

Infection Control and Readiness in Health Facilities

Data from Service Provision Assessment (SPA) Surveys



Are facilities prepared to face infectious disease pandemics like COVID-19?

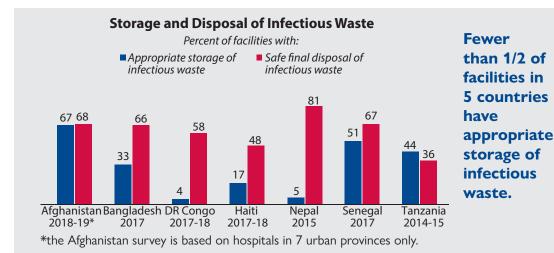
- Do health facilities have resources for hand washing?
- Do health facilities have personal protective equipment such as gloves, masks and gowns?
- Do health facilities store infectious waste appropriately?
- Do health facilities have the diagnostic and therapeutic equipment needed to manage respiratory infections?

These and many other questions are answered, at least in part, by Service Provision Assessment (SPA) surveys. The SPA collects information on general readiness of facilities to provide quality health services.

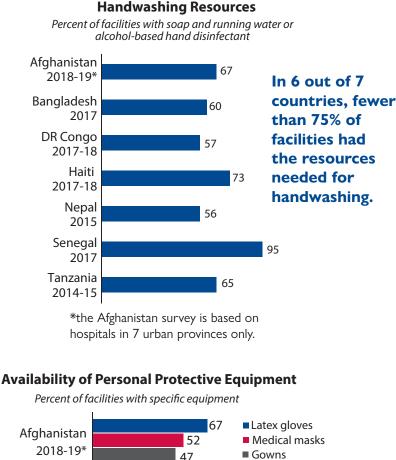
The SPA collects data on many elements necessary for pandemic prevention and mitigation including infection prevention measures, availability of personal protective equipment for health workers, diagnostic capacity, and treatment readiness.

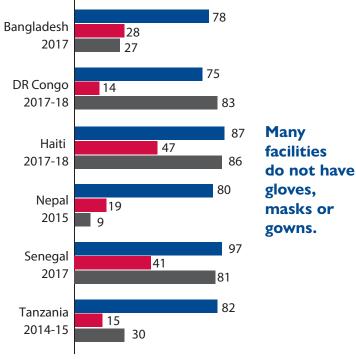


Data are shown from recent SPA surveys in Afghanistan, Bangladesh, the Democratic Republic of Congo, Haiti, Nepal, Senegal, and Tanzania. All of these surveys are nationally representative except for the AfSPA, which included public and private hospitals in urban areas of seven major provinces only.



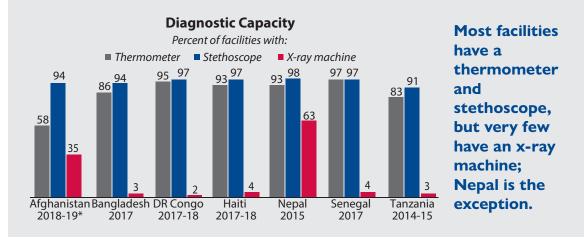
Availability of In-Patient Care and Oxygen Fewer Percent of facilities with: than 1/4 of In-patient care Oxygen facilities in 97 **5** countries 85 offer inpatient care. 55 Very few 11 facilities have 7





*the Afghanistan survey is based on hospitals in 7 urban provinces only.

Oxygen.Afghanistan Bangladesh DR CongoHaitiNepalSenegalTanzania2018-19*20172017-182017-18201520172014-15*the Afghanistan survey is based on hospitals in 7 urban provinces only.



For additional information on the results of the SPA Surveys, contact The DHS Program, ICF, 530 Gaither Road, Rockville, MD 20850, USA. Telephone: 301-572-0200,: www.dhsprogram.com

The Service Provision Assessment Surveys are implemented by ICF through The Demographic and Health Surveys (DHS) Program funded by the United States Agency for International Development (USAID).

