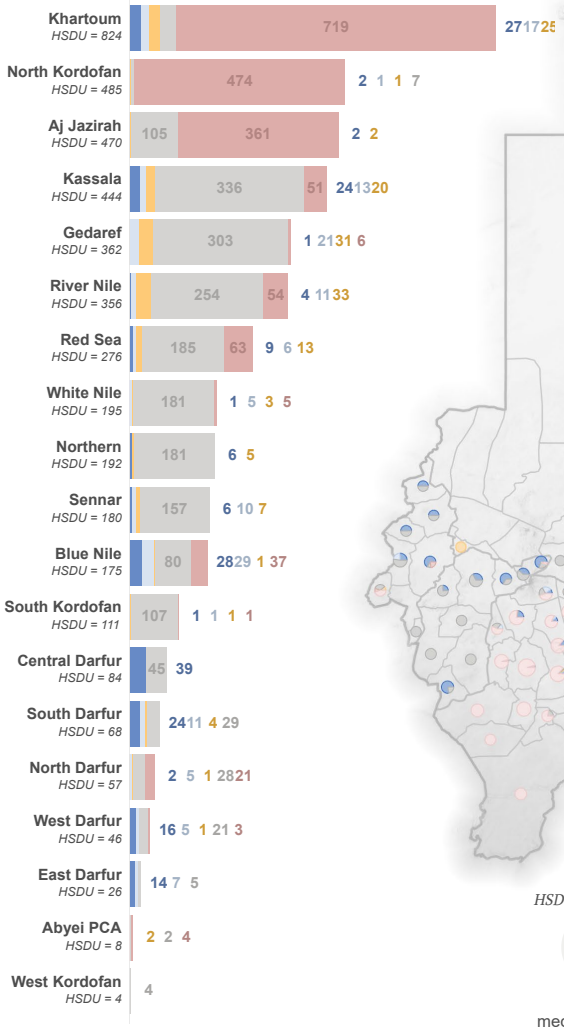


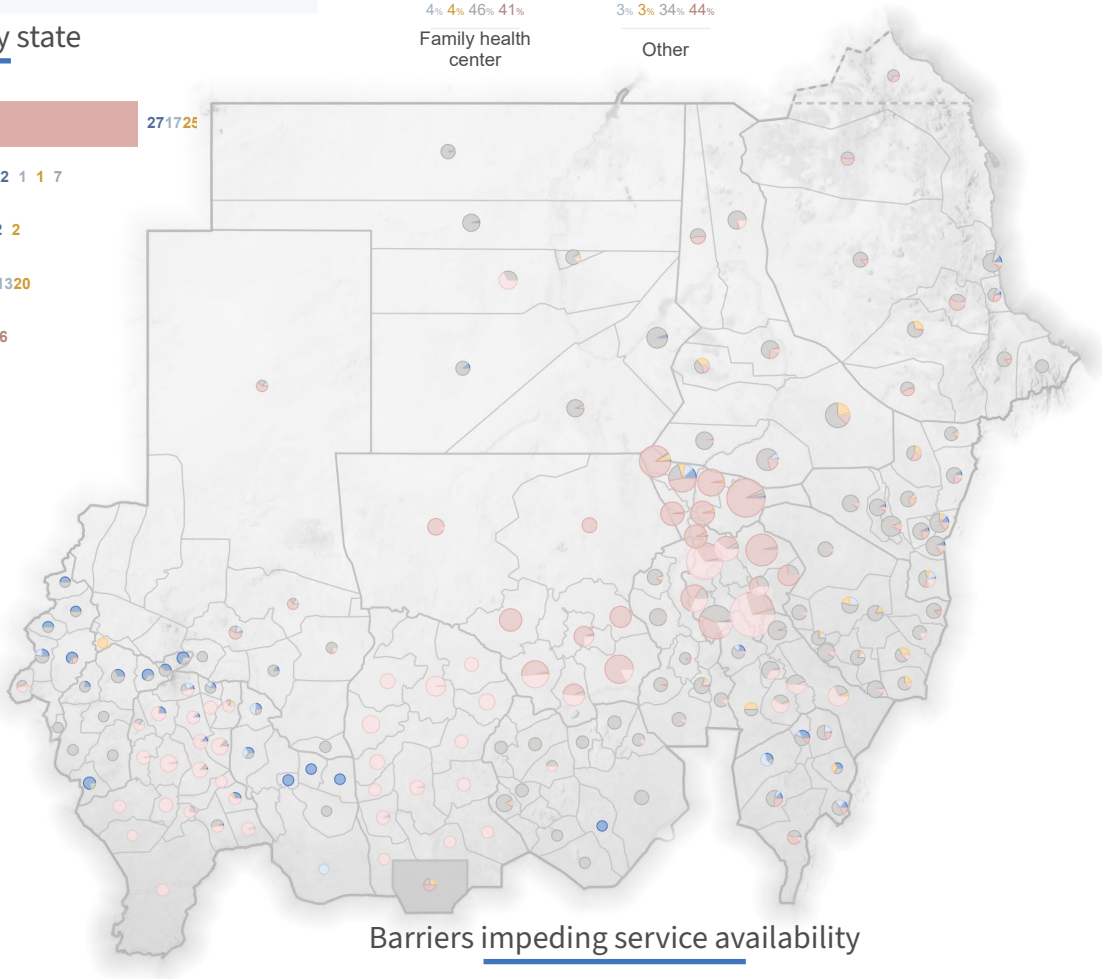

Labels
5% | 206
3% | 142
3% | 150
47% | 2066
41% | 1799

## Service availability by HSDU type




## Service availability by state



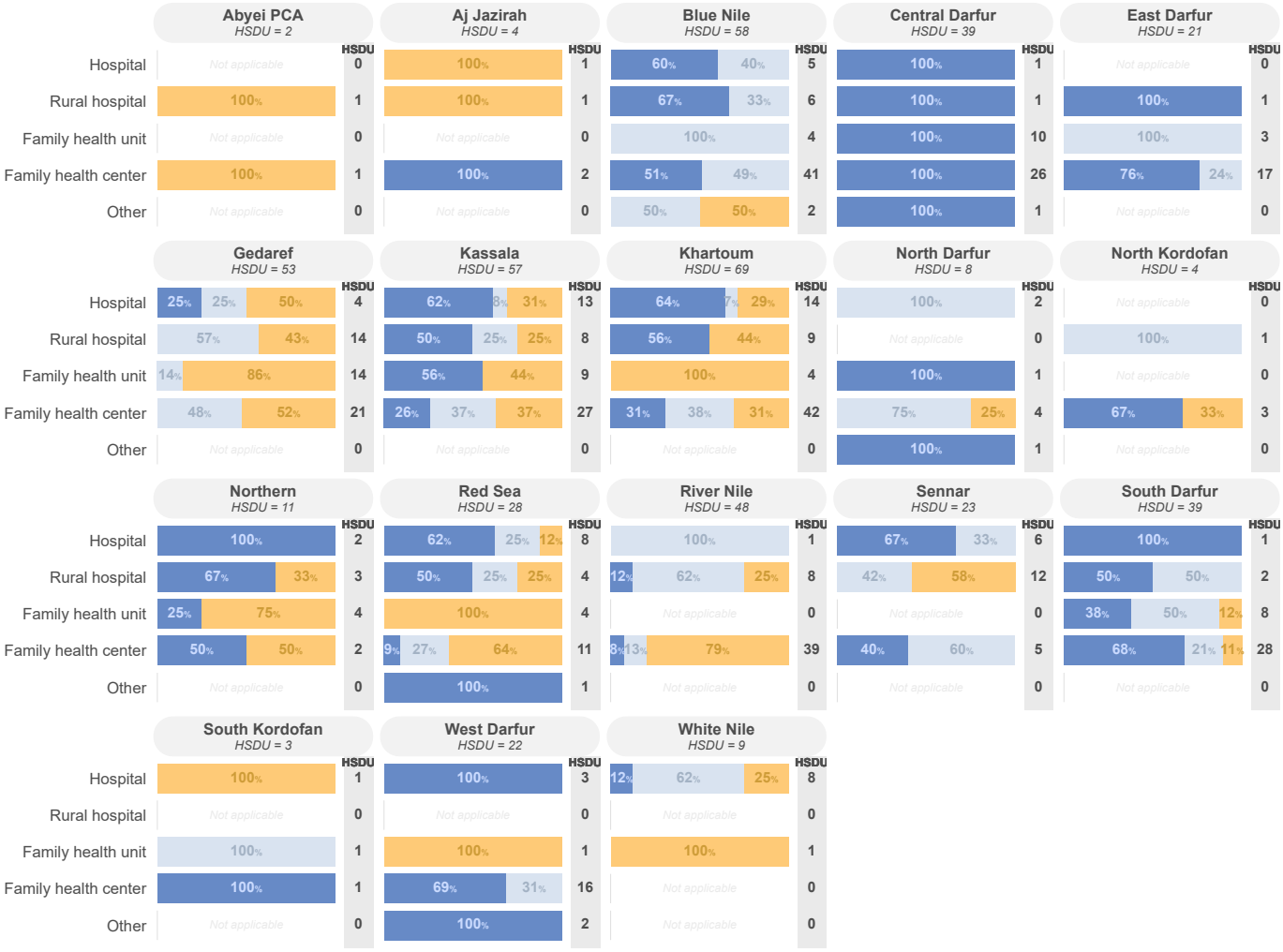
## Barriers impeding service availability


10 Acuity-based formal triage of children and adults at first entry to the facility with a validated instrument such as the WHO/ICRC Interagency triage tool.

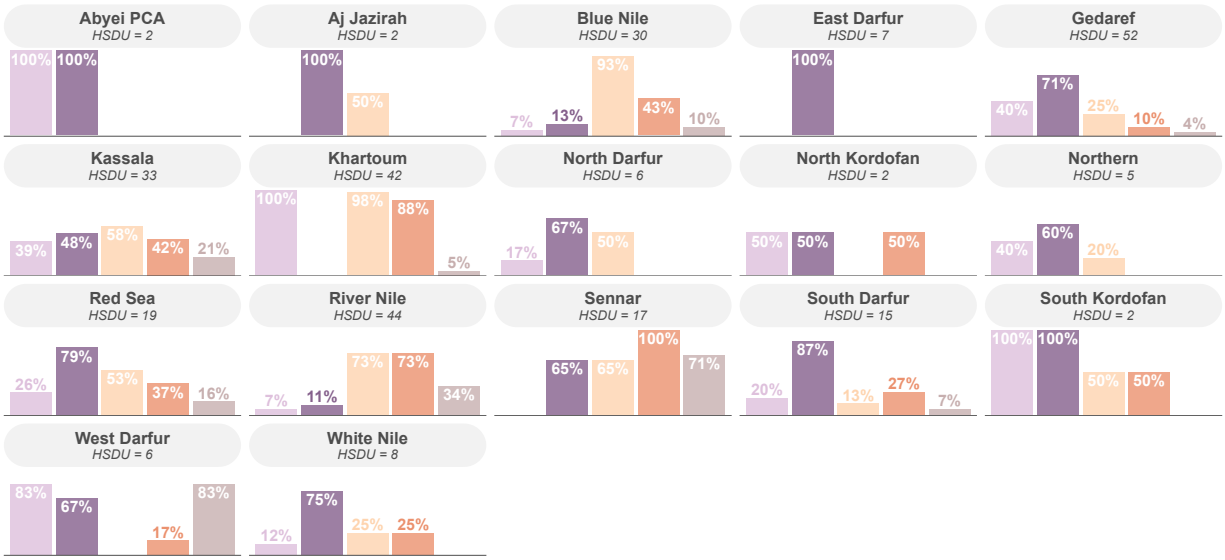
Availability status
Available
Partially available
Not available
Not normally provided
Not operational

Maps
Not reporting
Number of HSDUs
1
120
240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

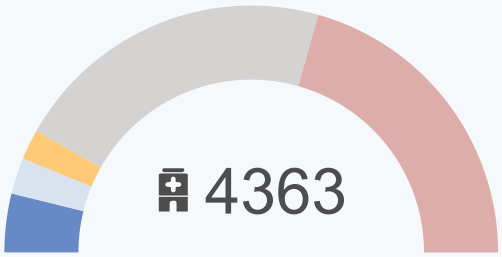
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# WHO BASIC EMERGENCY CARE BY PREHOSPITAL PROVIDER

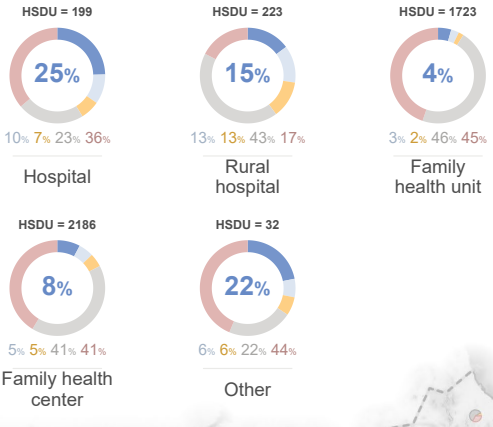
## Service availability[11]



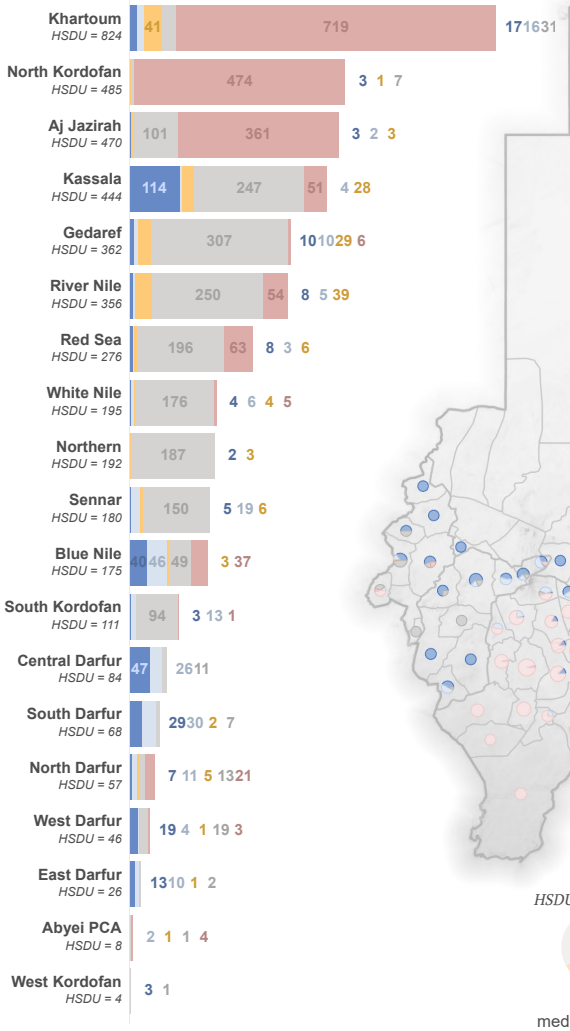

Labels

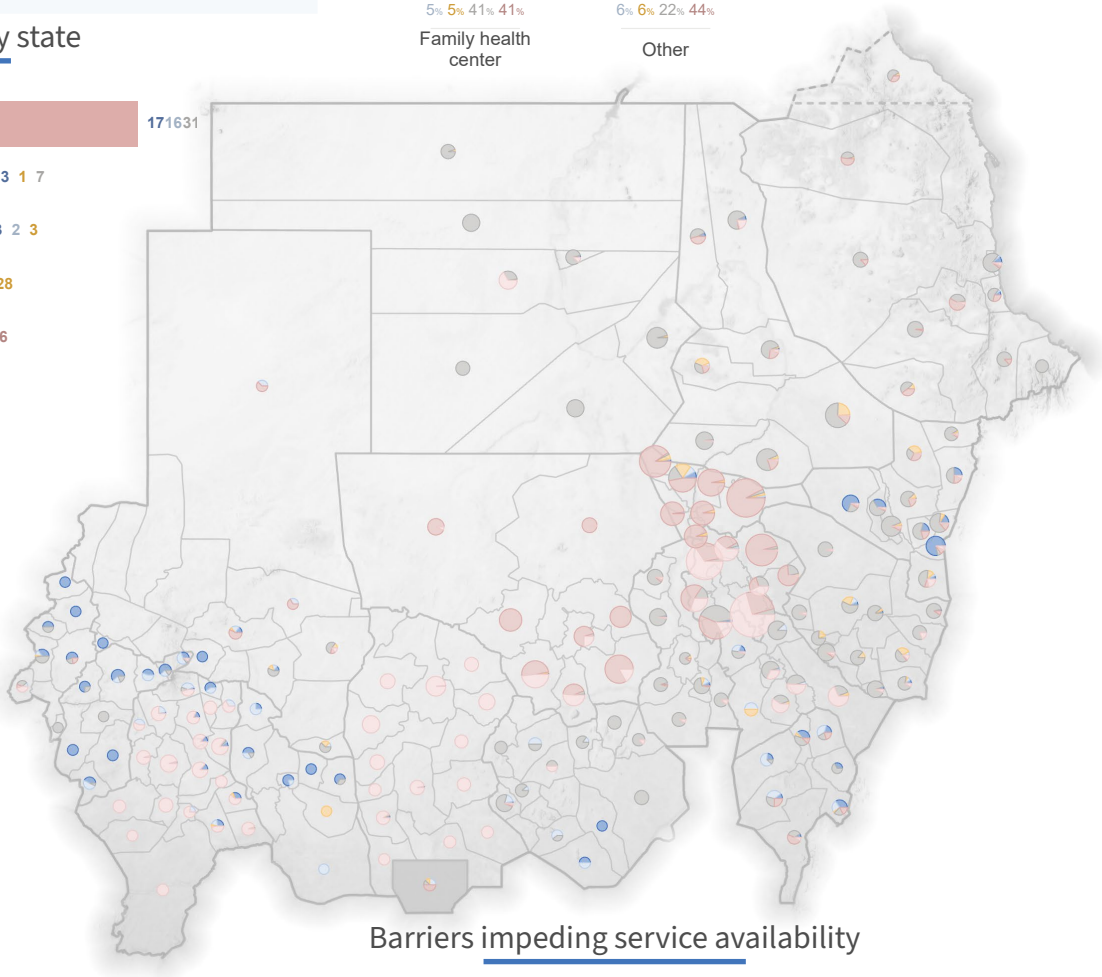
8% | 335
5% | 207
4% | 173
42% | 1849
41% | 1799

## Service availability by HSDU type




## Service availability by state



## Barriers impeding service availability


11 Initial syndrome-based management at scene by prehospital providers for difficulty breathing, shock, altered mental status, and polytrauma.

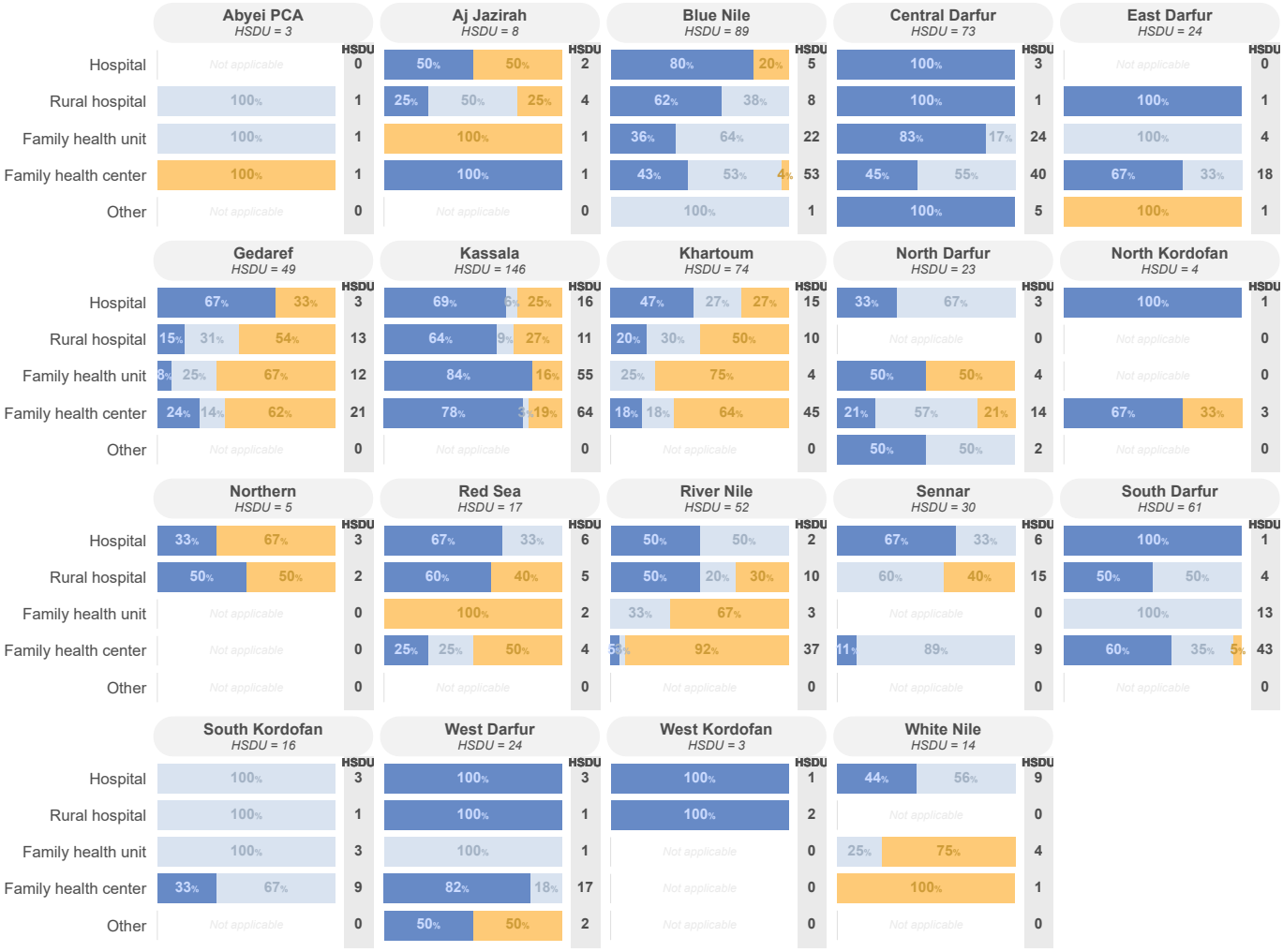
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

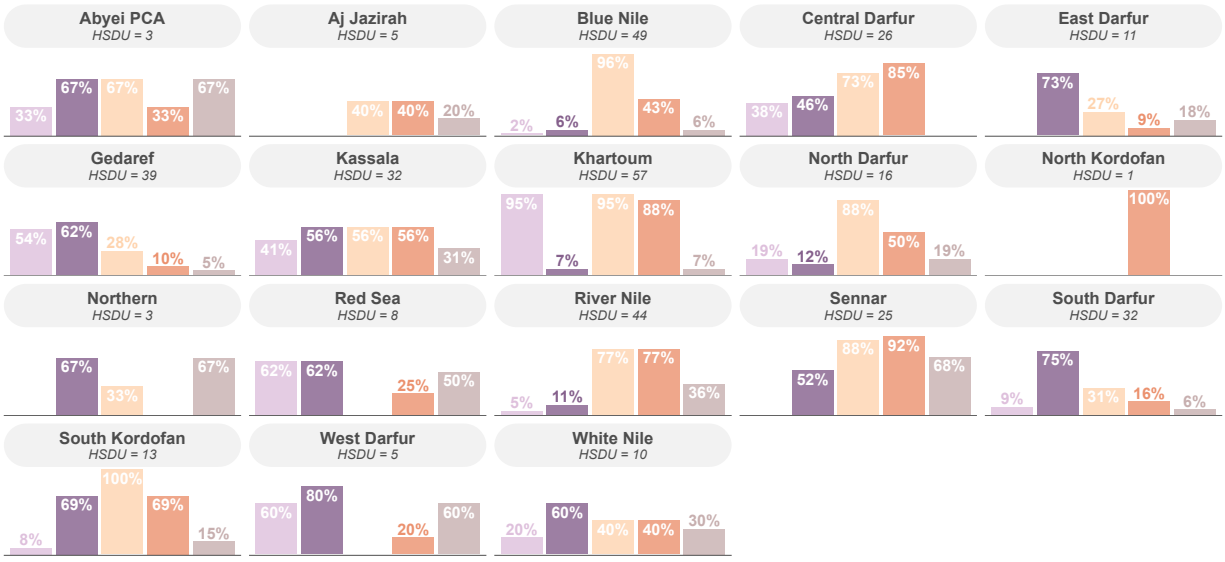
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

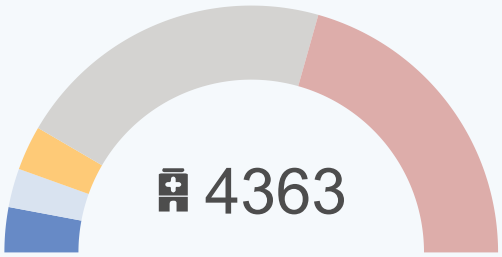
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# WHO BASIC EMERGENCY CARE

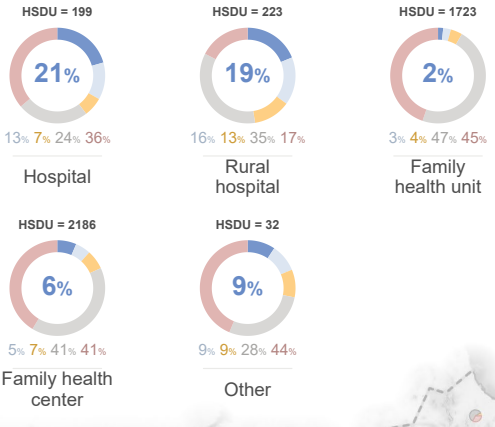
## Service availability[12]



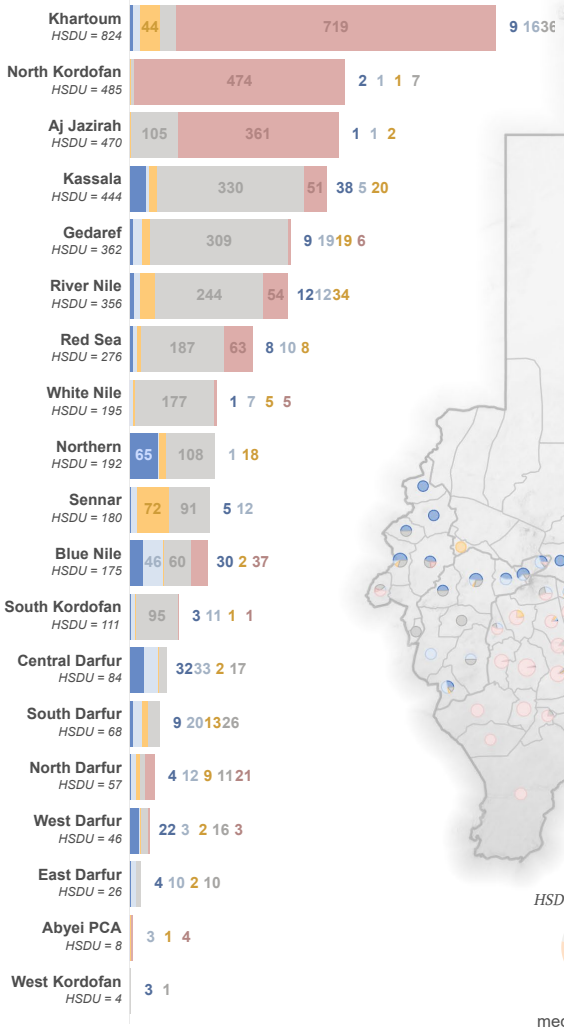

Labels

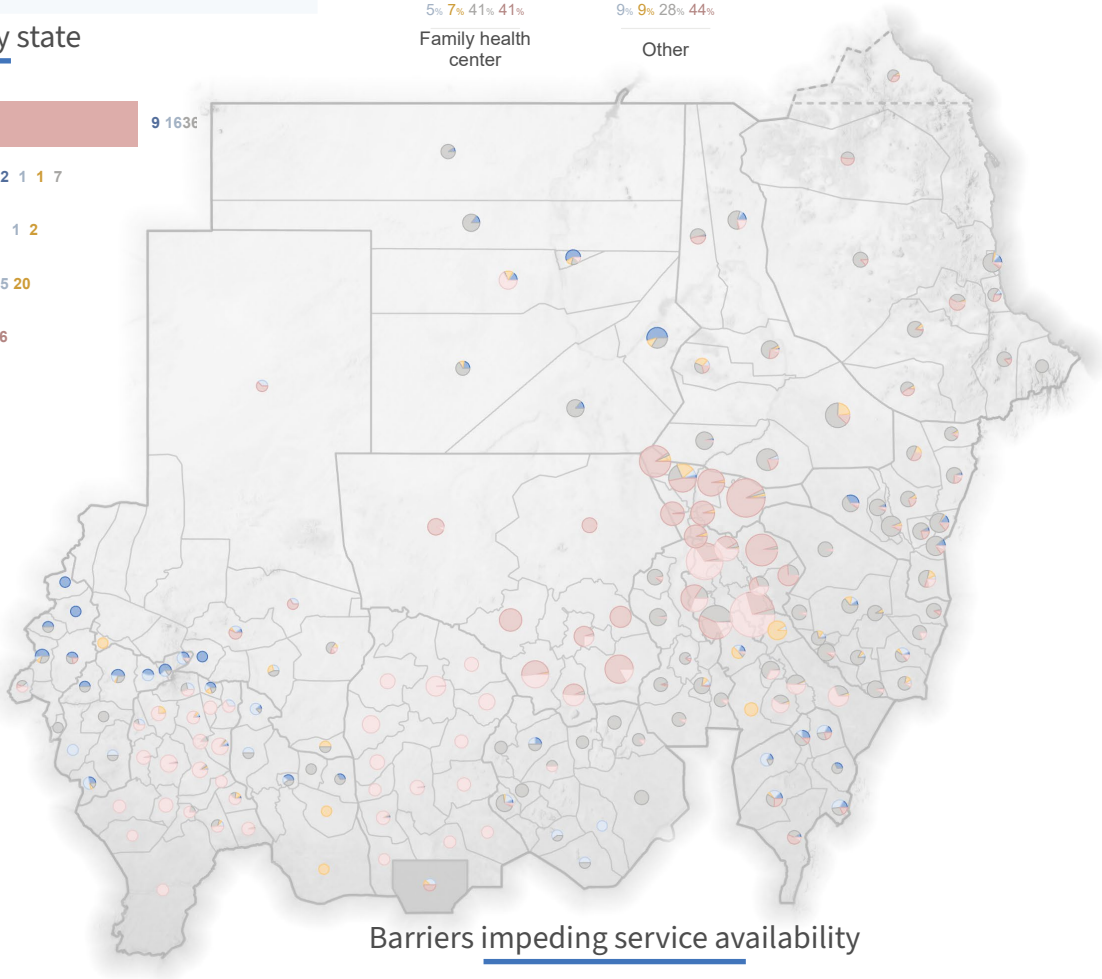
6% | 257
5% | 222
6% | 255
42% | 1830
41% | 1799

## Service availability by HSDU type

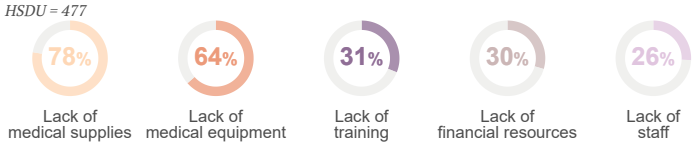



## Service availability by state



## Barriers impeding service availability




12 Basic syndrome-based management of difficulty breathing, shock, altered mental status, and polytrauma for neonates, children, and adults. Interventions include manual airway maneuvers, oral/nasal airway placement, oxygen administration, bag-valve mask ventilation, temperature management, and administration of essential emergency medications, including empiric antibiotics for serious infection.

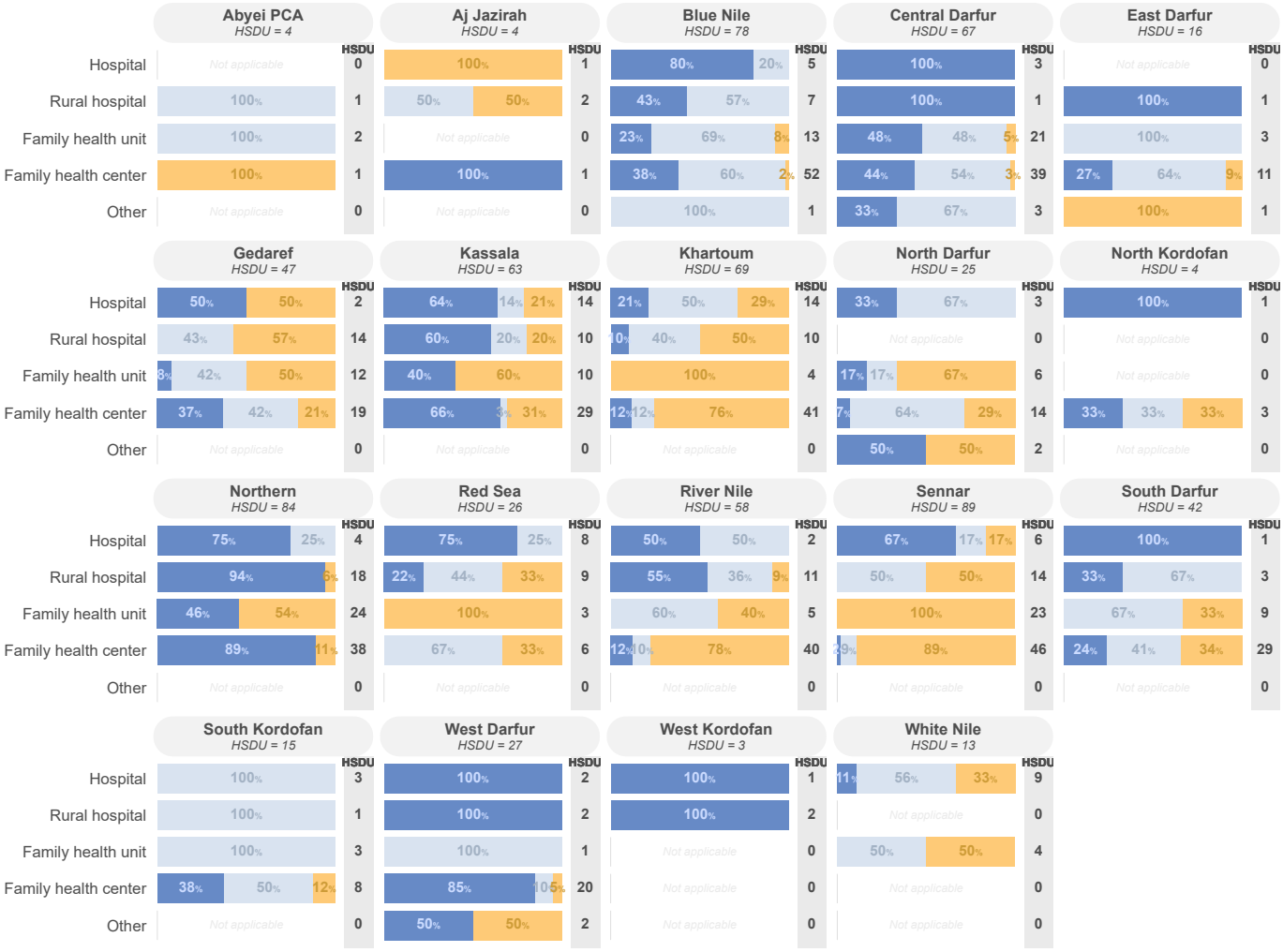
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

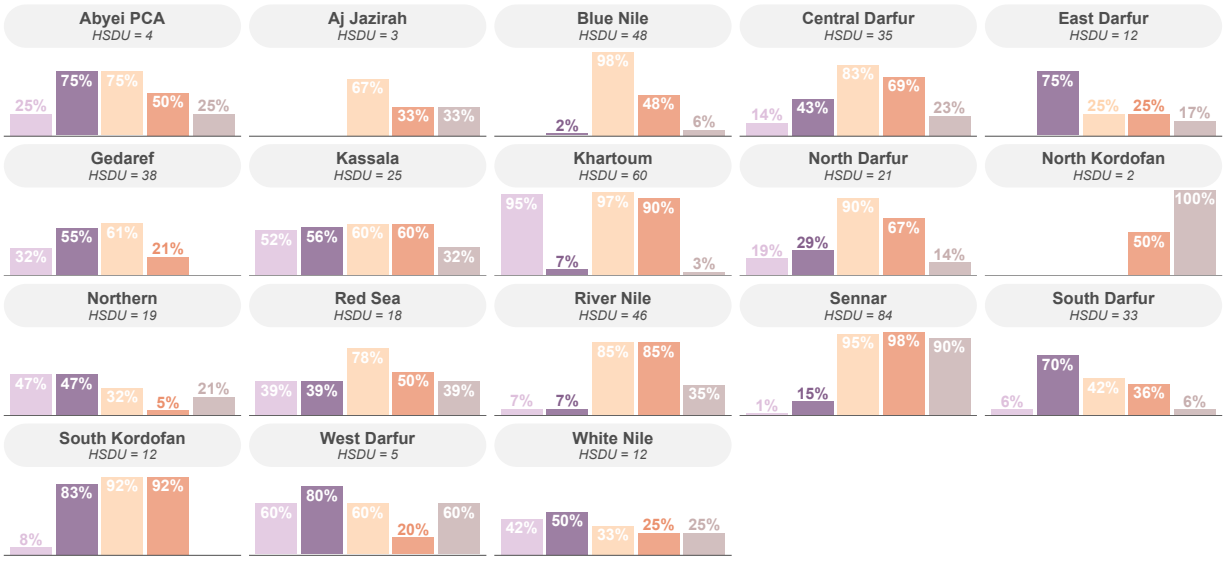
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

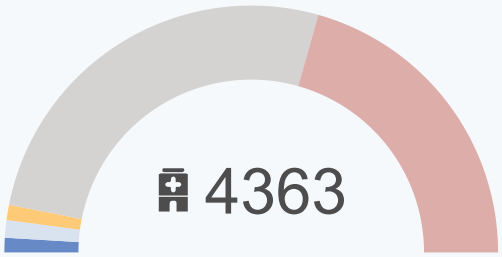
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# ADVANCED SYNDROME-BASED MANAGEMENT

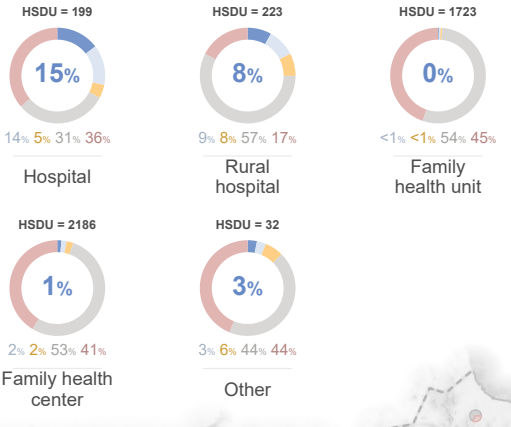
## Service availability[13]



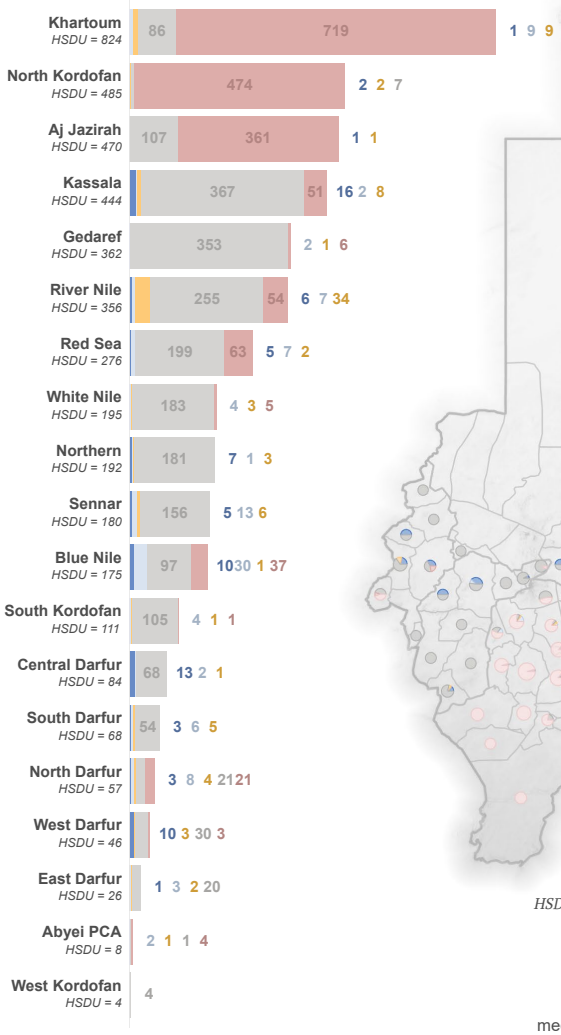

Labels

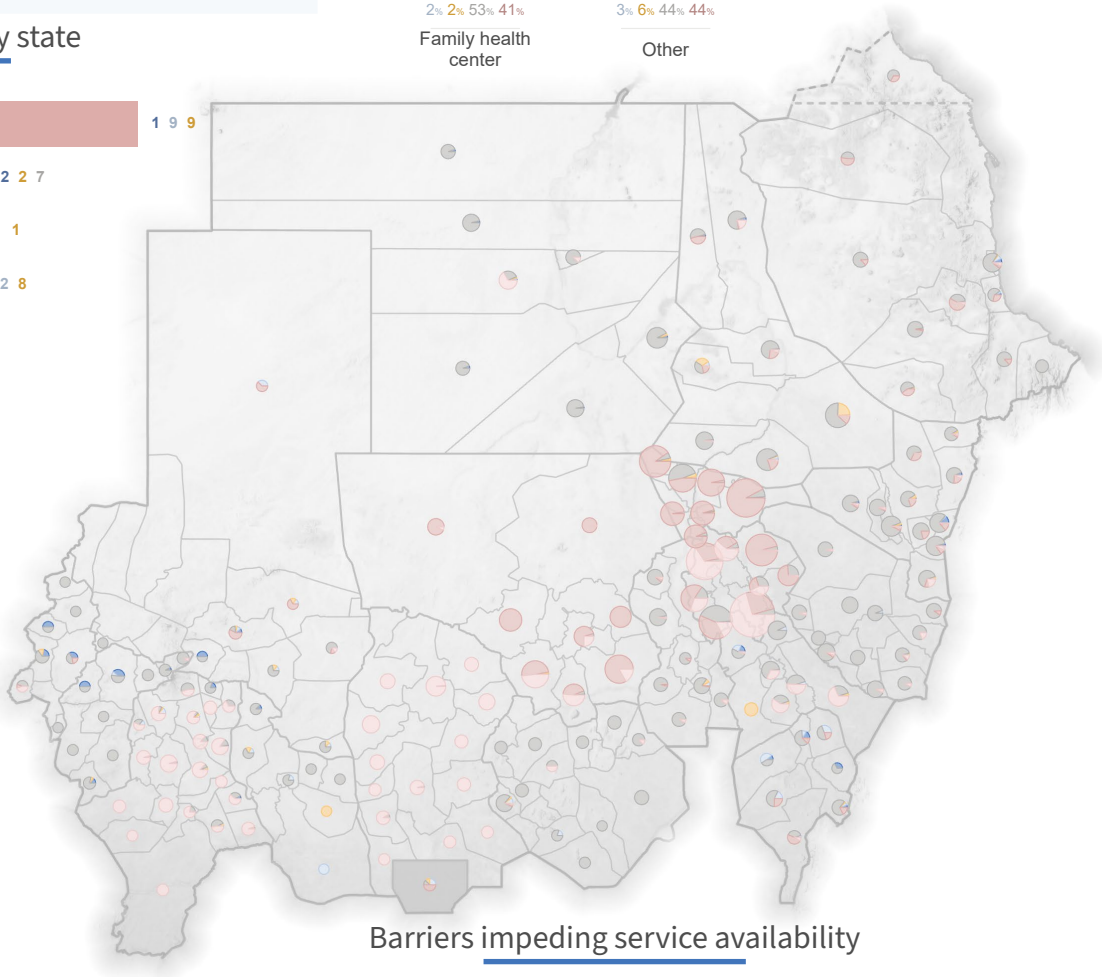
| | |
|---|---|
| 2% | 83 |
| 2% | 100 |
| 2% | 87 |
| 53% | 2294 |
| 41% | 1799 |

## Service availability by HSDU type

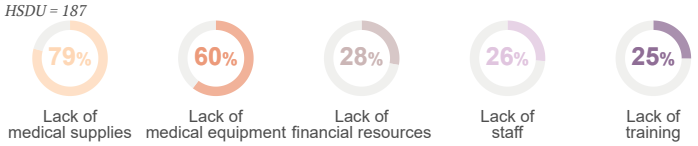



## Service availability by state

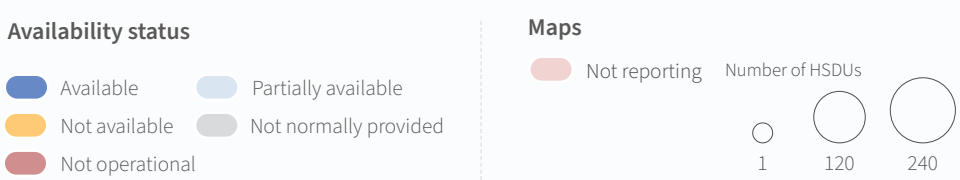


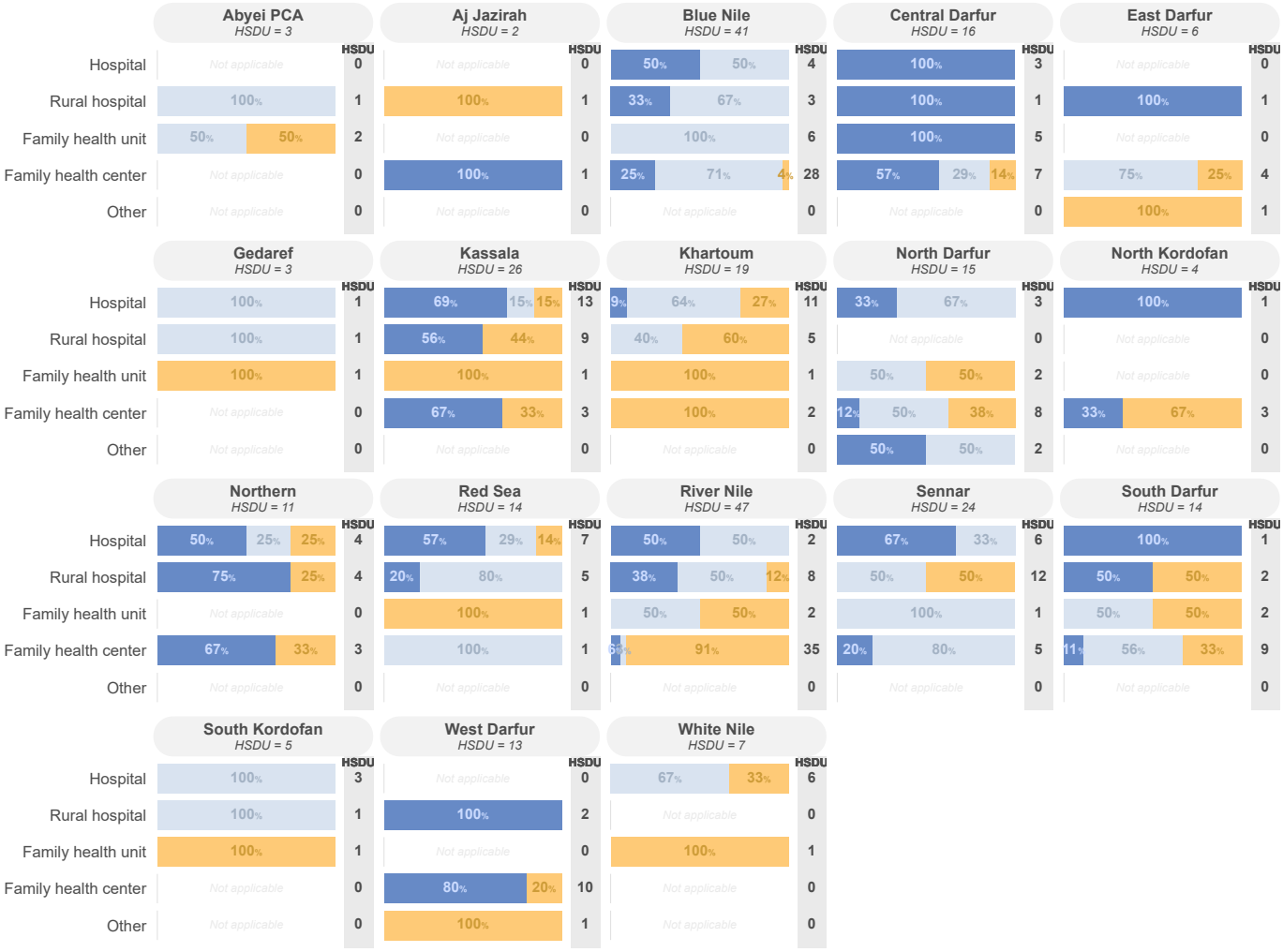
## Barriers impeding service availability



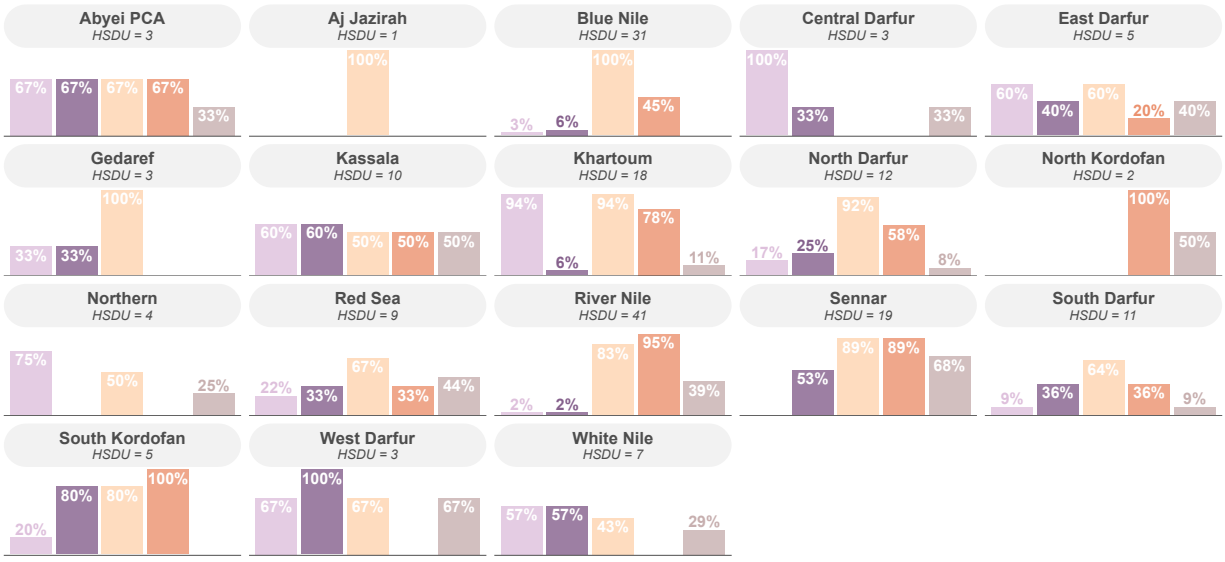

13 Advanced Syndrome-based management of difficulty breathing, shock, altered mental status, and polytrauma in a dedicated emergency unit, including for neonates, children, and adults. Interventions include intubation, mechanical ventilation, surgical airway, placement of chest drain, hemorrhage control, defibrillation, administration of IV fluids via peripheral and central venous line, with adjustment for age and condition, including malnutrition, and administration of essential emergency medications.



## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

Available | Partially available | Not available

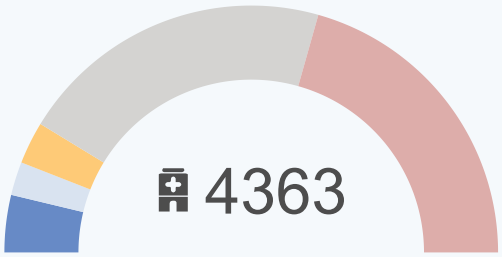
**Barriers** *for partial availability or non-availability.*

Lack of staff | Lack of supplies | Lack of financial resources | Lack of training | Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# MONITORED REFERRAL

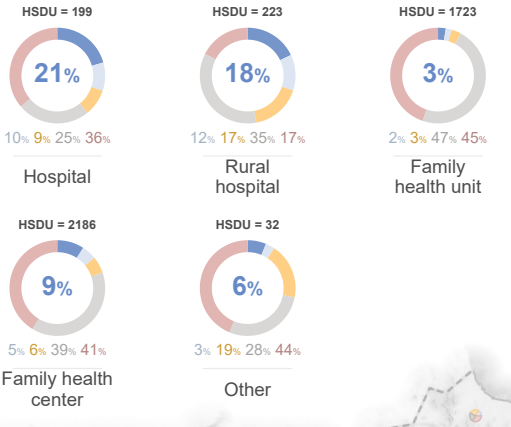
## Service availability[14]



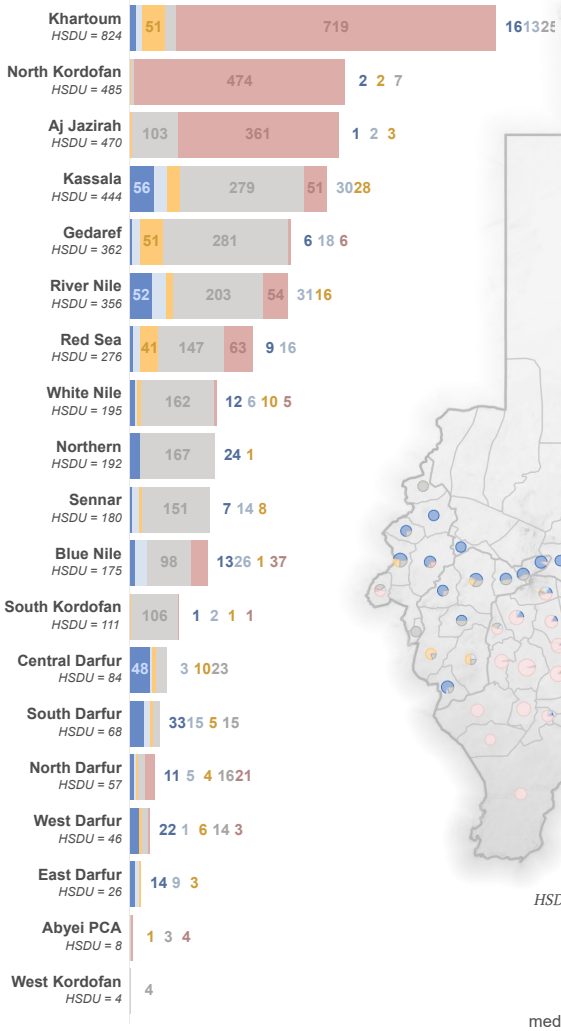

Labels

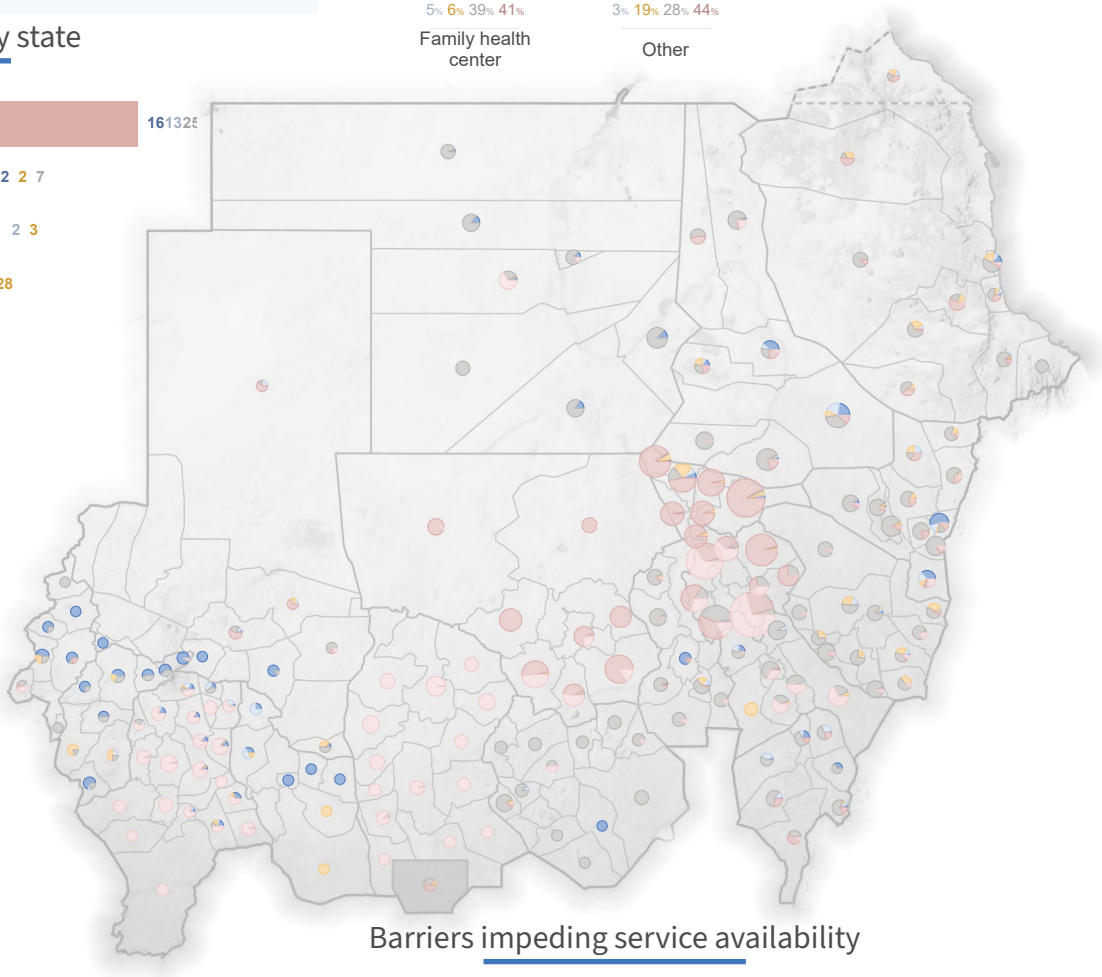
| | |
|---|---|
| 7% | 327 |
| 4% | 191 |
| 6% | 242 |
| 41% | 1804 |
| 41% | 1799 |

## Service availability by HSDU type

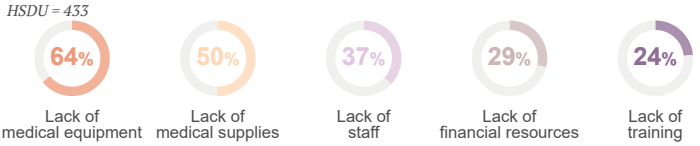



## Service availability by state



## Barriers impeding service availability




14 Direct provider monitoring during transport to an appropriate healthcare facility and structured handover to facility personnel.

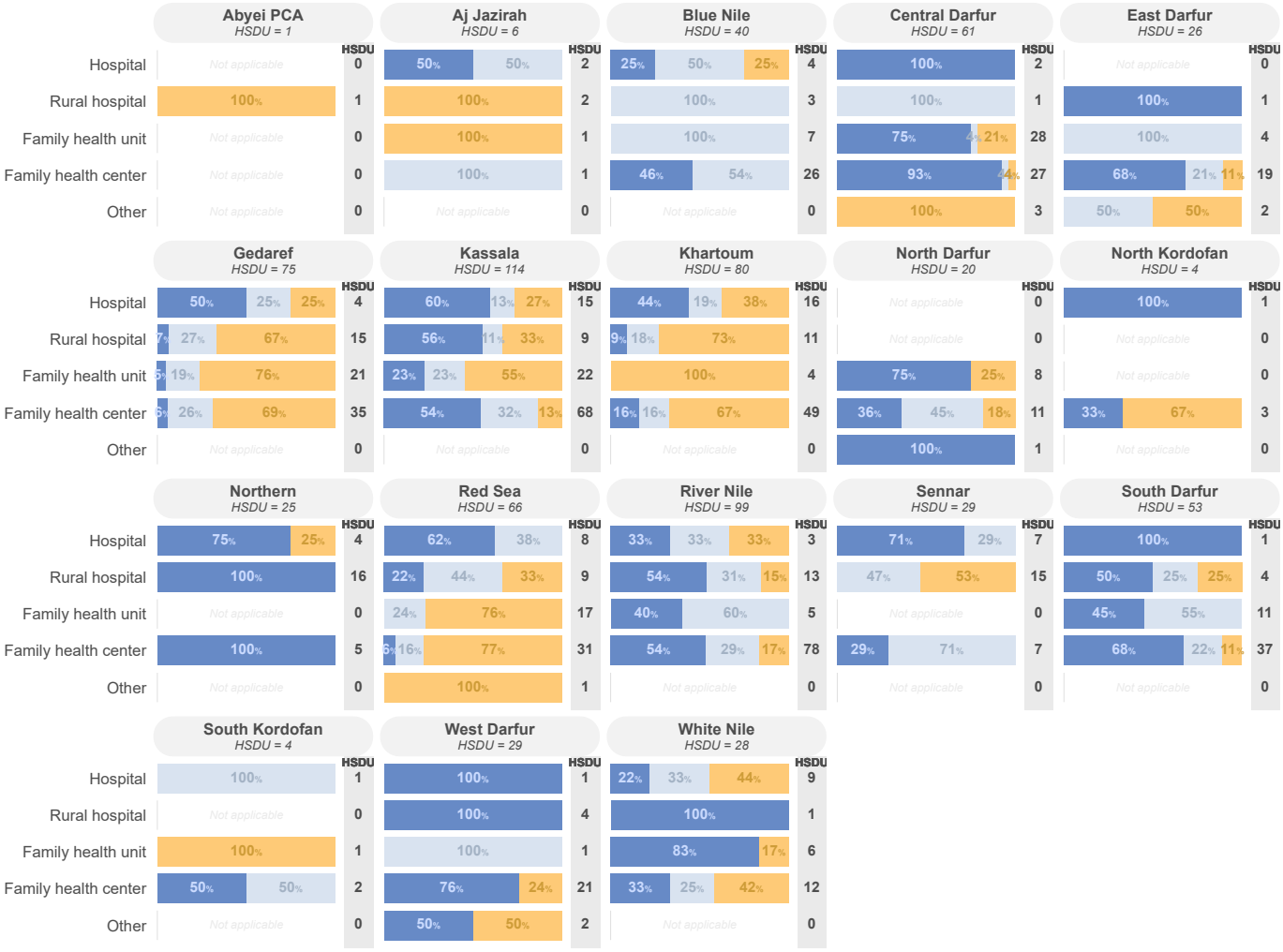
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

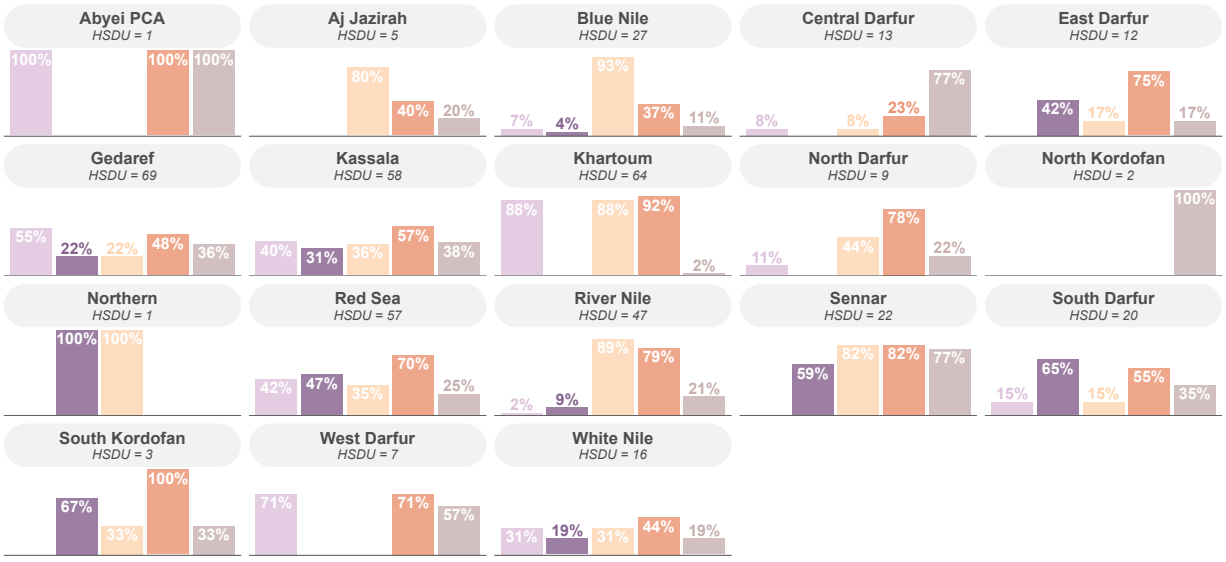
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

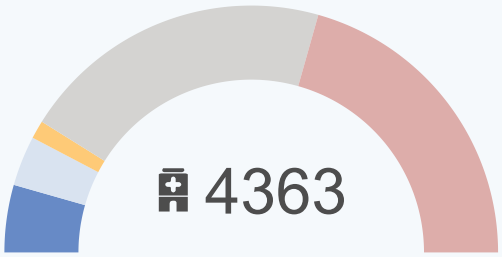
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

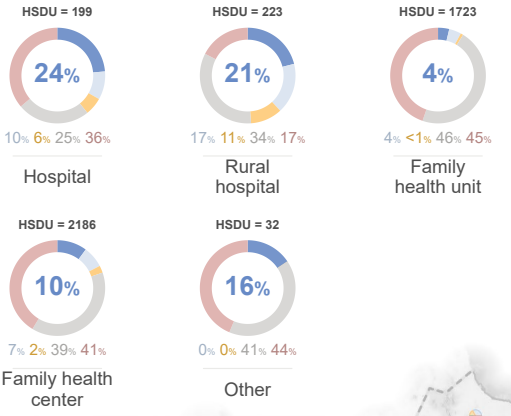
# REFERRAL CAPACITY

## Service availability[15]

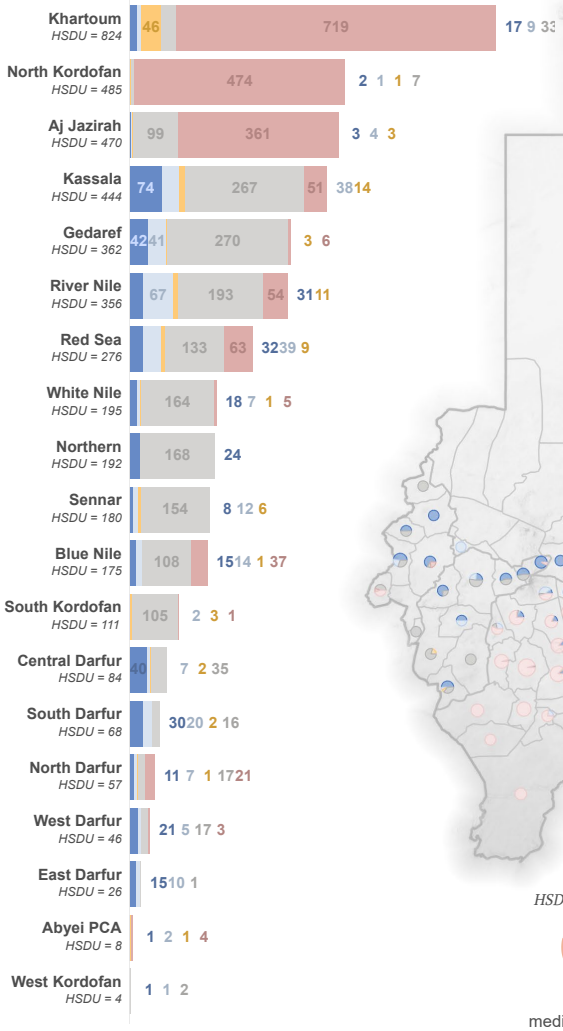


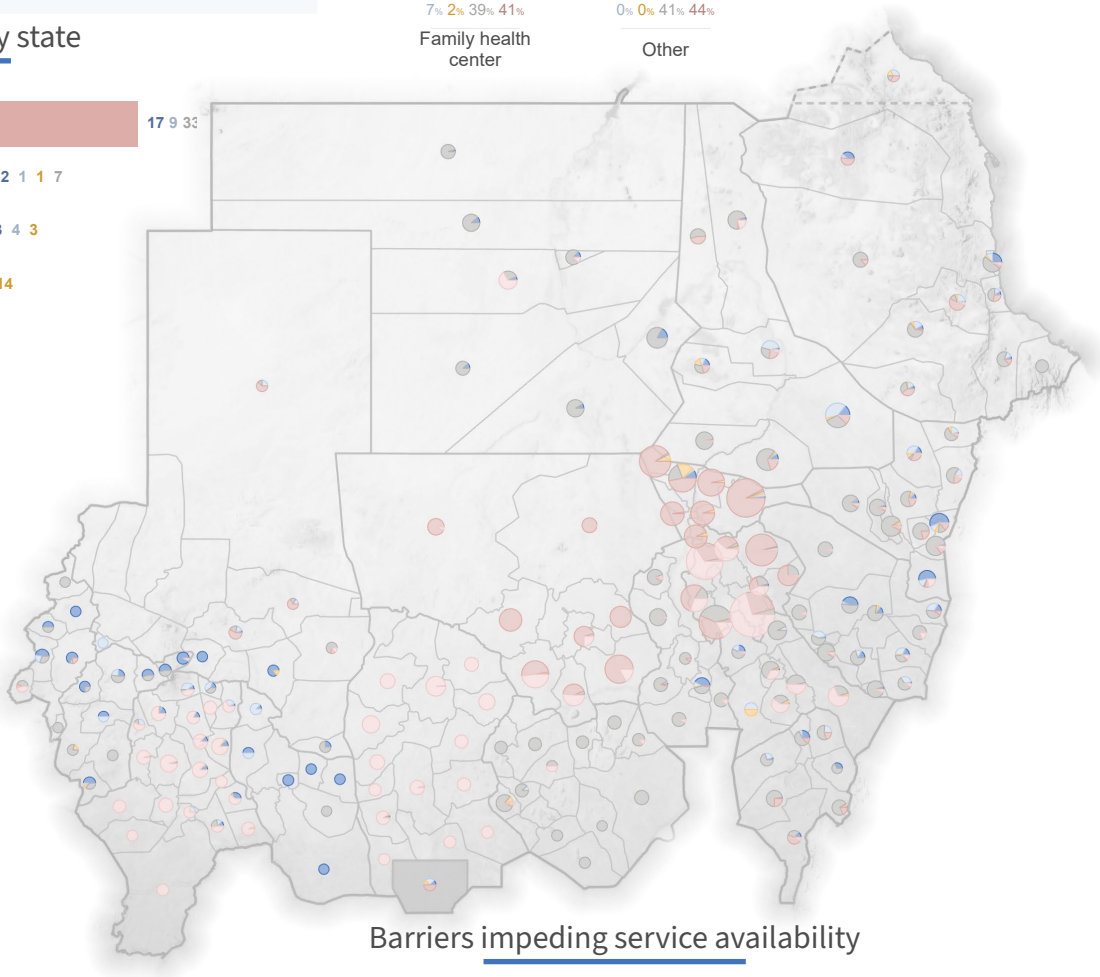

| Labels | |
|---|---|
| 9% | 385 |
| 7% | 286 |
| 2% | 104 |
| 41% | 1789 |
| 41% | 1799 |

## Service availability by HSDU type

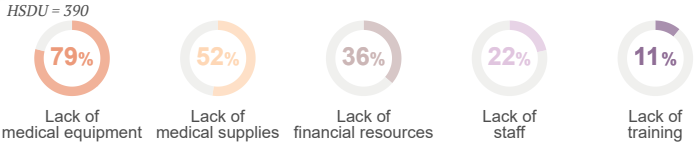



## Service availability by state



## Barriers impeding service availability




15 Referral procedures, means of communication, and access to transportation.

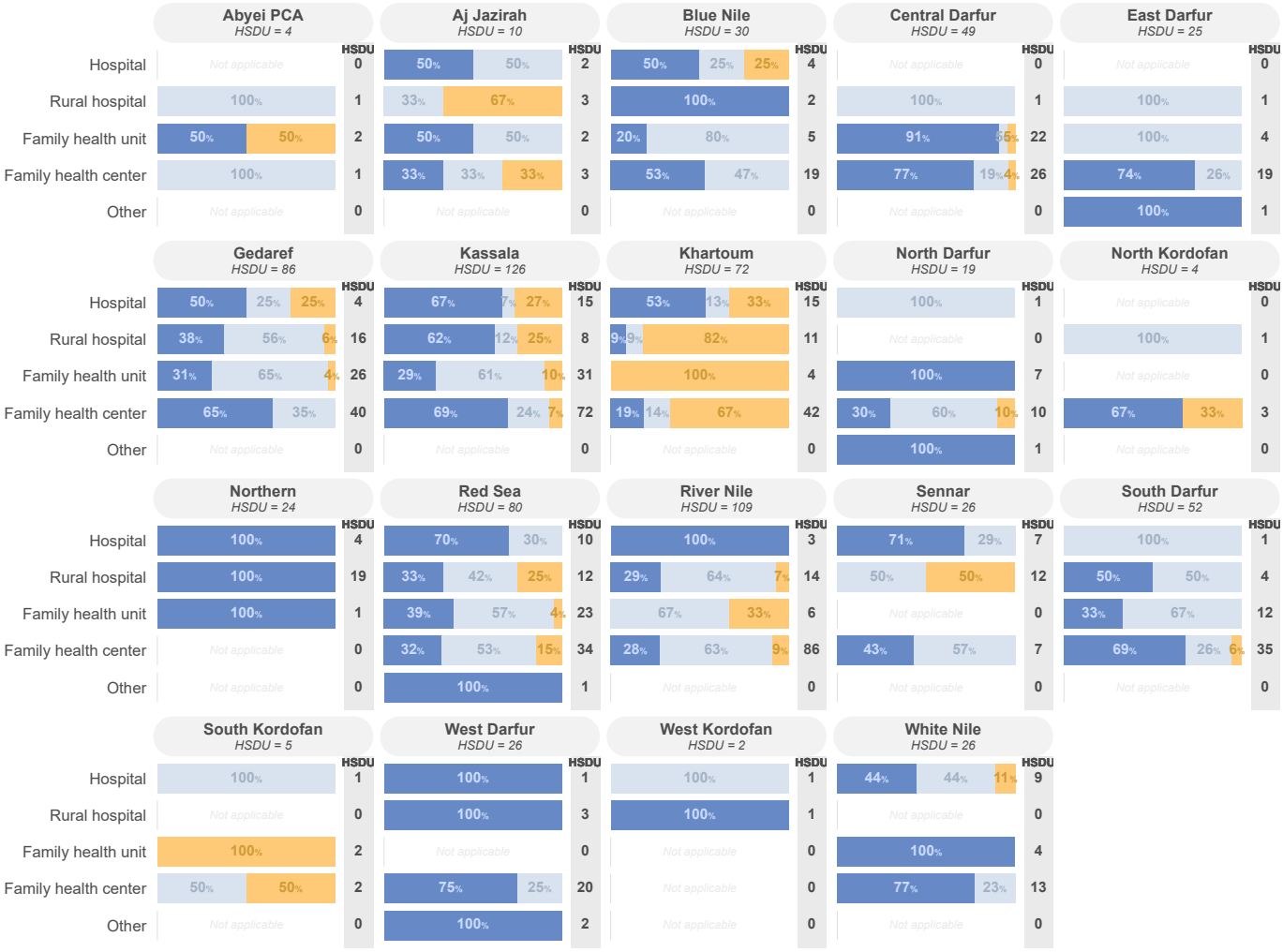
**Availability status**

Available | Partially available | Not available | Not normally provided | Not operational

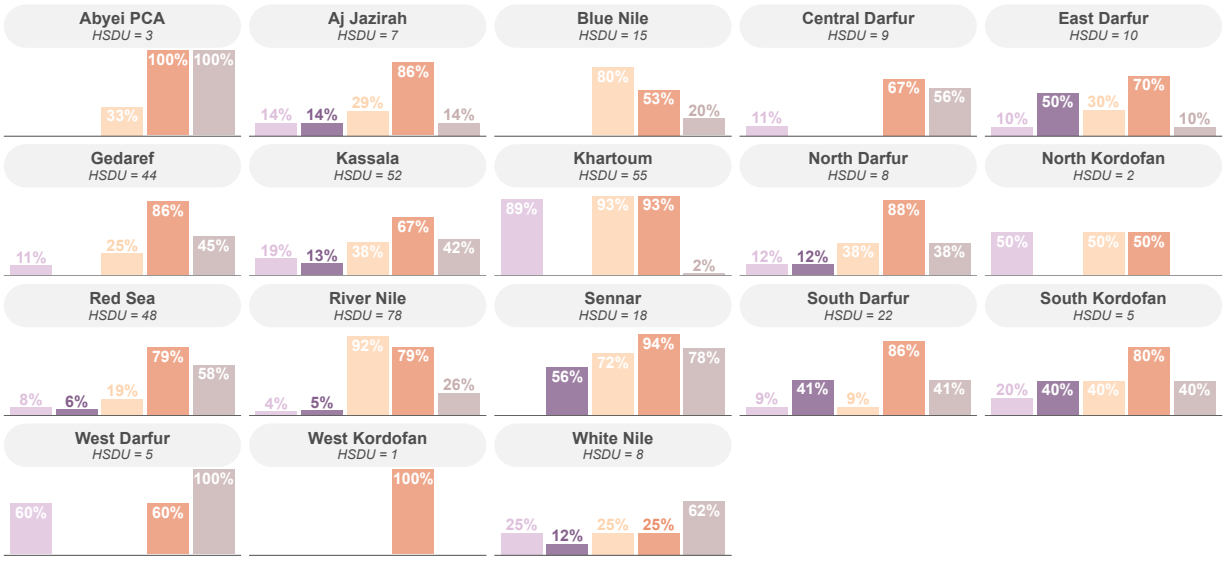
**Maps**

Not reporting | Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

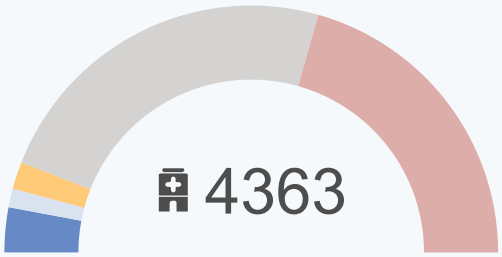
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# ACCEPTANCE OF REFERRALS

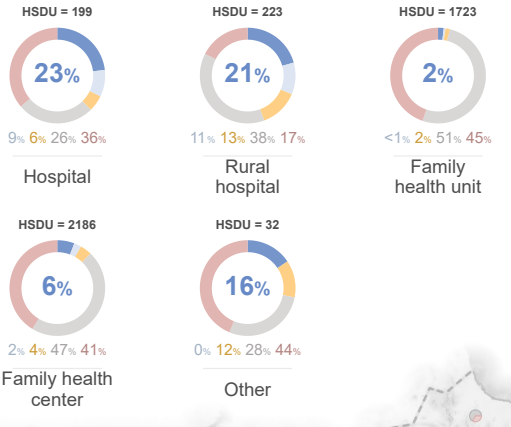
## Service availability[16]



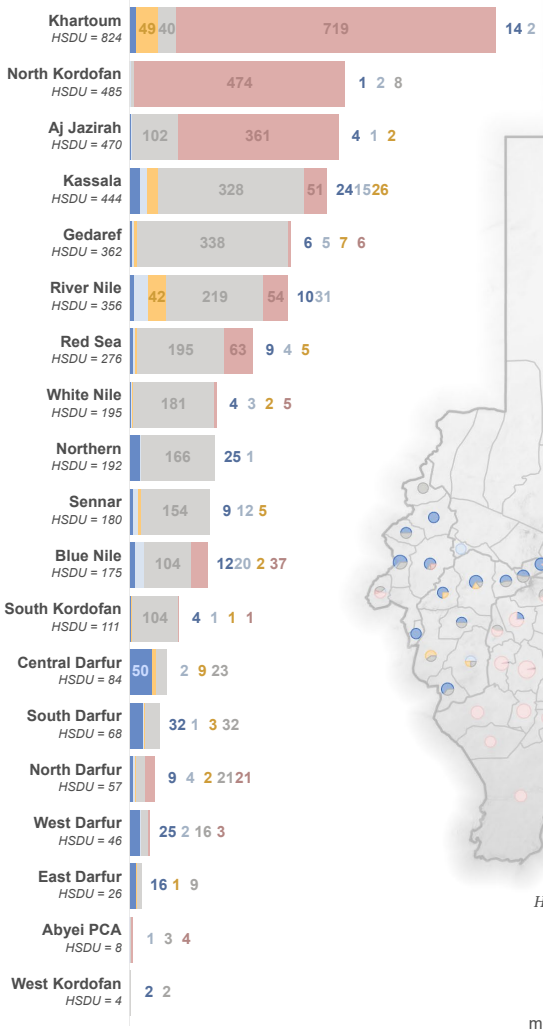

*Labels*

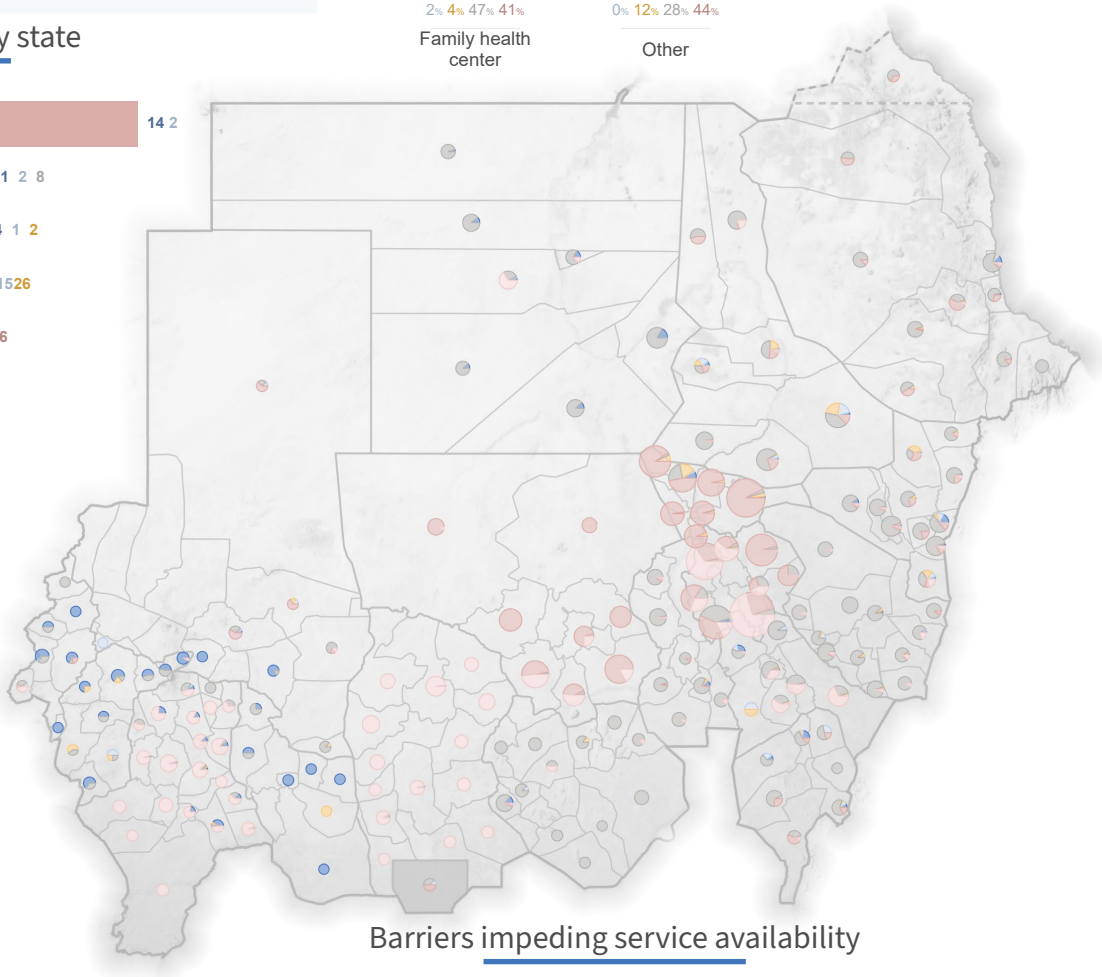
6% | 256
2% | 107
4% | 156
47% | 2045
41% | 1799

## Service availability by HSDU type

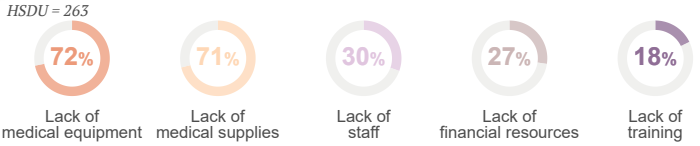



## Service availability by state



## Barriers impeding service availability




16 Acceptance of referrals with remote decision support for prehospital providers and primary healthcare facilities, and condition-specific protocol-based referral to higher levels.

**Availability status**

Available | Partially available
Not available | Not normally provided
Not operational

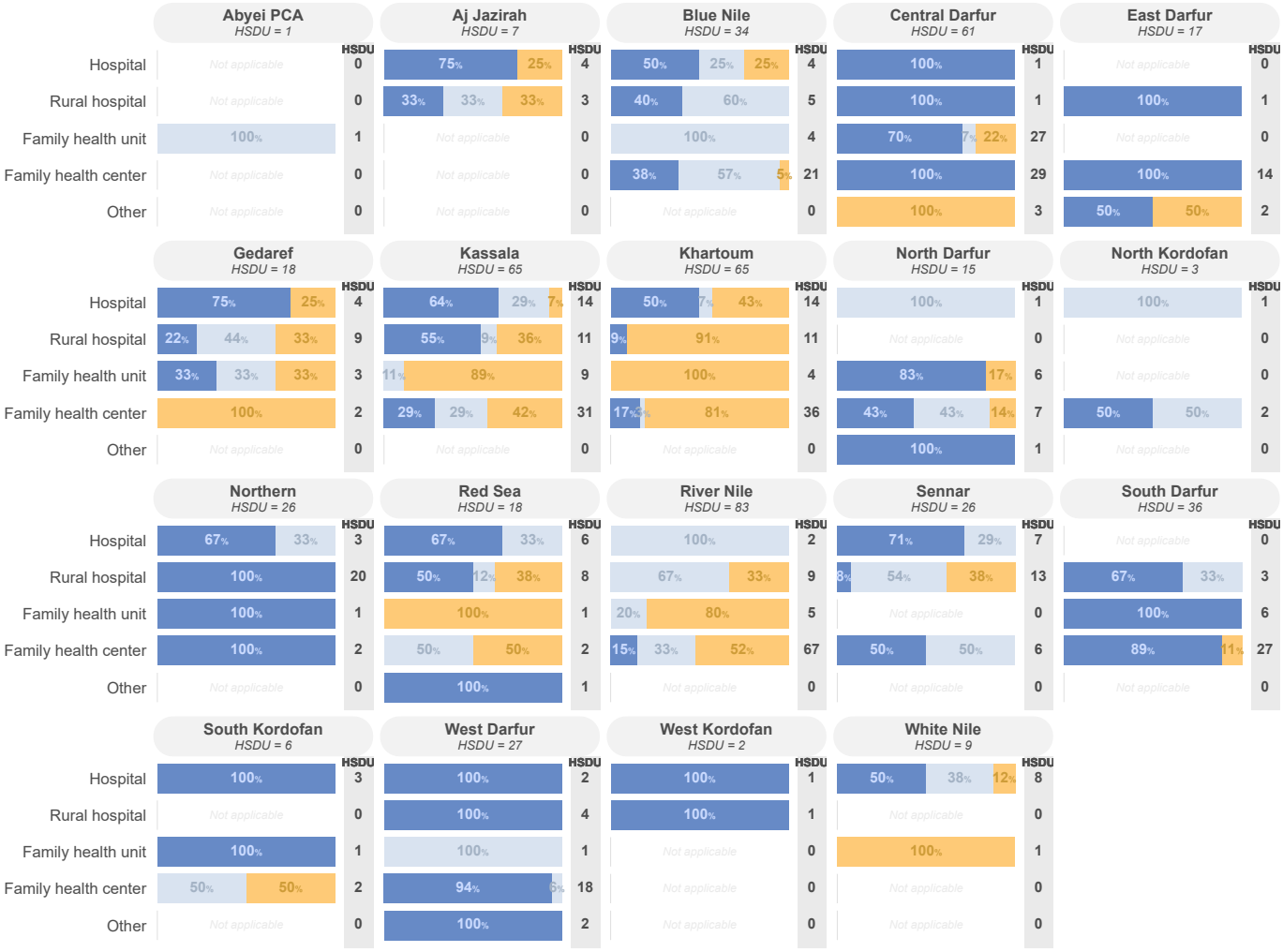
**Maps**

Not reporting

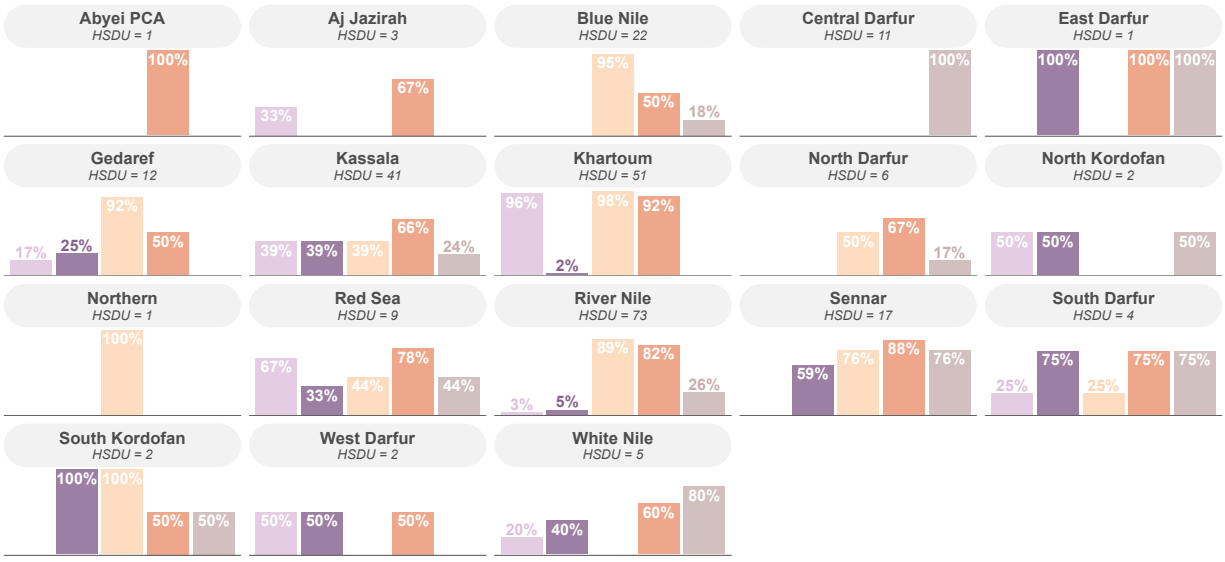
Number of HSDUs

1 | 120 | 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

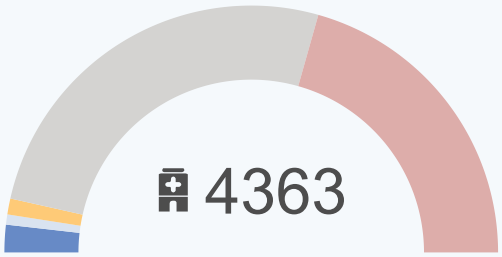
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# ACCEPTANCE OF COMPLEX REFERRALS

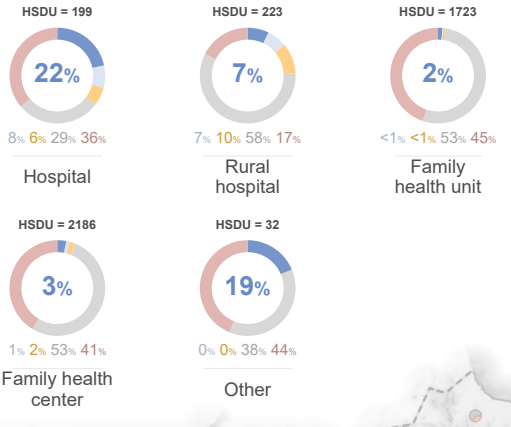
## Service availability[17]



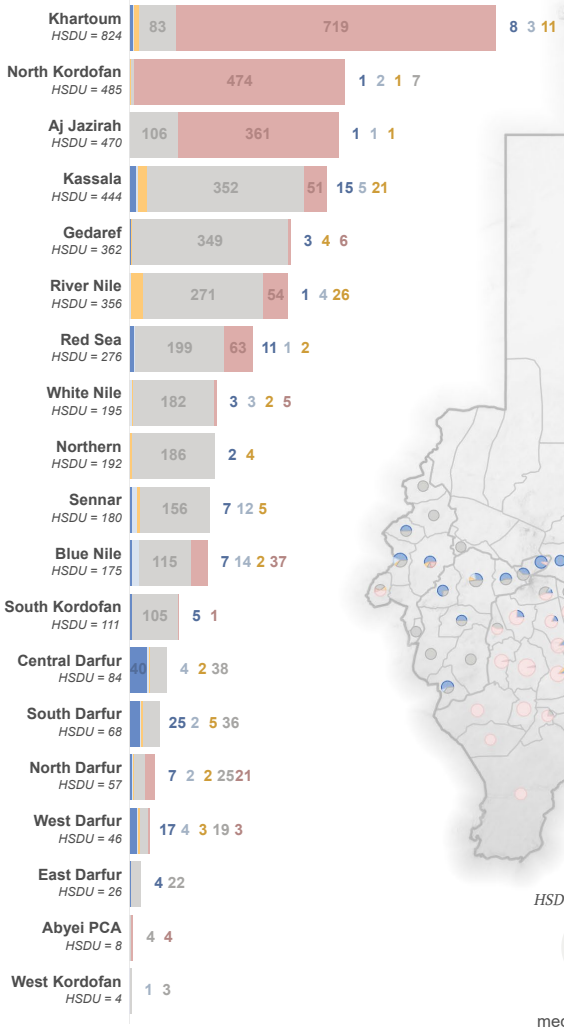

Labels

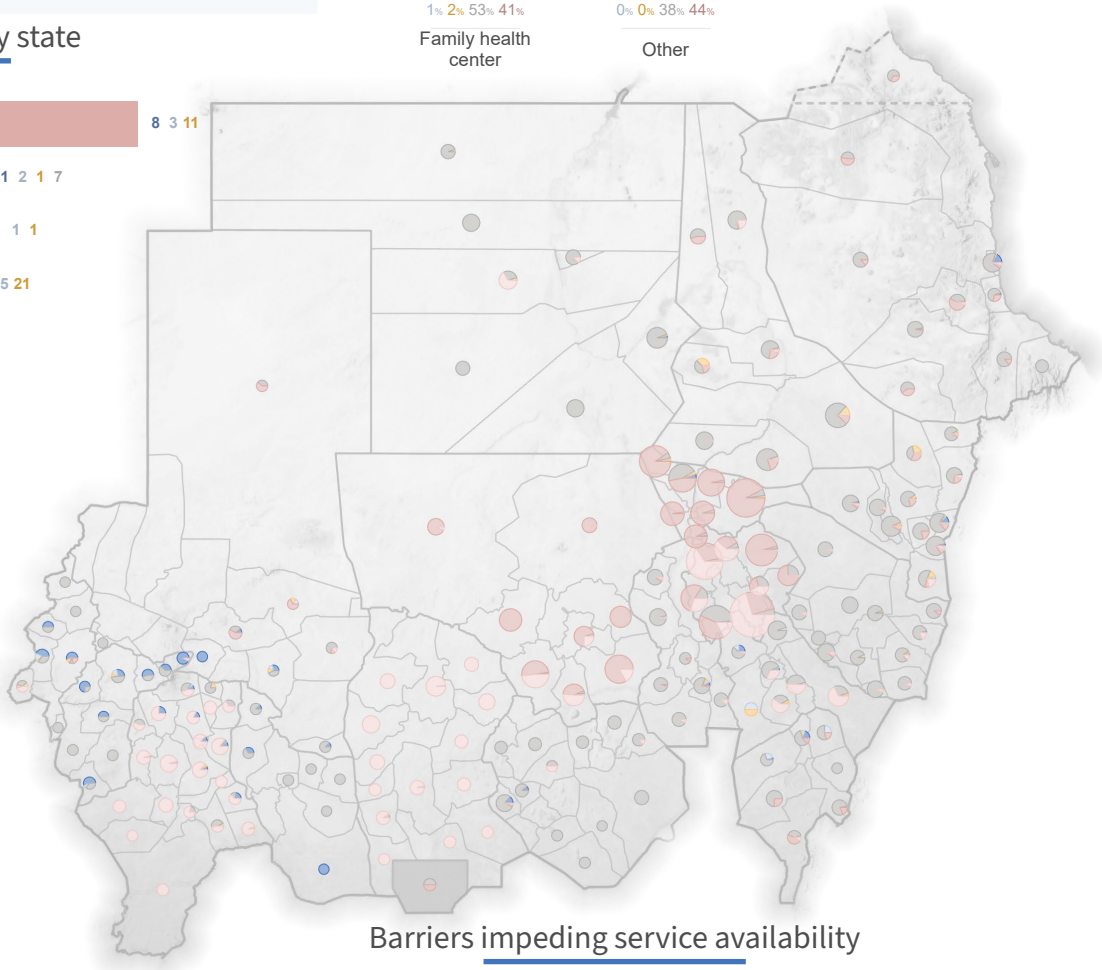
| | |
|---|---|
| 4% | 157 |
| 1% | 58 |
| 2% | 91 |
| 52% | 2258 |
| 41% | 1799 |

## Service availability by HSDU type




## Service availability by state



## Barriers impeding service availability


17 Acceptance of complex referrals with remote decision support for prehospital providers and lower-level facilities.

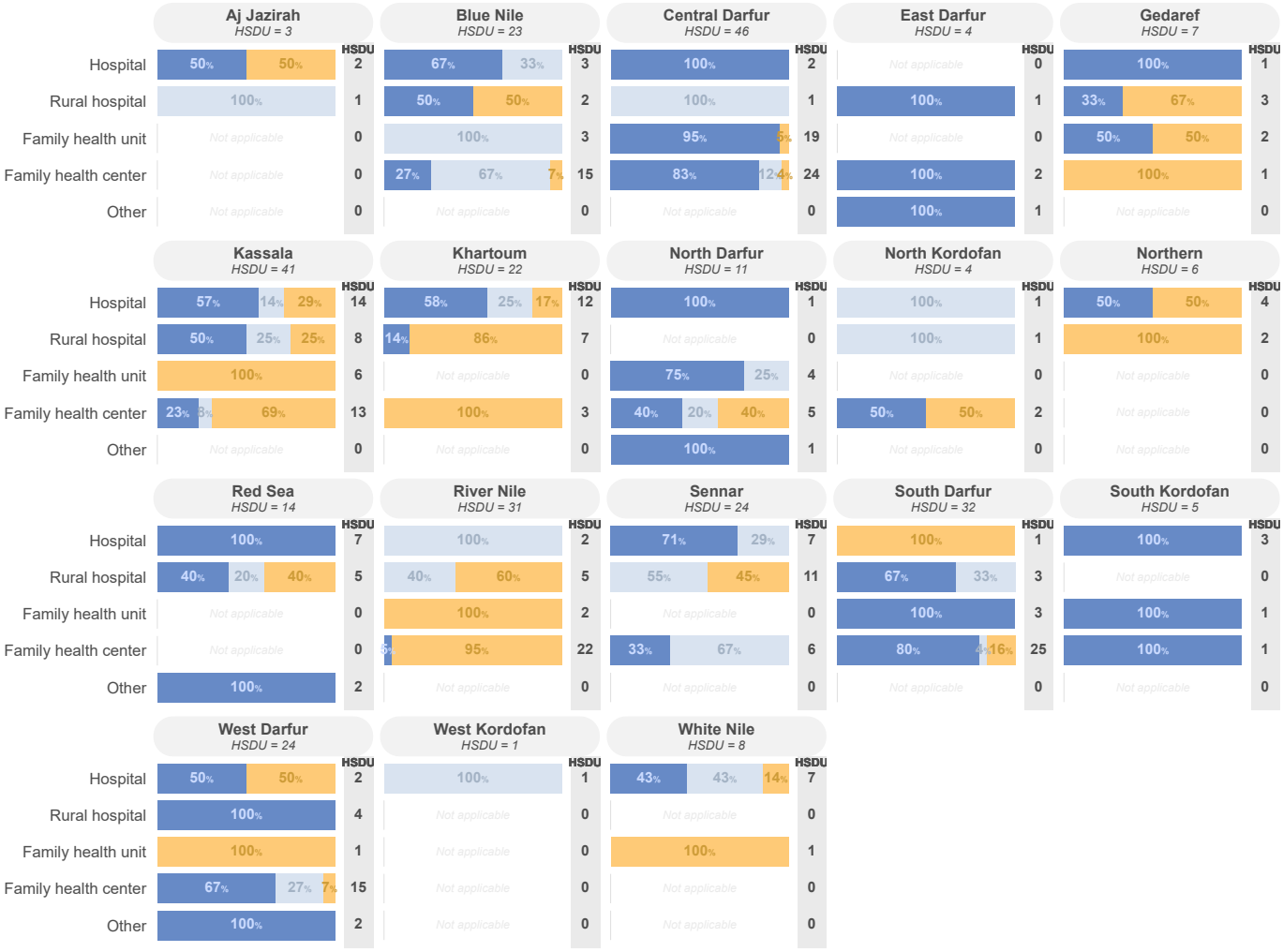
Availability status

Available
Partially available
Not available
Not normally provided
Not operational

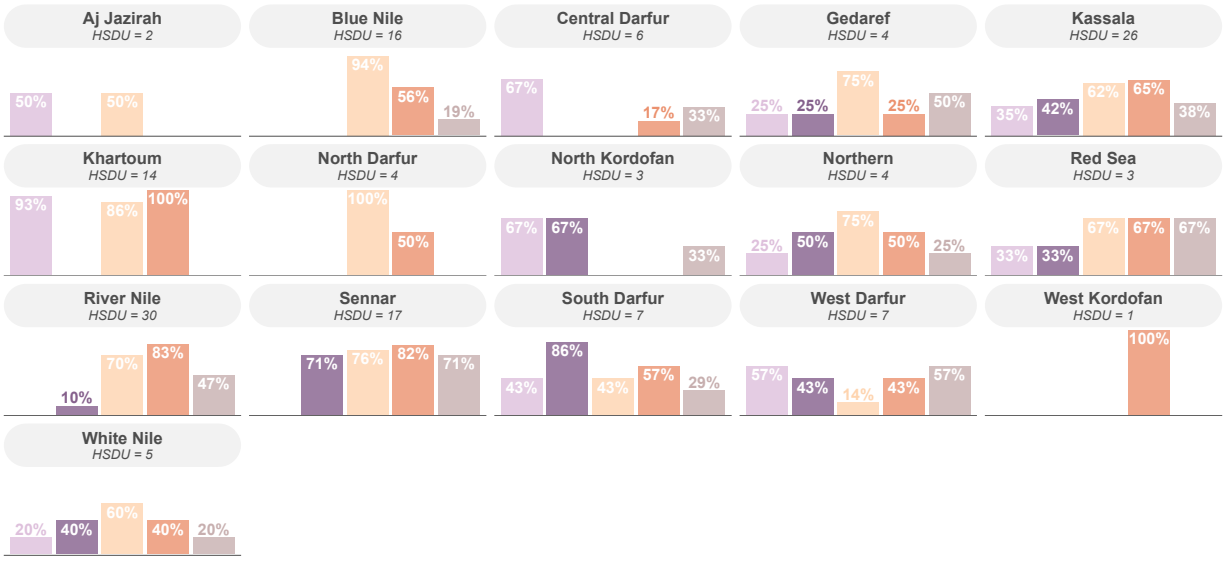
Maps

Not reporting
Number of HSDUs
1
120
240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

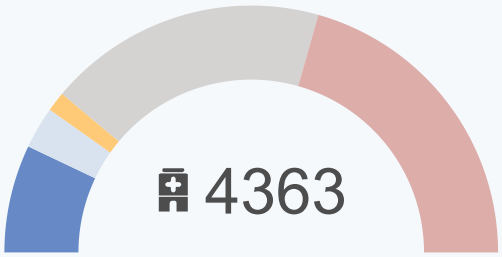
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# OUTPATIENT SERVICES FOR PRIMARY CARE

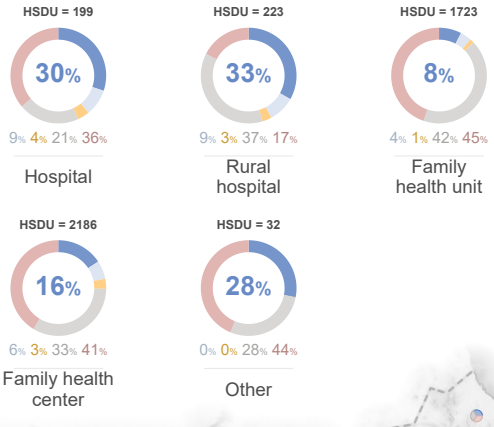
## Service availability[18]



