# Sudan



| *   | Population (000s)                               | 37,964 | Life expectancy at birth (years)             | 63    |
|-----|---|--------|--|-------|
| Ξ×  | GNI per capita (PPP Int \$)                     | 2,370  | Total health expenditure (% GDP)             | 6.5   |
| unt | Physician density (per 10 000 population)       | 0.28   | ICT Development Index rank                   | 119   |
| S S | Nurse & midwife density (per 10 000 population) | 0.84   | Mobile-cellular subscriptions (% population) | 74.36 |
| 00  | Hospital bed density (per 10 000 population)    | 7      | Internet users (% population)                | 21    |

## 1. eHealth foundations

| National policies or strategies                             |                  |                        |                    |
|---|------------------|------------------------|--------------------|
|   | Country response | Global "yes" response§ | Year adopted       |
| National universal health coverage policy or strategy       | Yes              | 75%                    | 2012               |
| National eHealth policy or strategy                         | Yes              | 58%                    | 2005               |
| National health information system (HIS) policy or strategy | Yes              | 66%                    | 2012               |
| National telehealth policy or strategy                      | No               | 22%                    | N/A                |
| Funding sources for eHealth                                 |                  |                        |                    |
|   | Country response | Global "yes" response§ | Funding source %** |
| Public funding  | Yes              | 77%                    | 25-50%             |
| Private or commercial funding                               | Yes              | 40%                    | <25%               |
| Donor/non-public funding                                    | Yes              | 63%                    | <25%               |
| Public-private partnerships                                 | Yes              | 42%                    | <25%               |
| Multilingualism in eHealth                                  |                  |                        |                    |
|   | Country response | Global "yes" response§ | Year adopted       |
| Policy or strategy on multilingualism                       | N/A              | 28%                    | N/A                |
| Government-supported Internet sites in multiple languages   | Yes              | 48%                    |                    |
| eHealth capacity building                                   |                  |                        |                    |
|   | Country response | Global "yes" response§ | Proportion**       |
| Health sciences students – Pre-service training in eHealth  | No               | 74%                    | N/A                |
| Health professionals – In-service training in eHealth       | No               | 77%                    | N/A                |

# 2. Legal frameworks for eHealth

| Policy or legislation – purpose  | Country response | Global "yes" response§ |
|--|------------------|------------------------|
| Defines <b>medical jurisdiction</b> , <b>liability or reimbursement of eHealth services</b> such as telehealth                                 | Yes              | 31%                    |
| Addresses <b>patient safety and quality of care</b> based on data quality, data transmission standards or clinical competency criteria         | No               | 46%                    |
| Protects the <b>privacy of personally identifiable data</b> of individuals irrespective of whether it is in <b>paper or digital format</b>     | Yes              | 78%                    |
| Protects the <b>privacy of individuals' health-related data</b> held in electronic format in an <b>EHR</b>                                     | _                | 54%                    |
| Governs the <b>sharing of digital data between health professionals in other health services</b> in the same country through the use of an EHR | No               | 34%                    |
| Governs the sharing of digital data between health professionals in health services in other countries through the use of an EHR               | No               | 22%                    |
| Governs the sharing of personal and health data between research entities  | No               | 39%                    |
| Allows <b>individuals electronic access to their own health-related data</b> when held in an <b>EHR</b>  | No               | 29%                    |
| Allows <b>individuals to demand their own health-related data be corrected</b> when held in an <b>EHR</b> if it is known to be inaccurate      | No               | 32%                    |
| Allows individuals to demand the deletion of health-related data from their EHR  | No               | 18%                    |
| Allows individuals to specify which health-related data from their EHR can be shared with health professionals of their choice                 | No               | 28%                    |
| Governs civil registration and vital statistics  | Yes              | 76%                    |
| Governs national identification management systems   | Yes              | 65%                    |



# 3. Telehealth

| Telehealth programmes country overview |                       |                  |  |
|--|-----------------------|------------------|--|
|  | Health system level** | Programme type** |  |
| Teleradiology                          | National              | Pilot            |  |
| Teledermatology                        | ‡                     | ‡                |  |
| Telepathology                          | ‡                     | ‡                |  |
| Telepsychiatry                         | ‡                     | ‡                |  |
| Remote patient monitoring              | ‡                     | ‡                |  |

# 4. Electronic Health Records (EHRs)

| EHR country overview   |                  |                         |
|--|------------------|-------------------------|
|  | Country response | Year introduced         |
| National EHR system  | No               | N/A                     |
| Legislation governing the use of the national EHR system                               | ‡                |                         |
| Health facilities with EHR   | Use EHR          | Facilities with EHR %** |
| Primary care facilities (e.g. clinics and health care centres)                         | N/A              | ‡                       |
| Secondary care facilities (e.g. hospitals, emergency care)                             | N/A              | ‡                       |
| Tertiary care facilities (e.g. specialized care, referral from primary/secondary care) | N/A              | ‡                       |
| Other electronic systems   | Country response | Global "yes" response§  |
| Laboratory information systems   | N/A              | 35%                     |
| Pathology information systems  | N/A              | 18%                     |
| Pharmacy information systems   | N/A              | 33%                     |
| PACS   | N/A              | 26%                     |
| Automatic vaccination alerting system  | N/A              | 10%                     |
| ICT-assisted functions   | Country response | Global "yes" response§  |
| Electronic medical billing systems   | Yes              | 58%                     |
| Supply chain management information systems  | Yes              | 58%                     |
| Human resources for health information systems   | Yes              | 69%                     |