Infection Control and Readiness from the Service Provision Assessment (SPA) Surveys

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Index under of positive14213241380100793.93.491.88Inference				of Congo					
Improved water source'94949494959697	Total number of facilities								
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Clinc turne. P <t< td=""><td>Improved water source¹</td><td>94</td><td>90</td><td>49</td><td>86</td><td>81</td><td>94</td><td>68</td></t<>	Improved water source ¹	94	90	49	86	81	94	68	
Safe final disposal of infectious wate* 68 66 59 48 67 33 Appropriate storage of infectious wate* 67 33 4 17 5 51 44 Secritization equipment* 90 11 14 35 80 58 77 Writtee guidelines for sterifization or HLD* 13 11 13 19 4 37 14 Safe final disposal of intery wate* 61 73 58 00 84 97 65 77 Disrifectant, (environmental)* 54 64 53 73 77 85 75 Solag and funding water or else alcohol-based hand disinfectant 67 78 73 87 80 97 82 Gourdi funding water or else alcohol-based hand disinfectant 77 78 77 83 97 82 Bedical masis 52 28 14 47 19 41 15 Gowni 7 7 78 87 89 <td>Regular electricity²</td> <td>97</td> <td>43</td> <td>65</td> <td>76</td> <td>49</td> <td>61</td> <td>67</td>	Regular electricity ²	97	43	65	76	49	61	67	
Appropriate storage of infectious wates'673341755144Seenilation equipment90111435805827Equipment for high level disinfection (HLD)'36332156na8577Written guidelines for sterilization or HLD413111399449798Safe final disposal of sharp wates'61775840649195Approprintes storage of sharp wates'64384370636757Sapa and running water or els aicohol-based hand disinfectant676770636757Godeline for standard preactions''67787587809781Personal Protective Equipment67787587809781Godenis for standard preactions''67787587809781Medical masks52281447194115Gows77757313203690Bod presser monitor''7988869593<	Client latrine ³	97	79	29	61	82	99	44	
Servitation equipment* 90 11 14 35 80 52 Equipment for high level disinfaction (HLD)* 36 33 21 56 na 65 77 Written guidelines for sterilization or HLD* 13 11 13 19 4 97 14 Safe final disposal of sharp waste* 61 73 58 40 64 91 35 Appropriate storage of sharp waste* 61 64 53 73 65 79 Dinfoctant (environmenti)* 64 38 43 70 63 67 63 73 65 79 65 65 Guidelines for standard proceutions** 15 77 17 73 65 97 82 66 95 80 97 82 Goows* 67 78 75 3 13 2 3 66 93 93 97 83 Stechoscope 94 94 97 94	Safe final disposal of infectious waste⁴	68	66	58	48	81	67	36	
Equipment for high level disinfection (HLD)* 36 31 11 12 56 na 87 14 Written guidelines for scarilization or HLD4 13 11 13 12 14 17 18 40 43 17 18 18	Appropriate storage of infectious waste ⁵	67	33	4	17	5	51	44	
Written guidelines for sterilization or HLD* 13 11 13 19 4 37 14 Safe final dispocal of sharp waste* 61 73 58 40 84 91 93 Appropriate storage of sharp waste* 54 64 53 73 56 95 65 Ditrinfectant (environmental)* 64 38 43 70 63 87 56 95 65 Guidelines for standard precusions** 15 17 19 23 4 41 23 Personal Protective Equipment 52 28 14 47 19 41 15 Gowns 77 75 87 80 97 82 Medical masks 52 28 14 47 19 41 15 Gowns 77 5 3 13 2 3 6 Disprostic Capacity 7 58 86 95 93 97 83 34	Sterilization equipment ⁶	90	11	14	35	80	58	27	
Safe final disposal of sharp watte* 61 73 58 40 84 91 93 Appropriate storage of sharp watte* 54 64 53 73 77 65 77 Dirinfectant (environmental)* 64 38 43 70 63 87 56 Guidelines for standard precautions* 67 60 57 73 56 95 63 Personal Protective Equipment 71 78 75 87 80 97 82 Gowns 77 73 80 97 82 93 94 94 95 93 94 94 95 93 93 97 83 64 93 94 94 93 97 93 94 94 94 97 93 97 93 94 94 94 94 94 94 94 94 94 94 94 94 94 94 94 94 94	Equipment for high level disinfection (HLD) ⁷	36	33	21	56	na	85	77	
Appropriate storage of sharp waste ¹⁴ 54 64 53 73 77 85 77 Diardectart (environmenta) ¹¹ 64 38 43 70 63 87 55 Soap and running water or else alcohol-based hand disinfectant 67 60 57 73 56 95 65 Guidelines for standard precautions ¹¹ 15 17 19 23 4 41 23 Personal Protective Equipment 52 78 75 87 80 97 82 Medical masks 52 28 14 47 19 41 15 Gowns 47 77 53 86 9 81 30 Exer glows ¹ 7 5 3 13 20 3 61 Gowns 7 5 3 13 20 3 61 30 61 30 61 30 61 30 61 31 41 31 31 <td>Written guidelines for sterilization or HLD⁸</td> <td>13</td> <td>11</td> <td>13</td> <td>19</td> <td>4</td> <td>37</td> <td>14</td>	Written guidelines for sterilization or HLD ⁸	13	11	13	19	4	37	14	