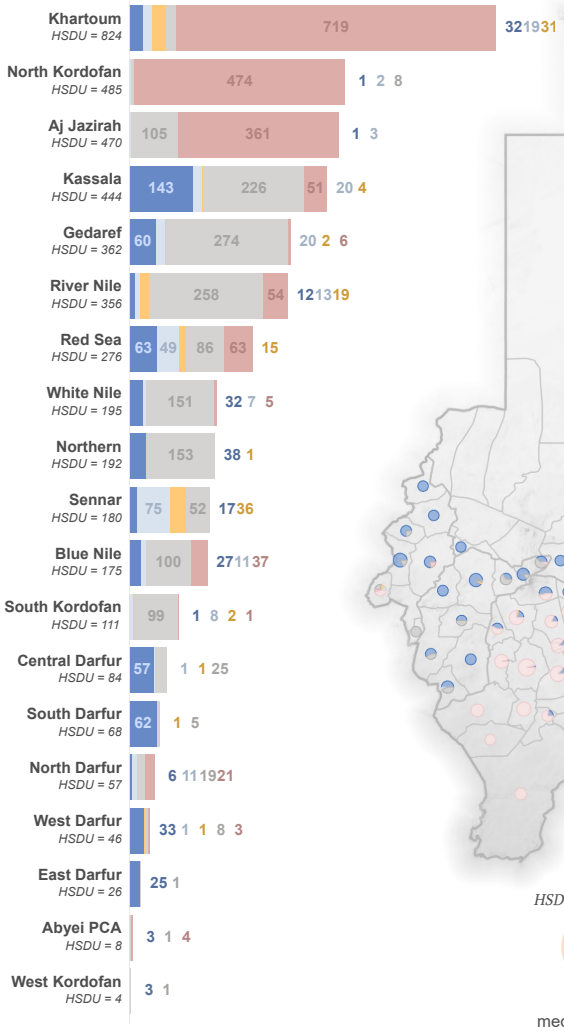

Labels

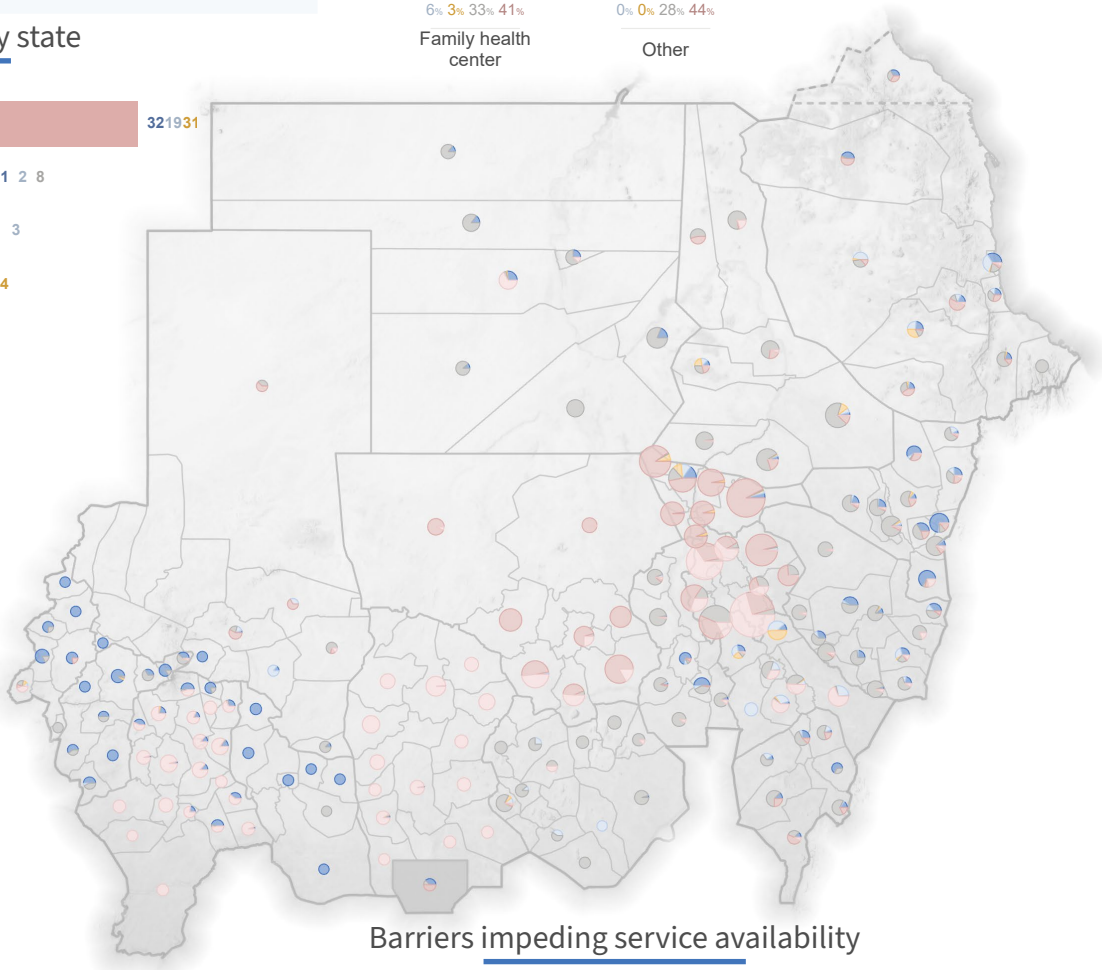
| | |
|---|---|
| 14% | 616 |
| 6% | 240 |
| 3% | 113 |
| 37% | 1595 |
| 41% | 1799 |

## Service availability by HSDU type

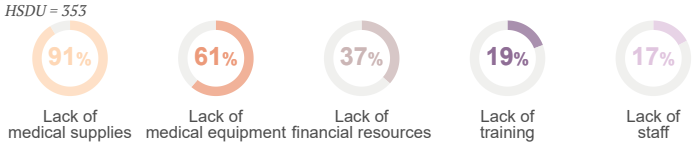



## Service availability by state



## Barriers impeding service availability




18 Outpatient services with availability of all essential drugs for primary care as per national guidelines.

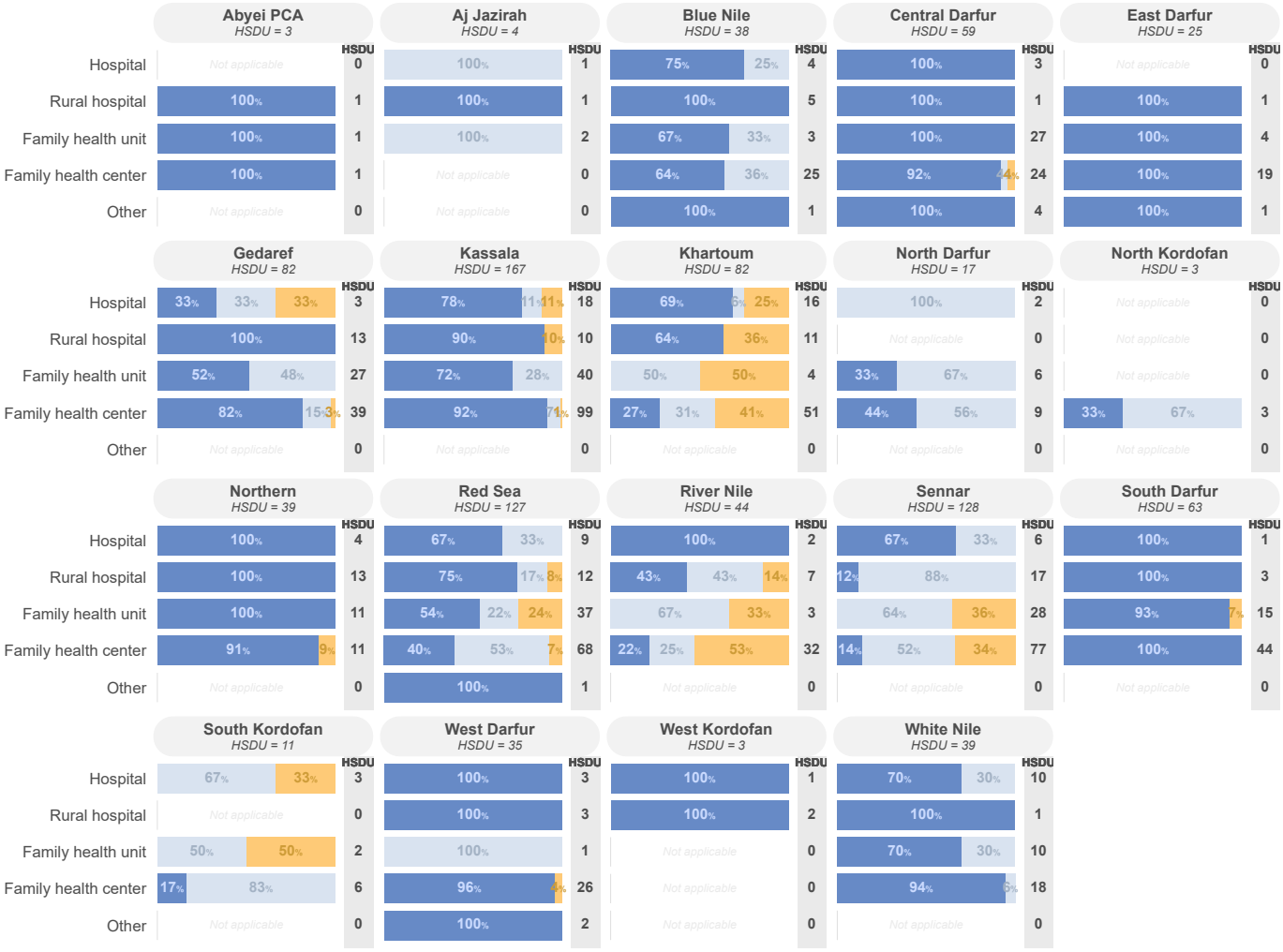
Availability status

Available
Partially available
Not available
Not normally provided
Not operational

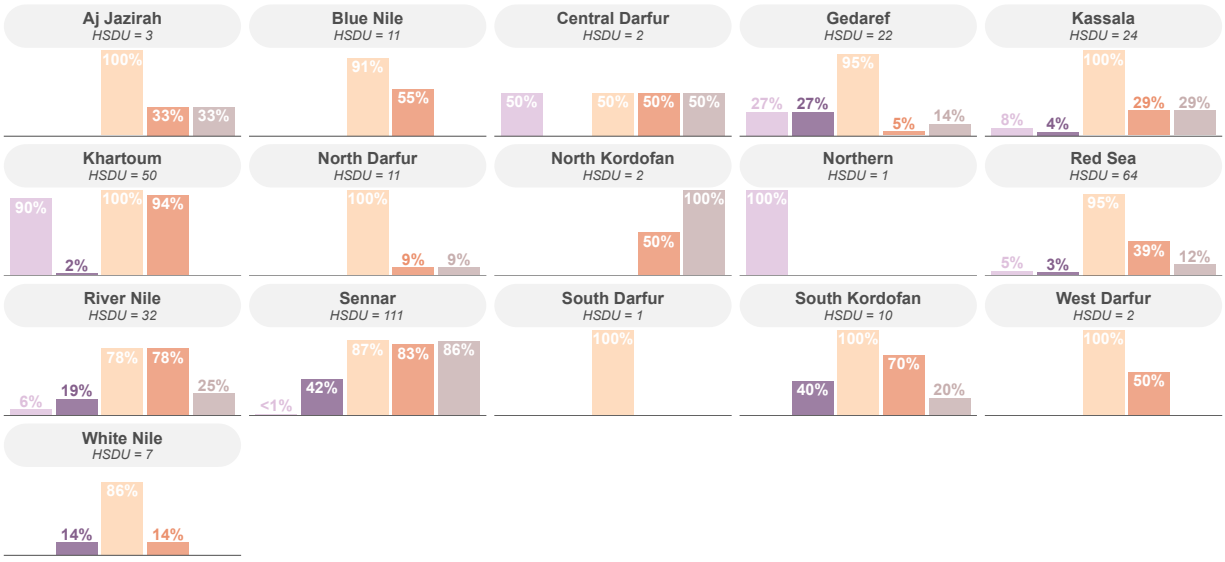
Maps

Not reporting
Number of HSDUs
1
120
240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

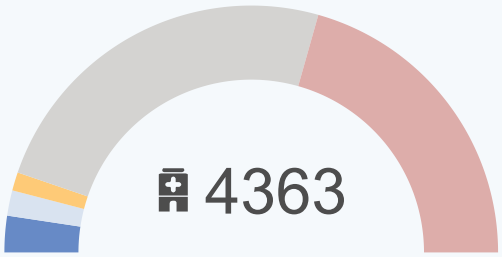
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

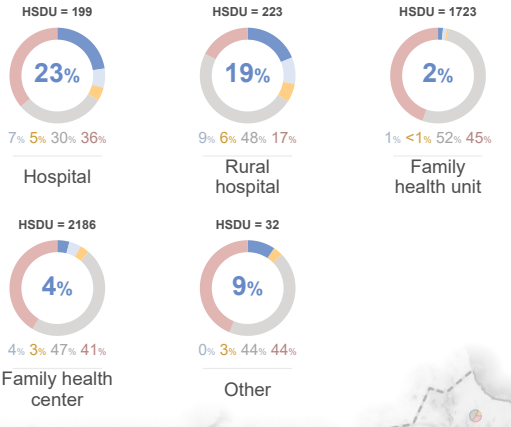
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# OUTPATIENT DEPARTMENT FOR SECONDARY CARE

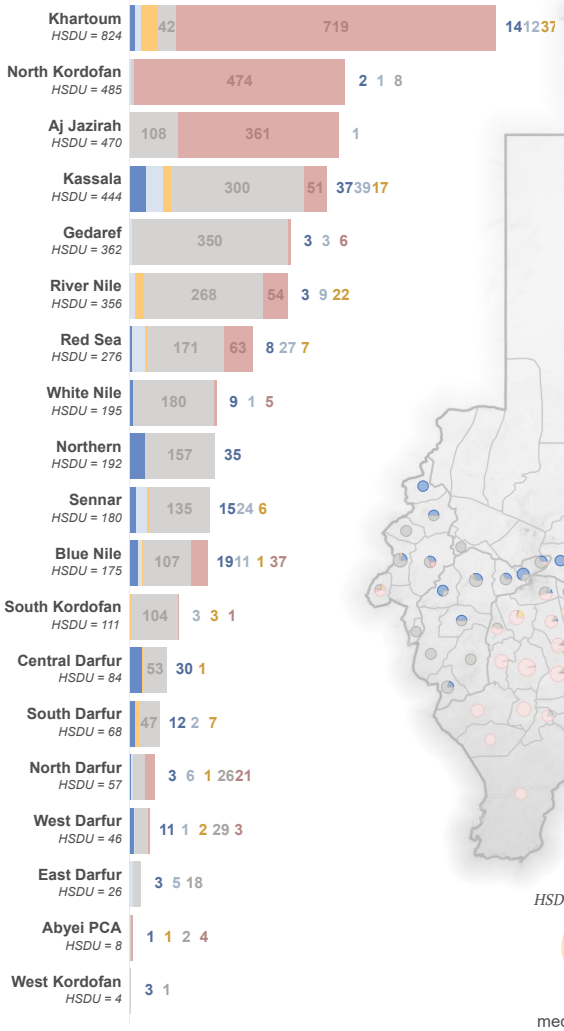
## Service availability[19]

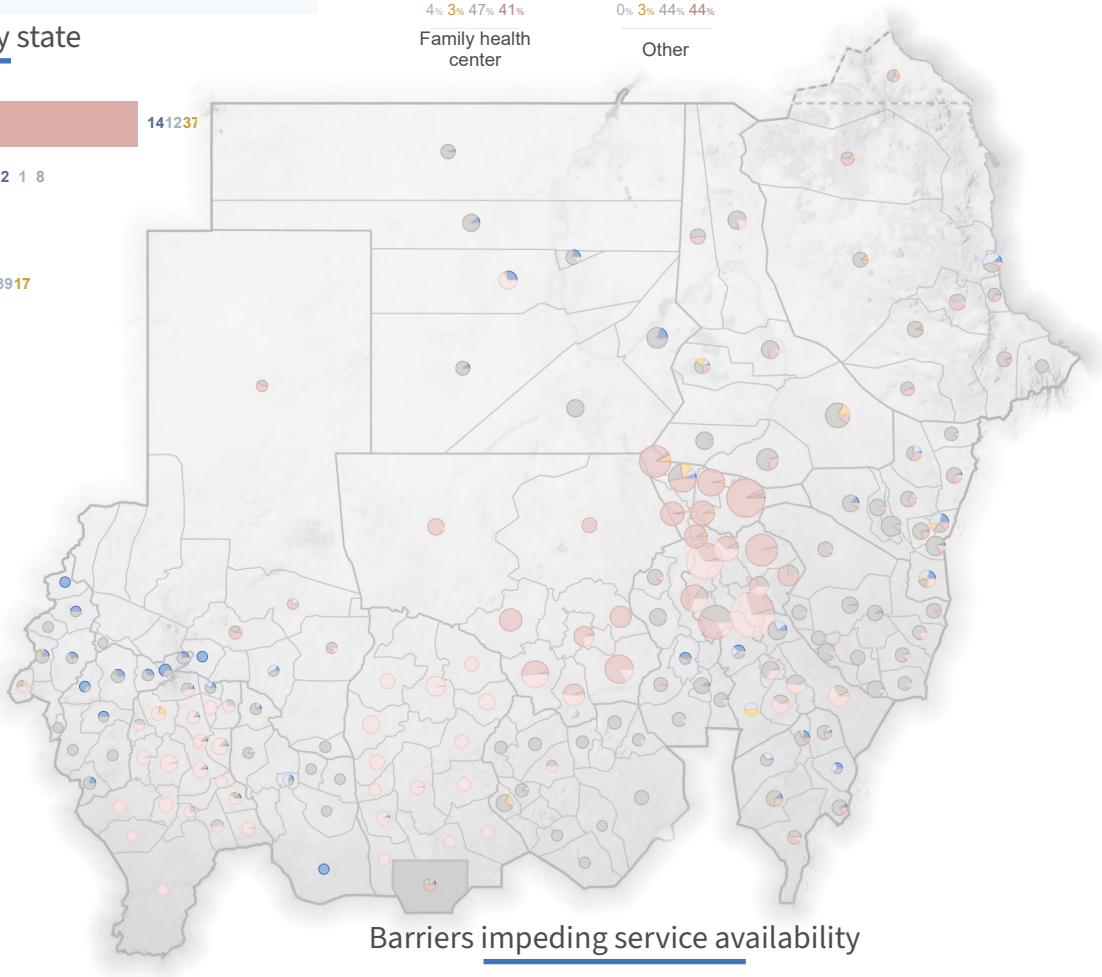



## Service availability by HSDU type

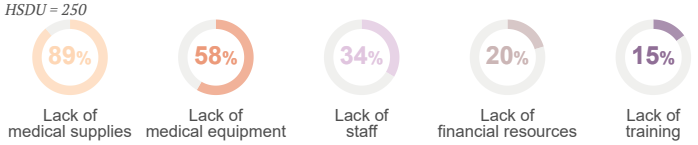



## Service availability by state

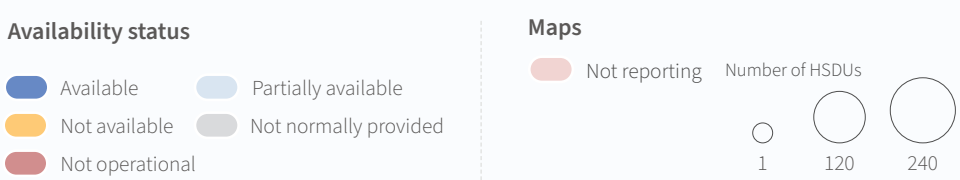


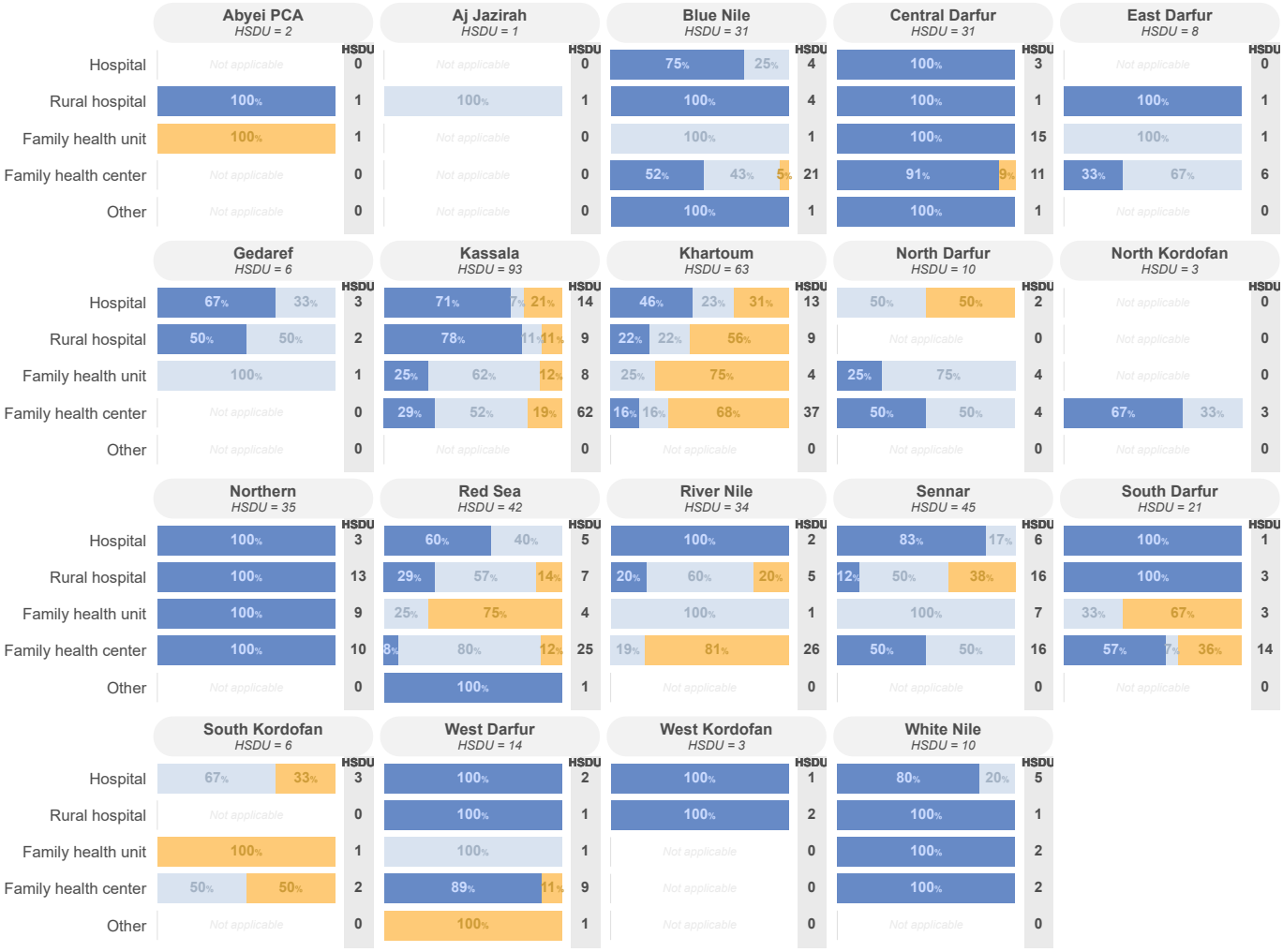
## Barriers impeding service availability



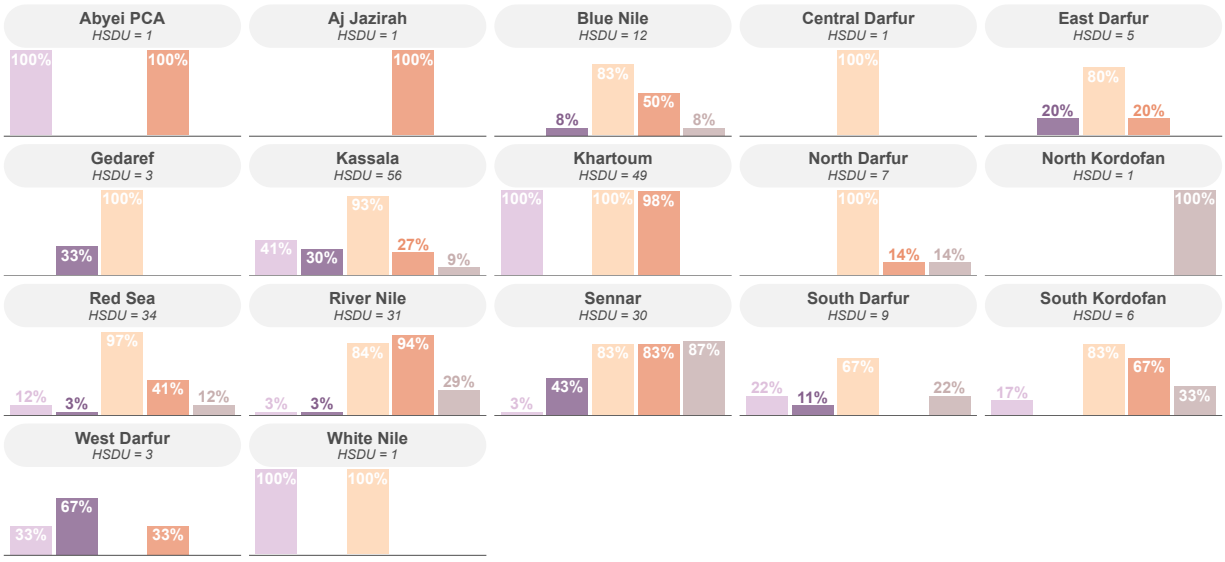

19 Outpatient department with availability of all essential drugs for secondary care as per national guidelines (including NCD and pain management), and at least one general practitioner.



## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

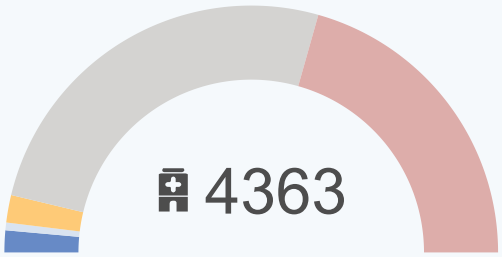
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# HOME VISITS

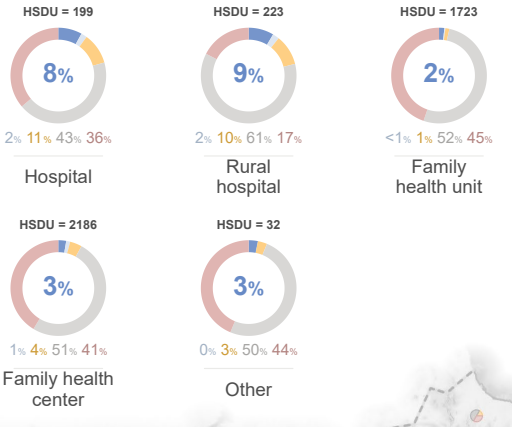
## Service availability[20]



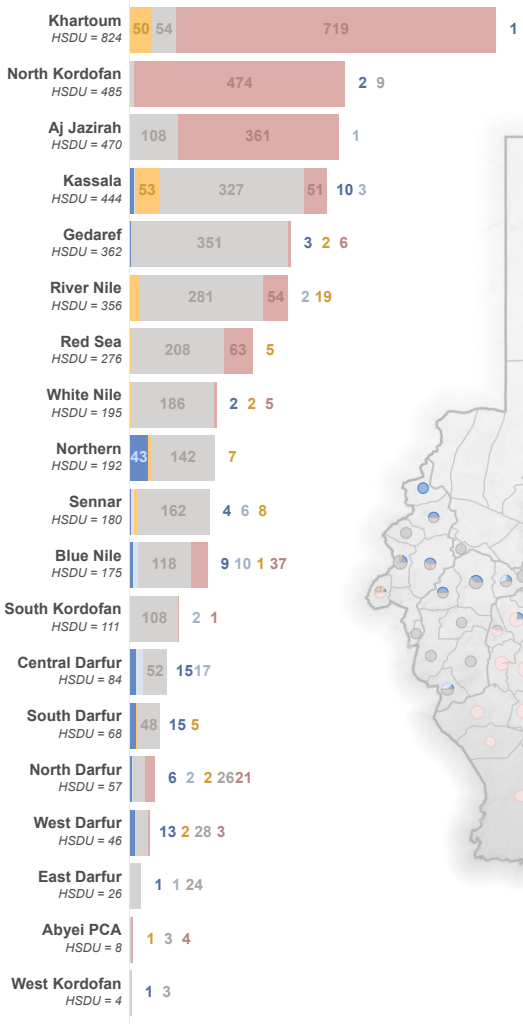

Labels

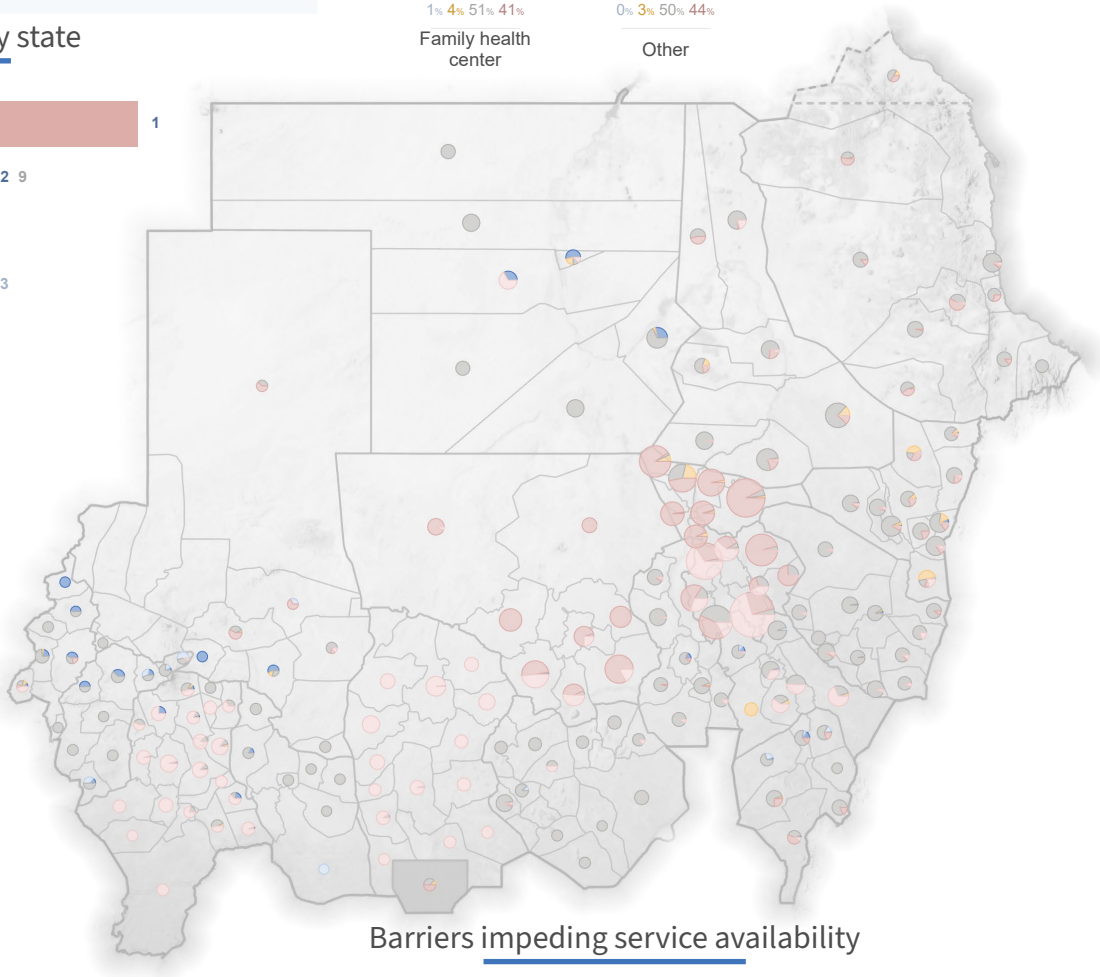
| | |
|---|---|
| 3% | 125 |
| 1% | 44 |
| 4% | 157 |
| 51% | 2238 |
| 41% | 1799 |

## Service availability by HSDU type

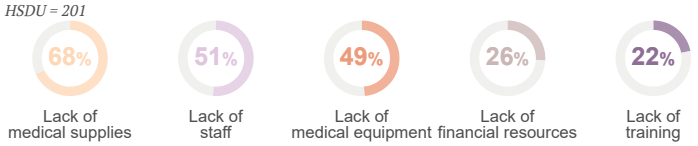



## Service availability by state



## Barriers impeding service availability




20 Including promotion of self-care practices and monitoring of NCD medication compliance.

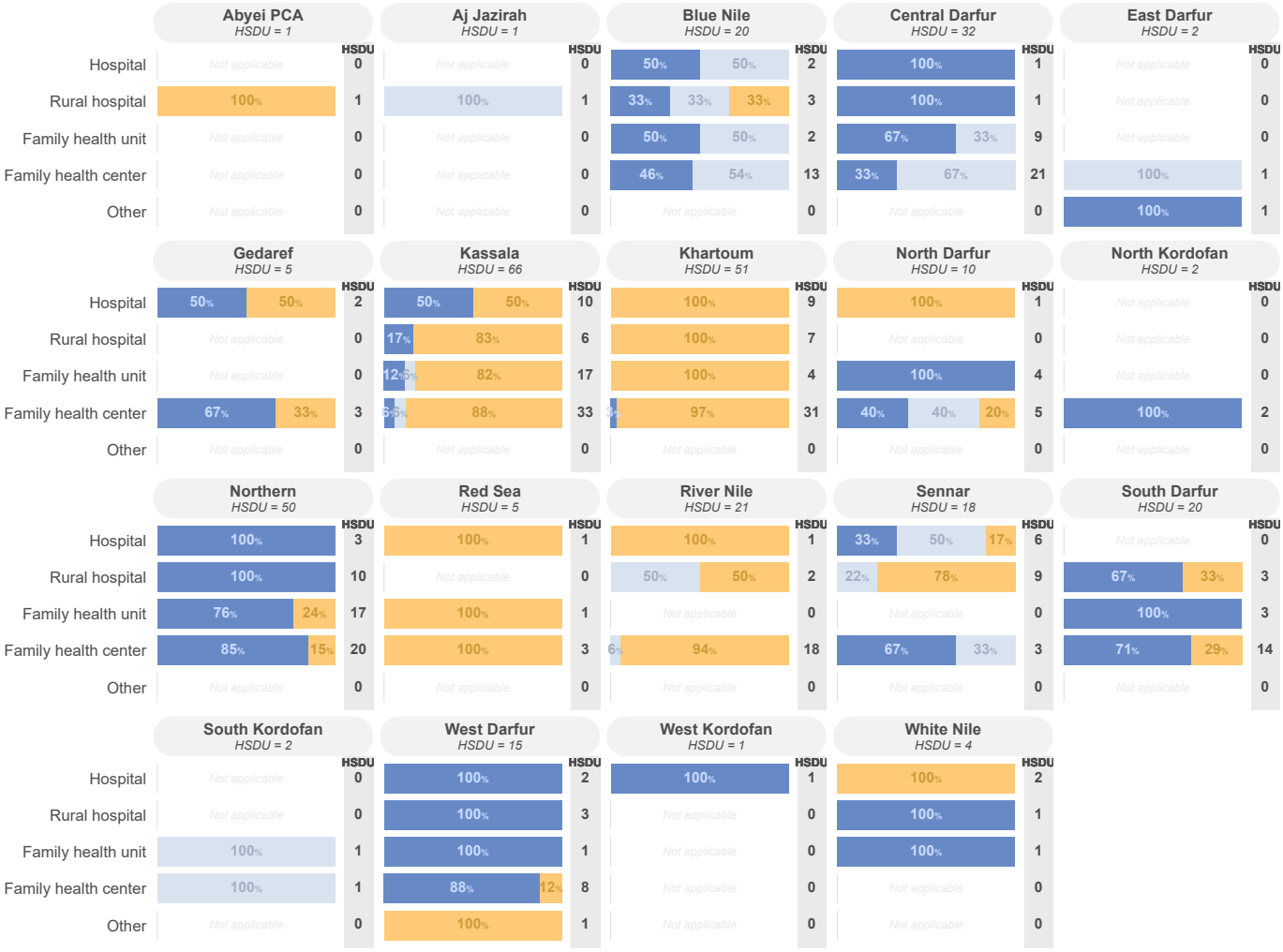
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

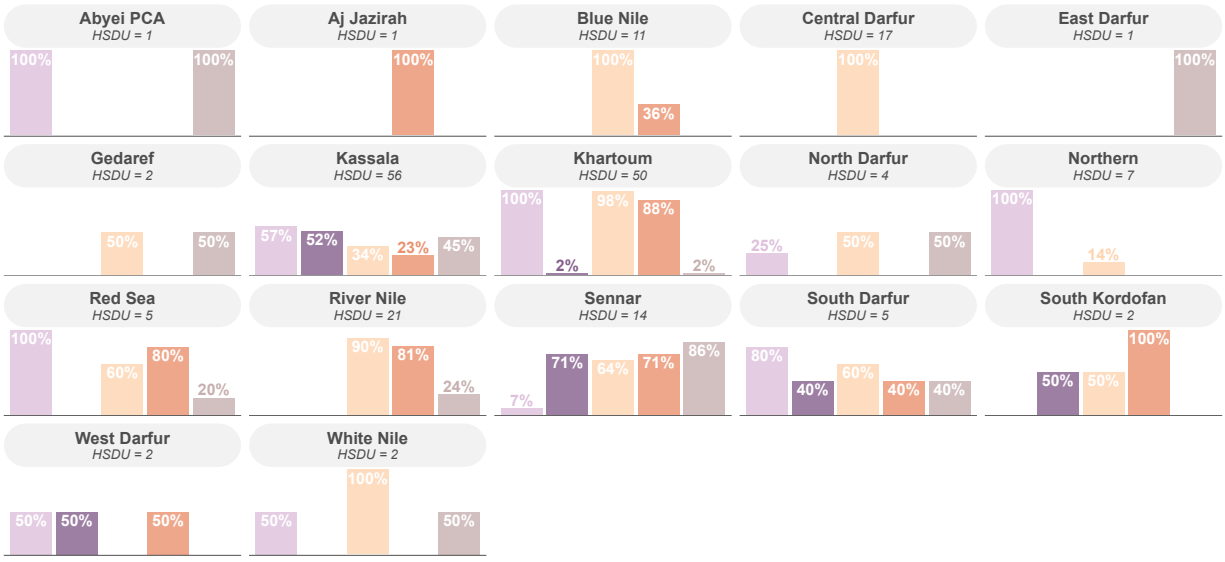
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

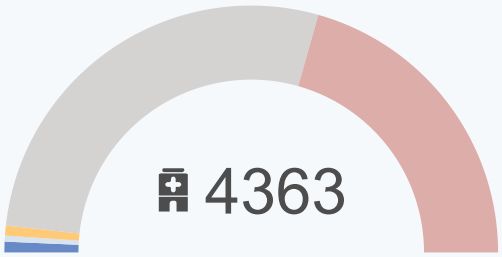
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# PROCEDURES FOR MASS CASUALTY SCENARIOS

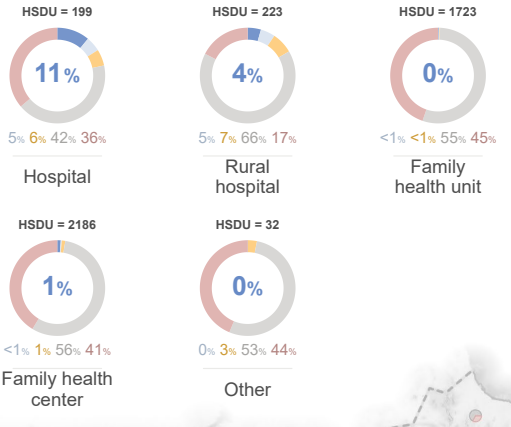
## Service availability[21]



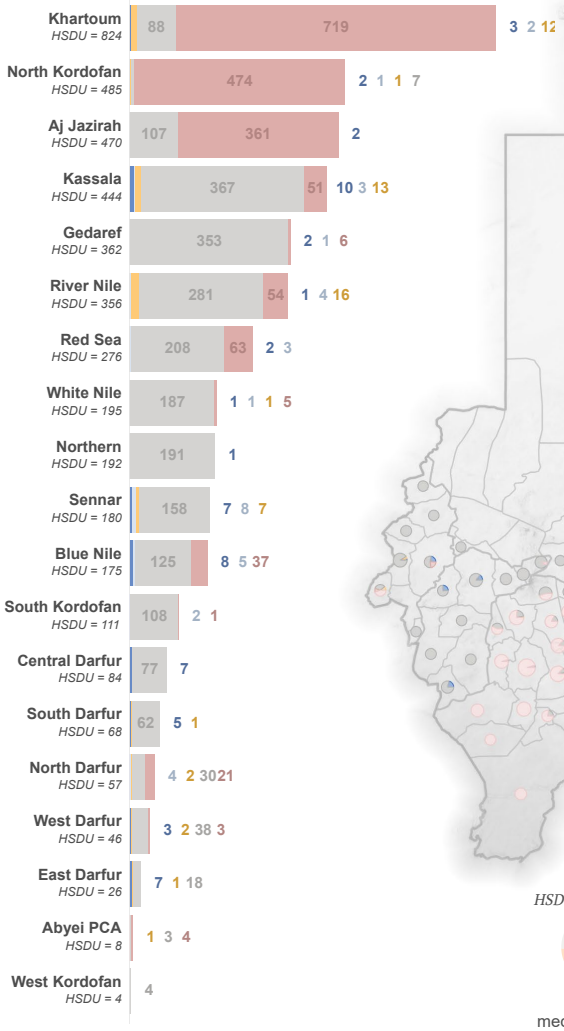

Labels

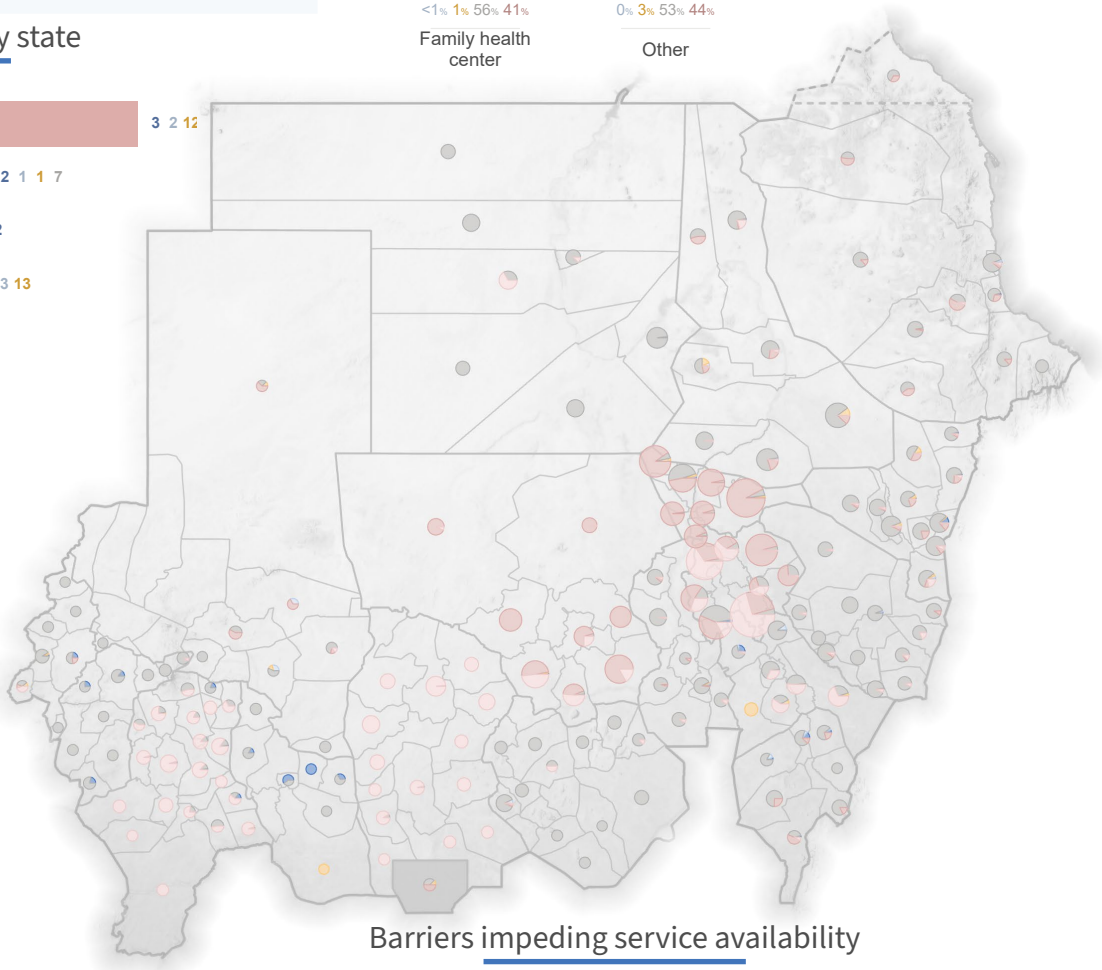
| | |
|---|---|
| 1% | 61 |
| <0.1% | 34 |
| 1% | 57 |
| 55% | 2412 |
| 41% | 1799 |

## Service availability by HSDU type




## Service availability by state



## Barriers impeding service availability


21 Procedures in place for early discharge of post-operatory patients through referral to secondary hospitals, in mass casualty scenarios.

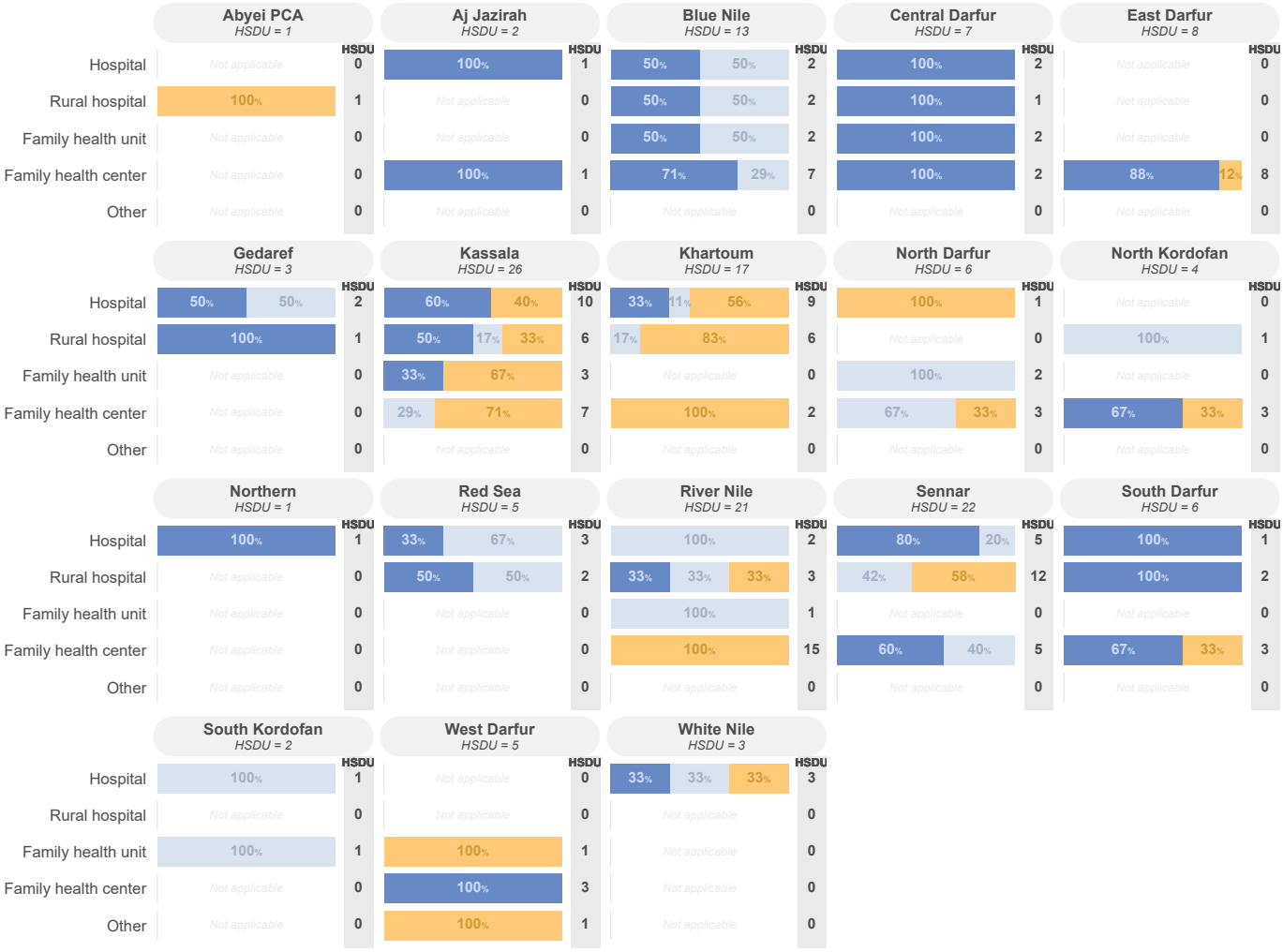
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

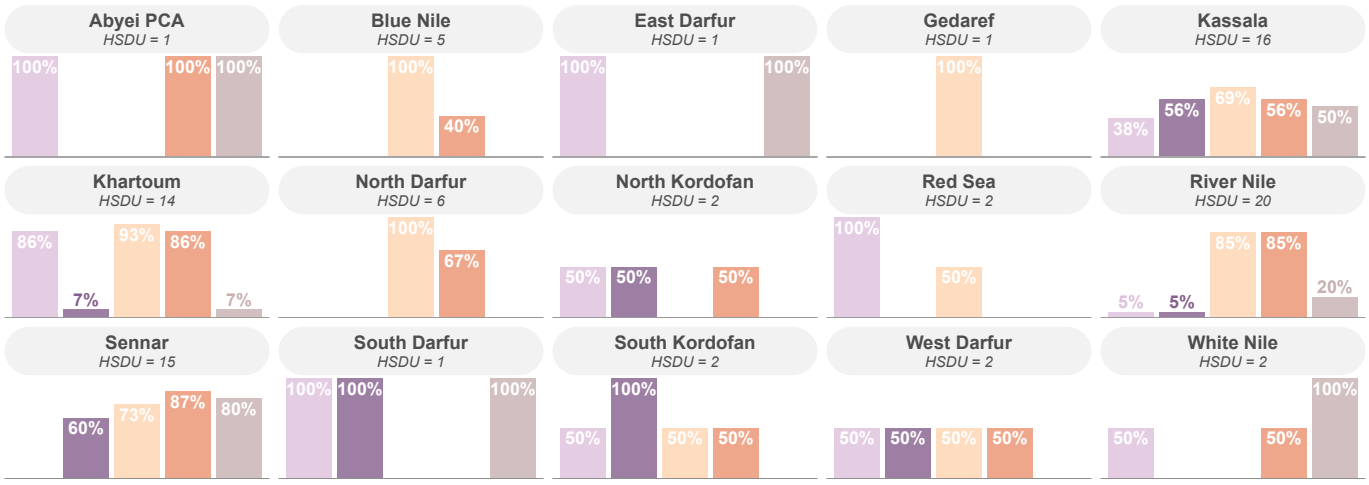
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

Available | Partially available | Not available

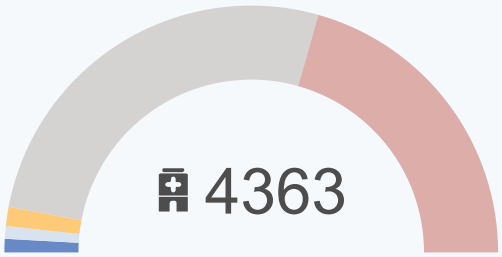
**Barriers** *for partial availability or non-availability.*

Lack of staff | Lack of supplies | Lack of financial resources | Lack of training | Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# MASS CASUALTY MANAGEMENT SYSTEM

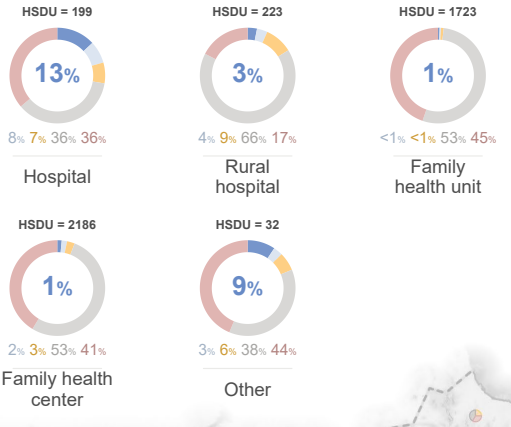
## Service availability[22]



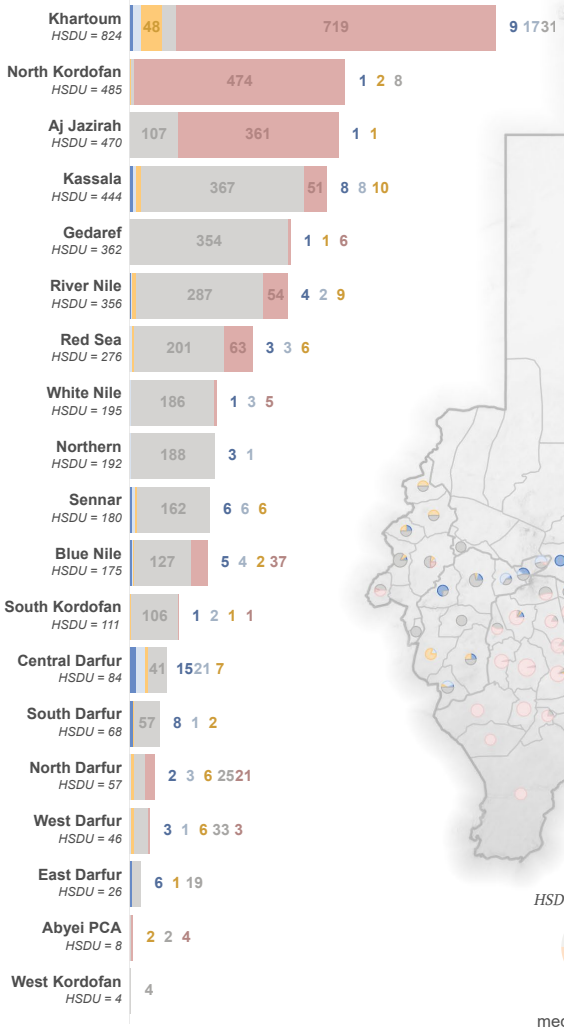

Labels

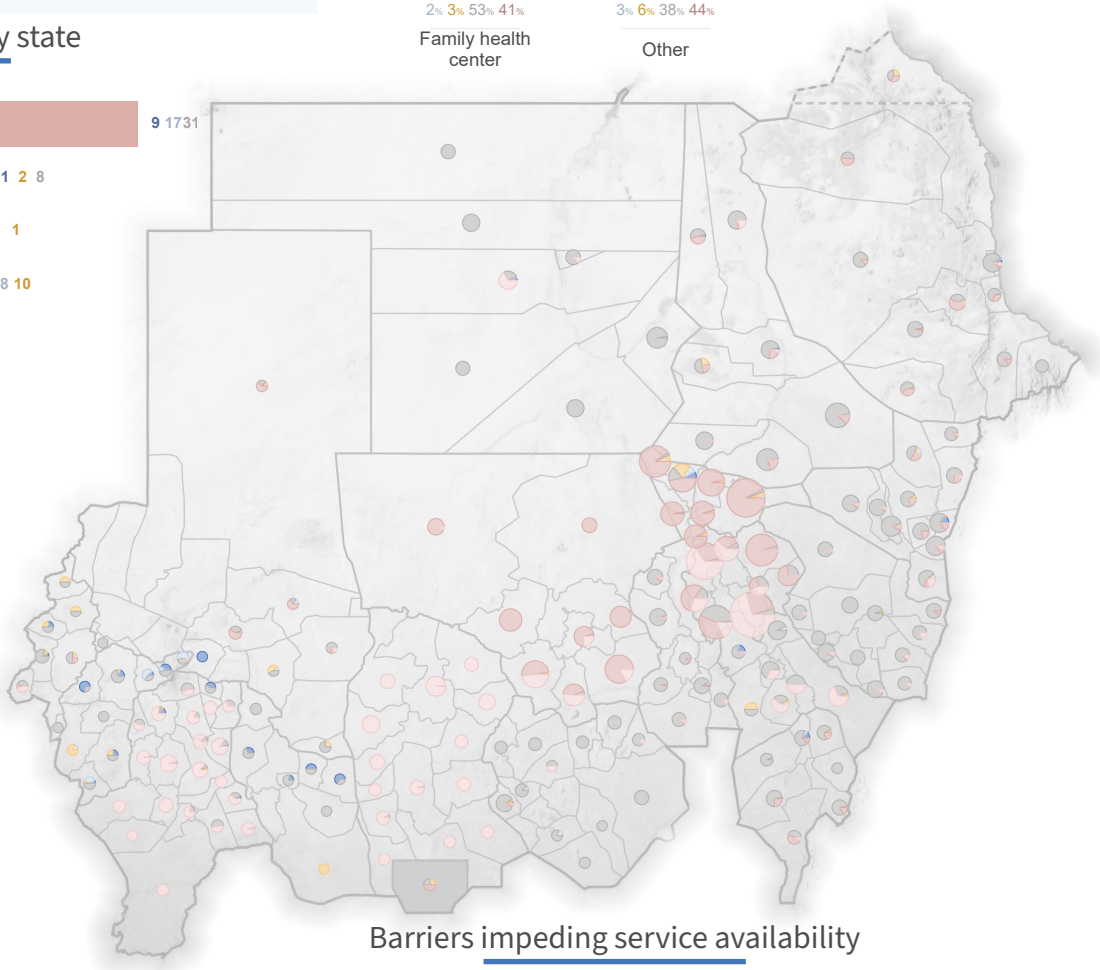
| | |
|---|---|
| 2% | 77 |
| 2% | 72 |
| 3% | 110 |
| 53% | 2305 |
| 41% | 1799 |

## Service availability by HSDU type

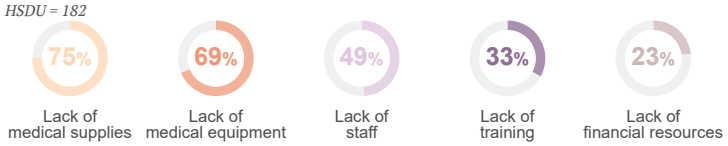



## Service availability by state



## Barriers impeding service availability




22 Mass casualty management system, including 2 step triage, green zone, red zone, incident command team, pre-prepared kits.