# 5. Use of eLearning in health sciences

| eLearning programmes country overview  |                  |                        |  |
|--|------------------|------------------------|--|
| Health sciences students – Pre-service | Country response | Global "yes" response§ |  |
| Medicine                               | N/A              | 58%                    |  |
| Dentistry                              | N/A              | 39%                    |  |
| Public health                          | N/A              | 50%                    |  |
| Nursing & midwifery                    | N/A              | 47%                    |  |
| Pharmacy                               | N/A              | 38%                    |  |
| Biomedical/Life sciences               | N/A              | 42%                    |  |
| Health professionals – In-service      | Country response | Global "yes" response§ |  |
| Medicine                               | No               | 58%                    |  |
| Dentistry                              | No               | 30%                    |  |
| Public health                          | Yes              | 47%                    |  |
| Nursing & midwifery                    | No               | 46%                    |  |
| Pharmacy                               | No               | 31%                    |  |
| Biomedical/Life sciences               | No               | 34%                    |  |



### 6. mHealth

| mHealth programmes country overview        |                        |                  |  |  |
|--|------------------------|------------------|--|--|
| Accessing/providing health services        | Health system level**  | Programme type** |  |  |
| Toll-free emergency                        | National, Intermediate | Established      |  |  |
| Health call centres                        | National, Intermediate | Established      |  |  |
| Appointment reminders                      | ‡                      | ‡                |  |  |
| Mobile telehealth                          | Intermediate           | Established      |  |  |
| Management of disasters and emergencies    | National               | Established      |  |  |
| Treatment adherence                        | ‡                      | ‡                |  |  |
| Accessing/providing health information     | Health system level**  | Programme type** |  |  |
| Community mobilization                     | National               | Established      |  |  |
| Access to information, databases and tools | ‡                      | ‡                |  |  |
| Patient records                            | ‡                      | ‡                |  |  |
| mLearning                                  | ‡                      | ‡                |  |  |
| Decision support systems                   | Intermediate           | Established      |  |  |
| Collecting health information              | Health system level**  | Programme type** |  |  |
|  |                        |                  |  |  |
| Patient monitoring                         | ‡                      | ‡                |  |  |
| Patient monitoring Health surveys          | ‡<br>National          | ‡<br>Established |  |  |

### 7. Social media

| Social media and health  | Country response                                  | Global "yes" response§ | Year adopted           |
|--|---|------------------------|------------------------|
| National policy or strategy on the use of social media by government organizations | No  | 18%                    | N/A                    |
| Policy or strategy makes specific reference to its use in the health domain        | ‡   | 5%                     |                        |
| Health care organizations – use of social media                                    |   | Country response       | Global "yes" response§ |
| Promote health messages as a part of health promotion can                          | mpaigns   | Yes                    | 78%                    |
| Help manage patient appointments   |   | No                     | 24%                    |
| Seek feedback on services  | eek feedback on services                          |                        | 56%                    |
| Make general health announcements  |   | Yes                    | 72%                    |
| Make emergency announcements   | Nake emergency announcements                      |                        | 59%                    |
| Individuals and communities – use of social media                                  | Individuals and communities – use of social media |                        | Global "yes" response§ |
| Learn about health issues  | earn about health issues                          |                        | 79%                    |
| Help decide what health services to use  |   |                        | 56%                    |
| Provide feedback to health facilities or health professionals                      |   | No                     | 62%                    |
| Run community-based health campaigns   |   | _                      | 62%                    |
| Participate in community-based health forums                                       |   | _                      | 59%                    |

# 8. Big data

| Policy or strategy – purpose                       | Country response | Global "yes" response§ | Year adopted |
|--|------------------|------------------------|--------------|
| Governing the use of big data in the health sector | No               | 17%                    | N/A          |
| Governing the use of big data by private companies | No               | 8%                     | N/A          |

#### **LEGEND**

\* Country context indicators

ICT Development Index Rank. 2015 - https://www.itu.int/net4/ITU-D/idi/2015/ All other country indicators. Global Health Observatory. 2012-2014 http://www.who.int/gho

Glossary

Indicates the percentage of participating Member States responding "Yes"

N/A Not applicable

Indicates question was unanswered

Question not asked Zero No funding

International level: Health entities in different geographic regions

Regional level: Health entities in countries in the same geographic region National level: Referral hospitals, laboratories and health institutes (mainly public, but also private)

Intermediate level: District or provincial facilities: public and private hospitals

and health centres

Local or peripheral level: Health posts, health centres providing basic level of care

Informal: Use of ICT for health purposes in the absence of formal

processes and policies Pilot: Testing and evaluating a programme

Established: An ongoing programme that has been conducted for a

minimum of 2 years and is planned to continue

© 2016 WHO