Disinfectant (environmental)* 64 38 43 70 63 87 53 Seap and running water or else alcohol-based hand disinfectant 67 60 57 73 56 95 65 Guidelines for standard precentions* 15 77 19 23 4 41 23 Personal Protective Equipment 15 77 78 75 87 80 97 82 Medical masks 52 28 14 47 19 41 15 Gowns 47 27 83 86 9 81 30 Exer protection 7 5 3 13 2 3 6 Diametria 78 86 95 93 93 97 83 Stechoscope 94 94 97 98 97 91 Blood pressure monitor* 88 3 6 30 67 9 91 Blood glucose 3	Safe final disposal of sharp waste ⁹	61	73	58	40	84	91	35	
Soap and running water or else alcohol-based hand disinfectant 67 60 57 73 56 95 63 Guidelines for standard precautions ¹⁰ 15 17 19 23 44 43 23 Personal Protective Equipment 57 78 75 87 80 97 82 Medical masks 52 28 14 47 19 41 15 Gowns 47 27 83 86 9 81 30 Eye protection 7 5 3 13 2 3 61 Diagnostic Capacity 7 5 86 95 93 97 83 Stethoscope 94 94 94 97 98 97 91 Blood pressure monitor ¹⁴ 92 85 90 97 94 94 32 Yang machine 33 20 29 44 83 34 31 32 34 34	Appropriate storage of sharp waste ¹⁰	54	64	53	73	77	85	79	
Guidelines for standard precautions ¹³ 15 17 19 23 4 41 23 Personal Protective Equipment 67 78 75 87 80 97 82 Medical masks 52 28 14 47 19 41 15 Gowns 17 27 83 86 9 81 30 Gowns 7 27 83 86 9 81 30 Eye protection 7 75 75 97 93 97 83 Diagnotic Capacity 7 7 83 86 95 93 97 91 Stethoscope 94 94 97 92 96 92 92 93 97 93 93 97 93 93 97 93 93 97 93	Disinfectant (environmental) ¹¹	64	38	43	70	63	87	57	
Personal Protective Equipment 67 78 75 87 80 97 82 Medical masks 52 28 14 47 19 41 15 Gowns 47 27 83 86 9 81 30 Eye protection 7 5 3 13 2 3 6 Diagnostic Capacity 7 58 86 95 93 93 97 83 Stethoscope 94 94 97 97 98 97 91 Blood pressure monitor ¹⁴ 92 85 90 97 94 96 82 X ray machine 35 3 2 4 63 4 30 Full blood count 88 3 6 30 67 9 9 Blood glucose 33 20 29 44 8 74 23 Self-inflating bag and mask (dult) 27 7	Soap and running water or else alcohol-based hand disinfectant	67	60	57	73	56	95	65	
Latex glows ¹¹ 67787587809782Medical masks52281447194115Gowns4727838698130Eye protection753132361Diagostic Capacity7593939783Stethoscope94949797989791Blood pressure monitor ¹⁴ 92859097949682X ray machine132029446343Flood glucose3320294487423Idver or renal function tests86341047106Self-infating bag and mask (adult)2771217141110Pulse cointerer outpatient area523316563Coxygen r, Filled coxygen cylinders ¹⁶ 857216844Inpatient care9775524111214Corringht observation beds (any)988944721895050Referral capacity-communication equipment ¹⁶ 91115264205551	Guidelines for standard precautions ¹²	15	17	19	23	4	41	23	
Latex glows ¹¹ 67787587809782Medical masks52281447194115Gowns4727838698130Eye protection753132361Diagostic Capacity7593939783Stethoscope94949797989791Blood pressure monitor ¹⁴ 92859097949682X ray machine132029446343Flood glucose3320294487423Idver or renal function tests86341047106Self-infating bag and mask (adult)2771217141110Pulse cointerer outpatient area523316563Coxygen r, Filled coxygen cylinders ¹⁶ 857216844Inpatient care9775524111214Corringht observation beds (any)988944721895050Referral capacity-communication equipment ¹⁶ 91115264205551	Personal Protective Equipment								
Gowns 47 27 83 86 9 81 30 Eye protection 7 5 3 13 2 3 6 Diagnostic Capacity 7 5 86 95 93 93 97 83 Stethoscope 94 94 97 97 98 97 91 Blood pressure monitor ¹⁴ 92 85 90 97 94 96 82 X ray machine 35 3 2 4 63 4 3 Blood glucose 33 20 29 44 8 7 23 Liver or renal function tests 86 3 4 10 47 10 6 Stelf-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85		67	78	75	87	80	97	82	
Fye protection 7 5 3 13 2 3 6 Diagnostic Capacity	Medical masks	52	28	14	47	19	41	15	