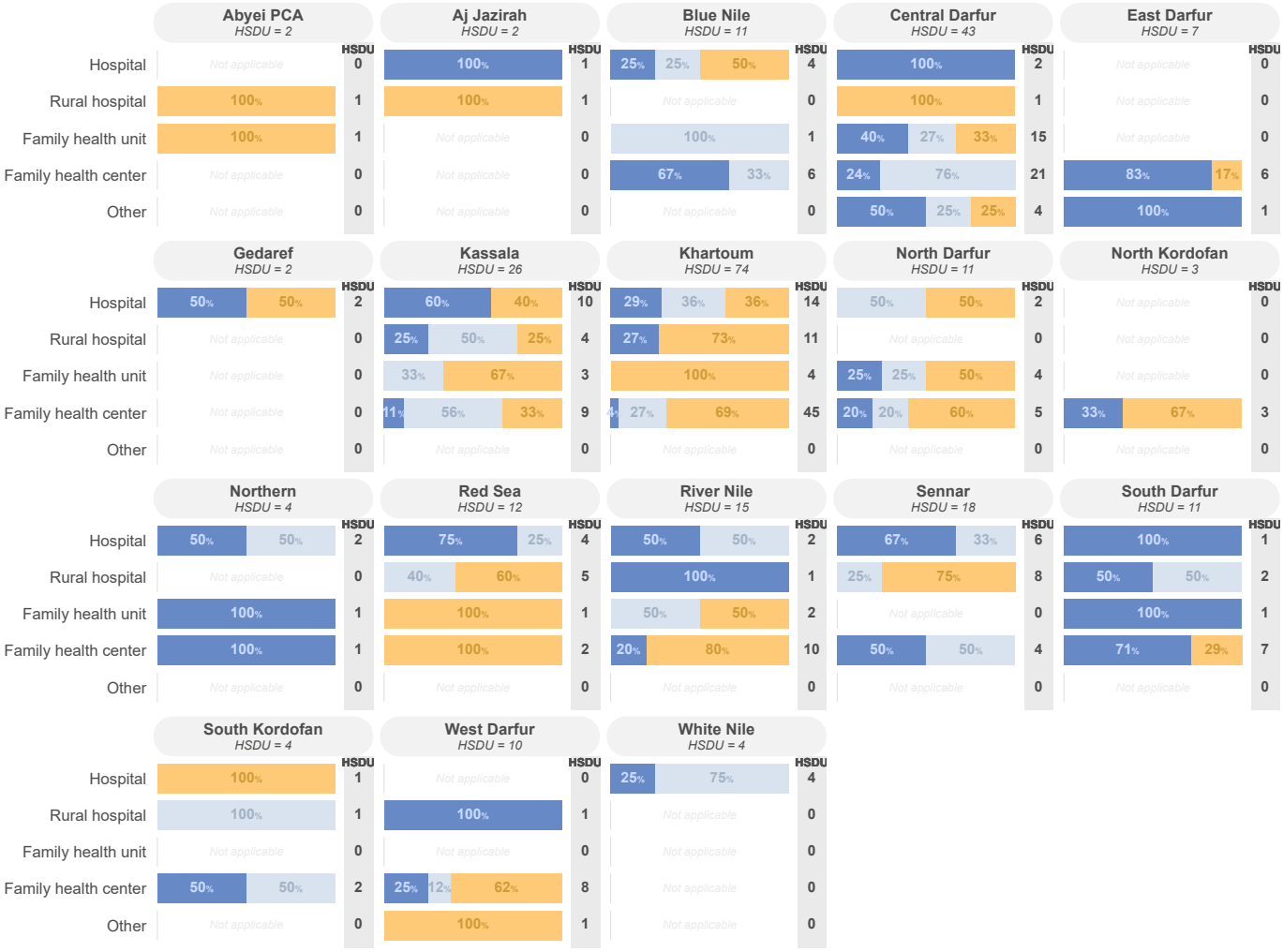
Availability status

Available
Partially available
Not available
Not normally provided
Not operational

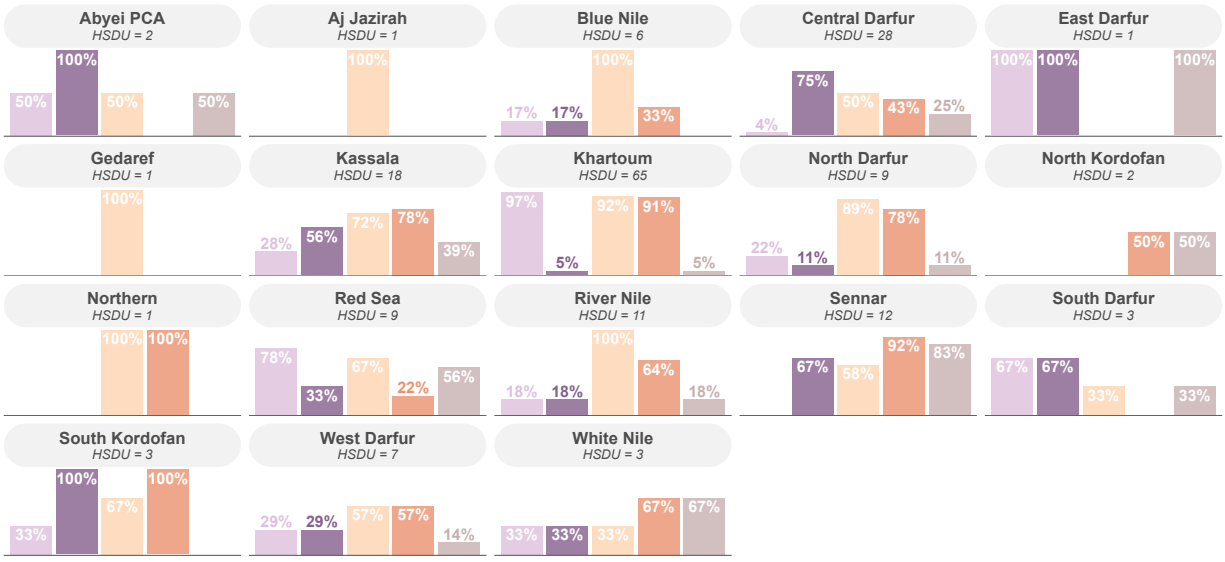
Maps

Not reporting
Number of HSDUs
1
120
240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

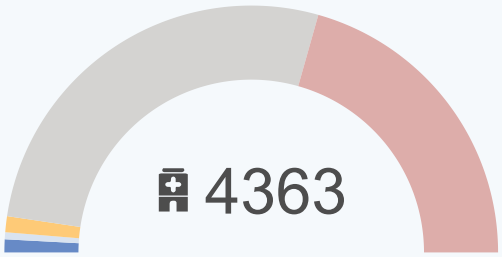
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

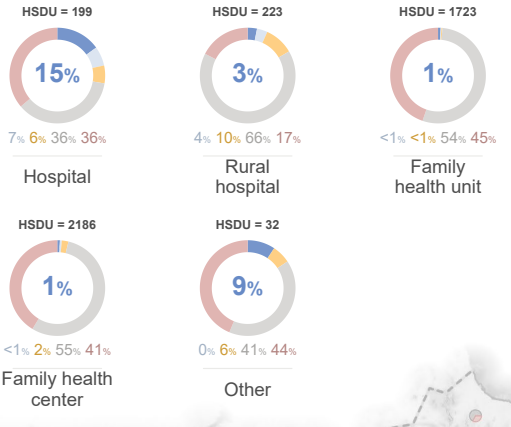
# WAR SURGERY PROTOCOLS

## Service availability[23]

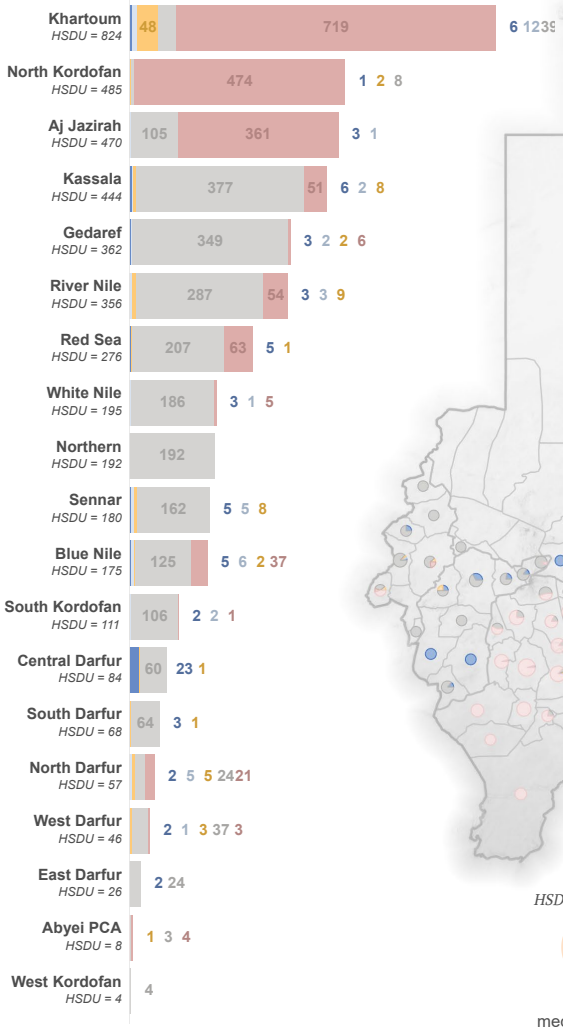


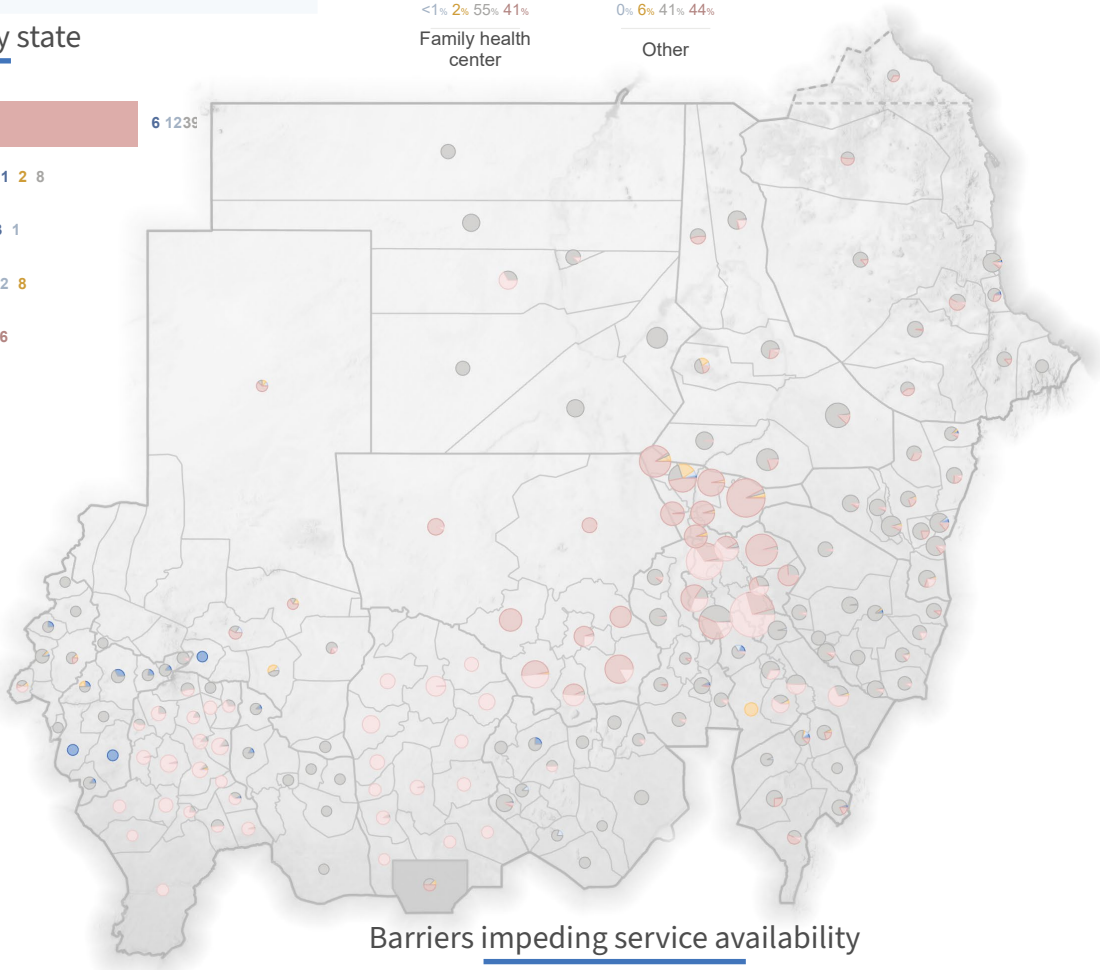

| Labels | |
|---|---|
| 2% \| | 74 |
| <0.1% \| | 40 |
| 2% \| | 91 |
| 54% \| | 2359 |
| 41% \| | 1799 |

## Service availability by HSDU type

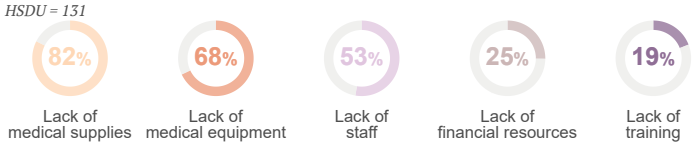



## Service availability by state



## Barriers impeding service availability




23 2 step surgery for contaminated wounds with debridement and delayed primary closure after 3-5 days.

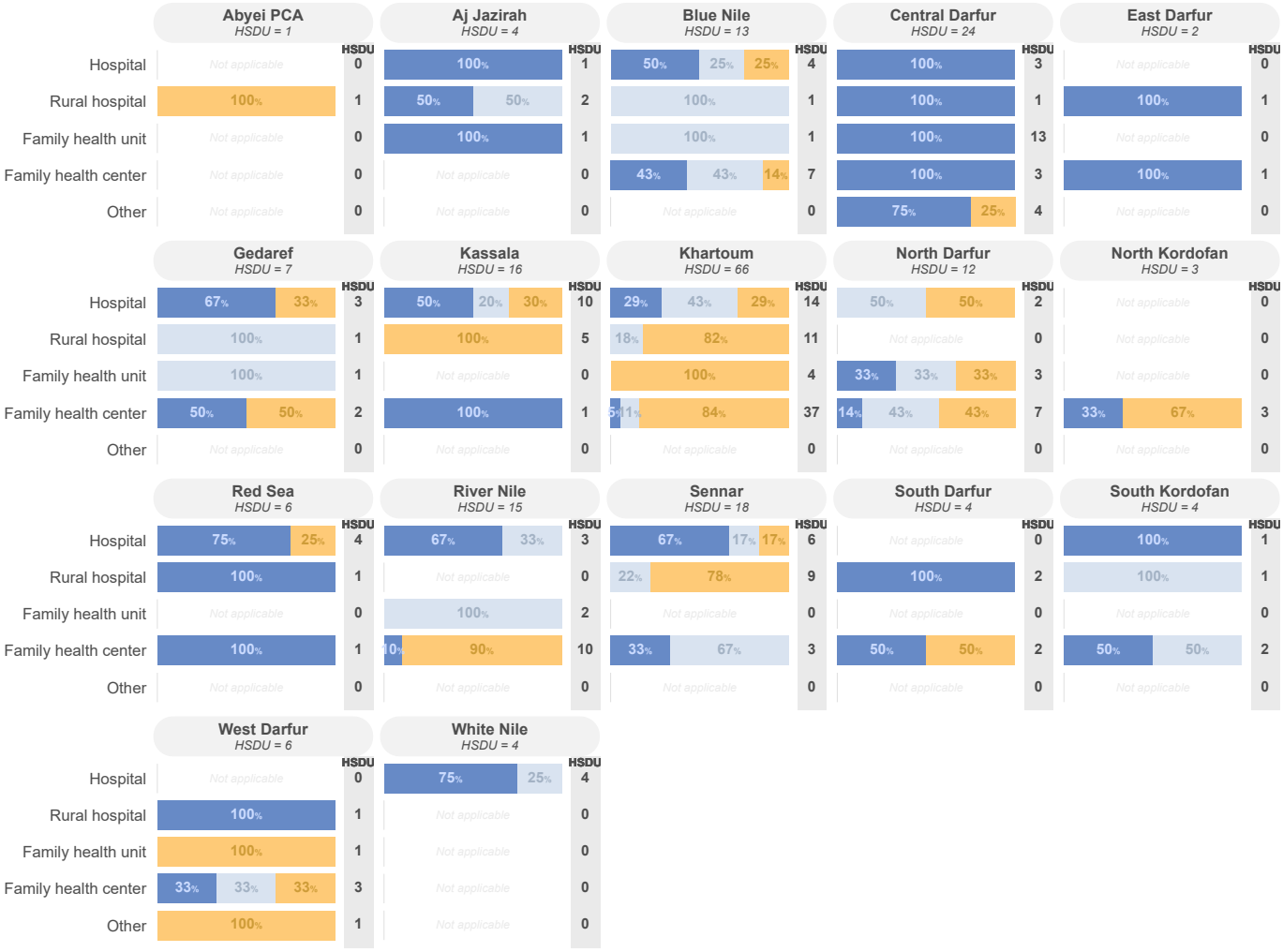
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

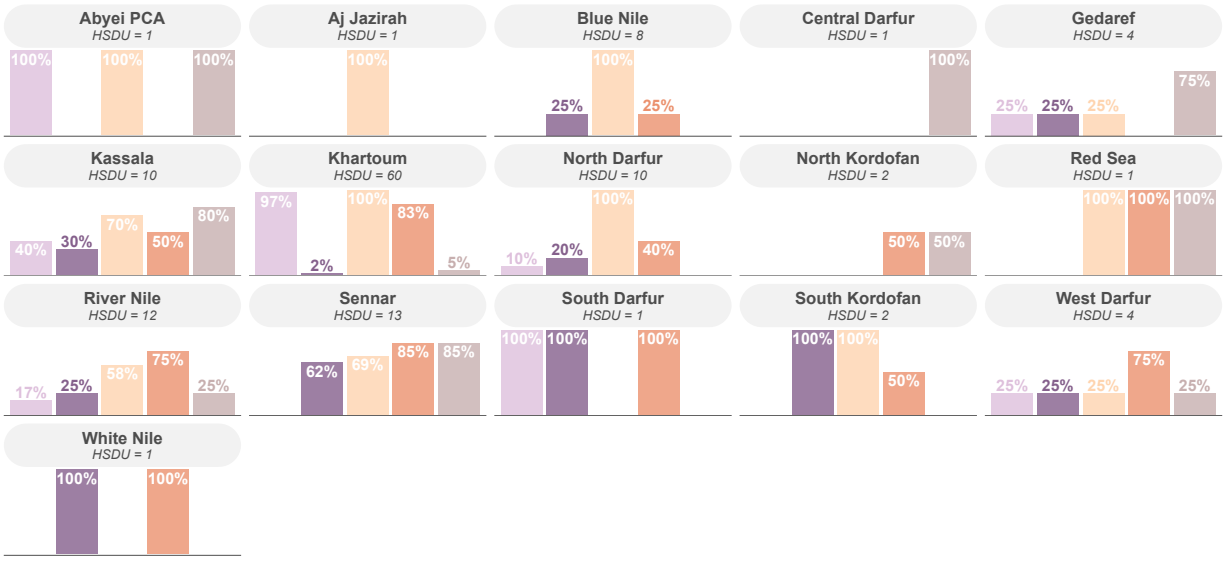
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

Available
Partially available
Not available

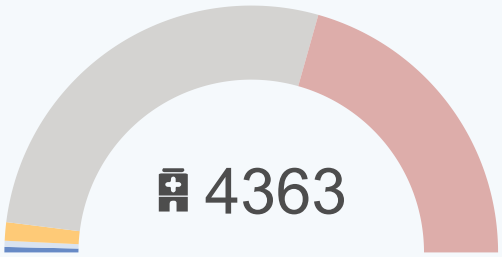
**Barriers** *for partial availability or non-availability.*

Lack of staff
Lack of supplies
Lack of financial resources
Lack of training
Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

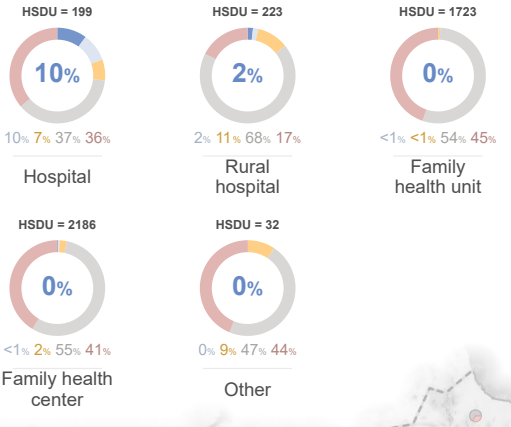
# DAMAGE CONTROL SURGERY PROTOCOLS

## Service availability[24]

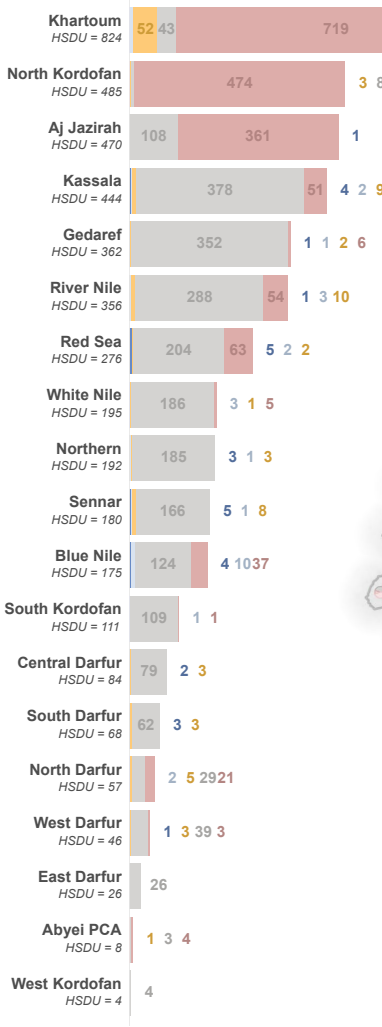


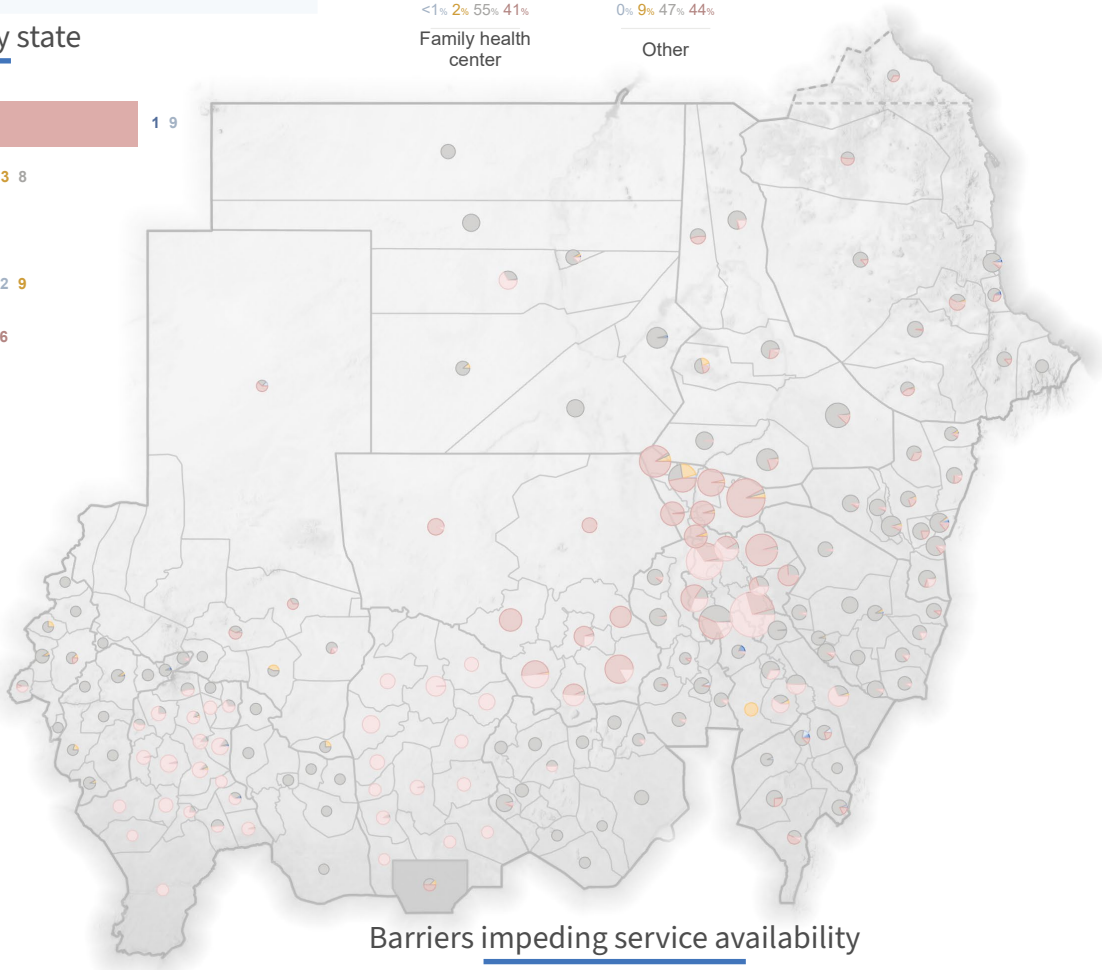

| Labels | |
|---|---|
| <0.1% \| | 31 |
| <0.1% \| | 35 |
| 2% \| | 105 |
| 55% \| | 2393 |
| 41% \| | 1799 |

## Service availability by HSDU type

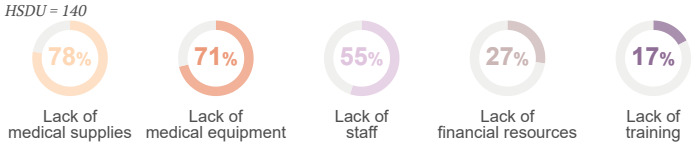



## Service availability by state



## Barriers impeding service availability




24 2 step abbreviated surgery (chest, abdomen and limbs) with vascular shunting, limitation of contamination, hemorrhage control, external fixation and physiological recovery in the ICU before returning to operating theatre.

**Availability status**

Available | Partially available
Not available | Not normally provided
Not operational

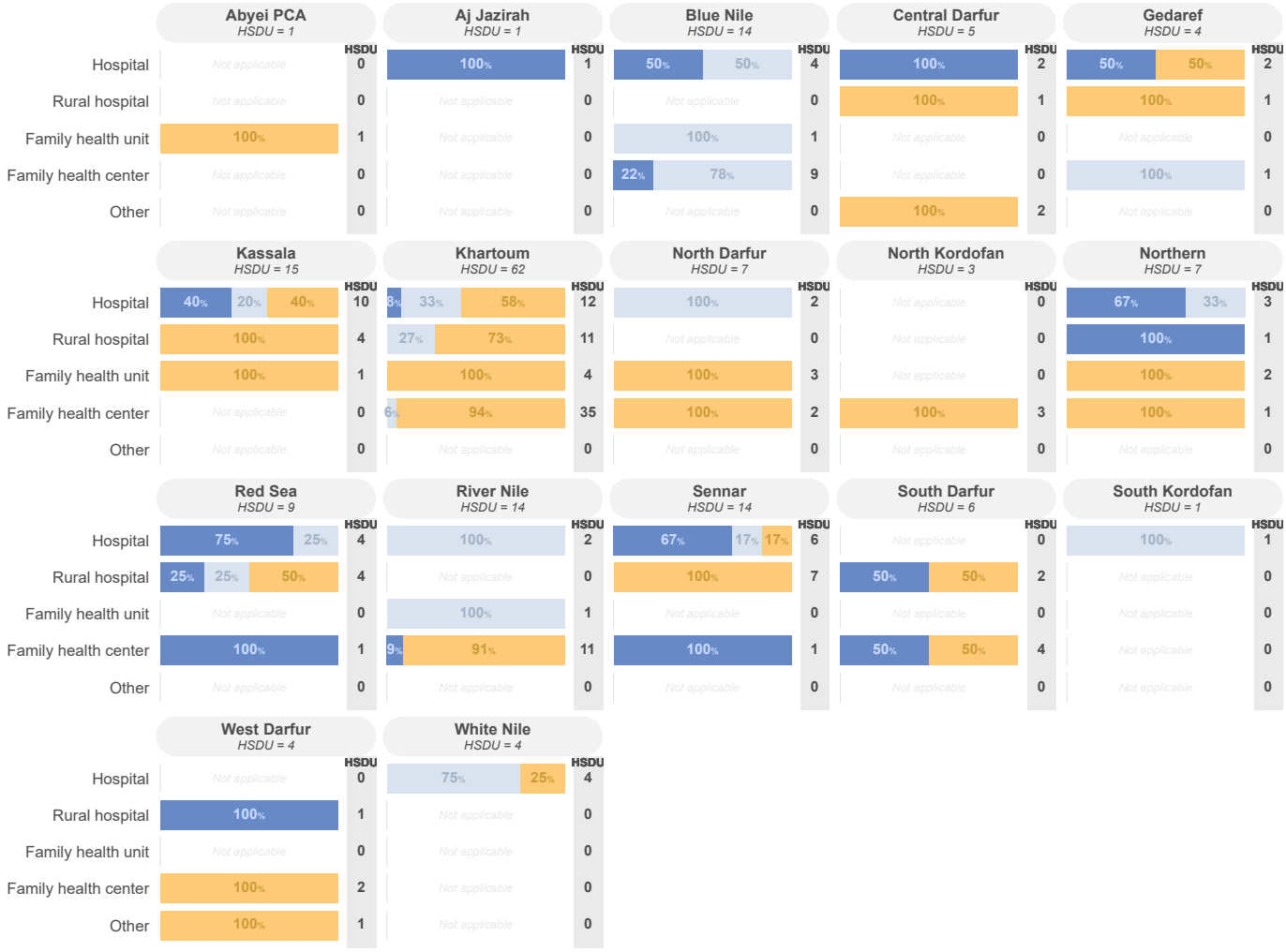
**Maps**

Not reporting

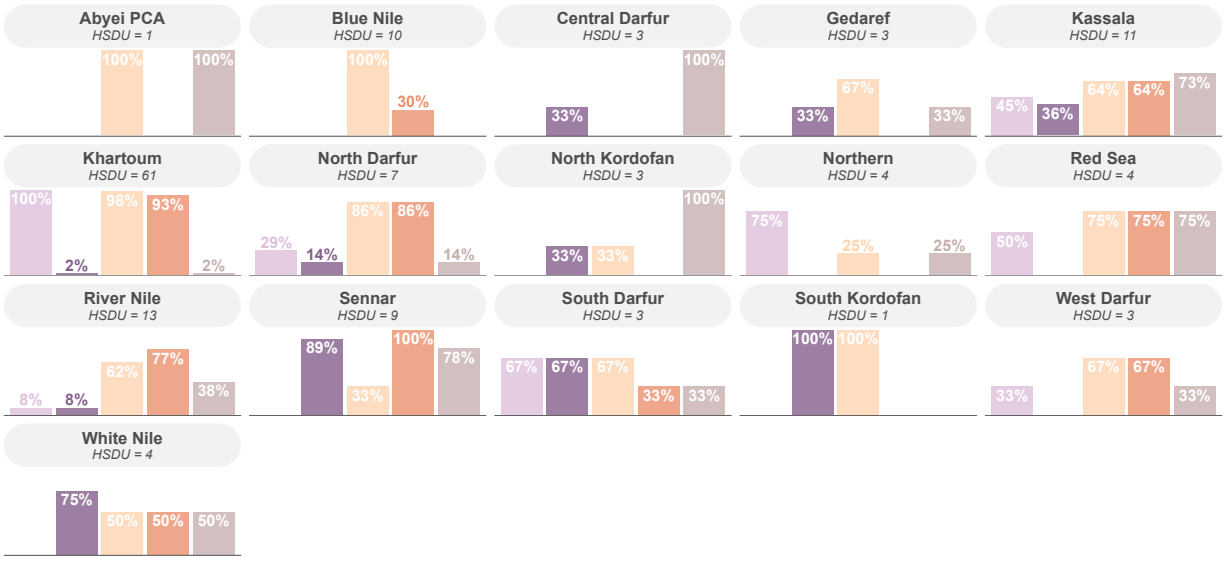
Number of HSDUs

1 120 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

Available | Partially available | Not available

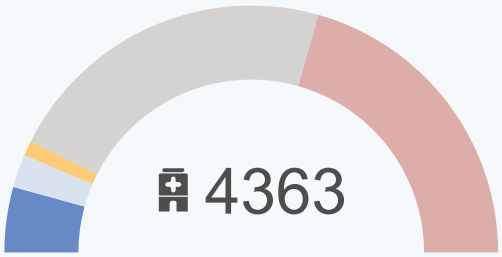
**Barriers** *for partial availability or non-availability.*

Lack of staff | Lack of supplies | Lack of financial resources | Lack of training | Lack of equipment

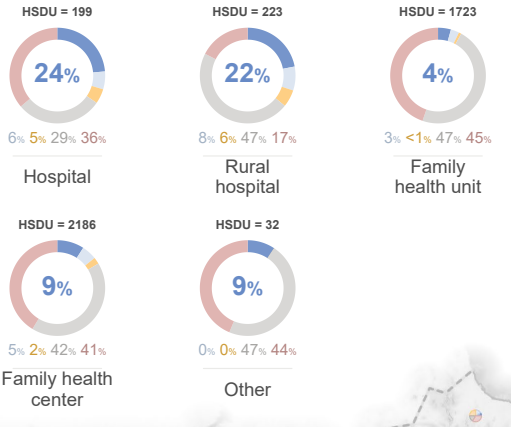
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# MINOR TRAUMA DEFINITIVE MANAGEMENT

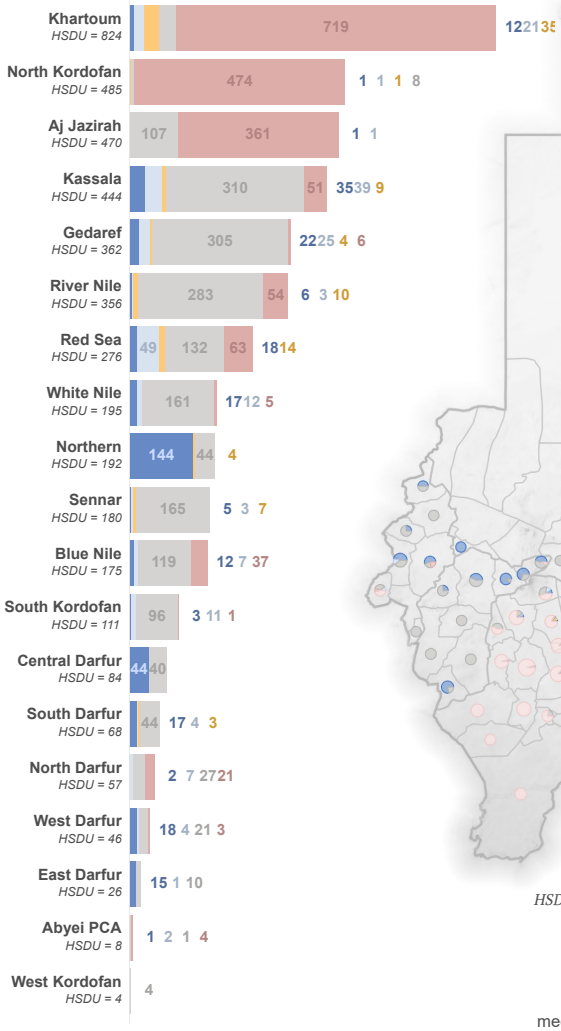
## Service availability[25]

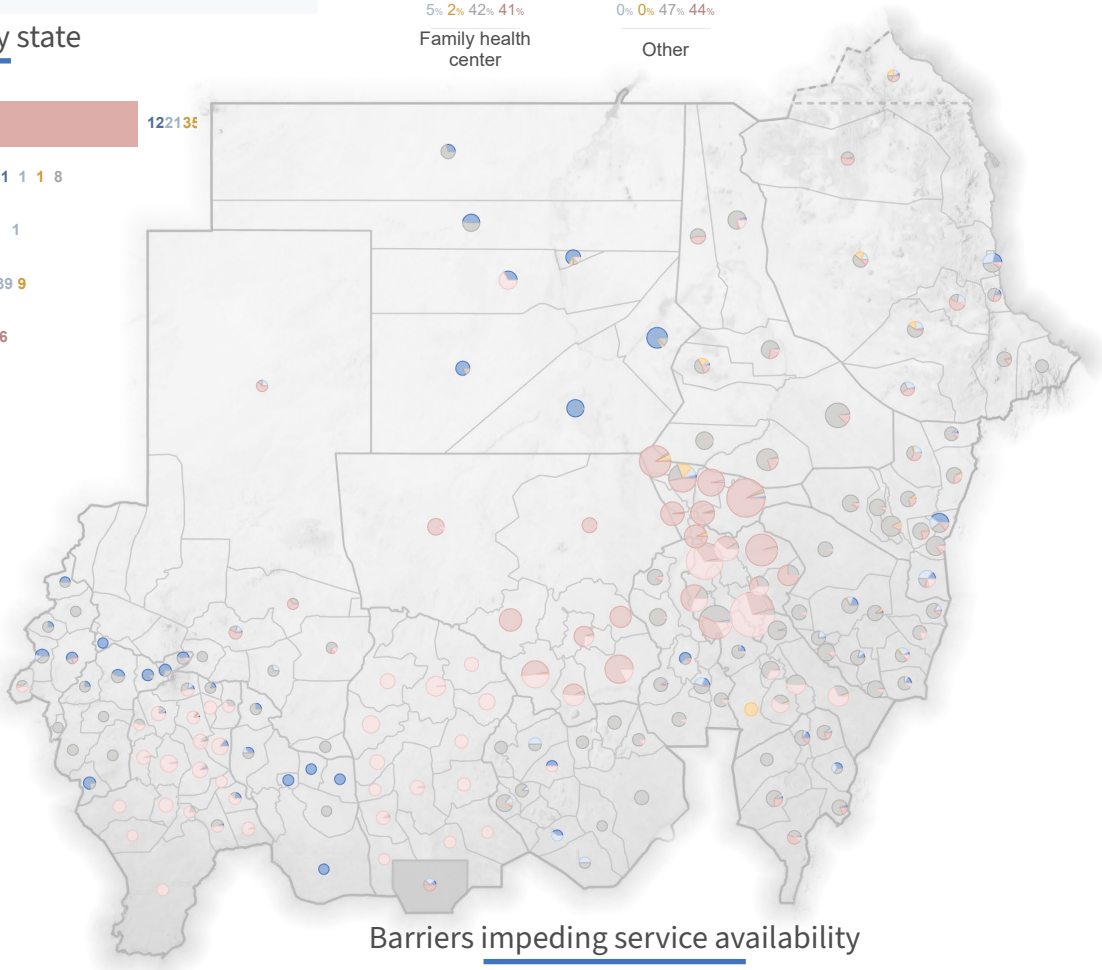



## Service availability by HSDU type

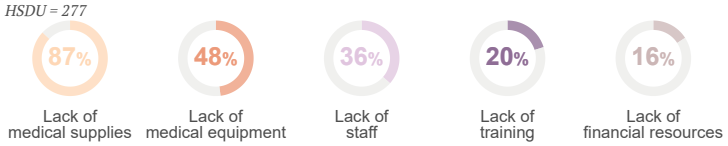



## Service availability by state

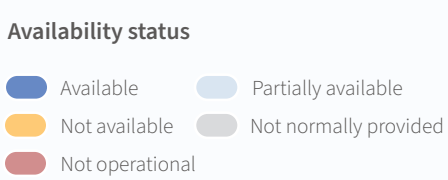


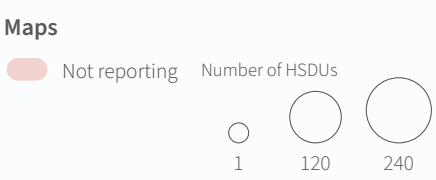



## Barriers impeding service availability

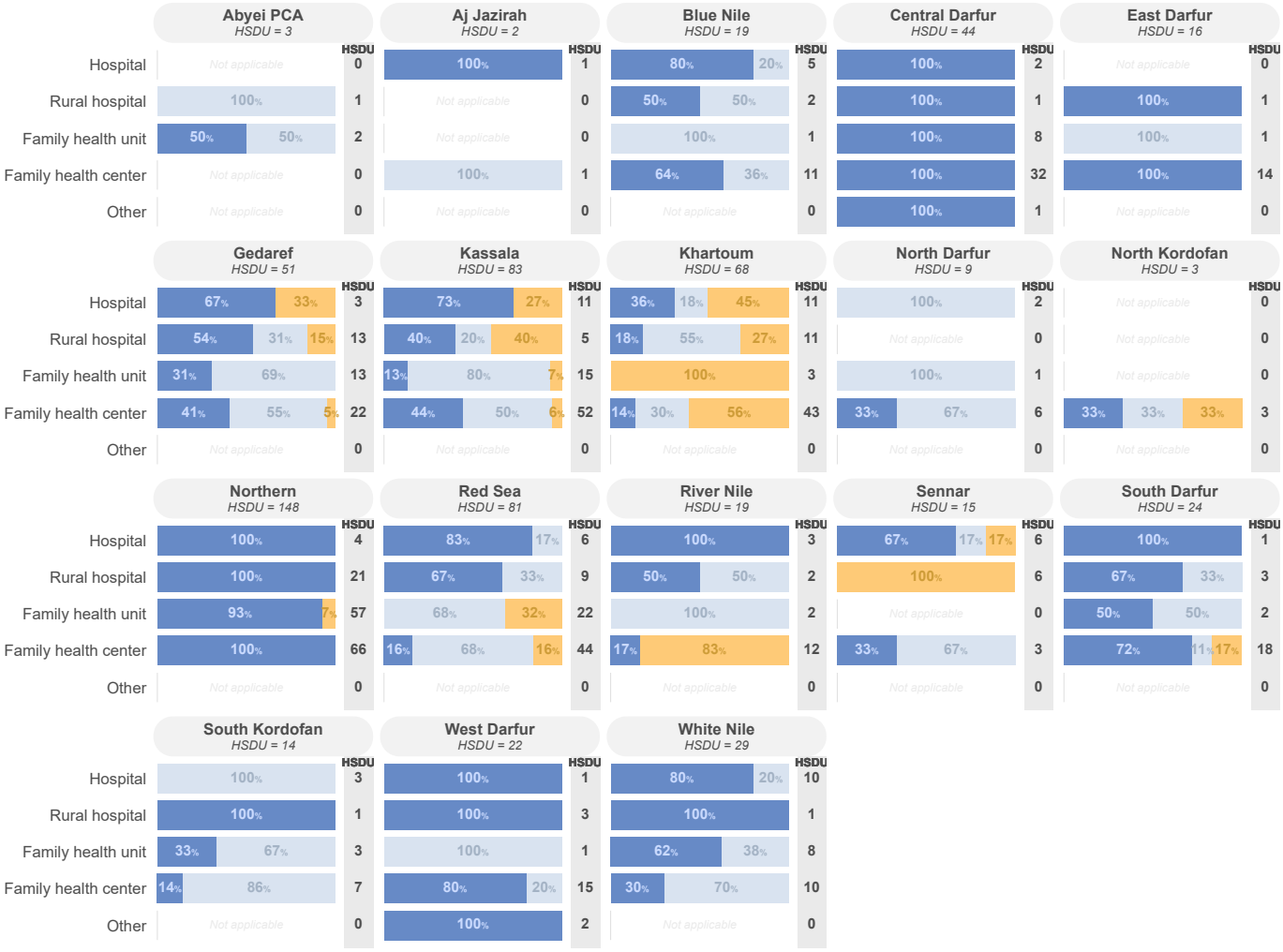



25 Pain management, tetanus toxoid and human antitoxin, minor surgery kits, suture absorbable/silk with needles, disinfectant solutions, bandages, gauzes, and cotton wool.

