



Expanding medical knowledge through research, enhancing patients' well-being through medical treatment, and securing the best available treatment are universal aspirations shared by researchers, health care professionals and patients around the globe. These aspirations are recognized and protected as basic rights by various international instruments.

The Right to Health

Article 25 of the Universal Declaration of Human Rights states that "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services."

The WHO Constitution enshrines "...the highest attainable standard of health as a fundamental right of every human being." WHO further clarifies that "the right to

health includes both freedoms and entitlements. Freedoms include the right to control one's health and body (e.g. sexual and reproductive rights) and to be free from interference (e.g. free from torture and from non-consensual medical treatment and experimentation).

Entitlements include the right to a system of health protection that gives everyone an equal opportunity to enjoy the highest attainable level of health.



The Right to Science

Article 27 of the Universal Declaration of Human Rights and Article 15(b) of the International Covenant on Economic, Social and Cultural Rights recognize, among other things, the right to benefit from science and technology and the duty of member states to respect the freedom indispensable for scientific research and creative activity.

The pursuit of scientific knowledge and the ability to benefit from the advancement of science and its applications are thus recognized as human rights by.

The Research and Self Determination Index (RSDI)

To full realize these human rights, states must set up legal and regulatory environments to protect researchers', health care professionals' and patients' freedom to research and access treatment. The Research and Self Determination Index (RSDI) is a research and policy tool for comparative assessment of the degree to which researchers, health care professionals and patients enjoy the right to health and the right science around the globe.

Based on analysis of data on domestic legislation, the RSDI documents cross-national variation of legal regimes and ranks countries based on the degree to which the rights of researchers, health care professionals and patients are recognized.

The RSDI allows readers to better understand the context in which science and medicine advance so that we can further expand the right to science. The intent is to raise awareness of such differences and to foster an evidence-based dialogue among policymakers, scientists, patients, and society.



Measurement questions

The RSDI is based on a five-step process, which is inspired by other efforts to build indexes and ranking in other domains of social life (human development, freedom of press, social progress, happiness, corruption, and economic freedoms):

1. Selection of areas of scientific research and medical treatment

We identified areas of policy that raise important questions that affect the enjoyment of the right to health and the right to science. Then we selected areas that have the potential to generate insights as to the degree to which researchers, health care professionals and patients enjoy their rights. These four areas are:

- Assisted reproduction technologies (ART)
- Research with human embryonic stem cells (hESC)
- End-of-life decisions
- Abortion and contraception

2. Identification of legal and regulatory indicators

We identified key regulatory conditions that permit measurement of the degree to which actors can enjoy their rights. For each indicator, we generated a list of questions and answers that capture the degree to which the regulatory framework recognizes, protects, or limits actors' ability to engage in a certain conduct or enjoy a certain entitlement.

3. Point allocation

We assigned points (from 0 to 12) to each answer pertaining to indicators. We allotted the highest score to the higher degree of enjoyment of the right. Progressively lower scores were assigned to legal environments that guarantee less freedoms and entitlements.

The score 0 was assigned to blank prohibitions. If data are not available, the answer is not included in the calculation. Data may not be available for two reasons: either we were not able to find relevant data or the legal system is silent on the point.

4. Data collection

Data were collected from various sources including primary sources (statutes and other regulatory documents) and secondary sources (scientific papers and policy reports). For each country, we report the level of completion of data collection.

5. Visualization of results and ranking

Points were then added to a total thus generating area scores and an overall score. The overall score results from adding the points of each area. These scores quantify the degree of freedom and entitles in each of the areas are protected under domestic law. Countries were then ranked based on the area scores and the overall score. The countries that appear on the Index are countries for which we have collected at least 80% of the data. The total of countries appearing in the Index are 46. Initially, the Index included 42 countries. Three countries were added in 2015. One was added in 2017



List Nations	Tot	%
Afghanistan	8	34.48%
Albania	36	41,38%
Algeria	13	24,14%
Angola	5	27.59%
Argentina	58	82,93%
Armenia	29	31.03%
Australia	65	100,00%
Austria	53	87,80%
Azerbaijan	29	31.03%
Bahamas	14	27.59%
Bangladesh	20	34.48%
Belarus	30	31.03%
Belgium	82	100,00%
Belize	19	27.59%
Benin	16	27.59%
Bhutan	6	27.59%
Bolivia	16	27.59%
Bosnia and Herzegovina	24	34.48%
Botswana	22	27.59%
Brazil	45	73,17%
Brunei	5	27.59%
Bulgaria	30	48,28%