Diagnostic Capacity Thermometer 58 86 95 93 93 97 83 Stethoscope 94 94 97 97 98 97 91 Blood pressure monitor ¹⁴ 92 85 90 97 94 96 82 X ray machine 35 3 2 4 63 4 3 Full blood count 88 3 6 30 67 9 9 Blood glucose 33 20 29 44 8 74 23 Liver or renal function tests 86 3 4 10 47 10 6 Self-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Inpatient care 97 75 24 11 12 14 <	Gowns	47	27	83	86	9	81	30	
Thermometer58869593939783Gethoscope94949797989791Blood pressure monitor ¹⁴ 92859097949682X ray machine353246343Full blood court8836306799Blood glucose3320294487423L ver or renal function tests86341047106Pulse oximeter - outpatient area523316563Oxygen-filled oxygen cylinders ¹⁶ 9775524111214I patient care9775524102950Referral capacity-communication equipment ¹⁶ 91115264205551	Eye protection	7	5	3	13	2	3	6	
Thermometer58869593939783Gethoscope94949797989791Blood pressure monitor ¹⁴ 92859097949682X ray machine353246343Full blood court8836306799Blood glucose3320294487423L ver or renal function tests86341047106Pulse oximeter - outpatient area523316563Oxygen-filled oxygen cylinders ¹⁶ 9775524111214I patient care9775524102950Referral capacity-communication equipment ¹⁶ 91115264205551	Diagnostic Capacity								
Biod pressure monitor ¹⁴ 92 85 90 97 94 96 82 X ray machine 35 3 2 4 63 4 3 Full blood count 88 3 6 30 67 9 9 Blood glucose 33 20 29 44 8 74 23 Liver or renal function tests 86 3 4 10 47 10 6 Self-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁶ 85 7 2 16 8 6 4 Inpatient care 97 7 55 24 11 12 14 Overnight observation beds (any) 98 8 94 47 21 89 50		58	86	95	93	93	97	83	
X ray machine 35 3 2 4 63 4 3 Full blood count 88 3 6 30 67 9 9 Blood glucose 33 20 29 44 8 74 23 Liver or renal function tests 86 3 4 10 47 10 6 Therapeutic Readiness Self-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Inpatient care 97 7 55 24 11 12 14 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51	Stethoscope	94	94	97	97	98	97	91	
Full blood count 88 3 6 30 67 9 9 Blood glucose 33 20 29 44 8 74 23 Liver or renal function tests 86 3 4 10 47 10 6 Therapeutic Readiness 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51	Blood pressure monitor ¹⁴	92	85	90	97	94	96	82	
Blood glucose 33 20 29 44 8 74 23 Liver or renal function tests 86 3 4 10 47 10 6 Therapeutic Readiness Self-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51	X ray machine	35	3	2	4	63	4	3	
Liver or renal function tests 86 3 4 10 47 10 6 Therapeutic Readiness 5 7 12 17 14 11 10 Self-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Inpatient care 97 77 55 24 11 12 14 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51	Full blood count	88	3	6	30	67	9	9	
Therapeutic Readiness Self-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Inpatient care 97 7 55 24 11 12 14 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51	Blood glucose	33	20	29	44	8	74	23	
Self-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Inpatient care 97 7 55 24 11 12 14 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51	Liver or renal function tests	86	3	4	10	47	10	6	
Self-inflating bag and mask (adult) 27 7 12 17 14 11 10 Pulse oximeter - outpatient area 52 3 3 16 5 6 3 Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Inpatient care 97 7 55 24 11 12 14 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51	Therapeutic Readiness								
Oxygen-filled oxygen cylinders ¹⁵ 85 7 2 16 8 6 4 Inpatient care 97 7 55 24 11 12 14 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51		27	7	12	17	14	11	10	
Inpatient care 97 7 55 24 11 12 14 Overnight observation beds (any) 98 8 94 47 21 89 50 Referral capacity-communication equipment ¹⁶ 91 11 52 64 20 55 51	Pulse oximeter - outpatient area	52	3	3	16	5	6	3	
Overnight observation beds (any)9889447218950Referral capacity-communication equipment ¹⁶ 91115264205551	Oxygen-filled oxygen cylinders ¹⁵	85	7	2	16	8	6	4	
Referral capacity-communication equipment1691115264205551	Inpatient care	97	7	55	24	11	12	14	
	Overnight observation beds (any)	98	8	94	47	21	89	50	
Referral capacity-emergency transport1789121946595758	Referral capacity-communication equipment ¹⁶	91	11	52	64	20	55	51	
	Referral capacity-emergency transport ¹⁷	89	12	19	46	59	57	58	