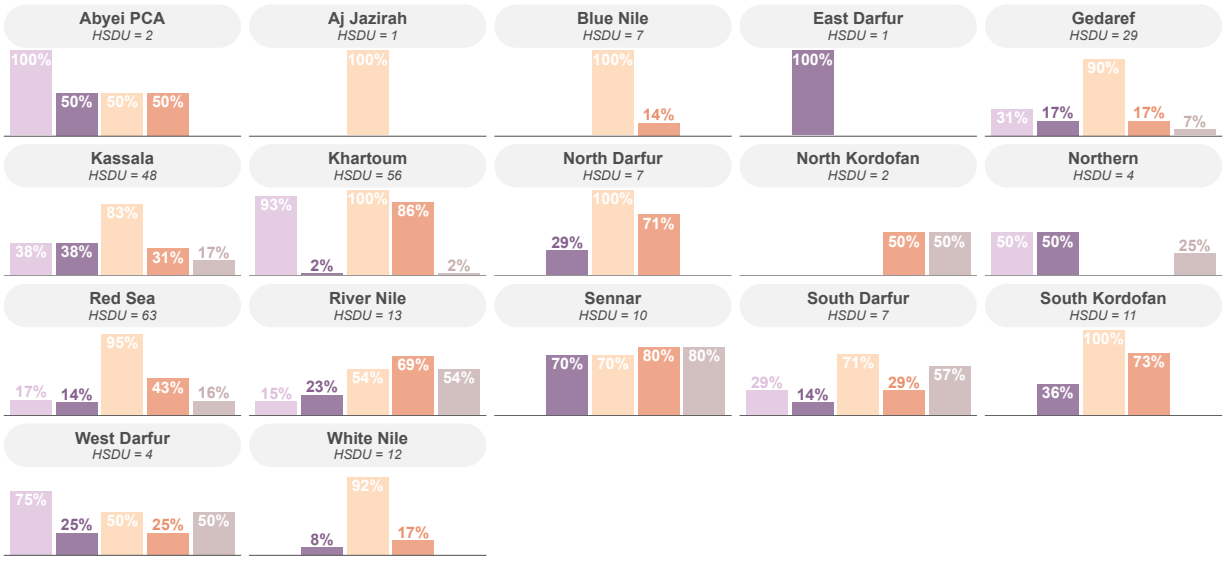


## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

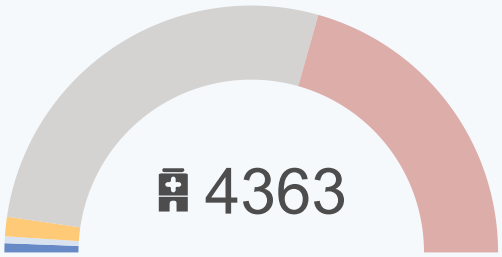
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

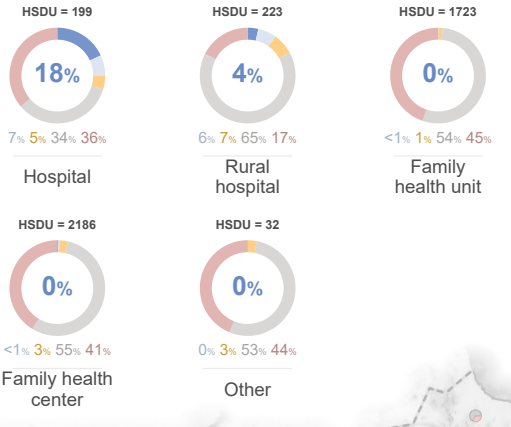
# EMERGENCY AND ELECTIVE SURGERY

## Service availability[26]

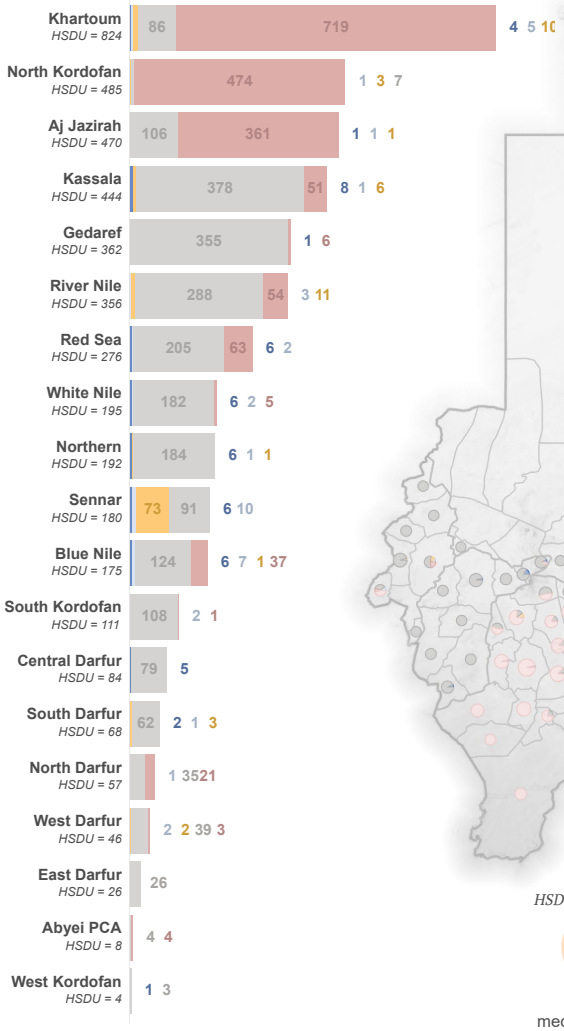


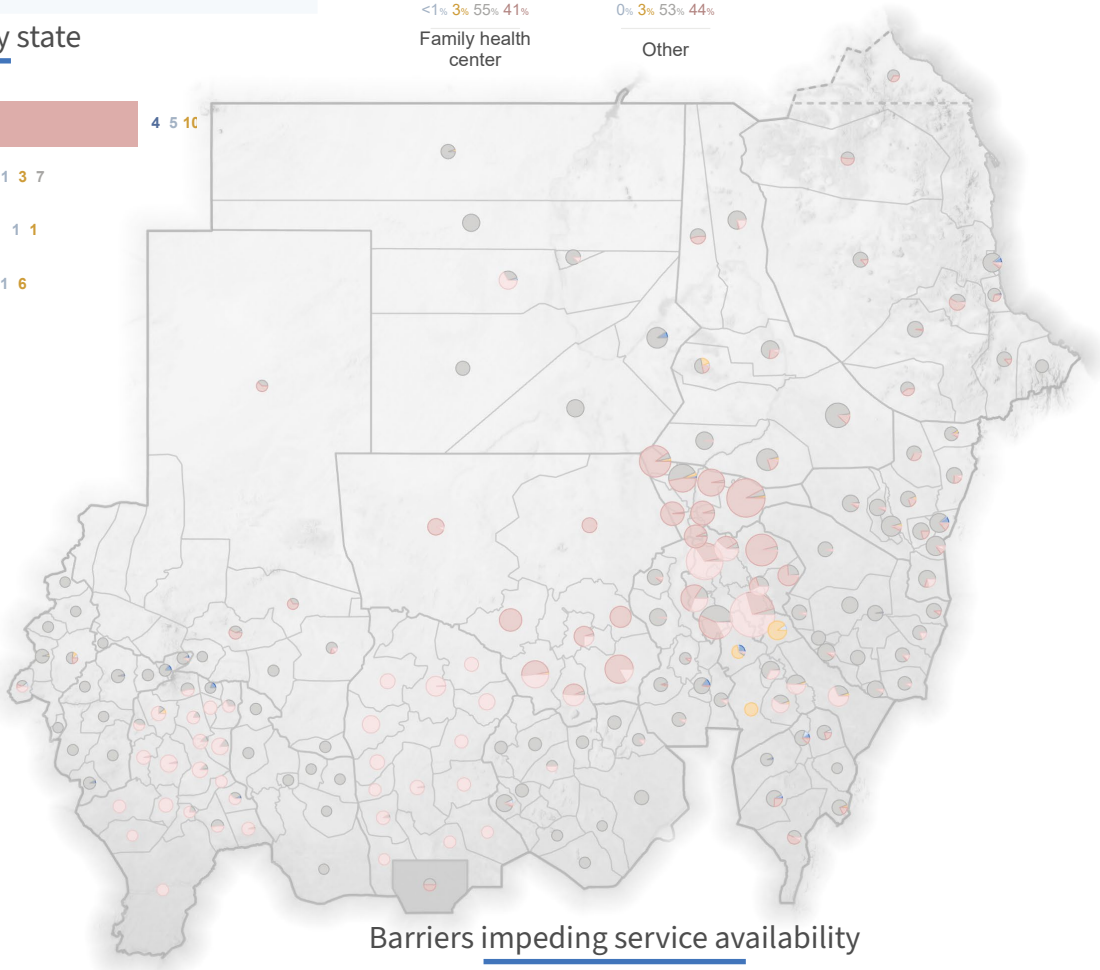

| Labels | |
|---|---|
| 1% | 52 |
| <0.1% | 39 |
| 3% | 111 |
| 54% | 2362 |
| 41% | 1799 |

## Service availability by HSDU type

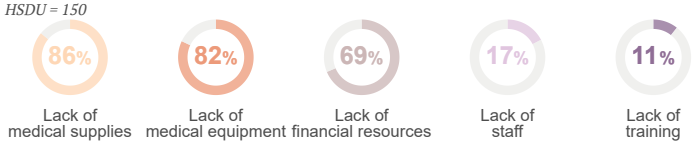



## Service availability by state



## Barriers impeding service availability




26 Inpatient surgical ward with at least one operating theatre (with or without gas).

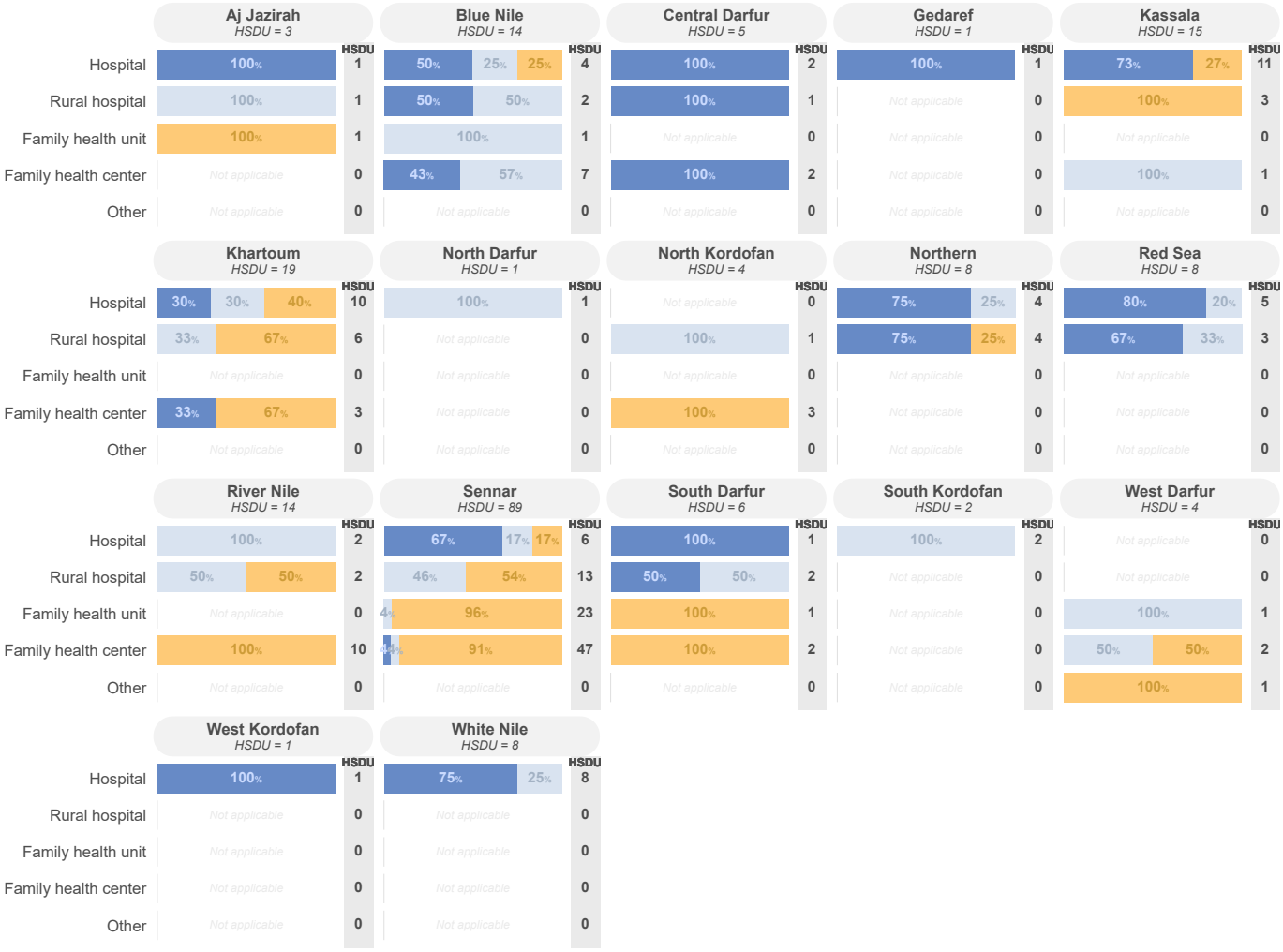
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

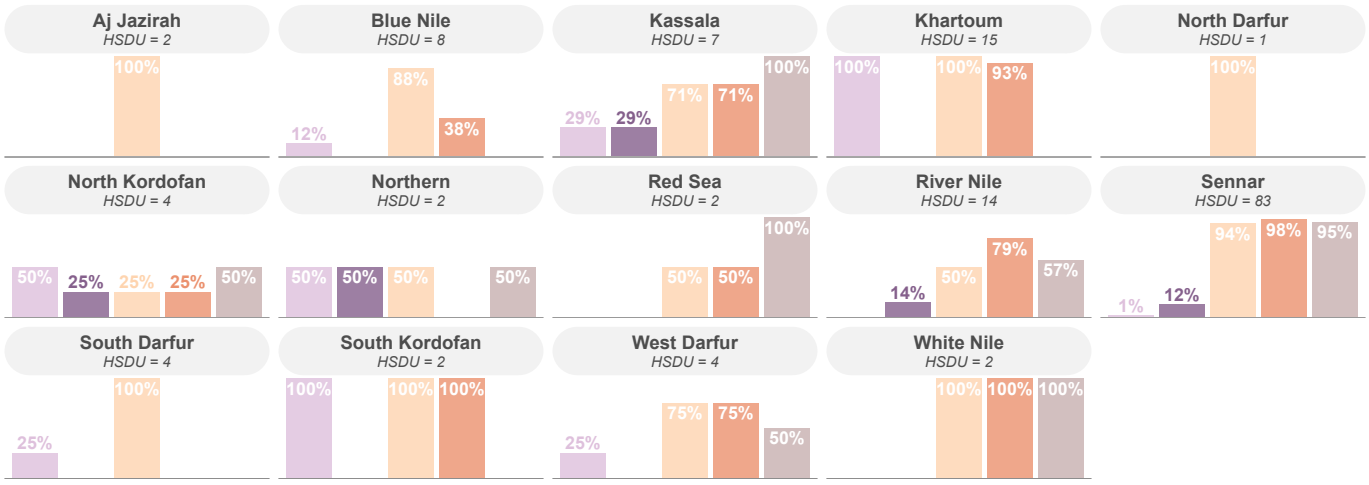
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

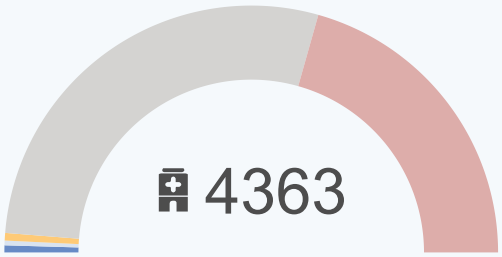
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# EMERGENCY AND ELECTIVE SURGERY WITH AT LEAST TWO OPERATING THEATRES

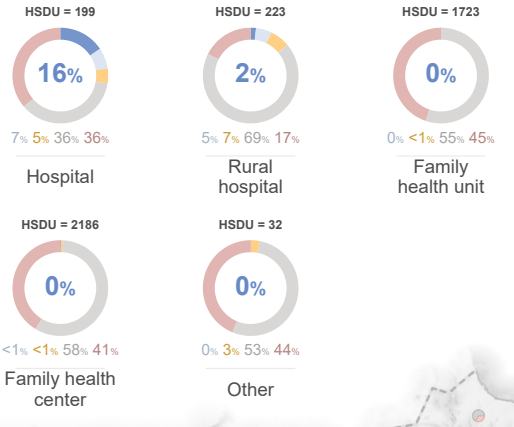
## Service availability[27]



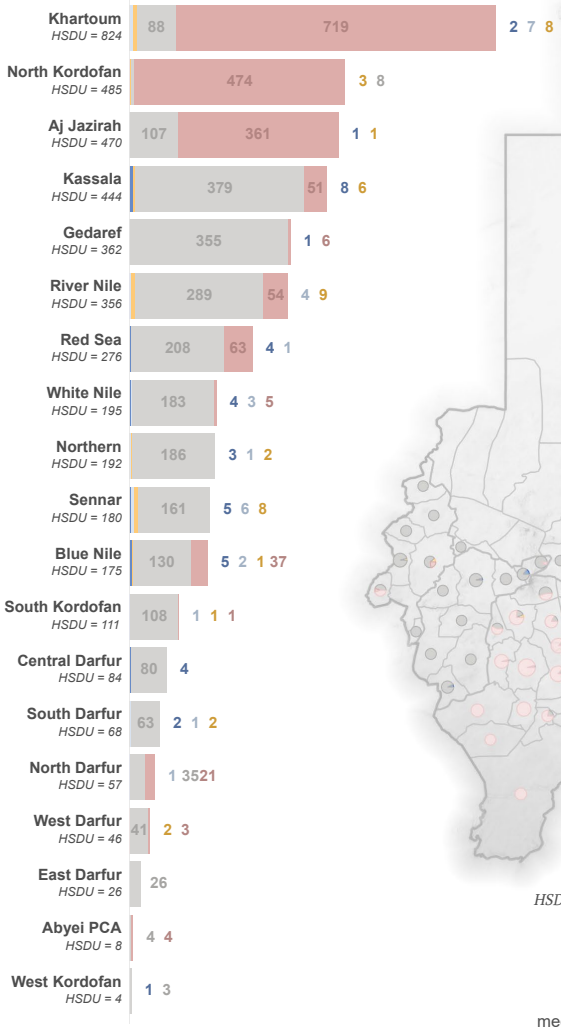

Labels

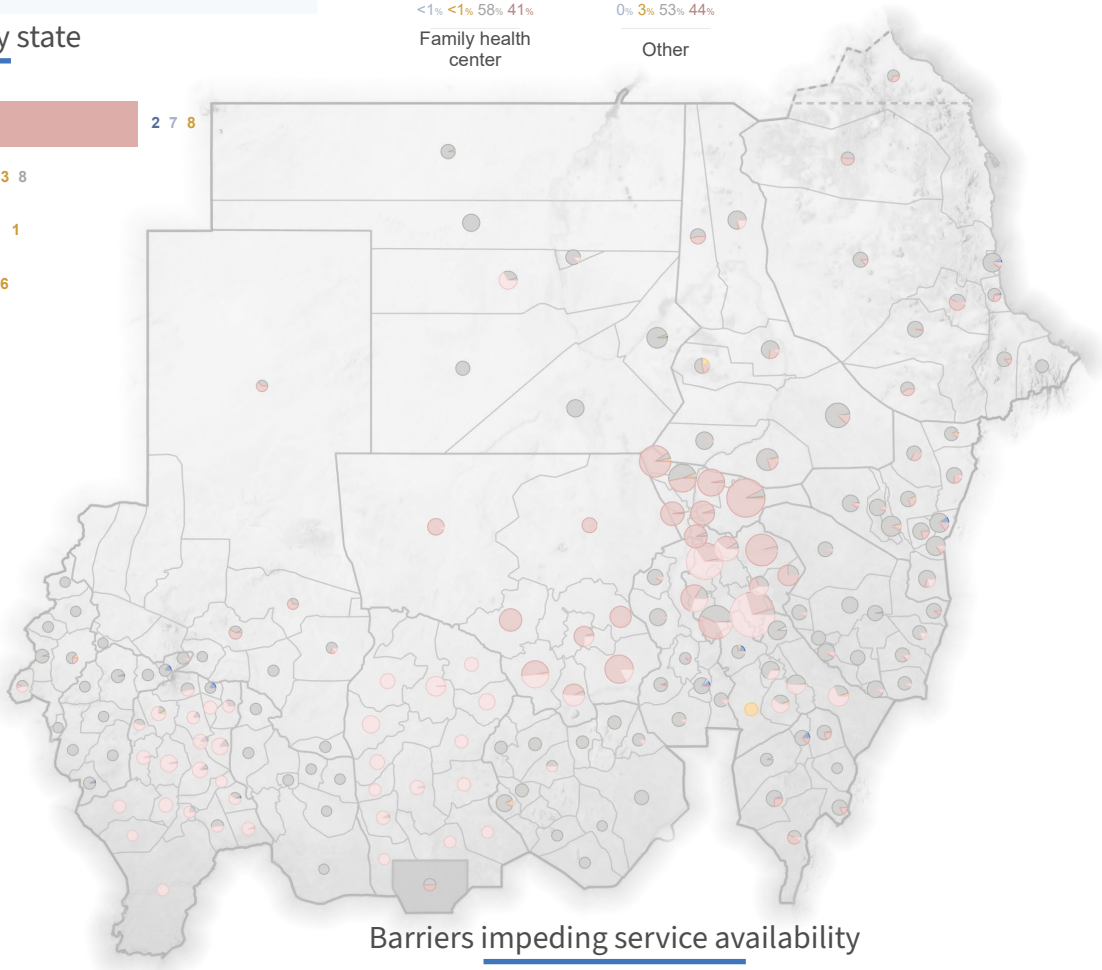
| | |
|---|---|
| <0.1% \| | 40 |
| <0.1% \| | 27 |
| <0.1% \| | 43 |
| 56% \| | 2454 |
| 41% \| | 1799 |

## Service availability by HSDU type

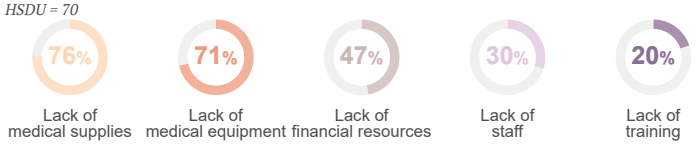



## Service availability by state

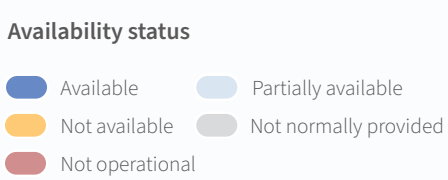


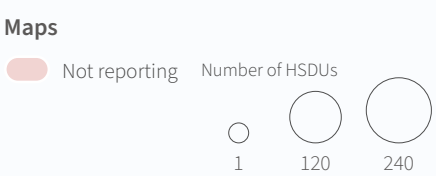



## Barriers impeding service availability




27 Inpatient surgery ward with at least two operating theatres with pediatric and adult gaseous anesthetic.



## Service availability by HSDU type and state*

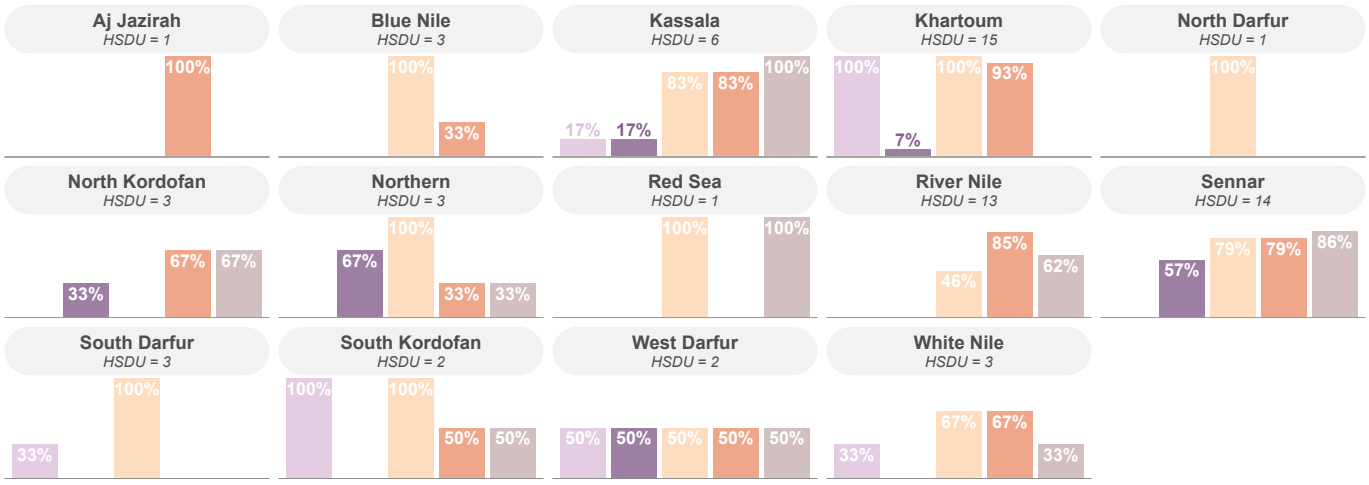
| | Aj Jazirah HSDU = 2 | HSDU | Blue Nile HSDU = 8 | HSDU | Central Darfur HSDU = 4 | HSDU | Gedaref HSDU = 1 | HSDU | Kassala HSDU = 14 | HSDU |
|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | 100% | 1 | 67% 33% | 3 | 100% | 2 | 100% | 1 | 73% 27% | 11 |
| Rural hospital | 100% | 1 | 100% | 2 | 100% | 1 | Not applicable | 0 | 100% | 3 |
| Family health unit | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 |
| Family health center | Not applicable | 0 | 100% | 3 | 100% | 1 | Not applicable | 0 | Not applicable | 0 |
| Other | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 |

| | Khartoum HSDU = 17 | HSDU | North Darfur HSDU = 1 | HSDU | North Kordofan HSDU = 3 | HSDU | Northern HSDU = 6 | HSDU | Red Sea HSDU = 5 | HSDU |
|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | 22% 44% 33% | 9 | 100% | 1 | Not applicable | 0 | 50% 25% 25% | 4 | 75% 25% | 4 |
| Rural hospital | 33% 67% | 6 | Not applicable | 0 | Not applicable | 0 | 50% 50% | 2 | 100% | 1 |
| Family health unit | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 |
| Family health center | 50% 50% | 2 | Not applicable | 0 | 100% | 3 | Not applicable | 0 | Not applicable | 0 |
| Other | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 |

| | River Nile HSDU = 13 | HSDU | Sennar HSDU = 19 | HSDU | South Darfur HSDU = 5 | HSDU | South Kordofan HSDU = 2 | HSDU | West Darfur HSDU = 2 | HSDU |
|---|---|---|---|---|---|---|---|---|---|---|
| Hospital | 100% | 2 | 67% 17% 17% | 6 | 100% | 1 | 50% 50% | 2 | Not applicable | 0 |
| Rural hospital | 100% | 2 | 45% 55% | 11 | 50% 50% | 2 | Not applicable | 0 | Not applicable | 0 |
| Family health unit | Not applicable | 0 | Not applicable | 0 | 100% | 1 | Not applicable | 0 | Not applicable | 0 |
| Family health center | 100% | 9 | 50% 50% | 2 | 100% | 1 | Not applicable | 0 | 100% | 1 |
| Other | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | Not applicable | 0 | 100% | 1 |

| | West Kordofan HSDU = 1 | HSDU | White Nile HSDU = 7 | HSDU |
|---|---|---|---|---|
| Hospital | 100% | 1 | 57% 43% | 7 |
| Rural hospital | Not applicable | 0 | Not applicable | 0 |
| Family health unit | Not applicable | 0 | Not applicable | 0 |
| Family health center | Not applicable | 0 | Not applicable | 0 |
| Other | Not applicable | 0 | Not applicable | 0 |

## Barriers impeding service availability by state




**Availability status**

Available
Partially available
Not available

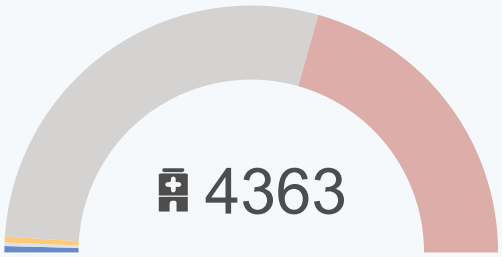
**Barriers** *for partial availability or non-availability.*

Lack of staff
Lack of supplies
Lack of financial resources
Lack of training
Lack of equipment

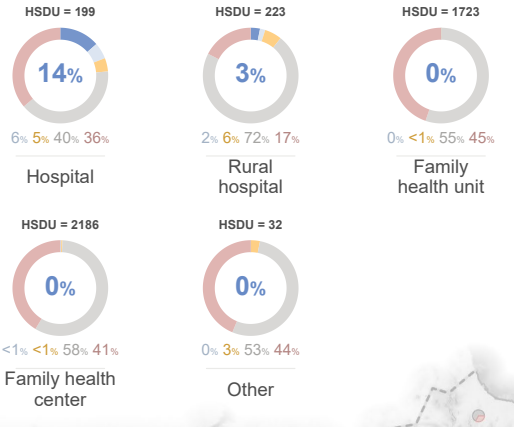
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# ORTHOPEDIC/TRAUMA WARD

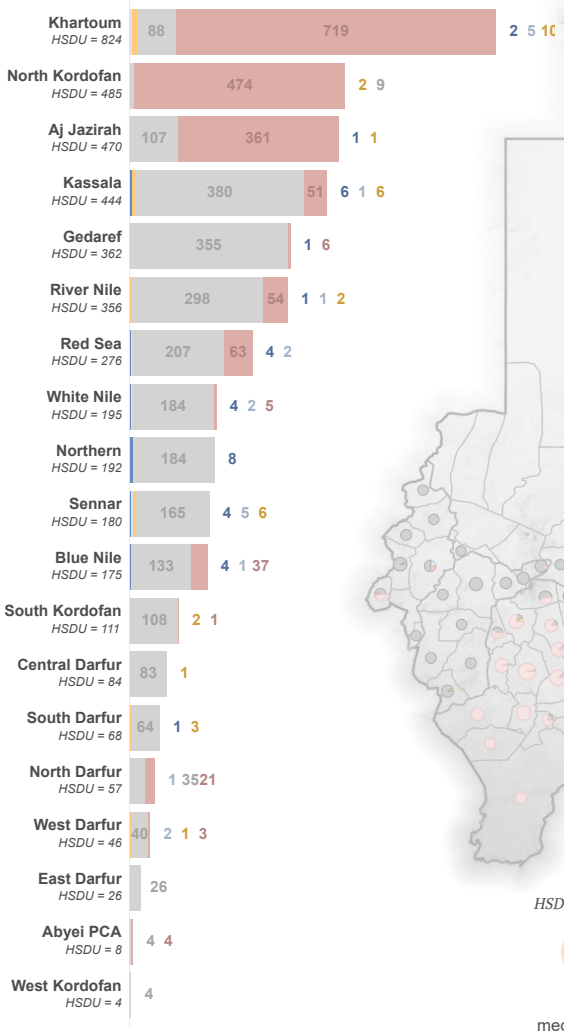
## Service availability[28]

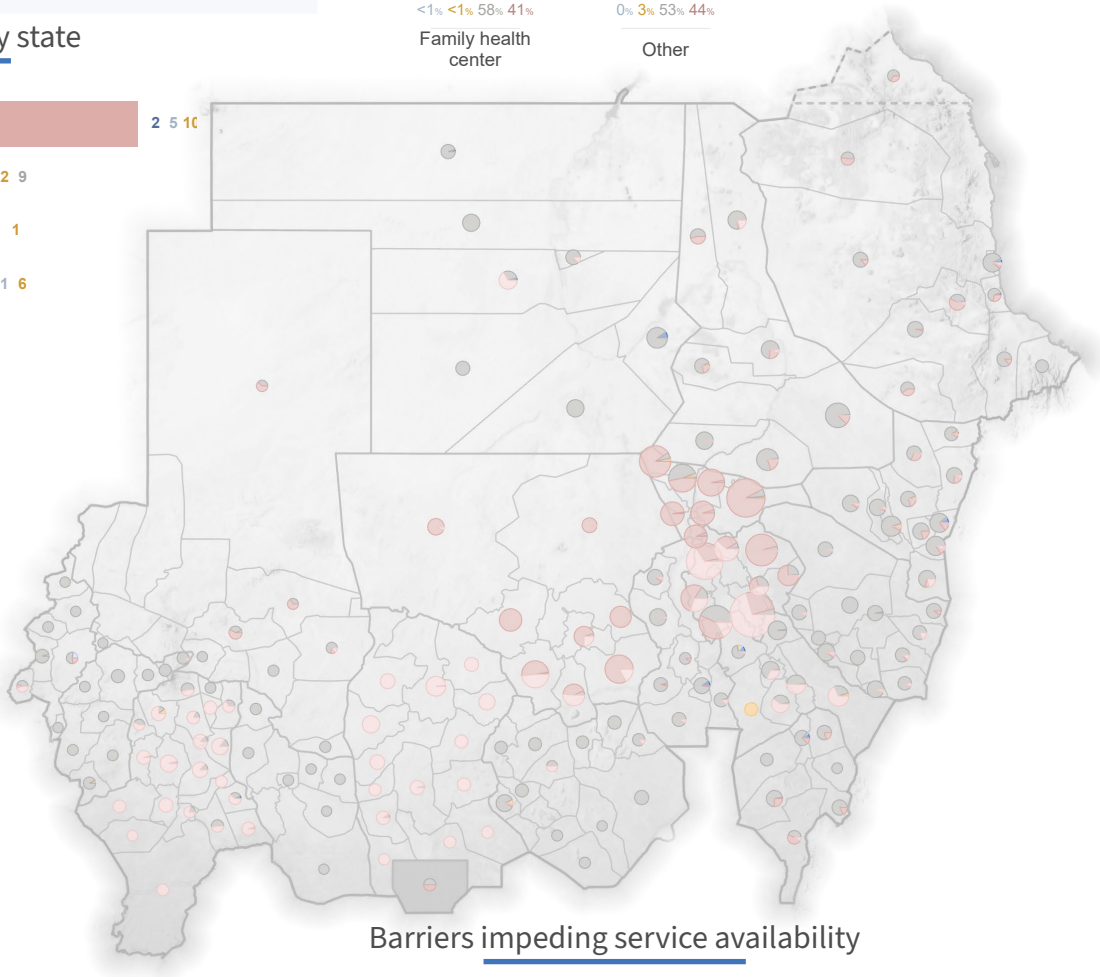



## Service availability by HSDU type

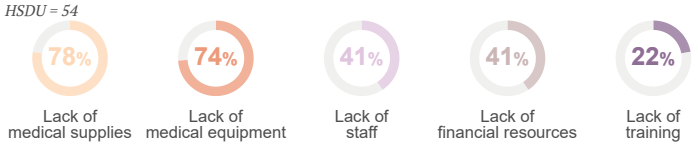



## Service availability by state

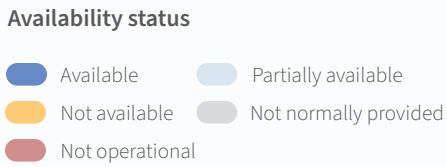


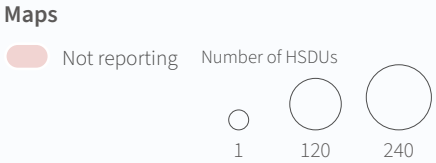



## Barriers impeding service availability

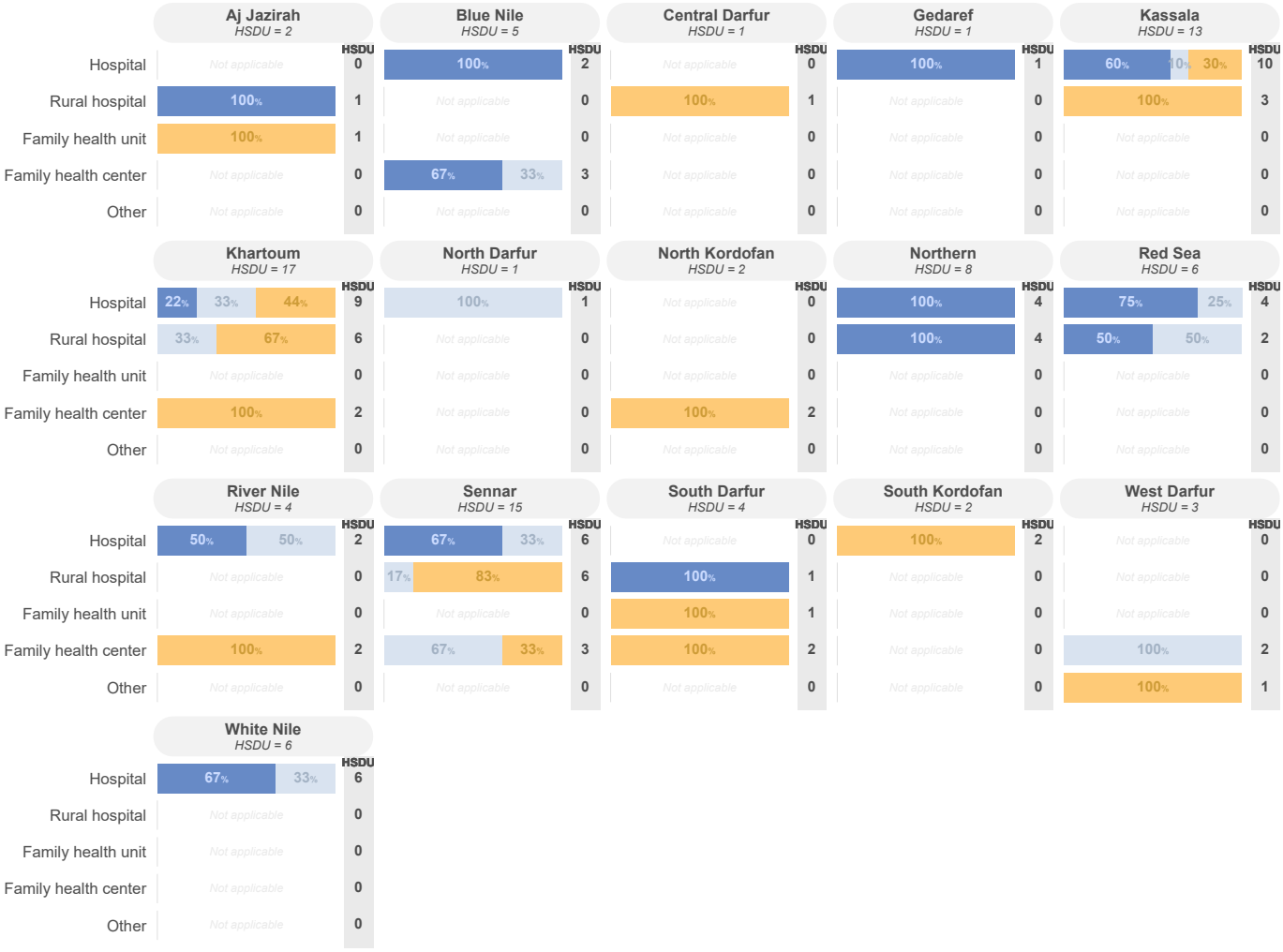



28 Orthopedic/trauma ward for advanced orthopedic and surgical care, including burn patient management.

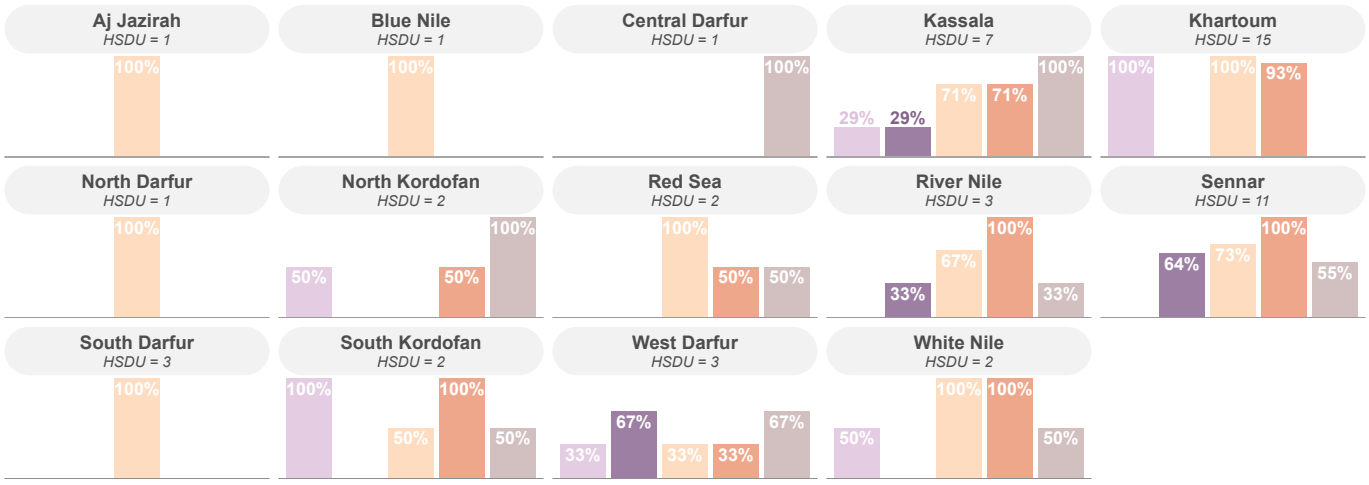


## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

Available · Partially available · Not available

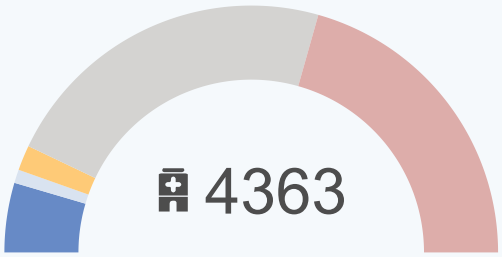
**Barriers** *for partial availability or non-availability.*

Lack of staff · Lack of supplies · Lack of financial resources · Lack of training · Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# SHORT HOSPITALIZATION CAPACITY

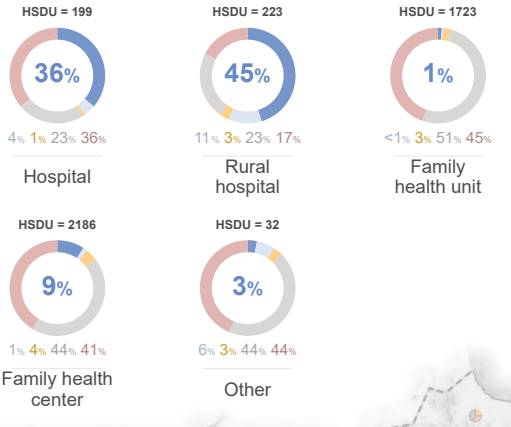
## Service availability[29]



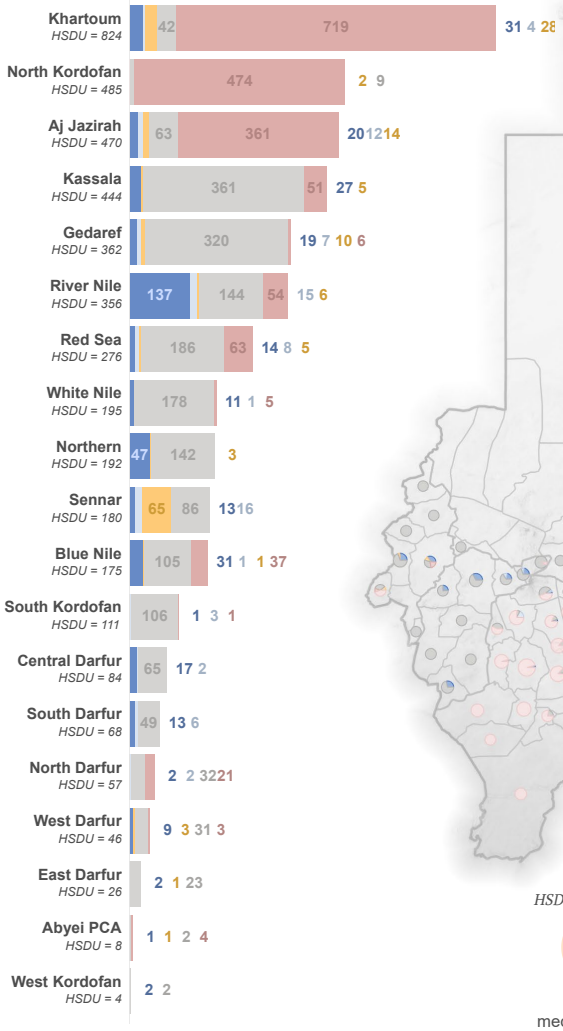

Labels

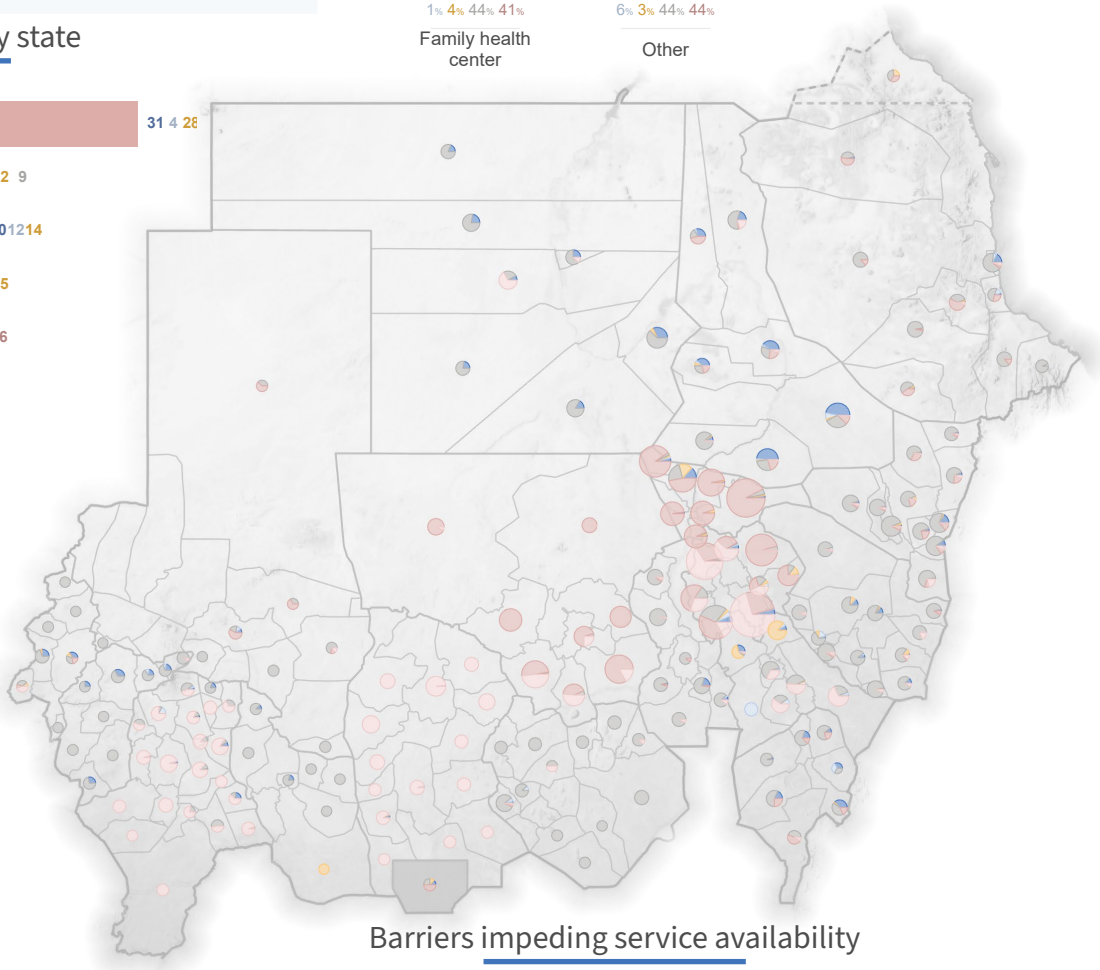
9% | 397
2% | 77
3% | 144
45% | 1946
41% | 1799

## Service availability by HSDU type

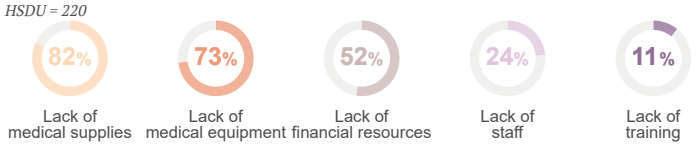



## Service availability by state



## Barriers impeding service availability




29 Short hospitalization capacity for observational purposes (maximum 48 hours)

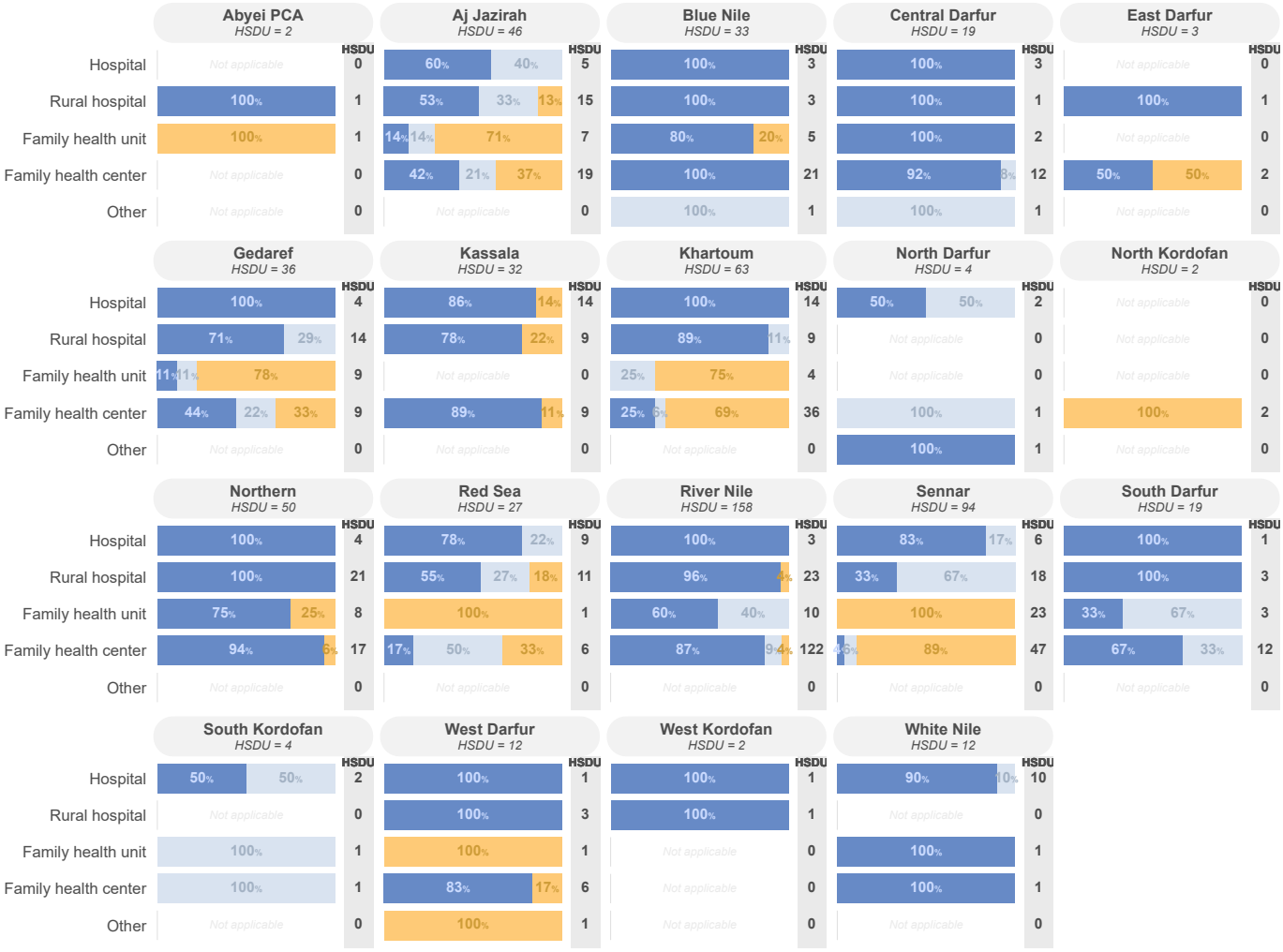
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

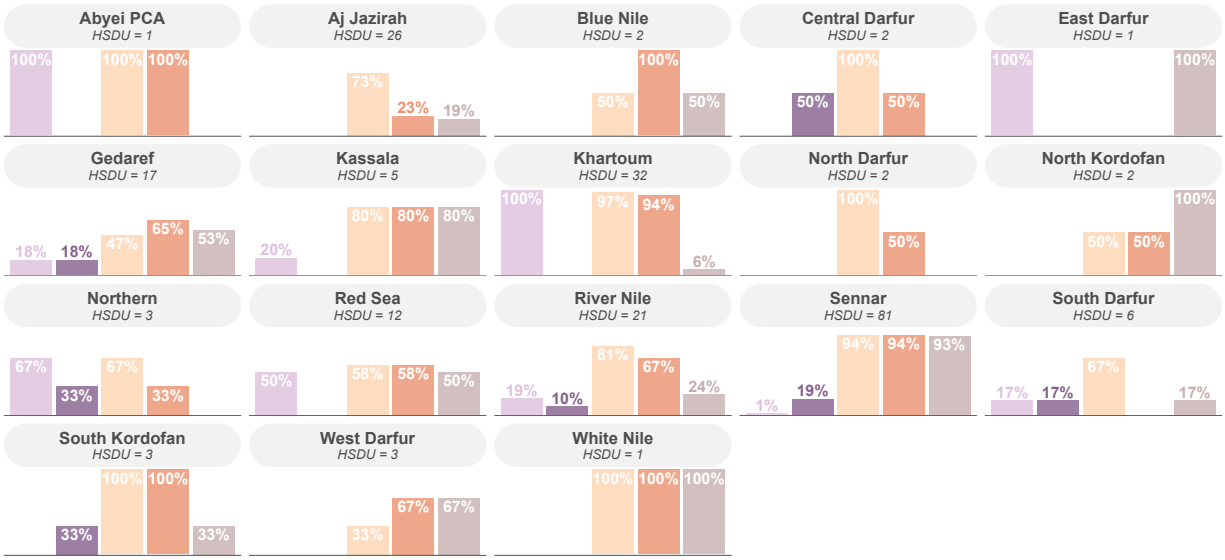
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

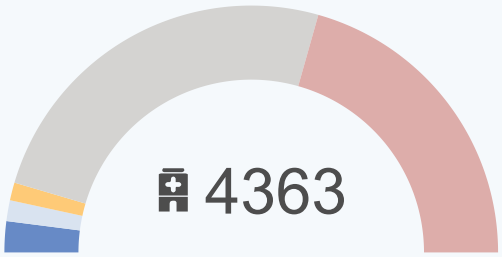
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

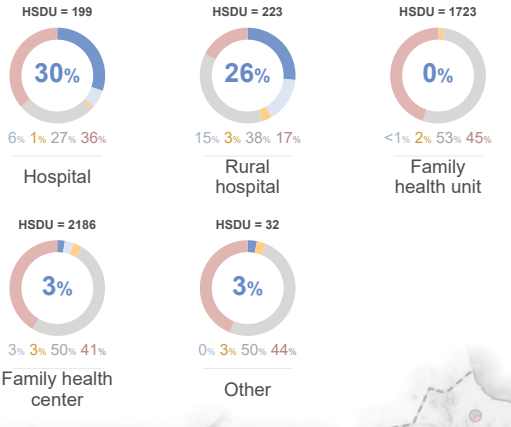
# 20 INPATIENT BED CAPACITY

## Service availability[30]

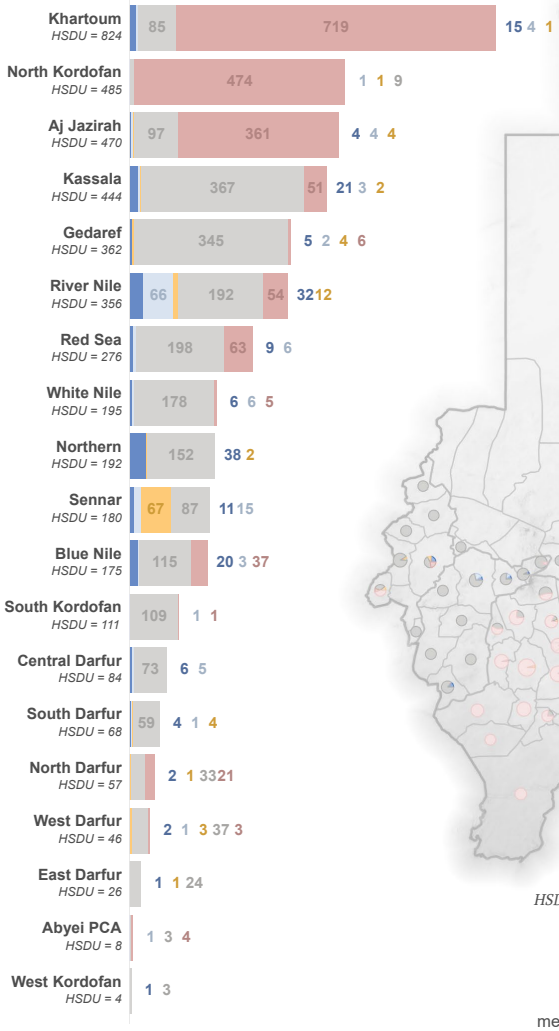


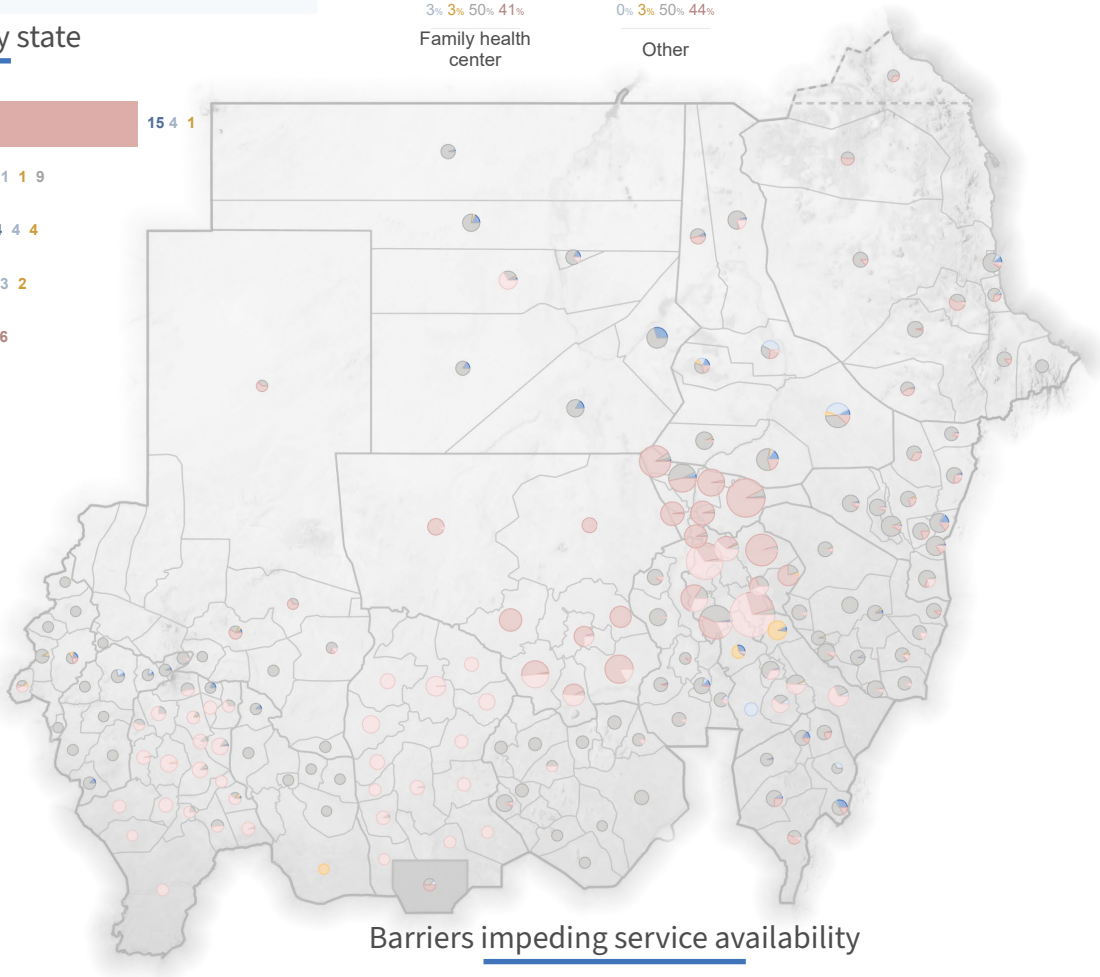

Labels
4% | 177
3% | 119
2% | 102
50% | 2166
41% | 1799

## Service availability by HSDU type




## Service availability by state



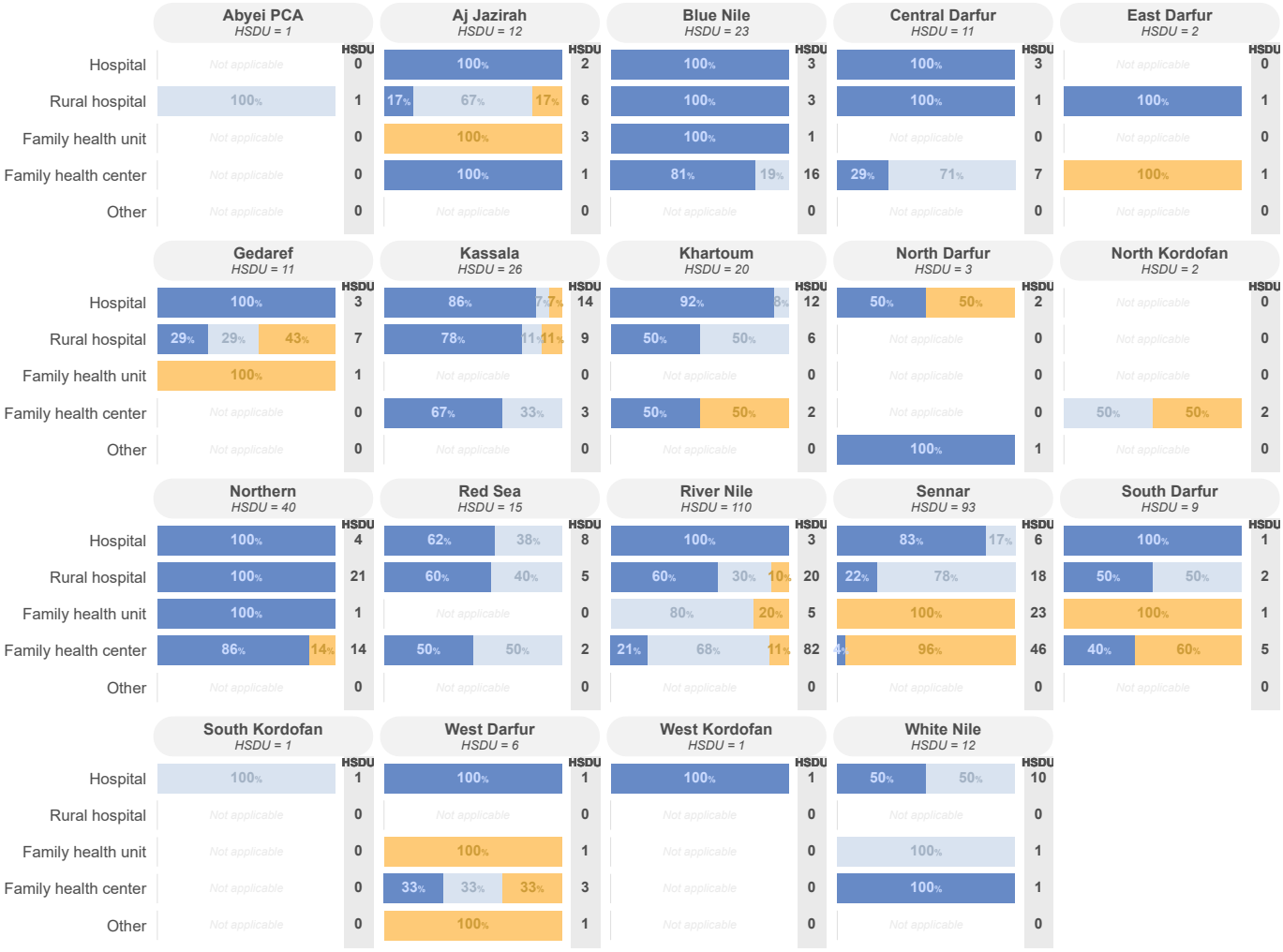
## Barriers impeding service availability


30 At least 20 inpatient bed capacity with 24/7 availability of medical doctors, nurses and midwifes.

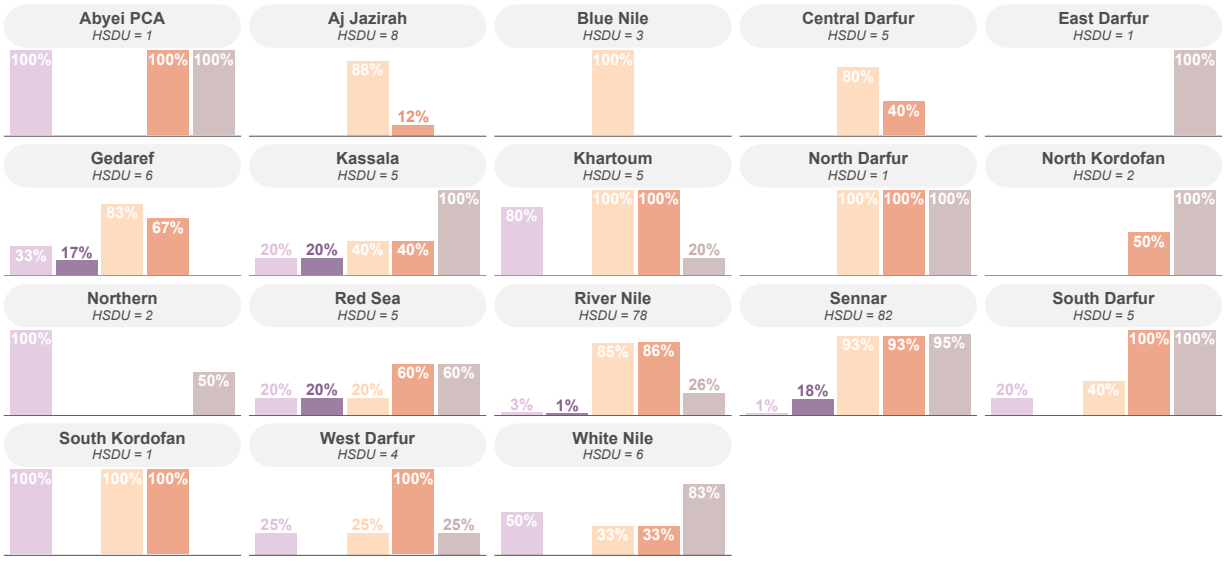
Availability status
Available
Partially available
Not available
Not normally provided
Not operational

Maps
Not reporting
Number of HSDUs
1
120
240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

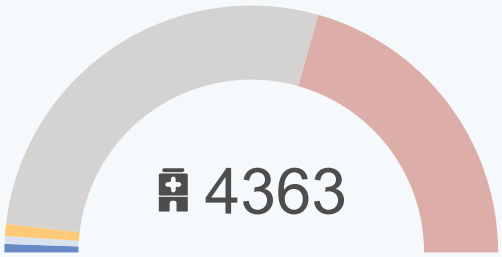
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

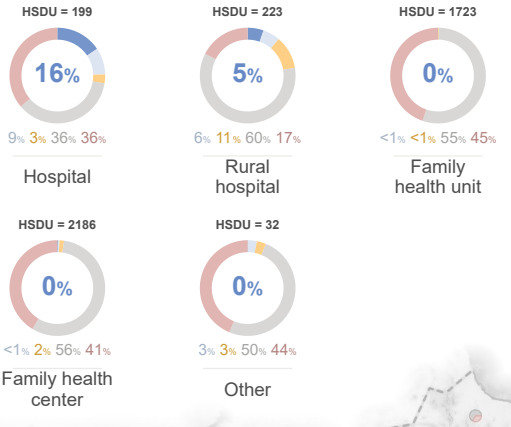
# 50 INPATIENT BED CAPACITY

## Service availability[31]

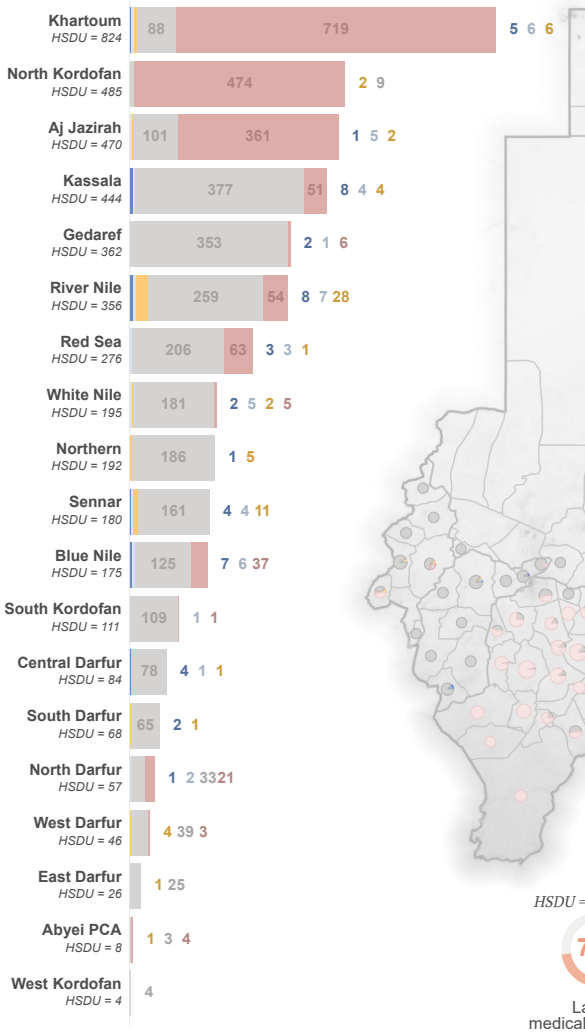


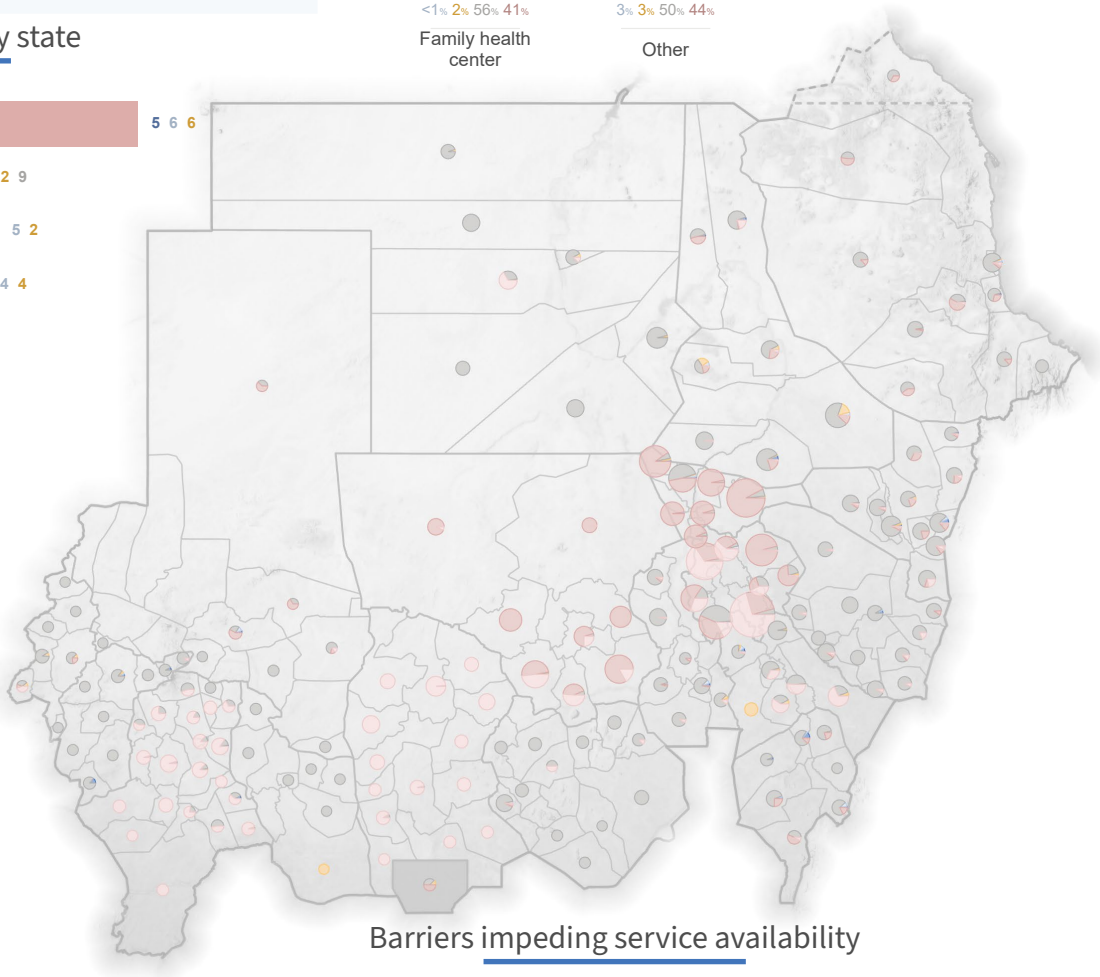

| Labels | |
|---|---|
| 1% | 48 |
| 1% | 45 |
| 2% | 69 |
| 55% | 2402 |
| 41% | 1799 |

## Service availability by HSDU type

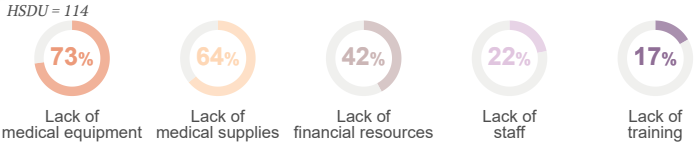



## Service availability by state



## Barriers impeding service availability




31 At least 50 inpatient bed capacity with pediatric and ob-gyn wards with 24/7 availability of doctors and/or specialists (general surgeon, ob-gyn, pediatrician, others).

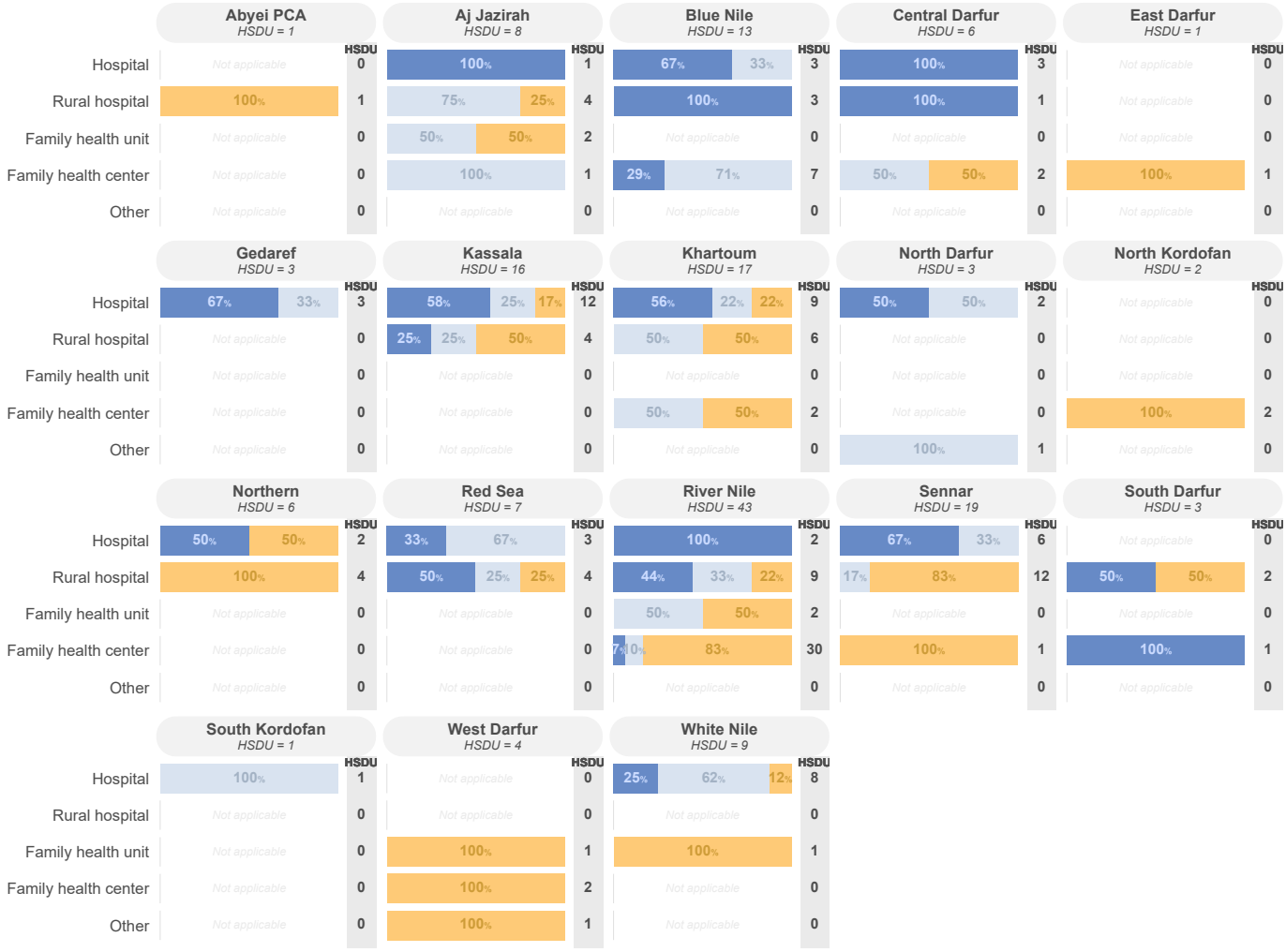
**Availability status**

Available · Partially available · Not available · Not normally provided · Not operational

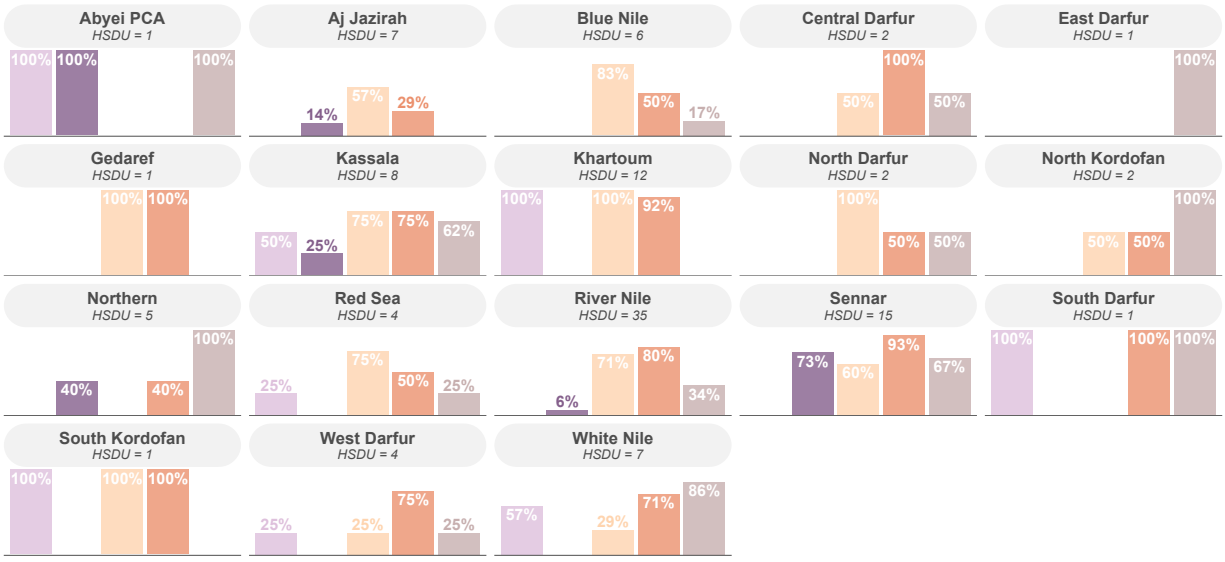
**Maps**

Not reporting · Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

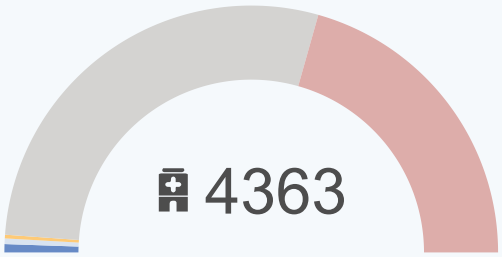
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# INPATIENT CRITICAL CARE MANAGEMENT

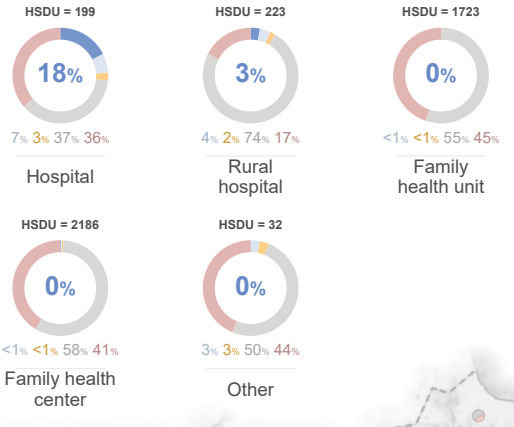
## Service availability[32]



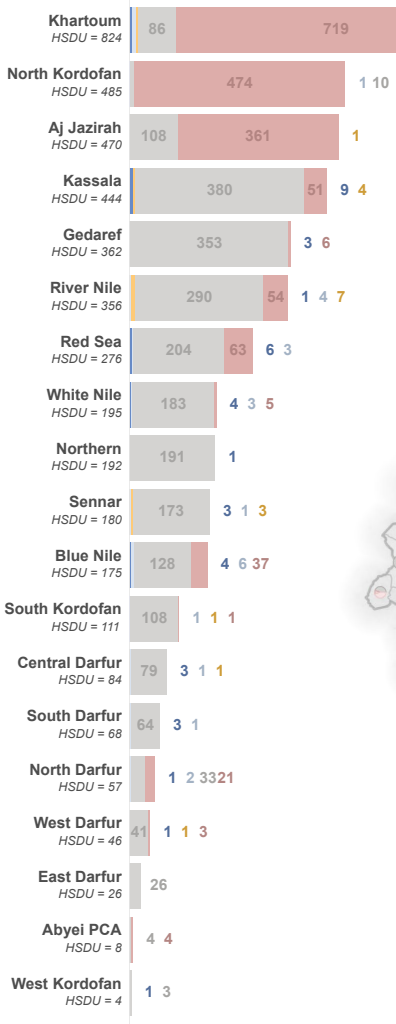

Labels

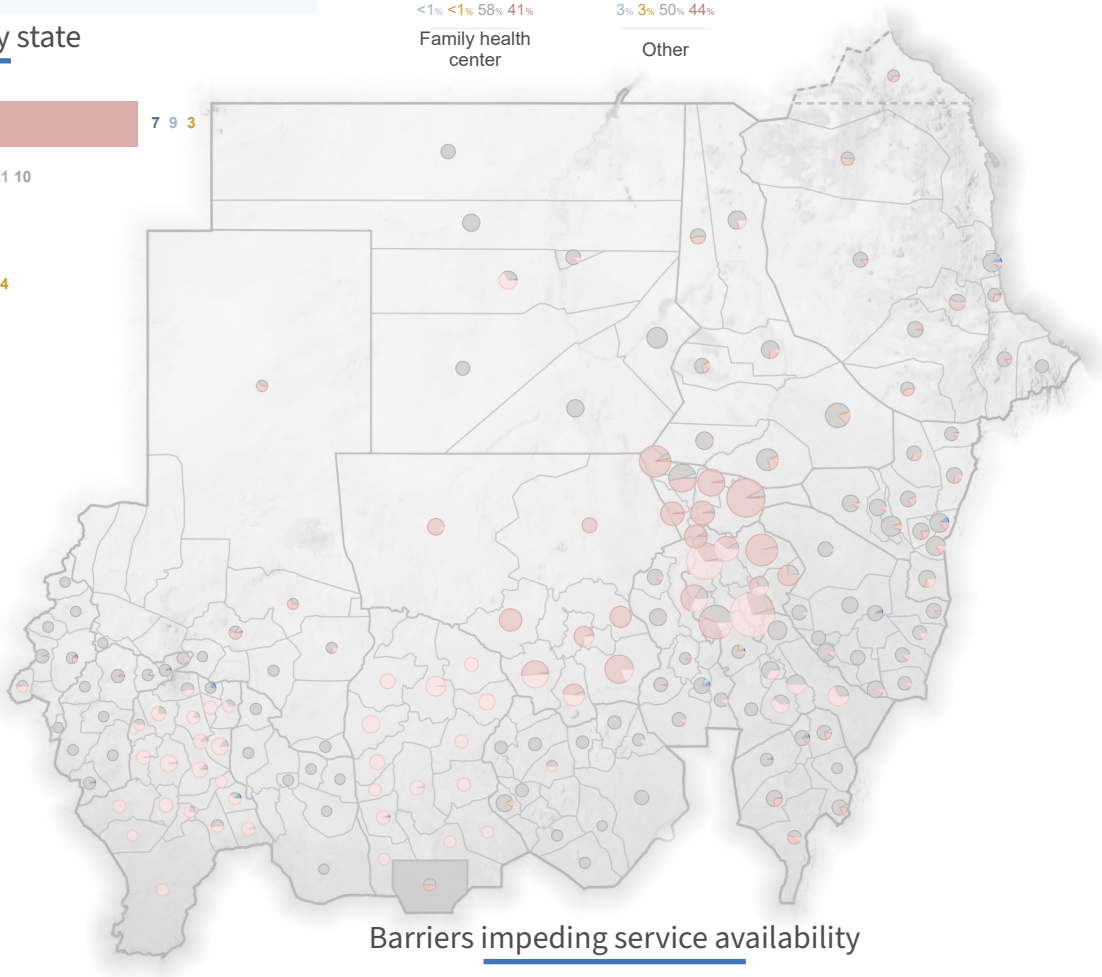
| | |
|---|---|
| 1% \| | 47 |
| <0.1% \| | 32 |
| <0.1% \| | 21 |
| 56% \| | 2464 |
| 41% \| | 1799 |

## Service availability by HSDU type




## Service availability by state



## Barriers impeding service availability


32 Inpatient critical care management with availability of mechanical ventilation, infusion pumps and third-line emergency drugs.

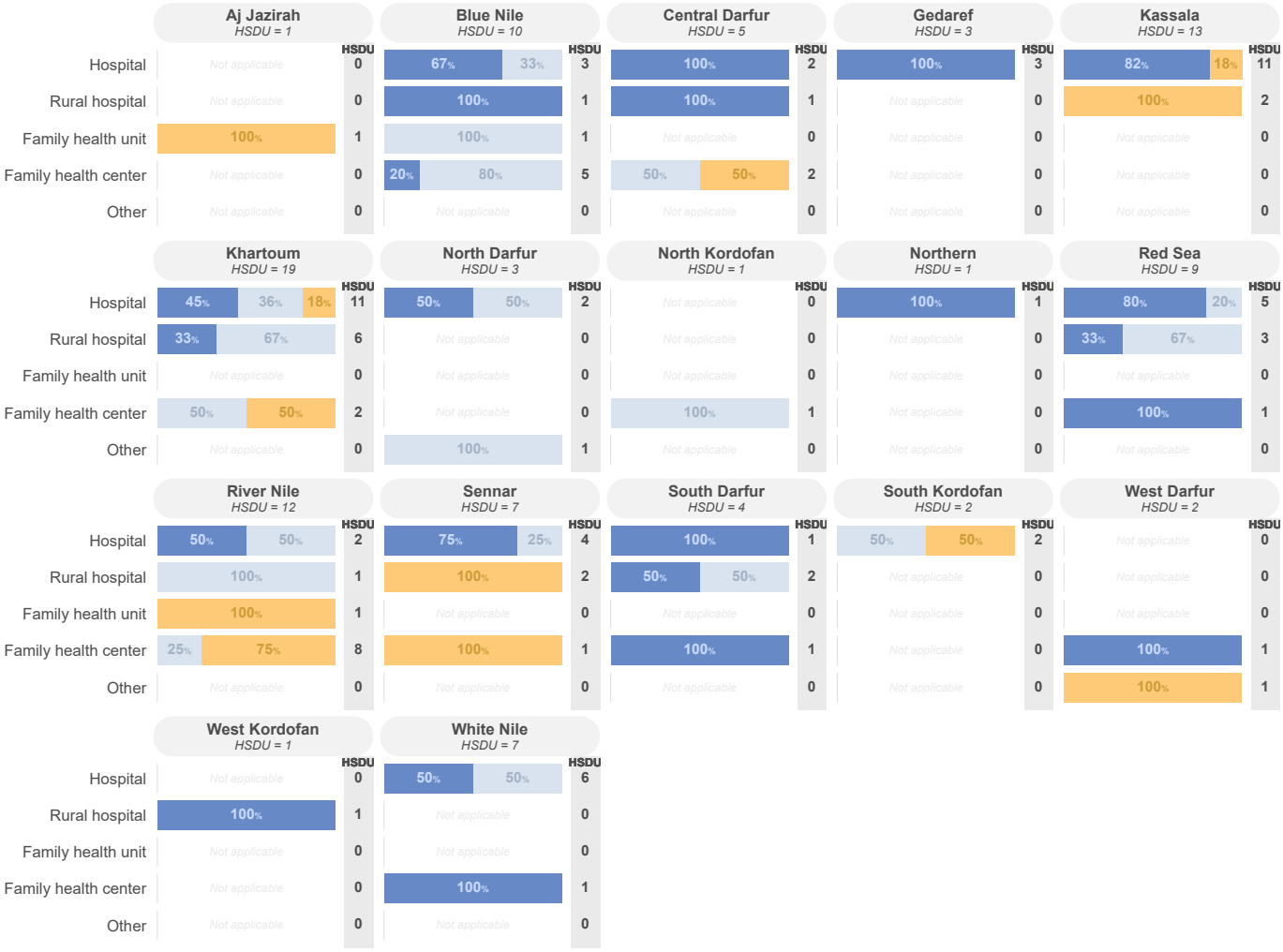
Availability status

Available
Partially available
Not available
Not normally provided
Not operational

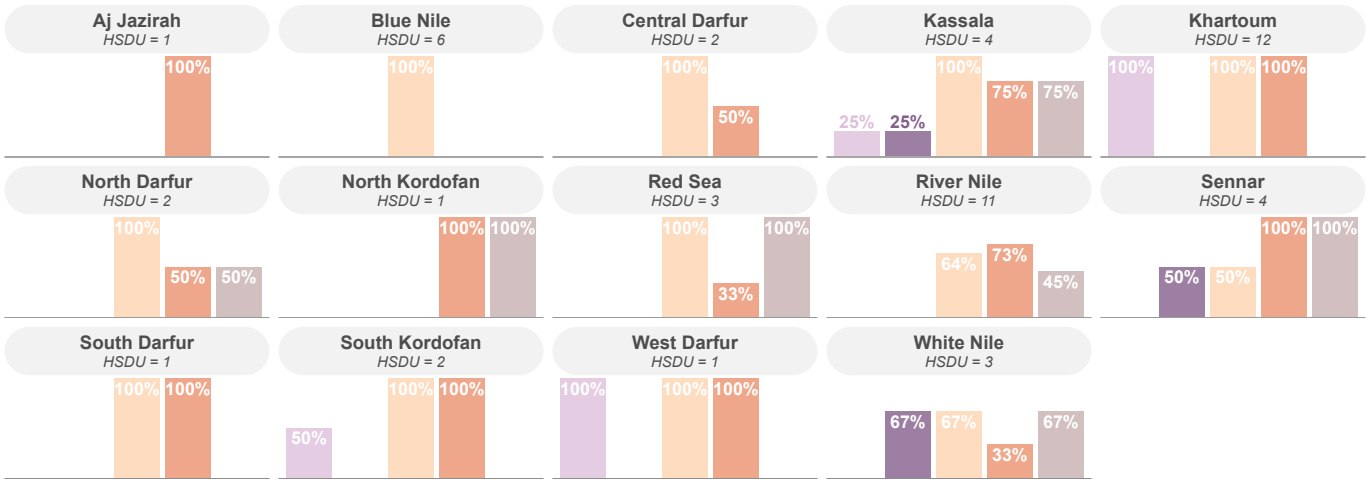
Maps

Not reporting
Number of HSDUs
1
120
240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

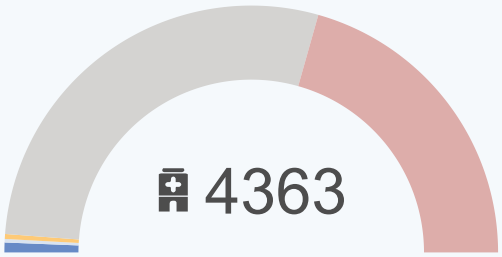
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# INTENSIVE CARE UNIT

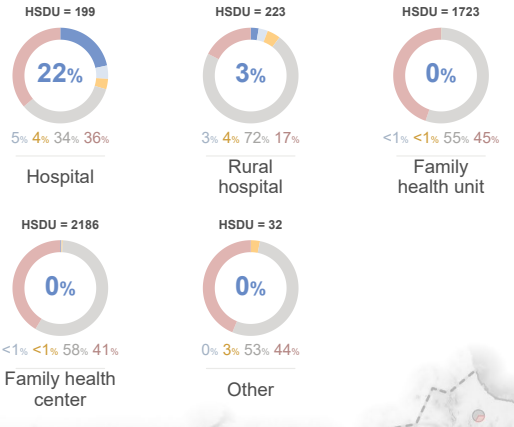
## Service availability[33]



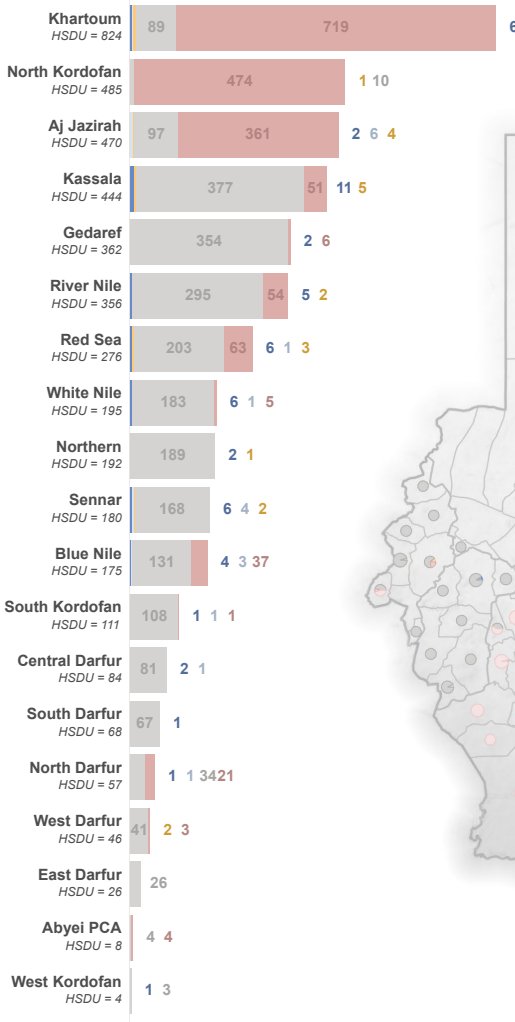

Labels

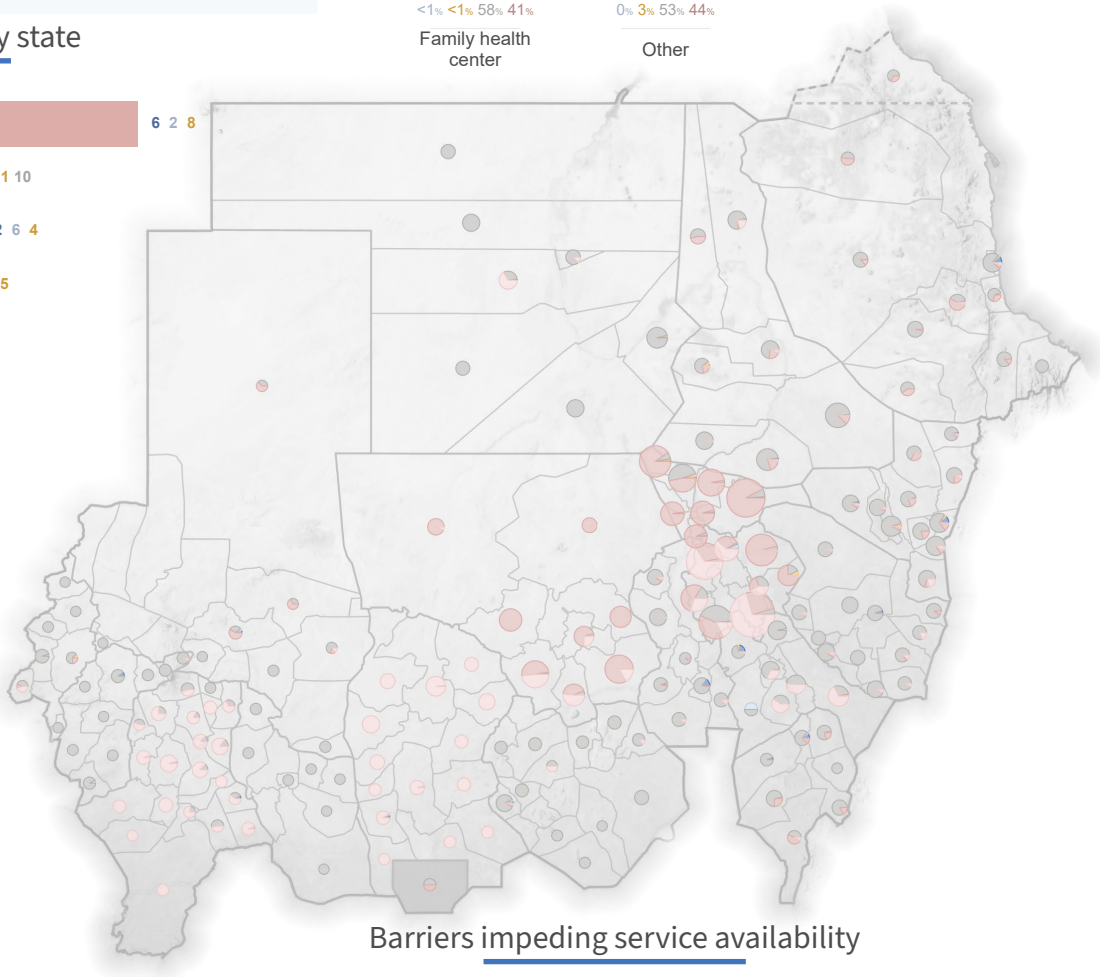
| | |
|---|---|
| 1% \| | 56 |
| <0.1% \| | 20 |
| <0.1% \| | 28 |
| 56% \| | 2460 |
| 41% \| | 1799 |

## Service availability by HSDU type

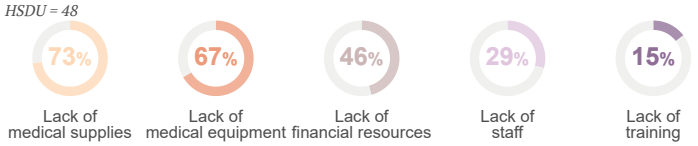



## Service availability by state



## Barriers impeding service availability




33 Intensive care unit with at least 4 beds.

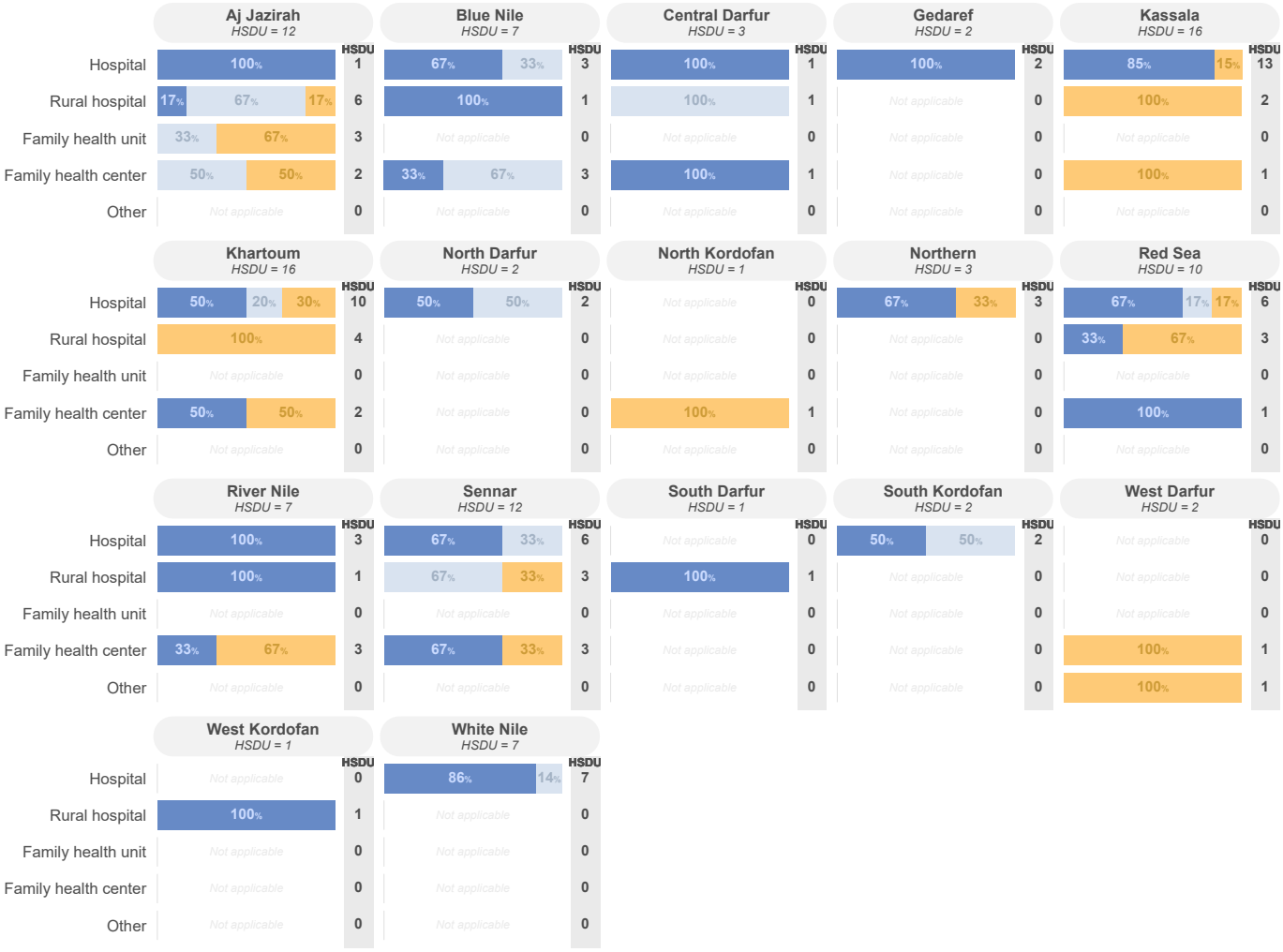
Availability status

Available
Partially available
Not available
Not normally provided
Not operational

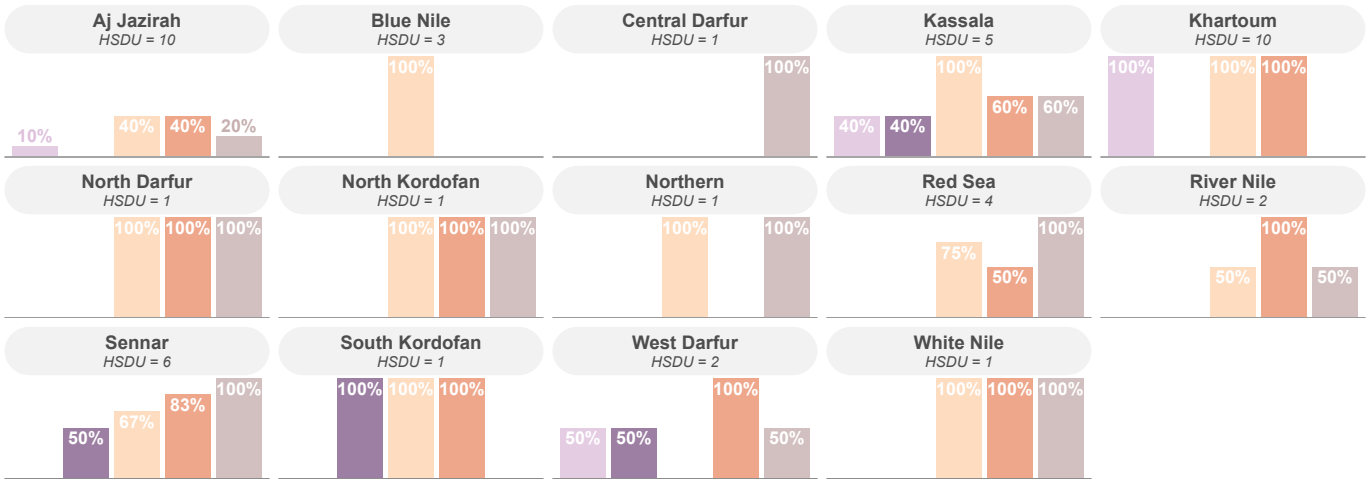
Maps

Not reporting
Number of HSDUs
1
120
240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

Available | Partially available | Not available

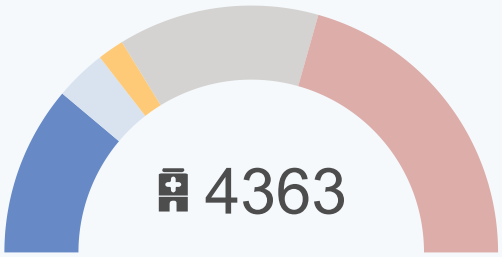
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

**Barriers** *for partial availability or non-availability.*

Lack of staff | Lack of supplies | Lack of financial resources | Lack of training | Lack of equipment

# BASIC LABORATORY

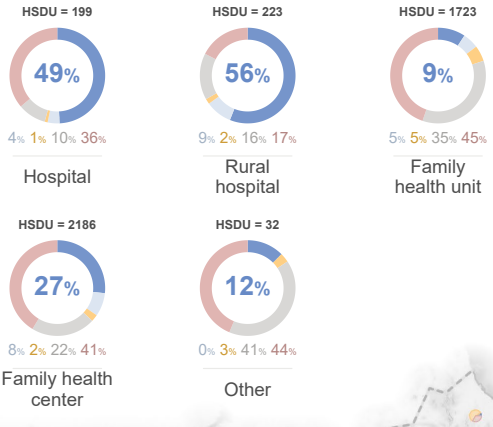
## Service availability[34]