Notes:

* The Afghanistan survey included only hospitals in urban areas of seven major provinces only; it is not nationally representative or directly comparable with the other surveys

NA- Not applicable; data were not collected.

¹Water is piped into facility or grounds, or else other protected water is available within 500 meters.

²Facility is connected to a central power grid and there has not been an interruption in power supply lasting for more than two hours at a time during normal working hours in the seven days before the survey, or facility has a functioning generator with fuel available, or back-up solar power.

³The facility had a functioning flush or pour-flush toilet, a VIP latrine, or composting toilet.

⁴The process of infectious waste disposal is incineration, and the facility has a functioning incinerator with fuel, or the facility disposes of infectious waste by means of open burning in a protected area, dumping without burning in a protected area, or removal offsite with storage in a protected area prior to removal.

⁵Waste receptacles observed in general outpatient service area, as well as in area where minor surgery is done.

⁶Facility reports that some instruments are processed in the facility and the facility has a functioning electric dry heat sterilizer, a functioning electric autoclave, or a non-electric autoclave with a functioning heat source available in the facility.

⁷Facility reports that some instruments are processed in the facility and the facility has an electric pot or other pot with heat source for high-level disinfection by boiling or high-level disinfection by steaming, or else facility has chlorine,

formaldehyde, or glutaraldehyde for chemical high-level disinfection available somewhere in the facility on the day of the survey. [®]Hand-written instructions are pasted on walls and clearly outline the procedures for processing of equipment are acceptable.

⁹ The process of sharps waste disposal is incineration, and the facility has a functioning incinerator with fuel on the day of survey, or disposes of sharps waste by means of open burning in a protected area, dumping without burning in a protected area, or removal offsite with storage in a protected area prior to removal offsite

¹⁰ Sharps container observed in general outpatient service area, in area where HIV testing is done if facility does HIV testing, as well as in area where minor surgery is done, if facility does minor surgeries

¹¹Chlorine-based or other country-specific disinfectants used for environmental disinfection available in the general outpatient area.

¹²Any guideline for infection control in health facilities available in the general outpatient area

¹³Non-latex equivalent gloves are acceptable.

¹⁴A digital blood pressure machine or a manual sphygmomanometer with a stethoscope available somewhere in the outpatient area

¹⁵In cylinders or concentrators or an oxygen distribution system

¹⁶The facility had a functioning land-line telephone, a functioning facility-owned cellular phone, a private cellular phone that is supported by the facility, or a functioning short wave radio available in the facility.

¹⁷Facility had a functioning ambulance or other vehicle for emergency transport that is stationed at the facility and had fuel available on the day of the survey, or facility has access to an ambulance or other vehicle for emergency transport that is stationed at another facility or that operates from another facility.