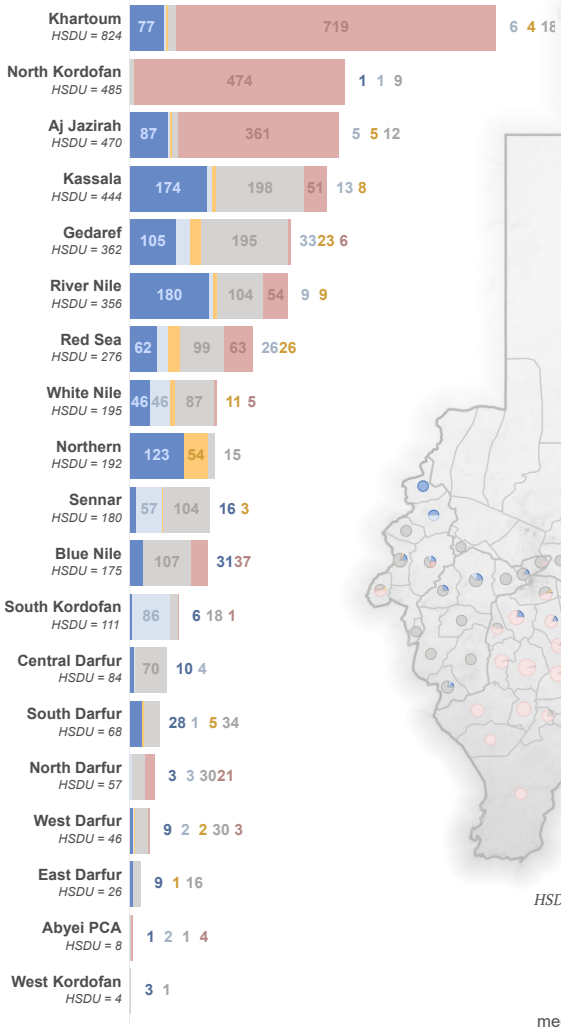

Labels

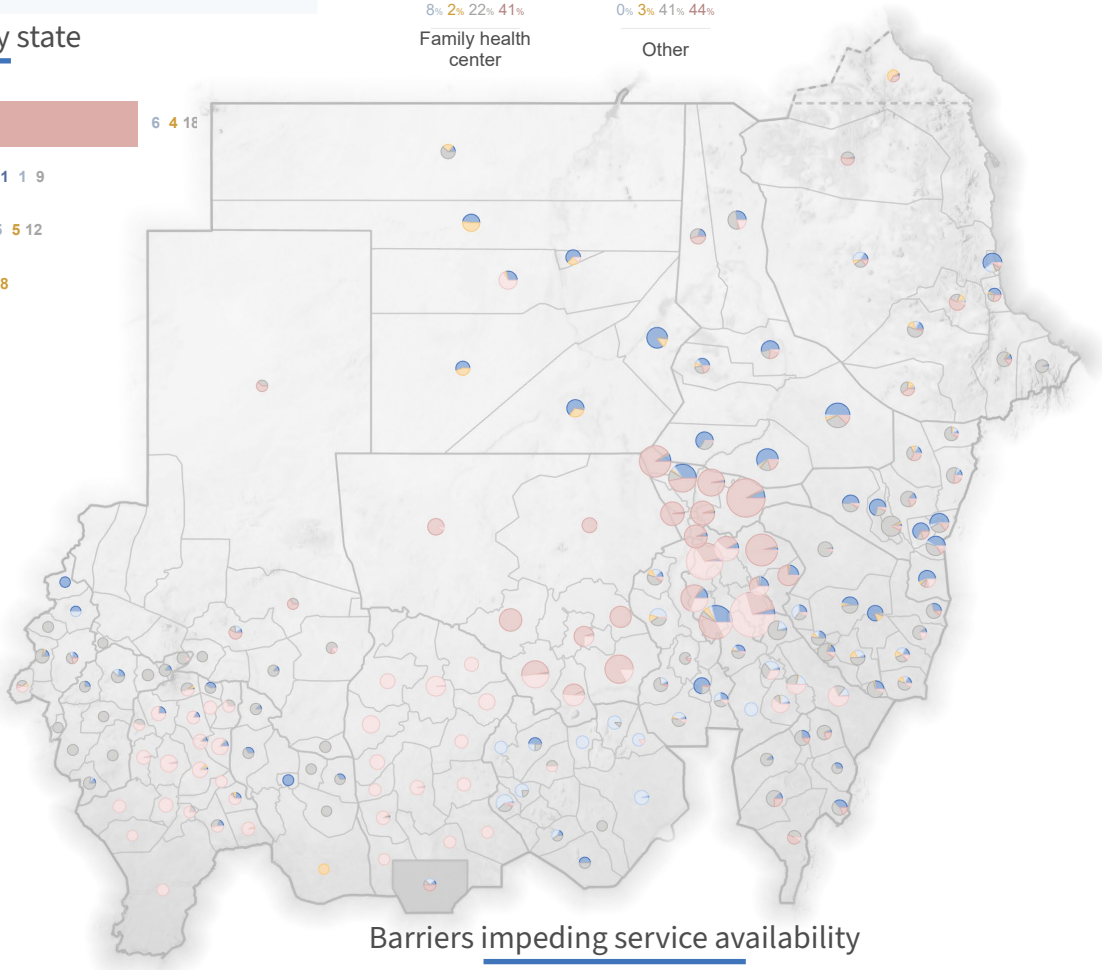
| | |
|---|---|
| 22% | 971 |
| 7% | 294 |
| 3% | 151 |
| 26% | 1148 |
| 41% | 1799 |

## Service availability by HSDU type

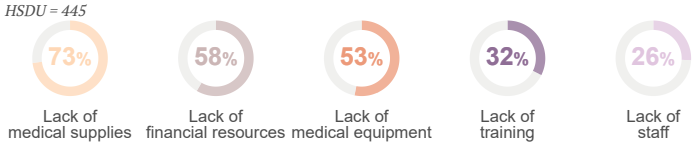



## Service availability by state



## Barriers impeding service availability




34 Basic laboratory with general microscopy.

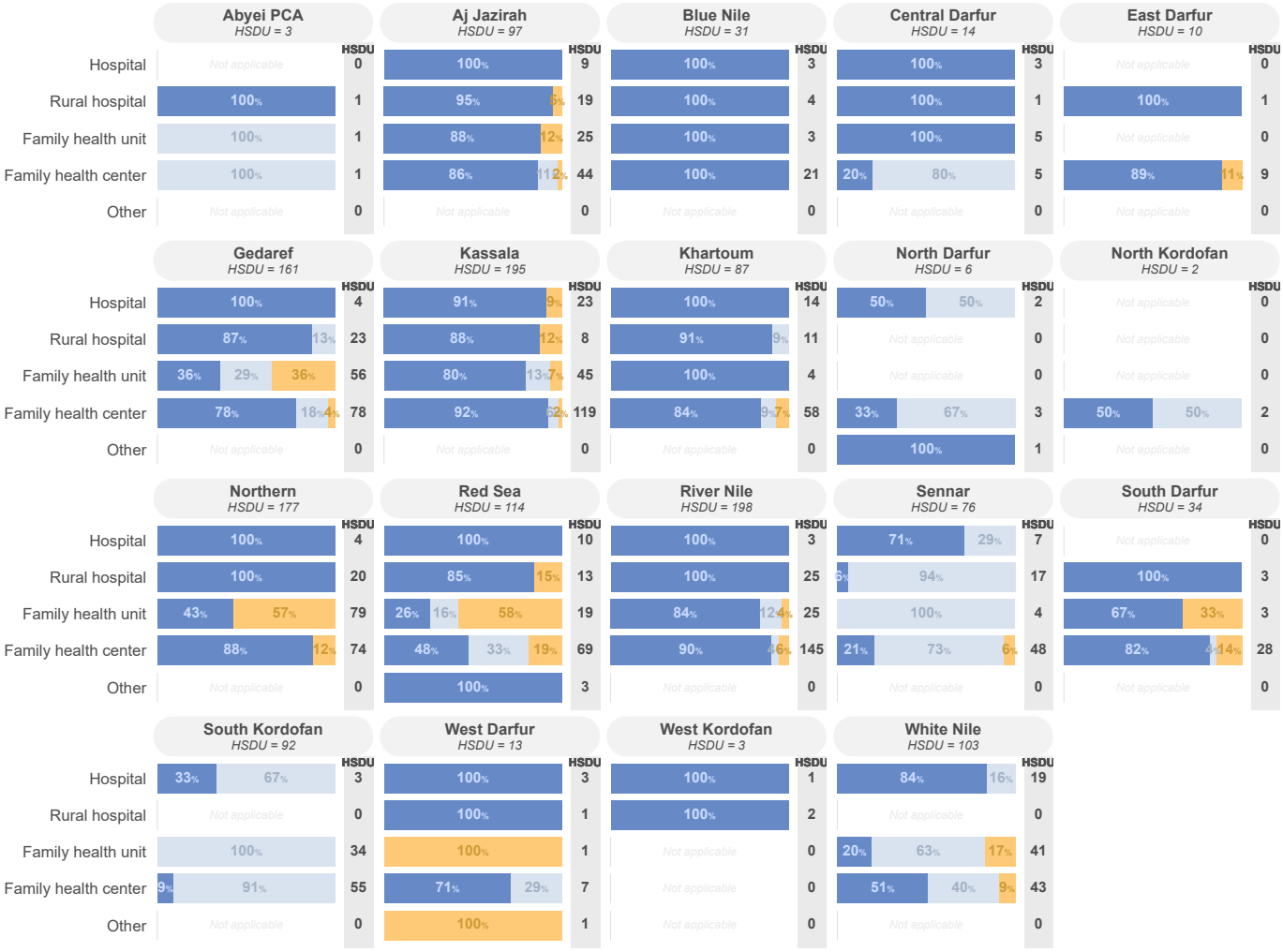
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

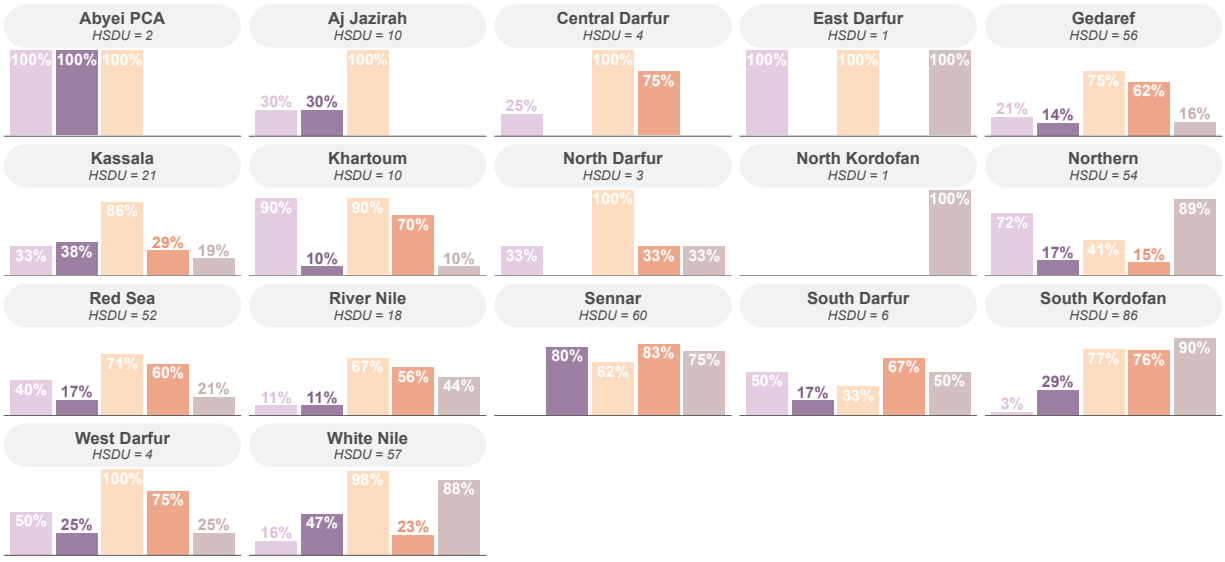
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

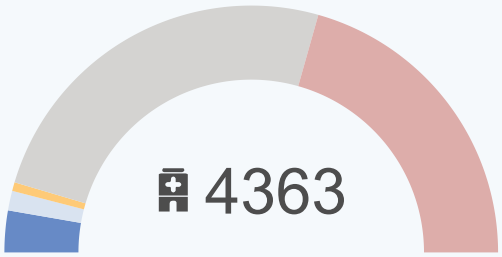
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

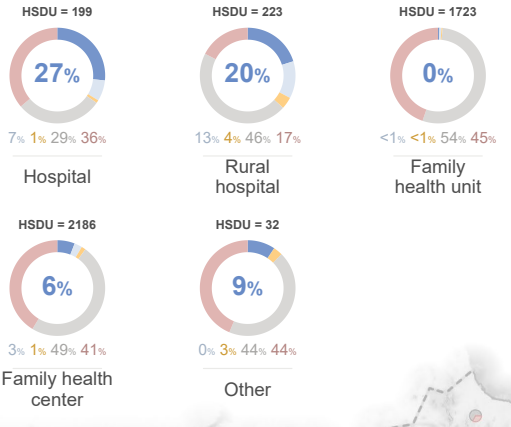
# LABORATORY SERVICES SECONDARY LEVEL

## Service availability[35]

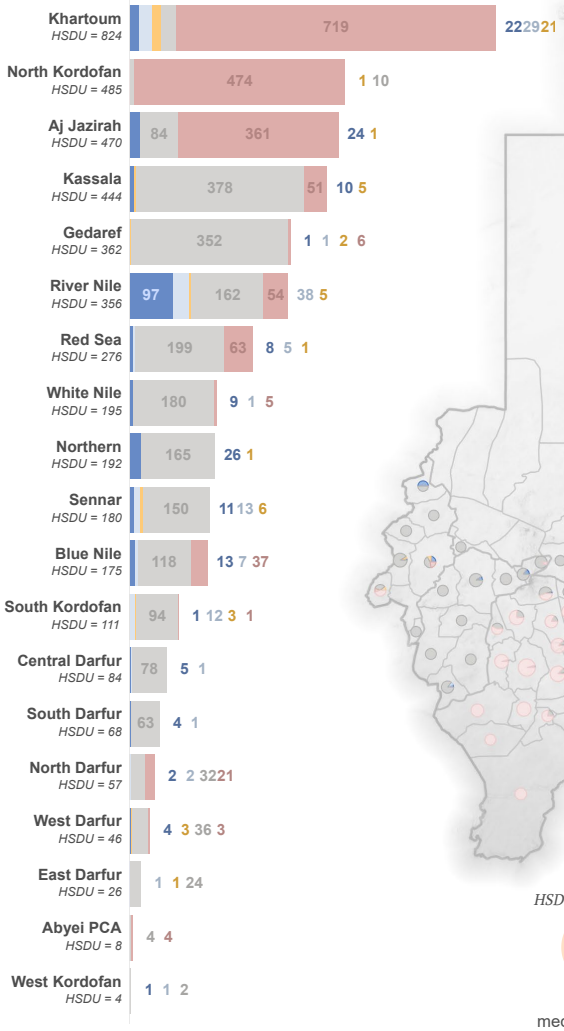


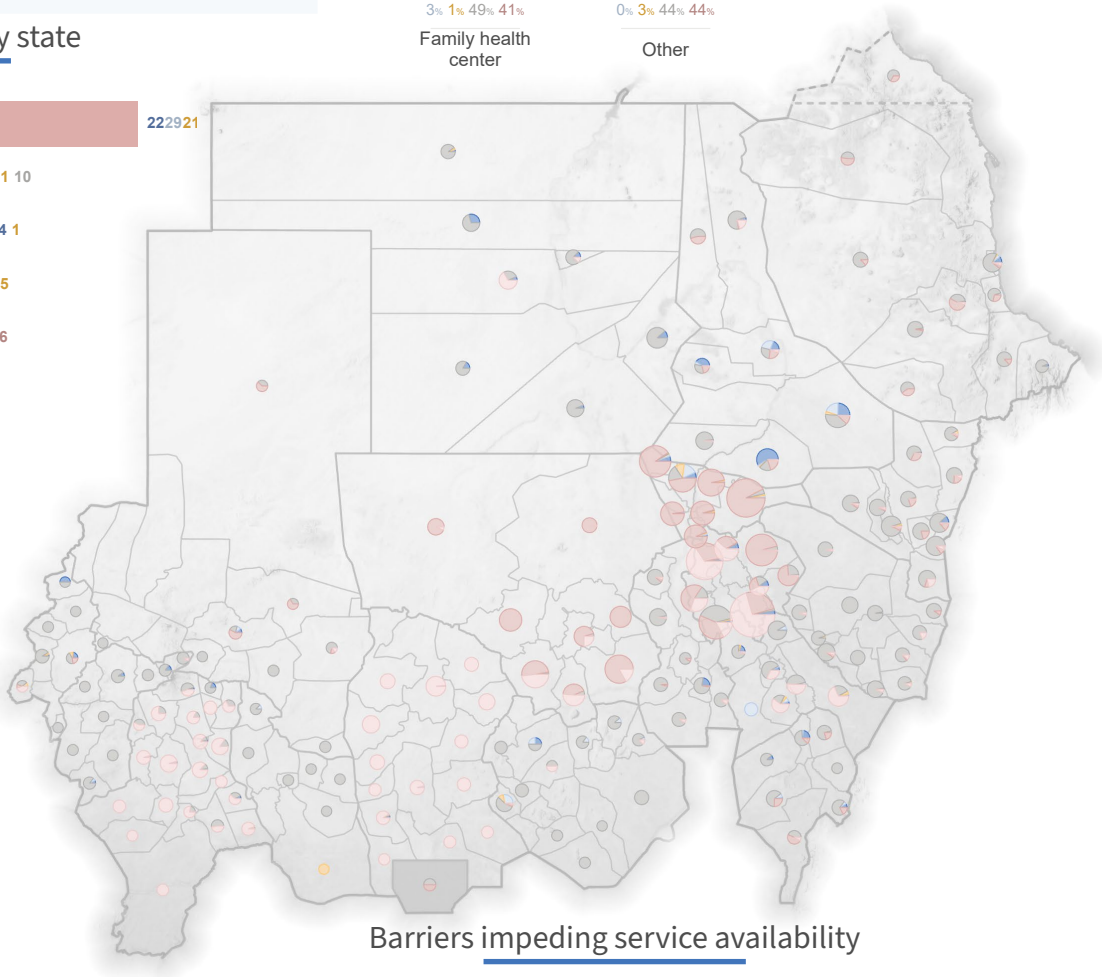

Labels
5% | 238
3% | 112
1% | 50
50% | 2164
41% | 1799

## Service availability by HSDU type

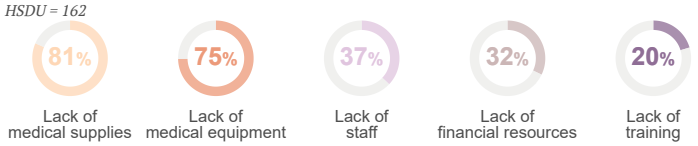



## Service availability by state

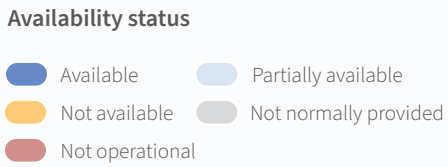


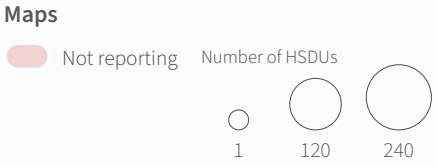



## Barriers impeding service availability

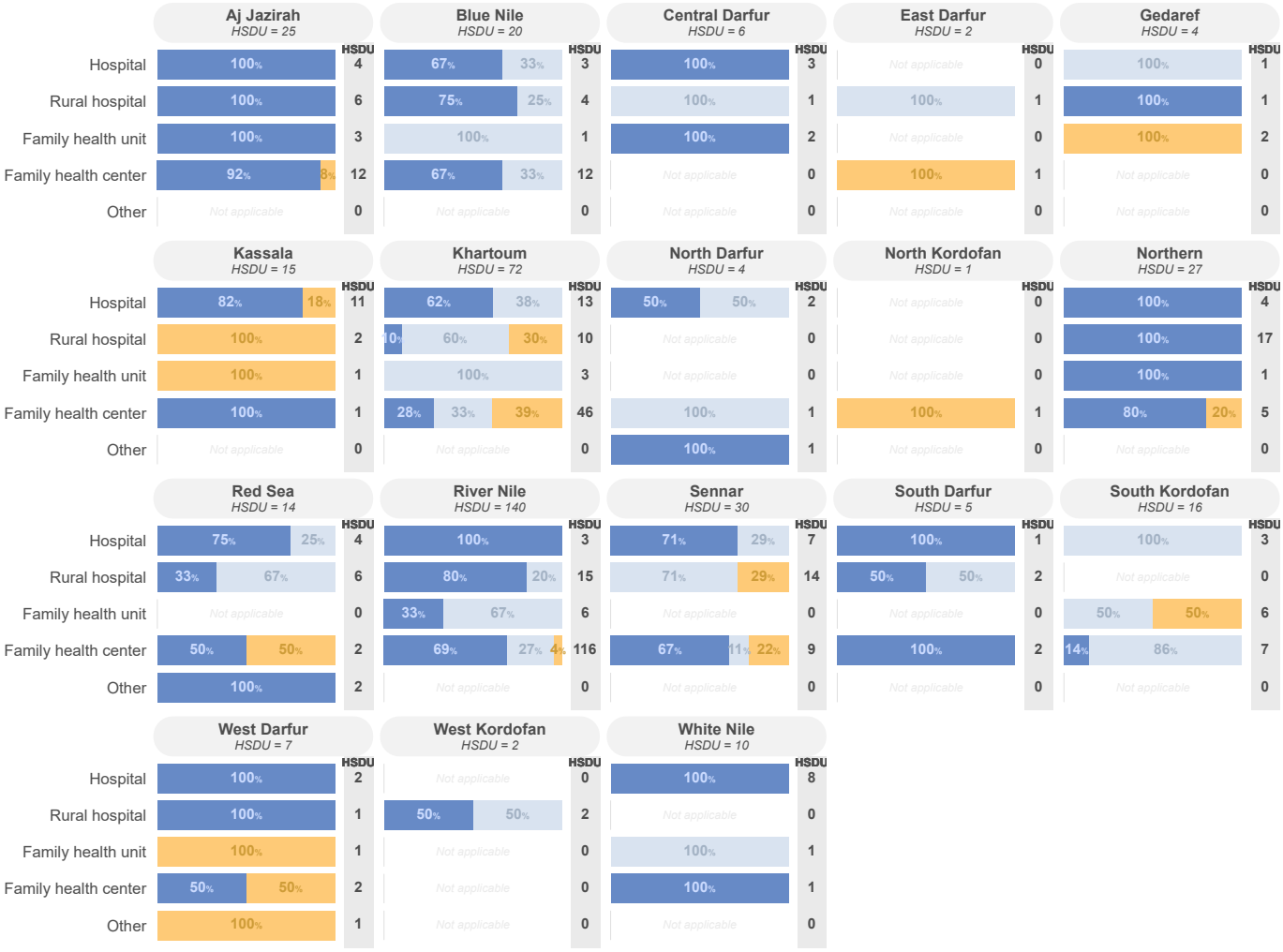



35 Secondary laboratory services including electrolyte and blood gas concentrations.

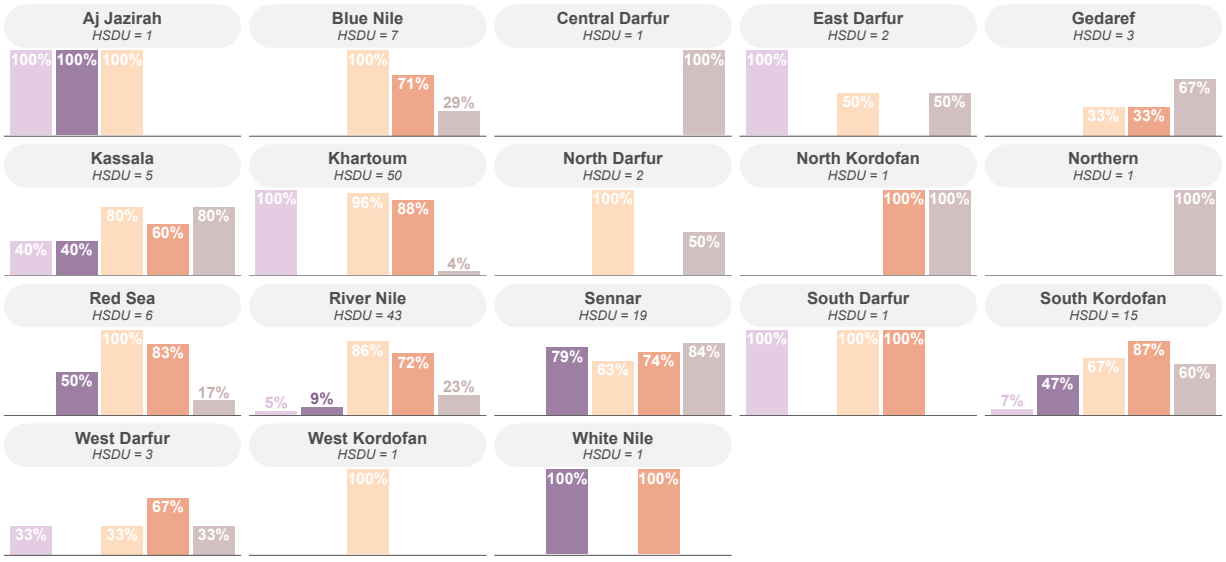


## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

Available · Partially available · Not available

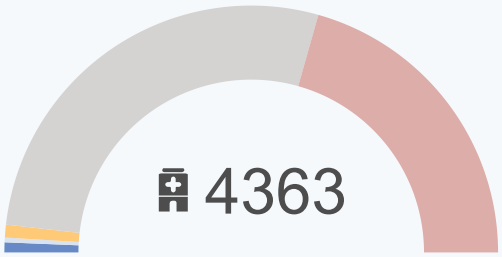
**Barriers** *for partial availability or non-availability.*

Lack of staff · Lack of supplies · Lack of financial resources · Lack of training · Lack of equipment

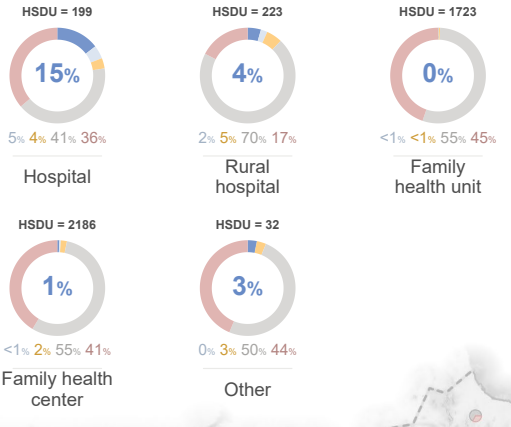
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# LABORATORY SERVICES TERTIARY LEVEL

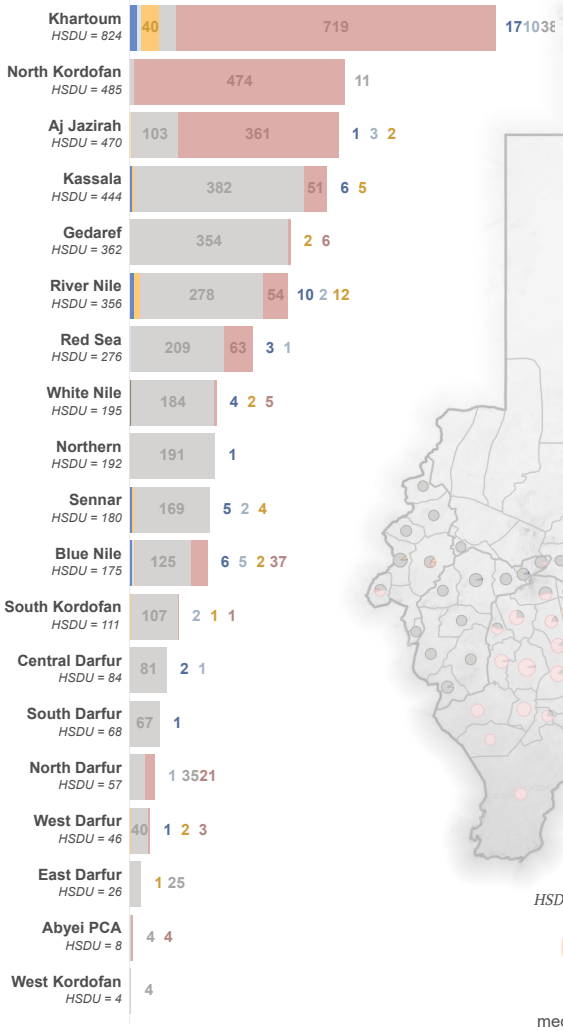
## Service availability[36]

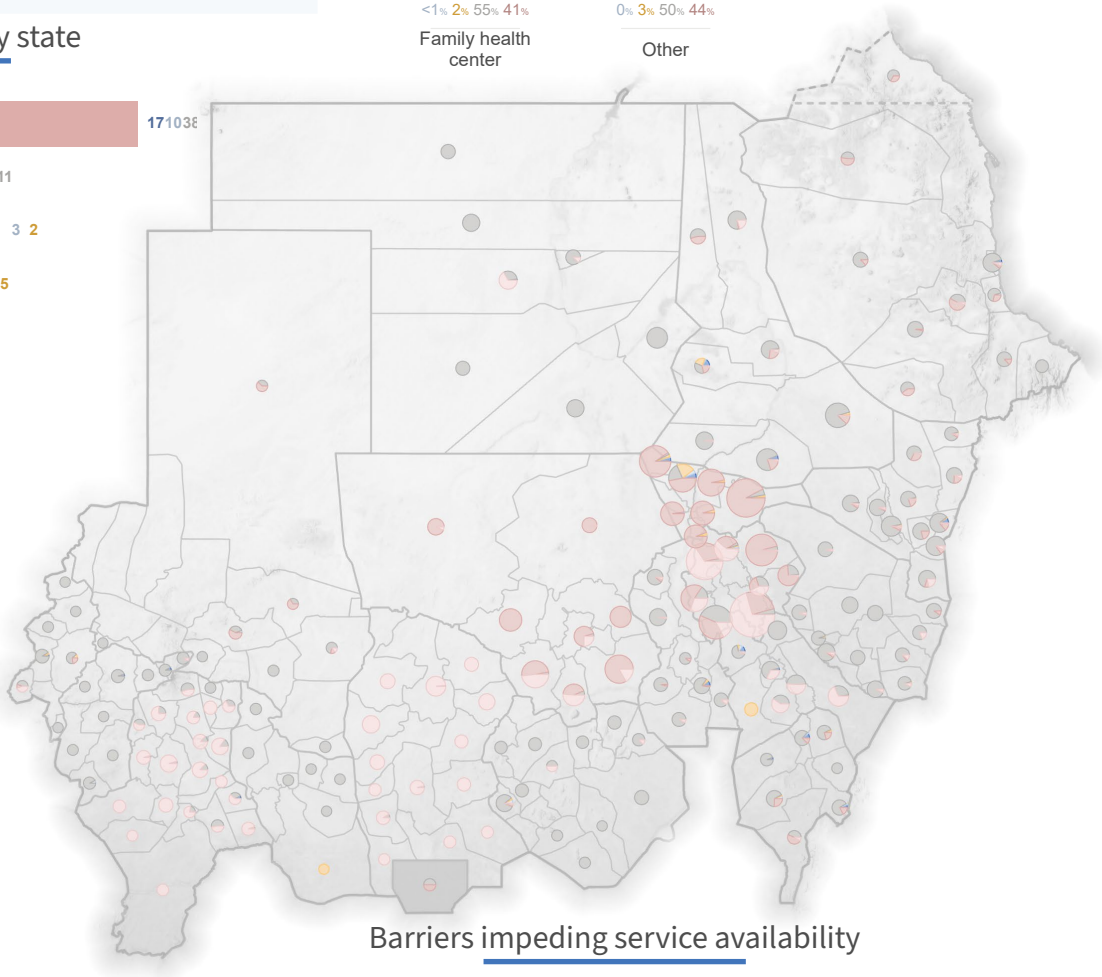



## Service availability by HSDU type

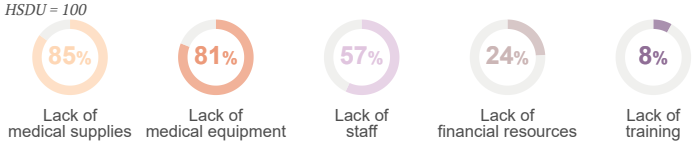



## Service availability by state

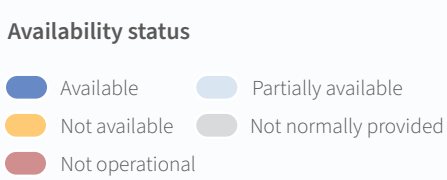


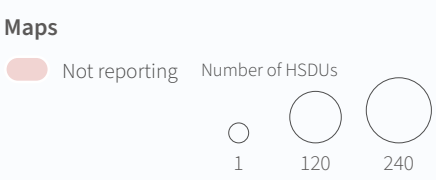



## Barriers impeding service availability

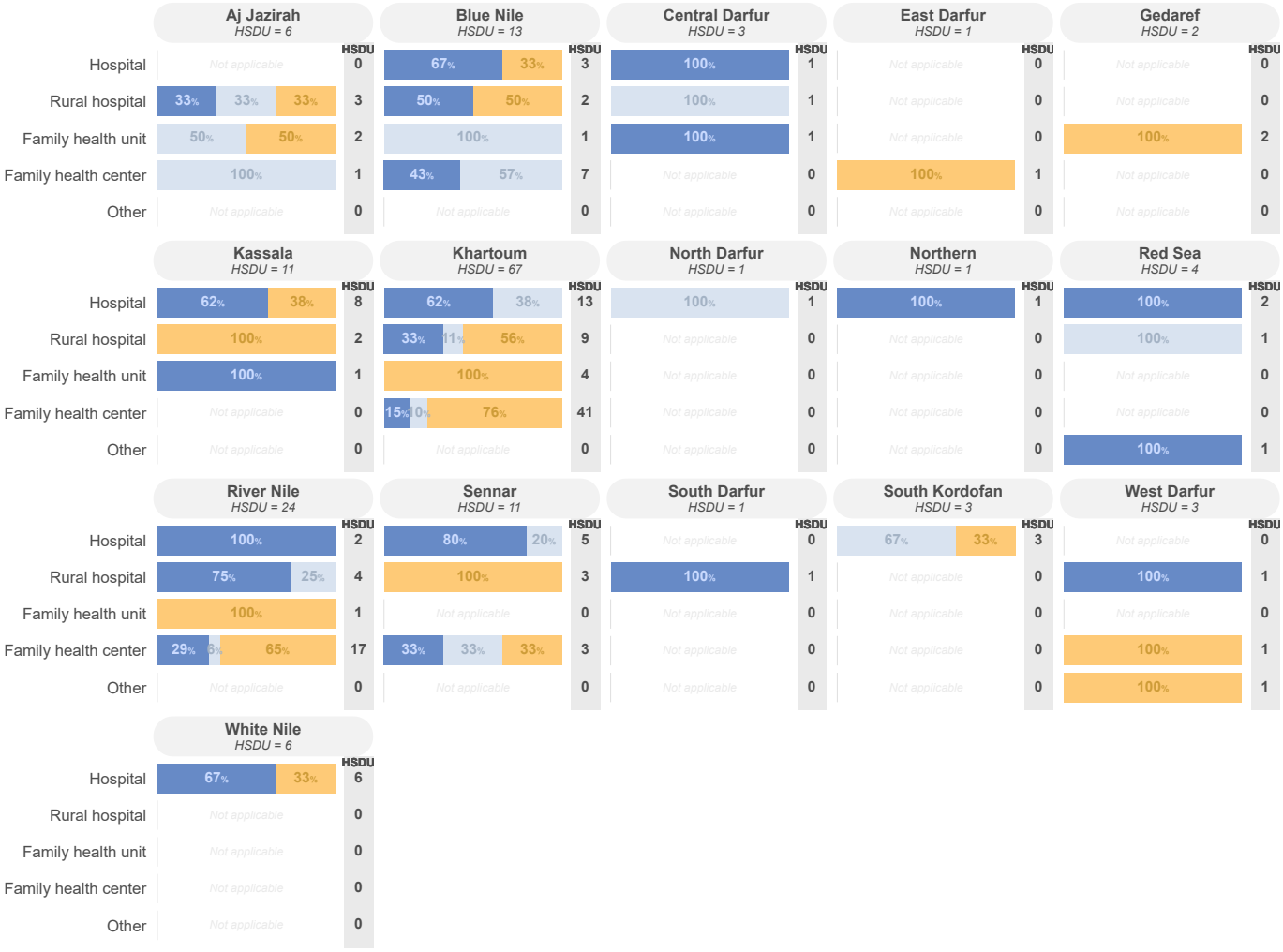



36 Tertiary laboratory services with public health laboratory capacities.

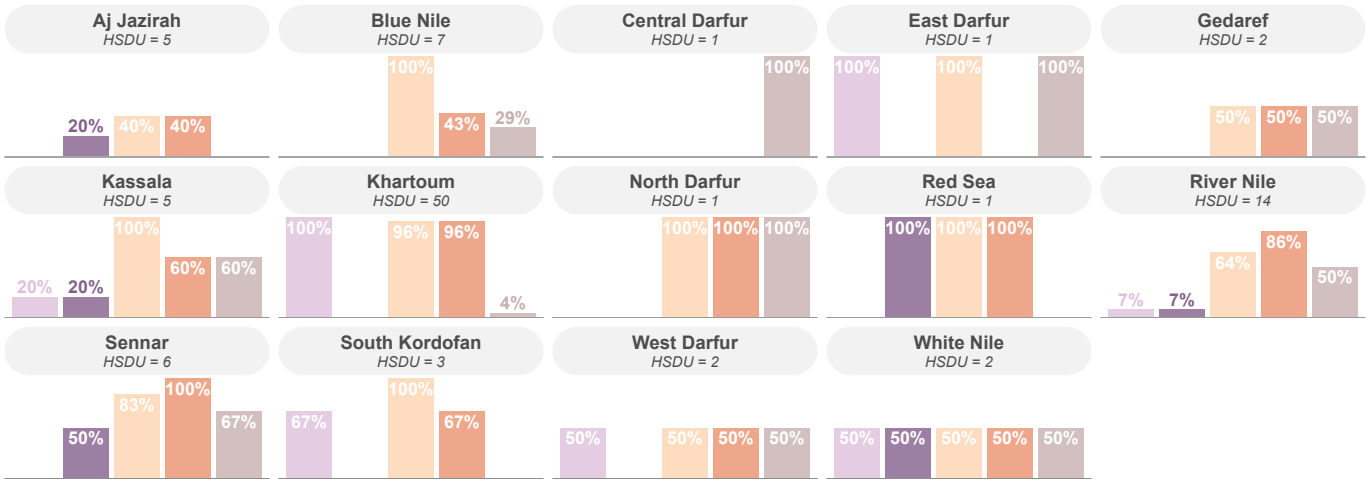


## Service availability by HSDU type and state*




## Barriers impeding service availability by state




### Availability status

- Available
- Partially available
- Not available

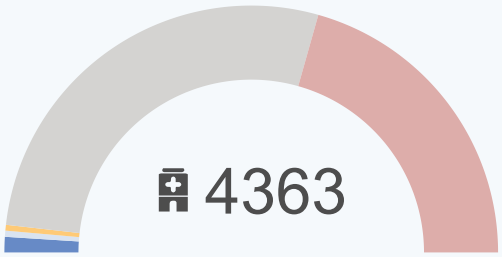
### Barriers *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

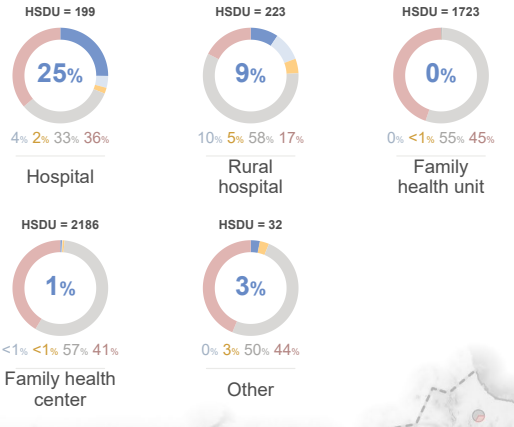
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# BLOOD BANK SERVICES

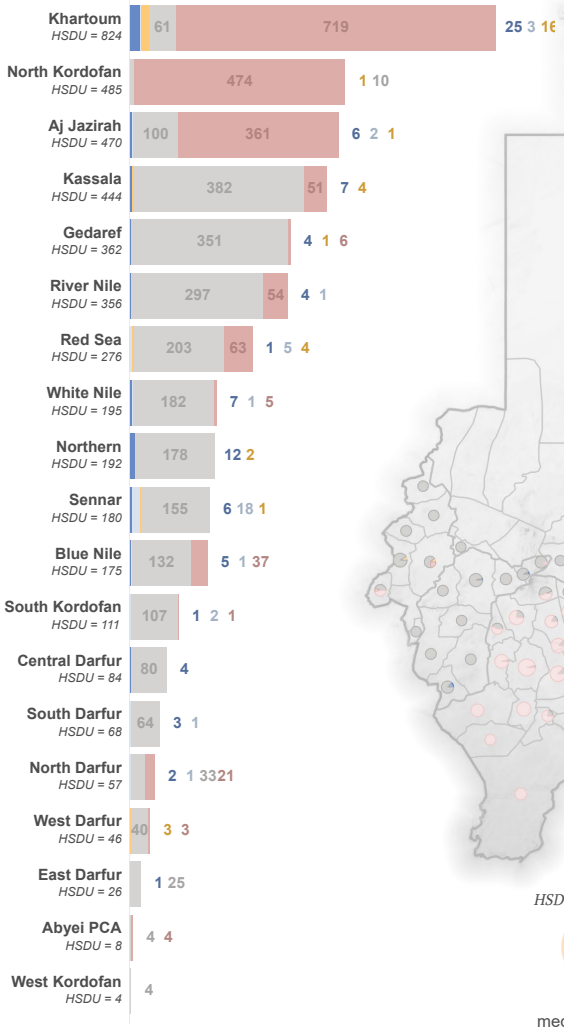
## Service availability[37]

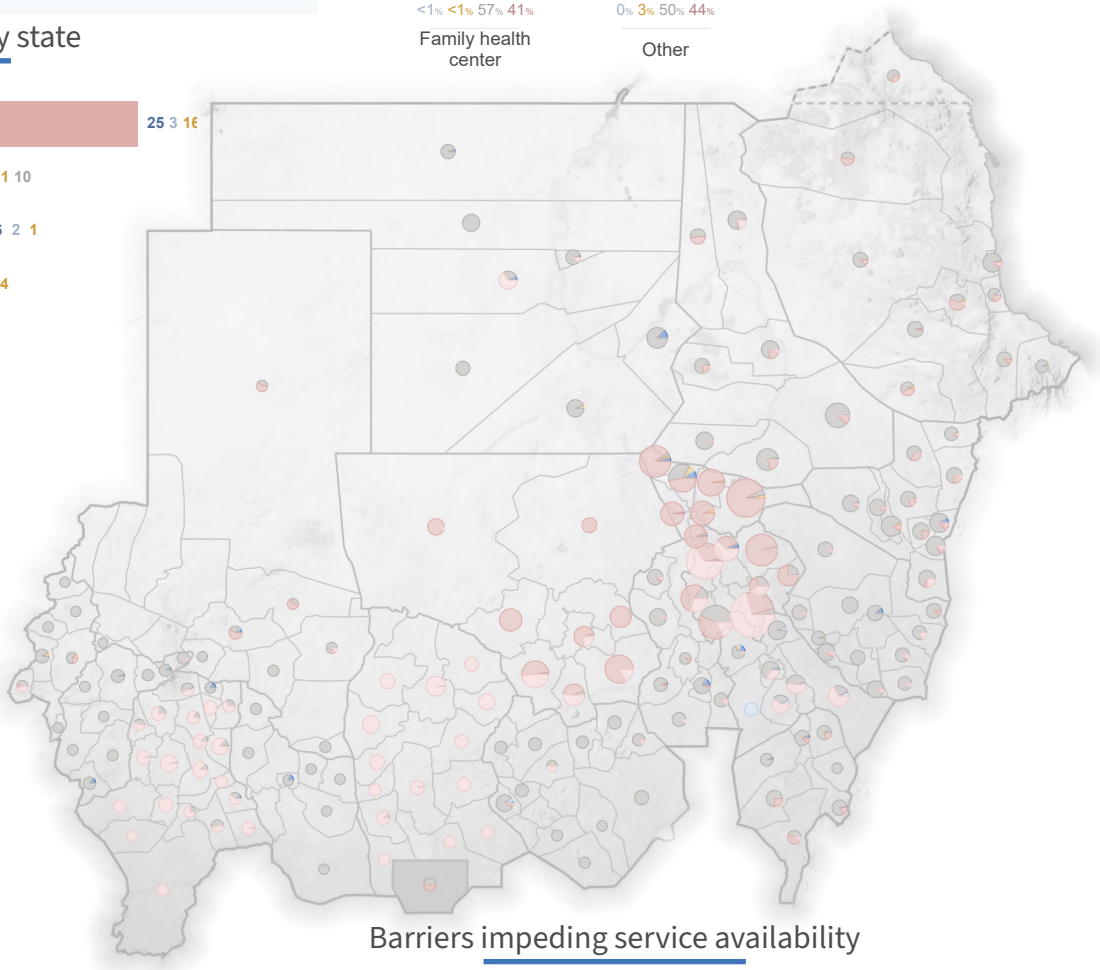



## Service availability by HSDU type

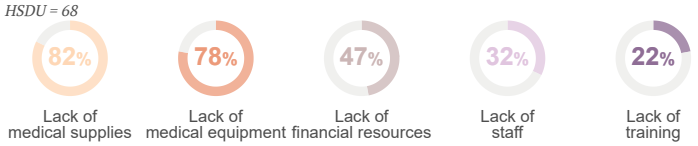



## Service availability by state



## Barriers impeding service availability




37 Availability of blood bank services.

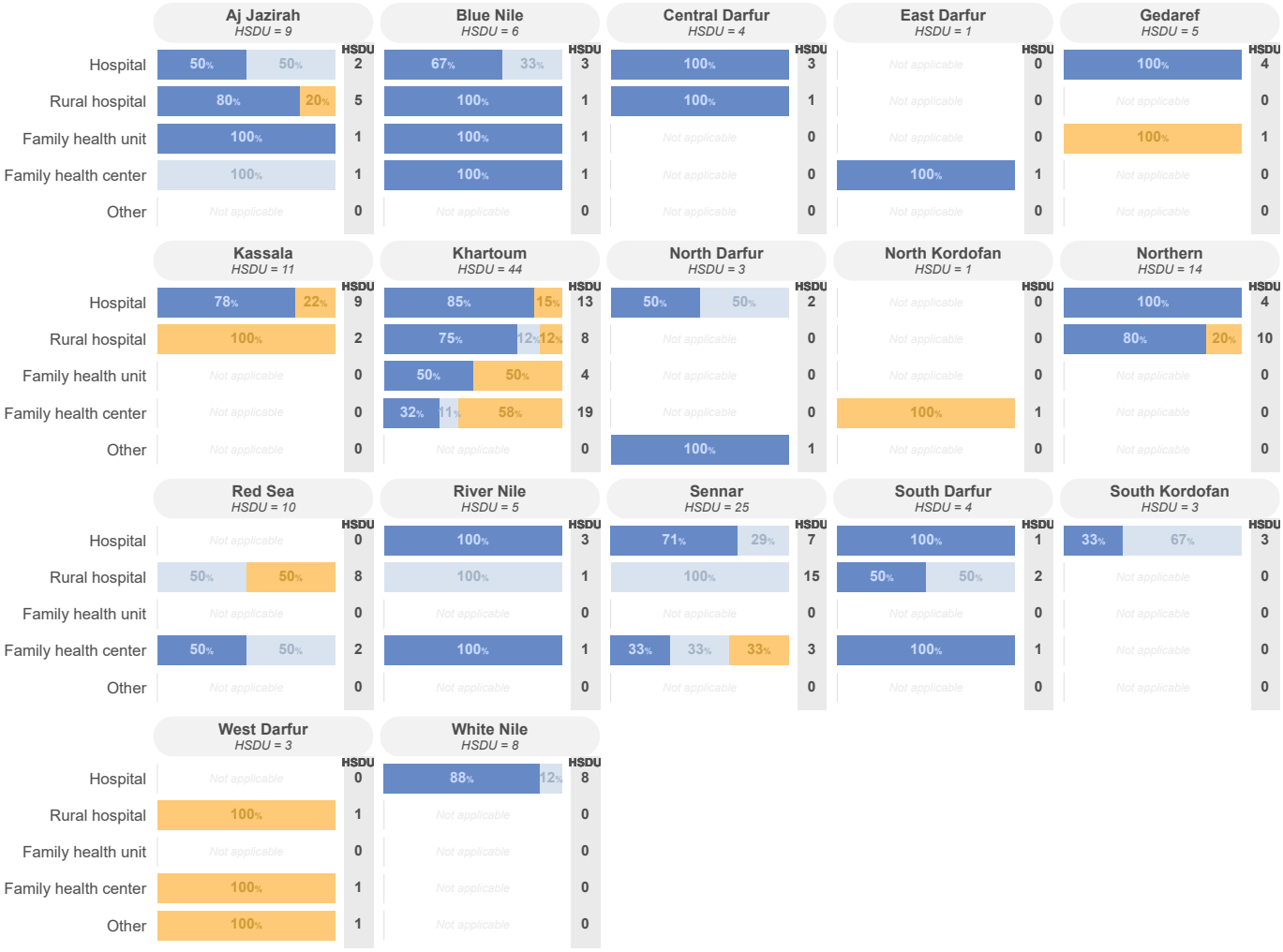
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

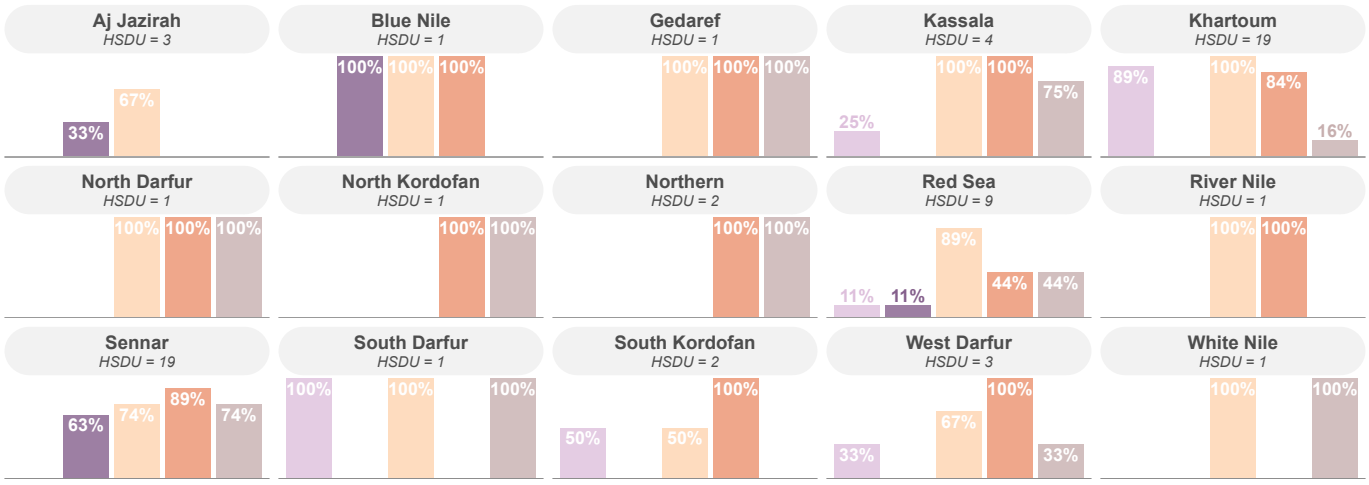
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

Available
Partially available
Not available

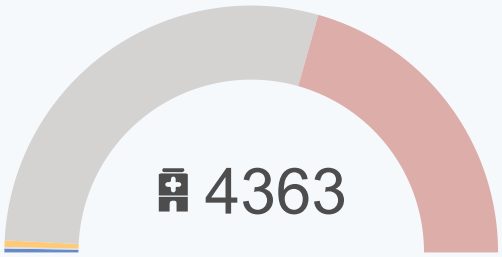
**Barriers** *for partial availability or non-availability.*

Lack of staff
Lack of supplies
Lack of financial resources
Lack of training
Lack of equipment

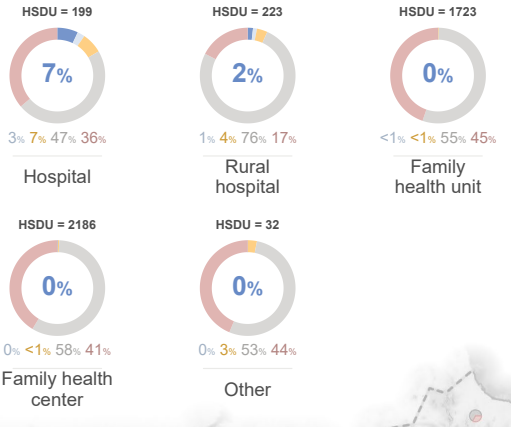
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# HEMODIALYSIS UNIT

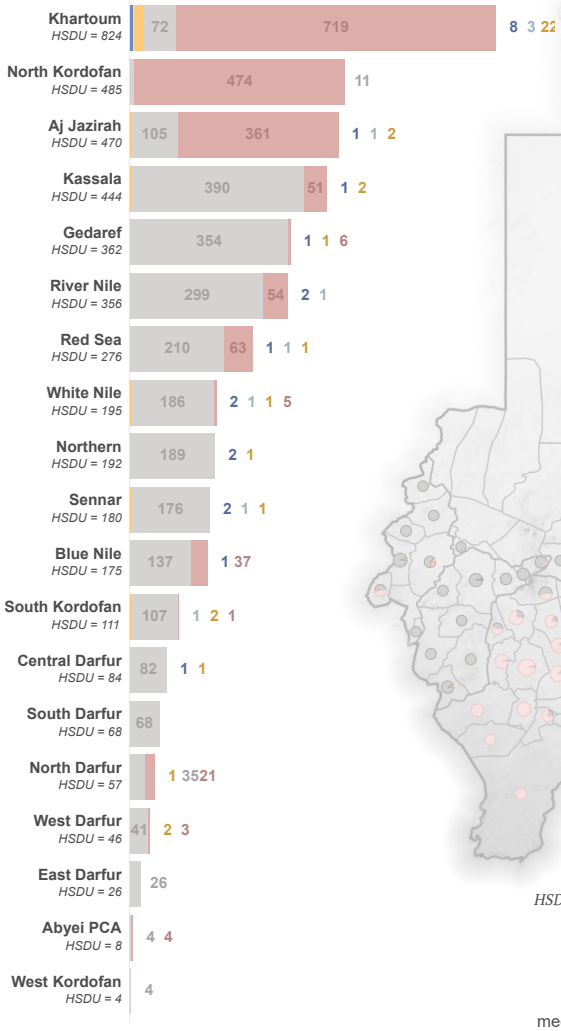
## Service availability[38]

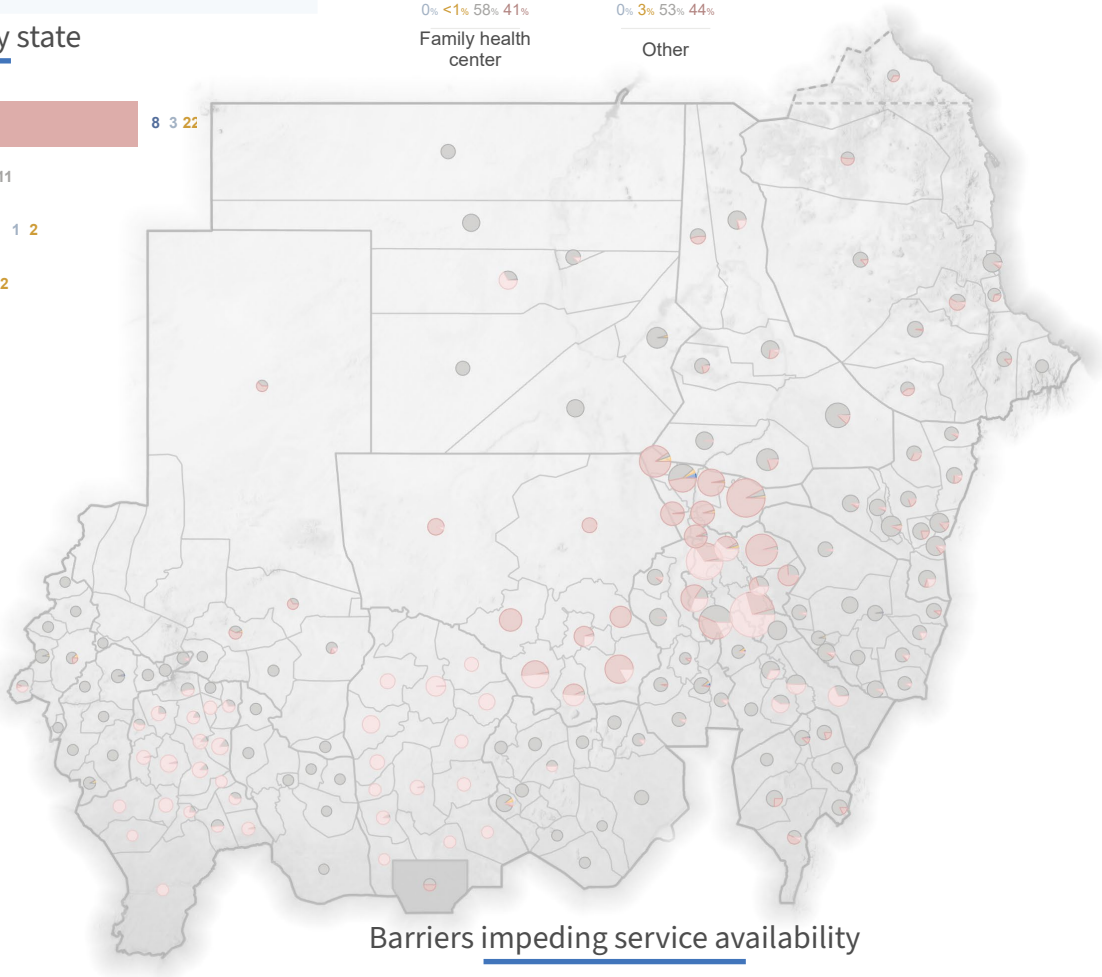



## Service availability by HSDU type

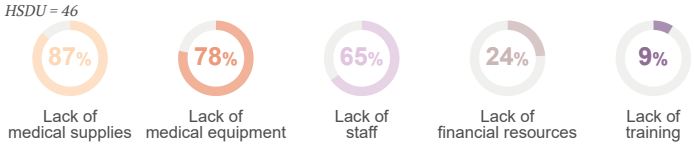



## Service availability by state



## Barriers impeding service availability




38 Availability of hemodialysis unit.

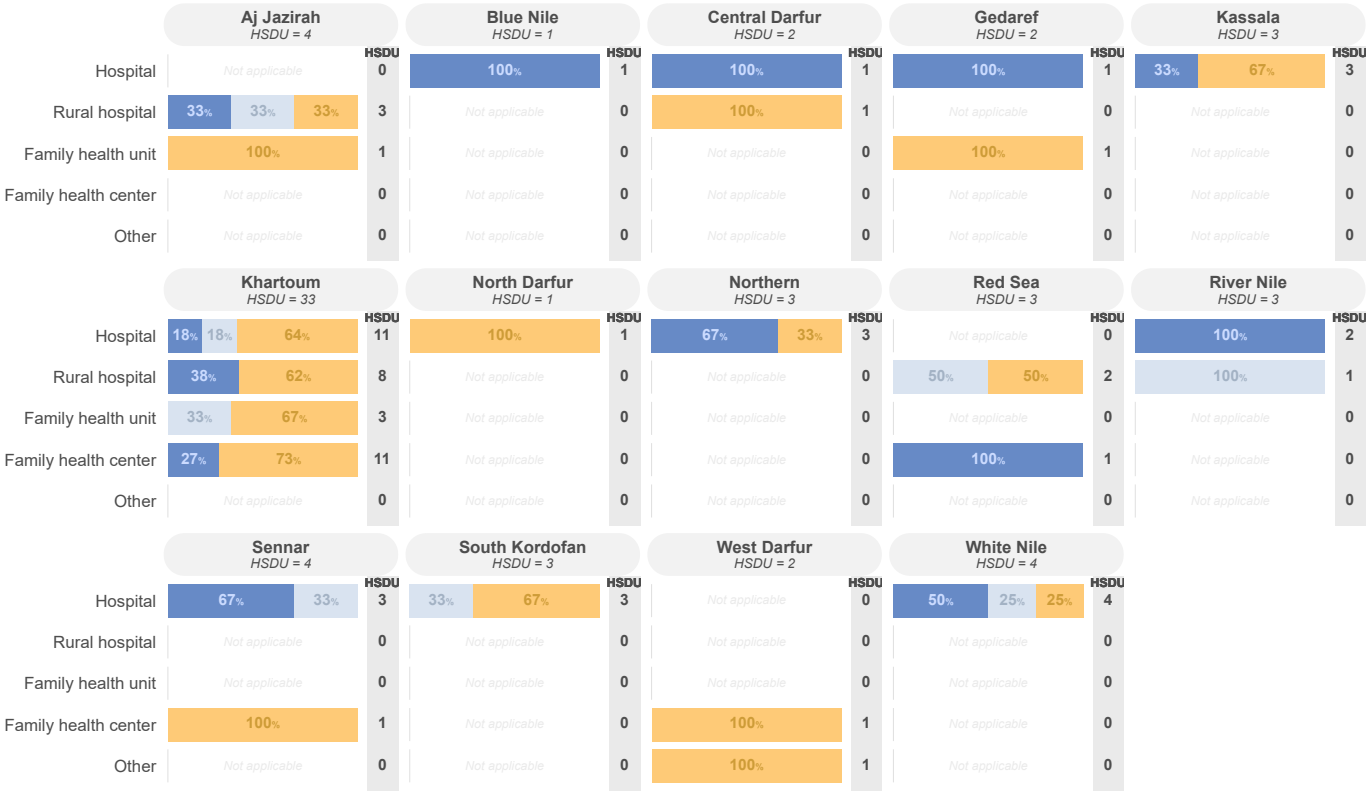
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

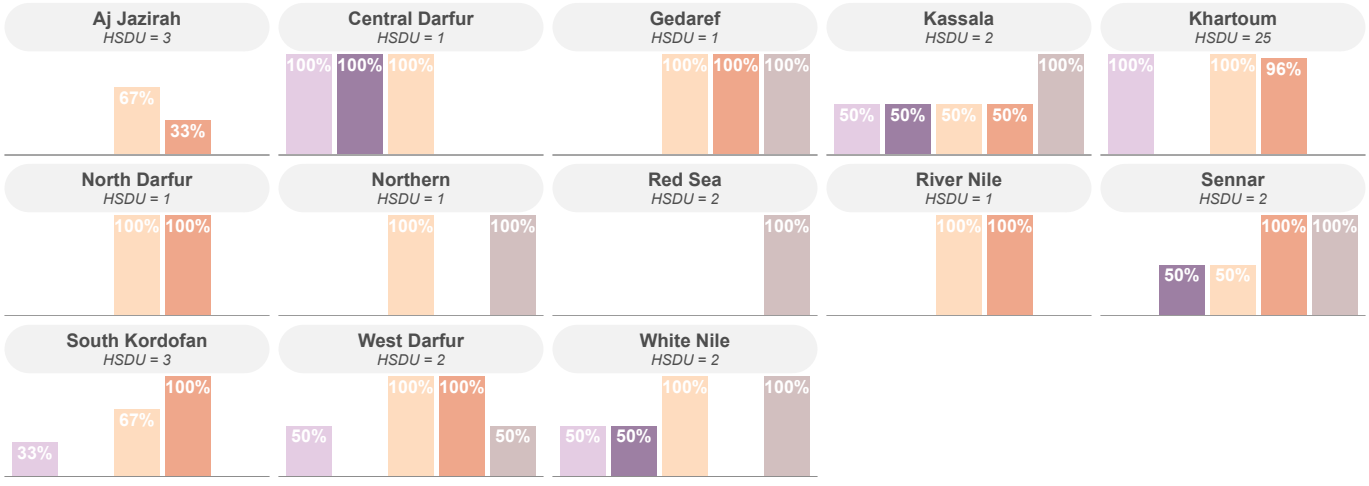
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

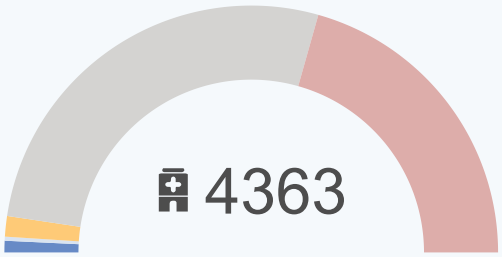
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# BASIC RADIOLOGICAL UNIT

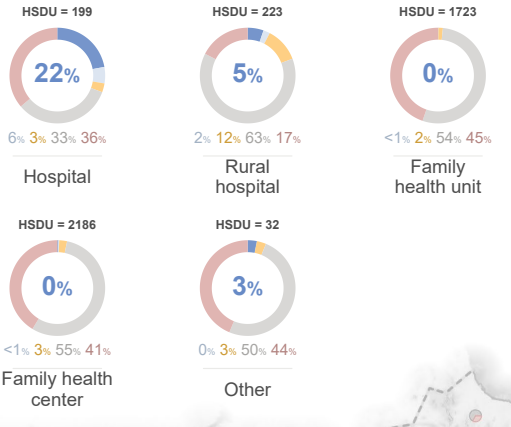
## Service availability[39]



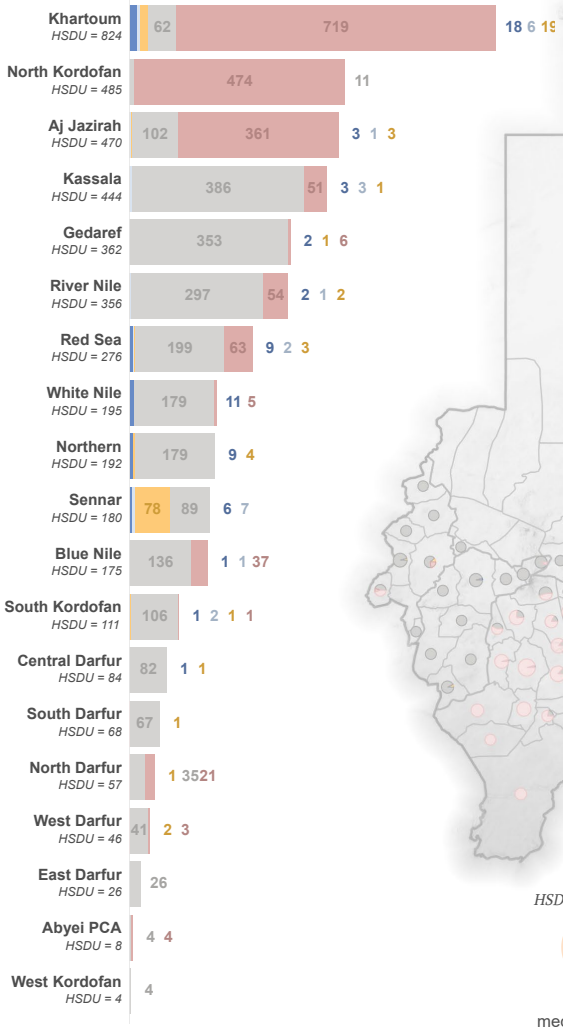

Labels

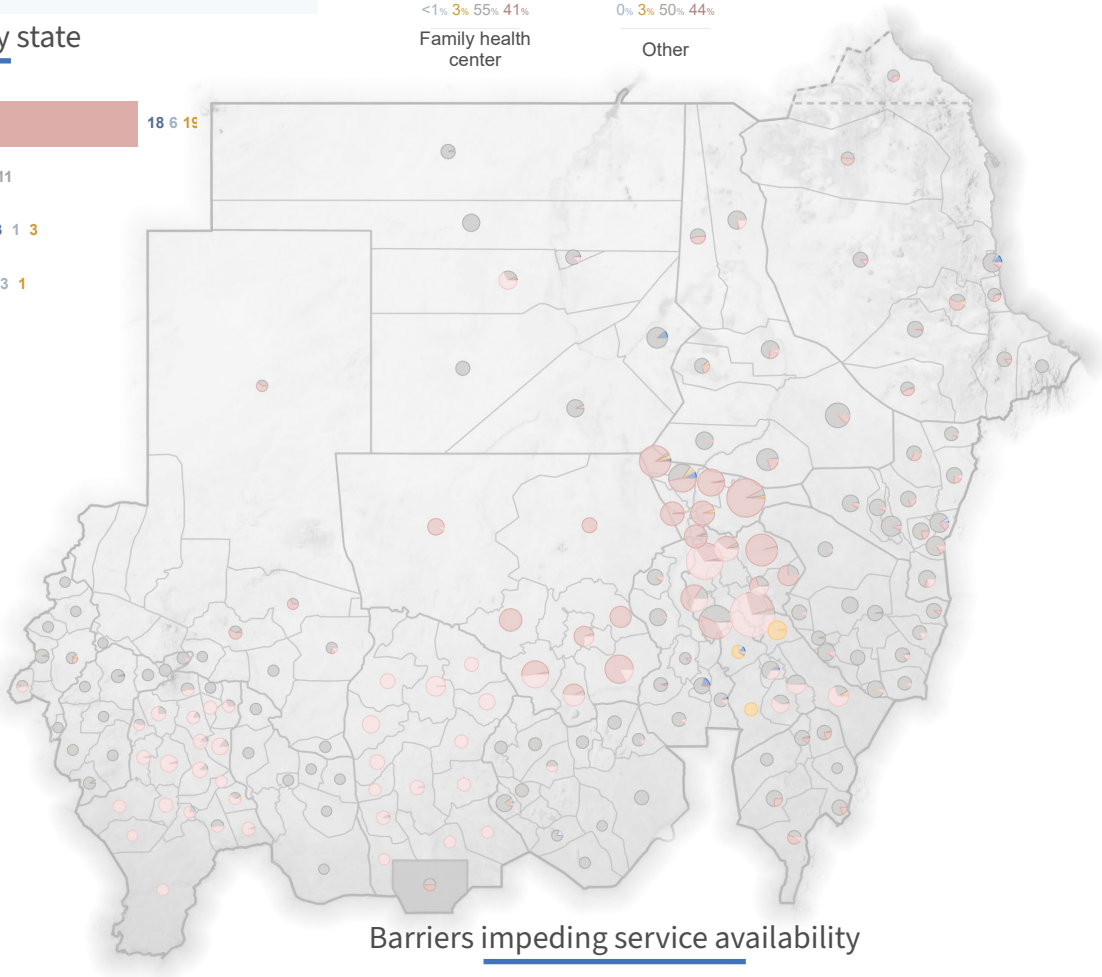
| | |
|---|---|
| 2% | 66 |
| <0.1% | 23 |
| 3% | 117 |
| 54% | 2358 |
| 41% | 1799 |

## Service availability by HSDU type

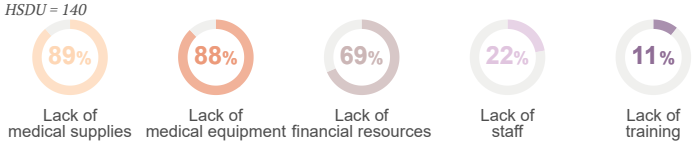



## Service availability by state



## Barriers impeding service availability




39 Basic radiological unit with X-ray and ultrasound.

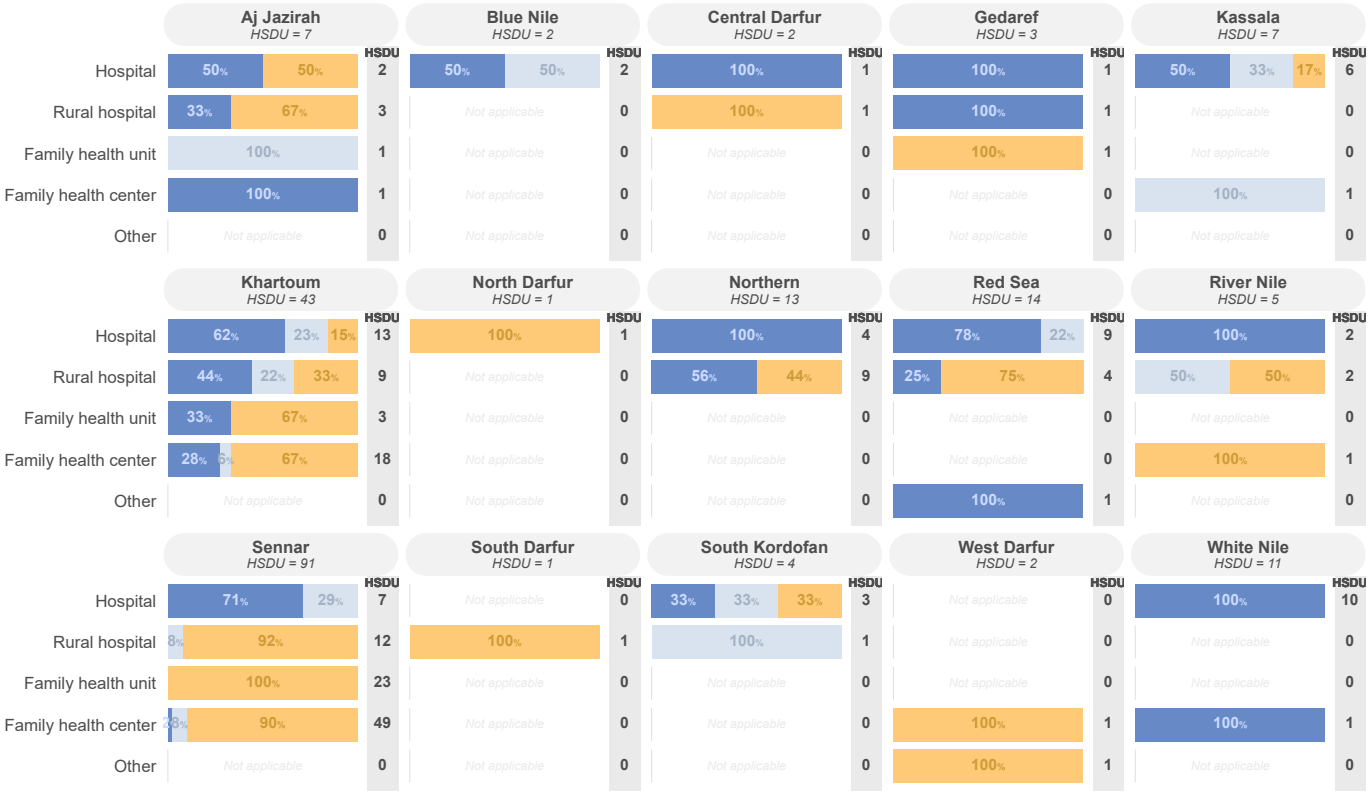
Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

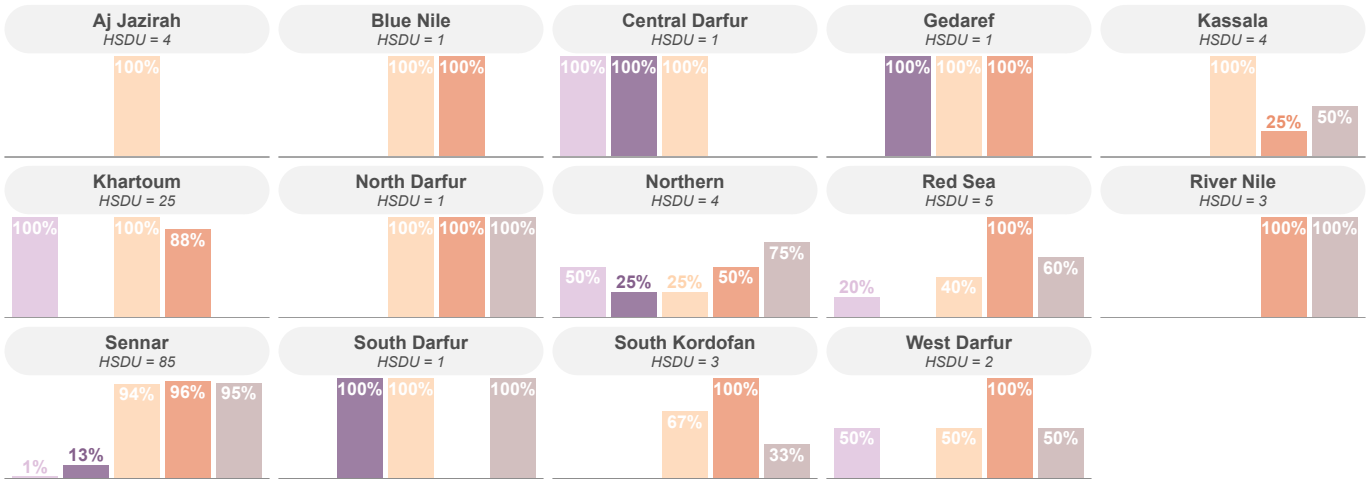
Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

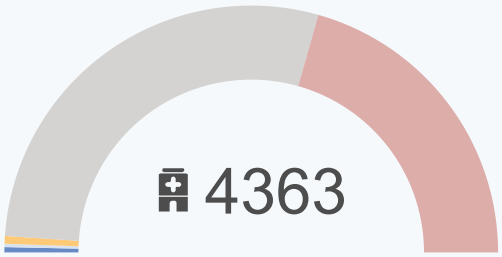
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

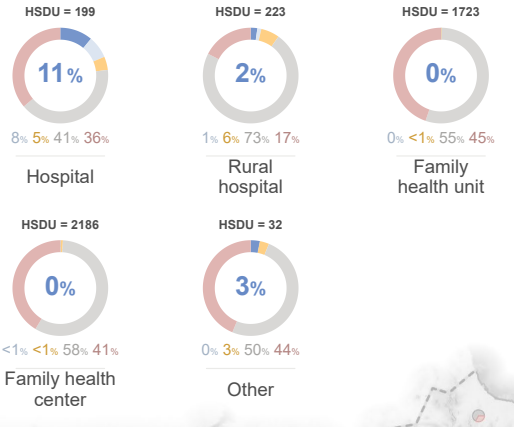
# RADIOLOGY UNIT

## Service availability[40]

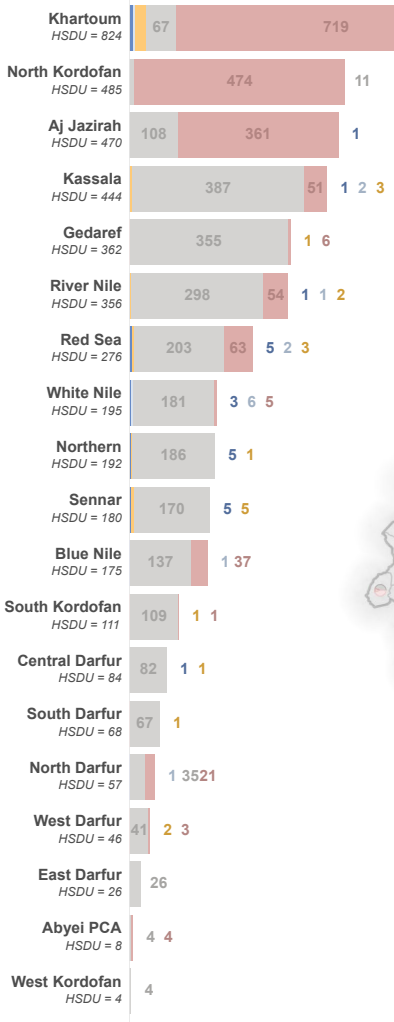


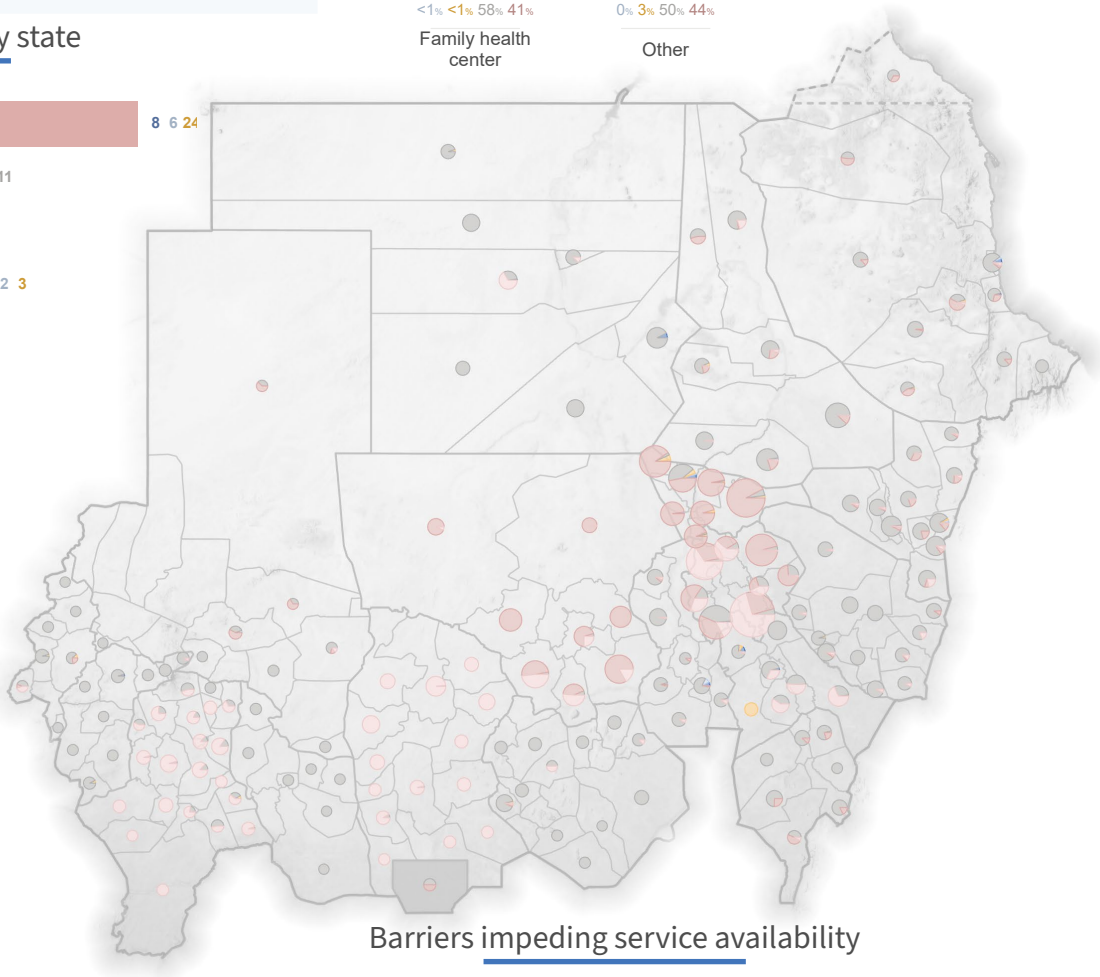

| Labels | |
|---|---|
| <0.1% \| | 30 |
| <0.1% \| | 19 |
| 1% \| | 44 |
| 57% \| | 2471 |
| 41% \| | 1799 |

## Service availability by HSDU type

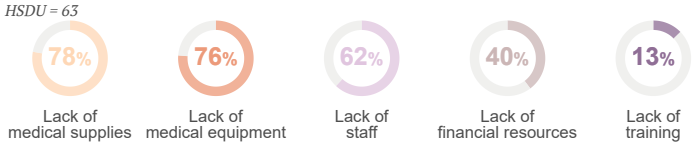



## Service availability by state



## Barriers impeding service availability




40 X-ray with stratigraphy, intraoperation X-ray intensifier, ultrasound, MRI and/or CT scan.

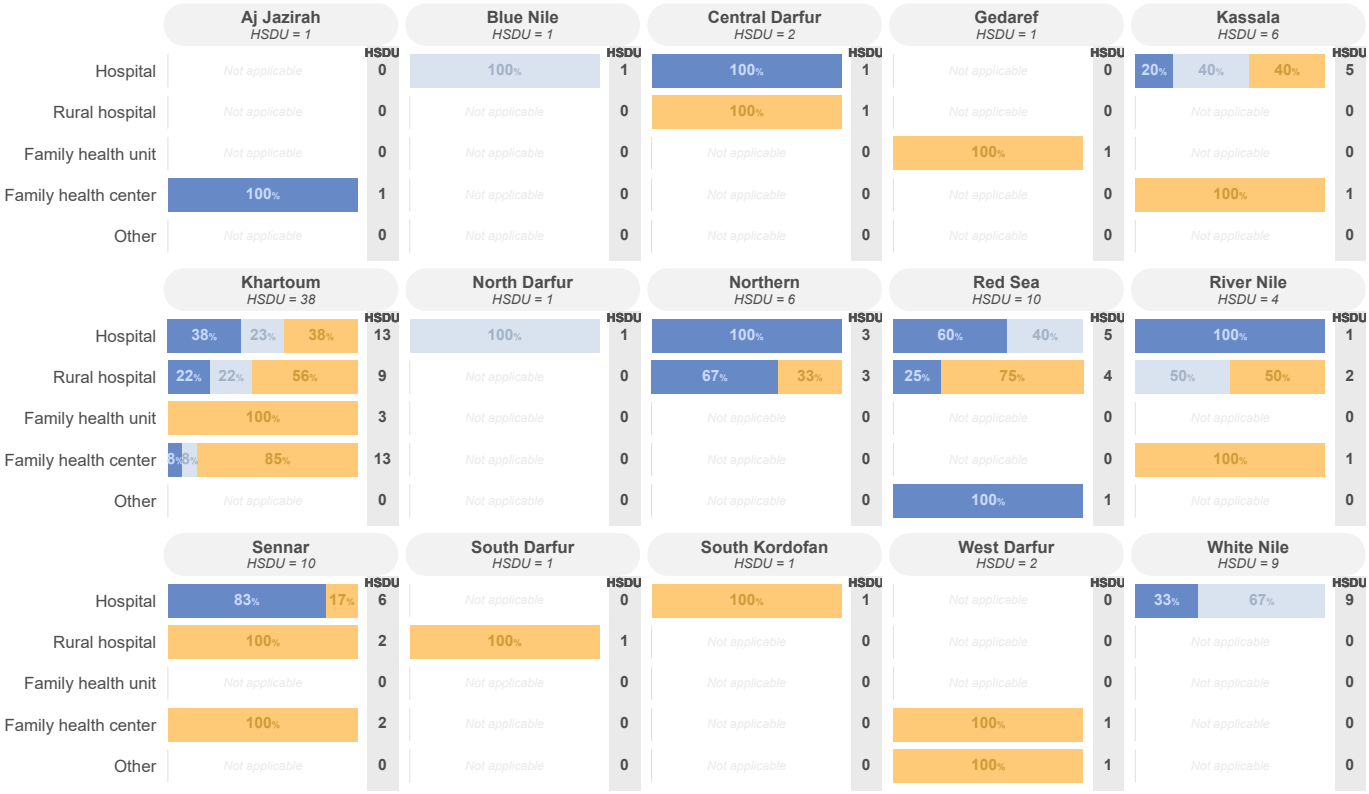
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

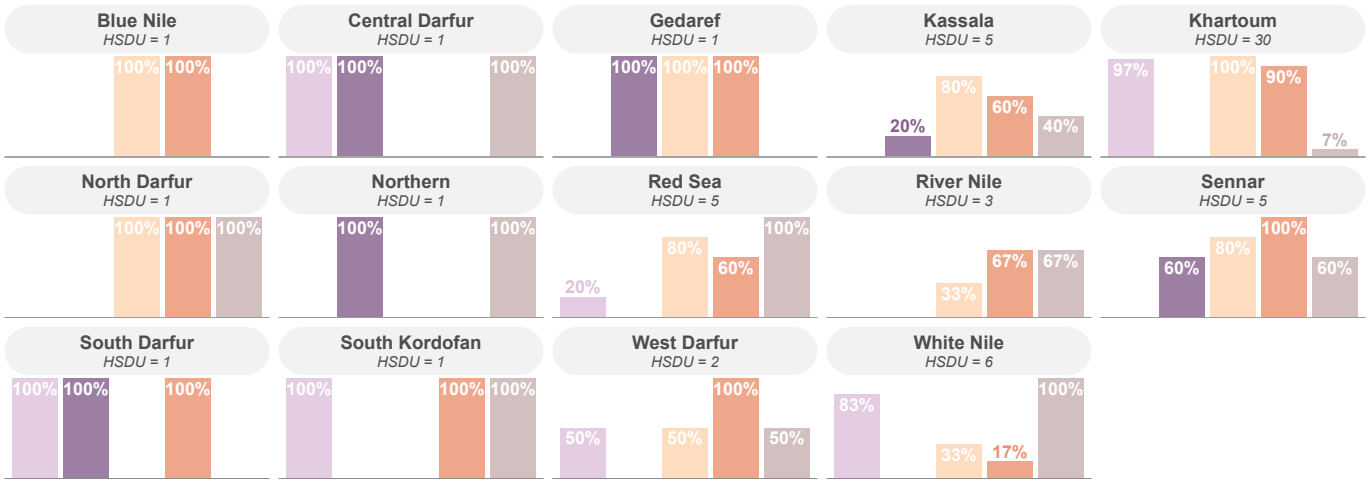
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

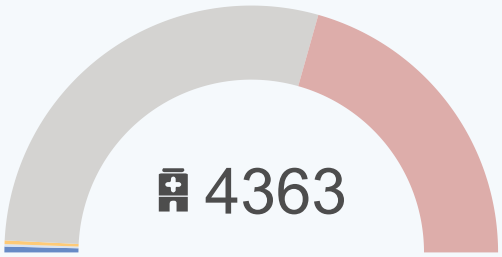
**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

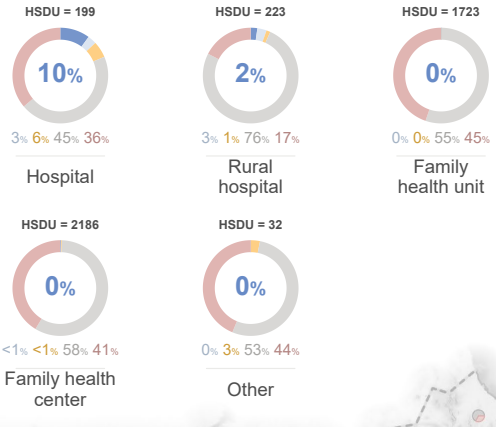
* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# MEDICAL EVACUATION PROCEDURES

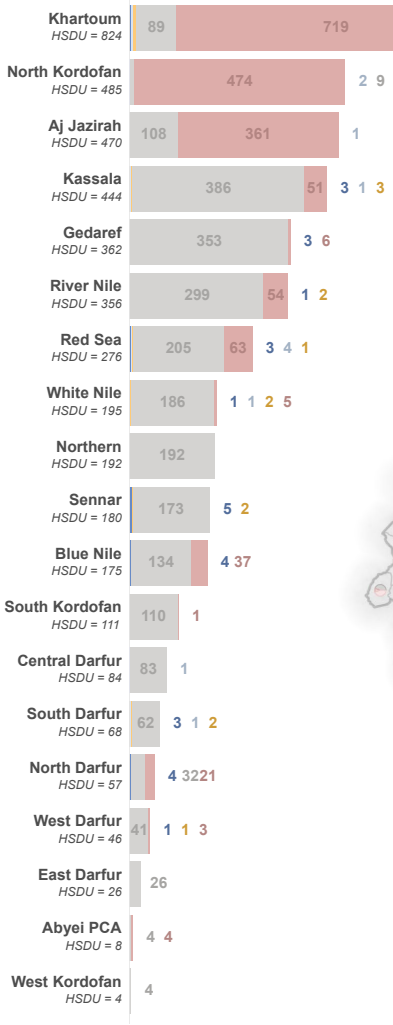
## Service availability[41]

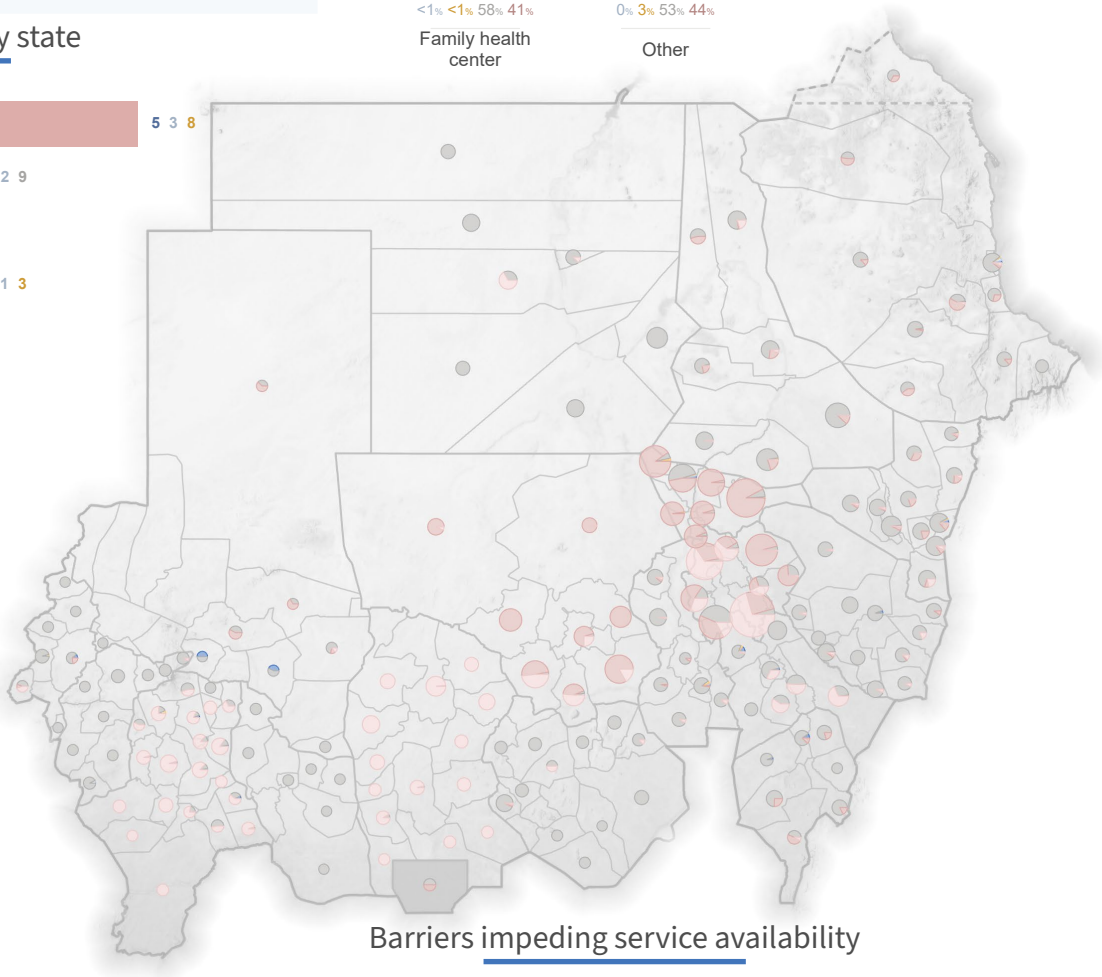



## Service availability by HSDU type

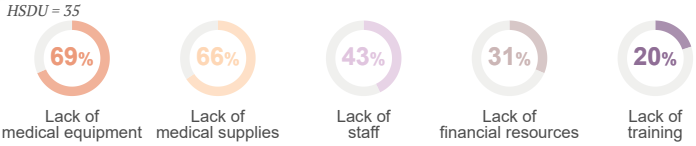



## Service availability by state



## Barriers impeding service availability




41 Medical evacuation (medevac) procedures, transport means and network for referral of patients in need of highly specialized care T1.15.

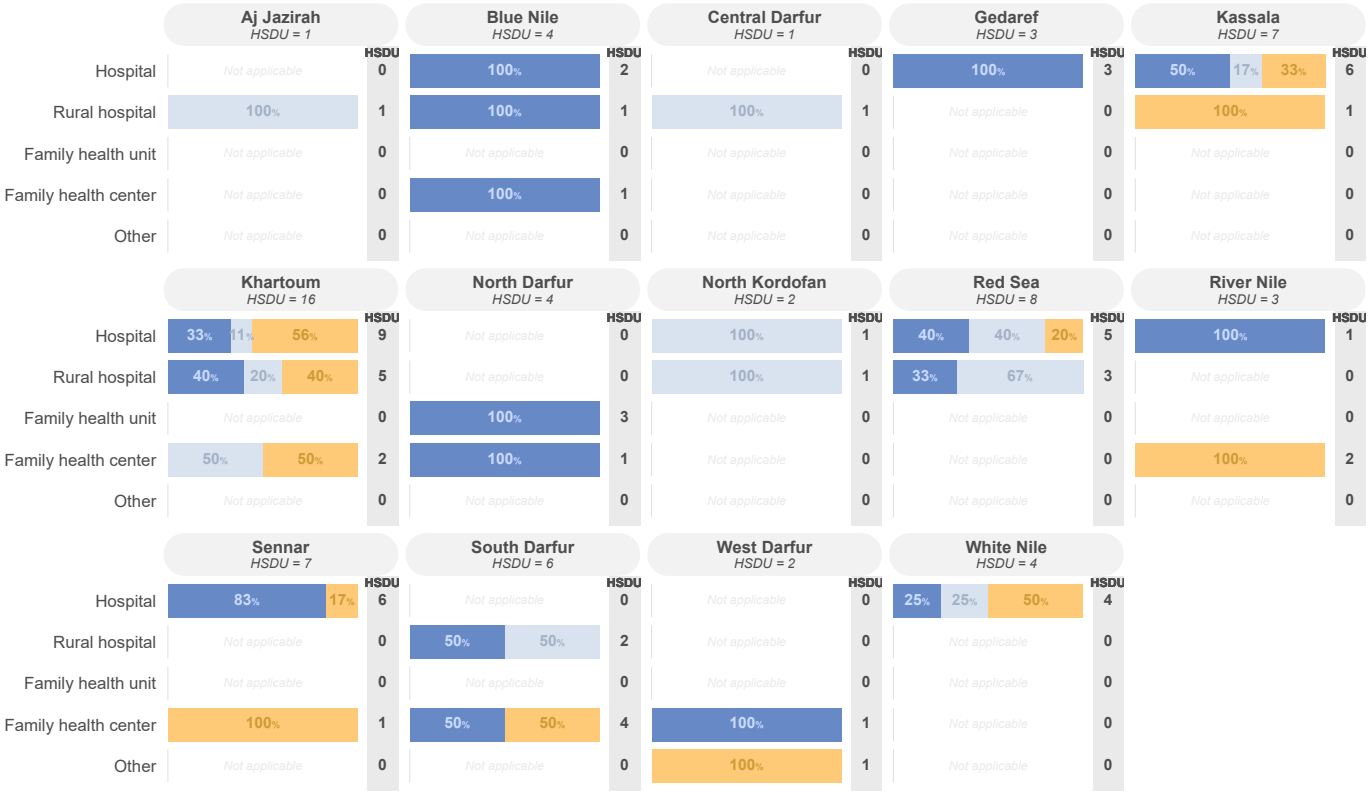
### Availability status

- Available
- Partially available
- Not available
- Not normally provided
- Not operational

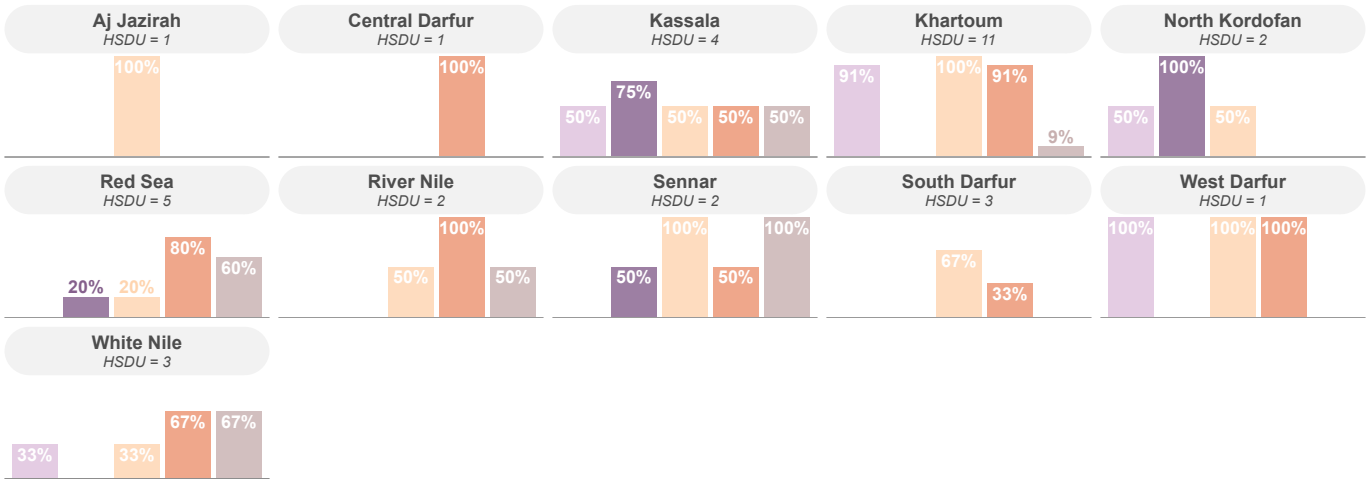
### Maps

- Not reporting
- Number of HSDUs: 1, 120, 240

## Service availability by HSDU type and state*




## Barriers impeding service availability by state




**Availability status**

- Available
- Partially available
- Not available

**Barriers** *for partial availability or non-availability.*

- Lack of staff
- Lack of supplies
- Lack of financial resources
- Lack of training
- Lack of equipment

* Non-operational HSDU and those not normally providing the service are excluded from this chart.

# ANNEX

# ANNEX I: POPULATION ESTIMATES

| State | Population estimates |
|---|---|
| KHARTOUM | 5 941 286 |
| AJ JAZIRAH | 5 124 749 |
| SOUTH DARFUR | 3 895 007 |
| NORTH DARFUR | 3 461 818 |
| NORTH KORDOFAN | 3 444 769 |
| WHITE NILE | 3 392 274 |
| GEDAREF | 3 091 393 |
| KASSALA | 2 718 540 |
| WEST KORDOFAN | 2 612 654 |
| SENNAR | 2 532 326 |
| EAST DARFUR | 2 390 080 |
| RED SEA | 2 035 582 |
| RIVER NILE | 1 862 303 |
| NORTHERN | 1 446 861 |
| SOUTH KORDOFAN | 1 156 469 |
| CENTRAL DARFUR | 943 721 |
| BLUE NILE | 813 930 |
| WEST DARFUR | 618 178 |
| ABYEI PCA | 20 480 |
| ***Grand total*** | ***47 502 420*** |

# ANNEX II: HeRAMS SERVICE DEFINITIONS

| Service | Definition |
|---|---|
| REQUEST FOR AMBULANCE SERVICES BY THE PATIENT | User-activated dispatch of basic ambulance services from district-level staging center (e.g., ambulance pool). |
| RECOGNITION OF DANGER SIGNS | Recognition of danger signs in neonates, children, and adults, including early recognition of signs of serious infection, with timely referral to higher-level care. |
| ACUITY-BASED FORMAL TRIAGE | Acuity-based formal triage of children and adults at first entry to the facility with a validated instrument such as the WHO/ICRC Interagency triage tool. |
| WHO BASIC EMERGENCY CARE BY PREHOSPITAL PROVIDER | Initial syndrome-based management at scene by prehospital providers for difficulty breathing, shock, altered mental status, and polytrauma. |
| WHO BASIC EMERGENCY CARE | Basic syndrome-based management of difficulty breathing, shock, altered mental status, and polytrauma for neonates, children, and adults. Interventions include manual airway maneuvers, oral/nasal airway placement, oxygen administration, bag-valve mask ventilation, temperature management, and administration of essential emergency medications, including empiric antibiotics for serious infection. |
| ADVANCED SYNDROME-BASED MANAGEMENT | Advanced Syndrome-based management of difficulty breathing, shock, altered mental status, and polytrauma in a dedicated emergency unit, including for neonates, children, and adults. Interventions include intubation, mechanical ventilation, surgical airway, placement of chest drain, hemorrhage control, defibrillation, administration of IV fluids via peripheral and central venous line, with adjustment for age and condition, including malnutrition, and administration of essential emergency medications. |
| MONITORED REFERRAL | Direct provider monitoring during transport to an appropriate healthcare facility and structured handover to facility personnel. |
| REFERRAL CAPACITY | Referral procedures, means of communication, and access to transportation. |
| ACCEPTANCE OF REFERRALS | Acceptance of referrals with remote decision support for prehospital providers and primary healthcare facilities, and condition-specific protocol-based referral to higher levels. |
| ACCEPTANCE OF COMPLEX REFERRALS | Acceptance of complex referrals with remote decision support for prehospital providers and lower-level facilities. |
| OUTPATIENT SERVICES FOR PRIMARY CARE | Outpatient services with availability of all essential drugs for primary care as per national guidelines. |
| OUTPATIENT DEPARTMENT FOR SECONDARY CARE | Outpatient department with availability of all essential drugs for secondary care as per national guidelines (including NCD and pain management), and at least one general practitioner. |
| HOME VISITS | Including promotion of self-care practices and monitoring of NCD medication compliance. |

| Service | Definition |
|---|---|
| PROCEDURES FOR MASS CASUALTY SCENARIOS | Procedures in place for early discharge of post-operatory patients through referral to secondary hospitals, in mass casualty scenarios. |
| MASS CASUALTY MANAGEMENT SYSTEM | Mass casualty management system, including 2 step triage, green zone, red zone, incident command team, pre-prepared kits. |
| WAR SURGERY PROTOCOLS | 2 step surgery for contaminated wounds with debridement and delayed primary closure after 3-5 days. |
| DAMAGE CONTROL SURGERY PROTOCOLS | 2 step abbreviated surgery (chest, abdomen and limbs) with vascular shunting, limitation of contamination, hemorrhage control, external fixation and physiological recovery in the ICU before returning to operating theatre. |
| MINOR TRAUMA DEFINITIVE MANAGEMENT | Pain management, tetanus toxoid and human antitoxin, minor surgery kits, suture absorbable/silk with needles, disinfectant solutions, bandages, gauzes, and cotton wool. |
| EMERGENCY AND ELECTIVE SURGERY | Inpatient surgical ward with at least one operating theatre (with or without gas). |
| EMERGENCY AND ELECTIVE SURGERY WITH AT LEAST TWO OPERATING THEATRES | Inpatient surgery ward with at least two operating theatres with pediatric and adult gaseous anesthetic. |
| ORTHOPEDIC/TRAUMA WARD | Orthopedic/trauma ward for advanced orthopedic and surgical care, including burn patient management. |
| SHORT HOSPITALIZATION CAPACITY | Short hospitalization capacity for observational purposes (maximum 48 hours) |
| 20 INPATIENT BED CAPACITY | At least 20 inpatient bed capacity with 24/7 availability of medical doctors, nurses and midwifes. |
| 50 INPATIENT BED CAPACITY | At least 50 inpatient bed capacity with pediatric and ob-gyn wards with 24/7 availability of doctors and/or specialists (general surgeon, ob-gyn, pediatrician, others). |
| INPATIENT CRITICAL CARE MANAGEMENT | Inpatient critical care management with availability of mechanical ventilation, infusion pumps and third-line emergency drugs. |
| INTENSIVE CARE UNIT | Intensive care unit with at least 4 beds. |
| BASIC LABORATORY | Basic laboratory with general microscopy. |
| LABORATORY SERVICES SECONDARY LEVEL | Secondary laboratory services including electrolyte and blood gas concentrations. |
| LABORATORY SERVICES TERTIARY LEVEL | Tertiary laboratory services with public health laboratory capacities. |
| BASIC RADIOLOGICAL UNIT | Basic radiological unit with X-ray and ultrasound. |
| RADIOLOGY UNIT | X-ray with stratigraphy, intraoperation X-ray intensifier, ultrasound, MRI and/or CT scan. |
| MEDICAL EVACUATION PROCEDURES | Medical evacuation (medevac) procedures, transport means and network for referral of patients in need of highly specialized care T1.15. |


HeRAMS