List Nations	Tot	%
Burkina Faso	23	27.59%
Burundi	12	27.59%
Cambodia	28	31.03%
Cameroon	15	27.59%
Canada	76	100,00%
Central African Republic	5	27.59%
Chad	13	27.59%
Chile	47	78,05%
China	69	97,56%
Colombia	48	70,73%
Congo - Brazzaville	9	27.59%
Costa Rica	18	51,22%
Ivory Coast	5	6.90%
Croatia	34	79.31%
Cuba	18	27.59%
Cyprus	26	41.38%
Czech Republic	50	70,73%
Congo - Kinshasa	9	27.59%
North Korea	25	24.14%
Denmark	63	86,21%
Djibouti	6	27.59%
Dominican Republic	14	65.52%



List Nations	Tot	%
Ecuador	28	58.62%
Egypt	18	93.10%
El Salvador	2	41.38%
Equatorial Guinea	9	34.48%
Eritrea	10	27.59%
Estonia	29	34.48%
Ethiopia	24	27.59%
Fiji	14	27.59%
Finland	58	82.76%
France	64	97.56%
Gabon	7	27.59%
Gambia	15	27.59%
Georgia	40	51.72%
Germany	57	97.56%
Ghana	26	31.03%
Greece	62	86.21%
Guatemala	9	27.59%
Guinea	24	27.59%
Guinea-Bissau	18	27.59%
Guyana	25	31.03%
Haiti	9	27.59%
Honduras	5	27.59%

List Nations	Tot	%
Hungary	55	86.21%
Iceland	62	86.21%
India	63	90.24%
Indonesia	8	34.48%
Iran	31	86.21%
Iraq	6	27.59%
Ireland	33	86.21%
Israel	54	79.31%
Italy	54	100.00%
Jamaica	9	27.59%
Japan	50	90.24%
Jordan	12	44.83%
Kazakhstan	28	31.03%
Kenya	9	43.90%
South Korea	54	92.68%
Kuwait	10	34.48%
Kyrgyzstan	29	31.03%
Laos	7	34.48%
Latvia	42	58.62%
Lebanon	22	27.59%
Lesotho	9	27.59%
Liberia	21	27.59%



List Nations	Tot	%
Libya	4	24.14%
Lithuania	31	44.83%
Luxembourg	32	41.38%
Republic of Macedonia	25	31.03%
Madagascar	8	27.59%
Malawi	3	27.59%
Malaysia	19	48.28%
Mali	12	27.59%
Malta	5	34.48%
Mauritania	9	27.59%
Mexico	57	97,56%
Moldova	26	37.93%
Mongolia	20	31.03%
Montenegro	29	31.03%
Morocco	18	82.76%
Mozambique	19	31.03%
Myanmar	5	24.14%
Namibia	21	24.14%
Nepal	26	31.03%
Netherlands	79	100,00%
New Zealand	62	87,80%
Nicaragua	5	27.59%

List Nations	Tot	%
Niger	5	27.59%
Nigeria	16	31.03%
Norway	47	86,21%
Oman	5	27.59%
Pakistan	15	20.69%
Panama	13	27.59%
Papua New Guinea	4	20.69%
Paraguay	3	20.69%
Peru	15	31.03%
Philippines	25	87,80%
Poland	28	68,29%
Portugal	56	90,24%
Qatar	12	20.69%
Romania	55	85,37%
Russia	47	68,29%
Rwanda	11	20.69%
Saudi Arabia	21	68,97%
Senegal	3	20.69%
Serbia	25	24.14%
Sierra Leone	11	20.69%
Slovakia	26	41.38%
Slovenia	45	58,62%



List Nations	Tot	%
Solomon Islands	1	20.69%
Somalia	3	20.69%
South Africa	68	87,80%
Spain	64	100,00%
Sri Lanka	3	20.69%
Sudan	7	20.69%
Suriname	3	20.69%
Swaziland	3	20.69%
Sweden	67	100,00%
Switzerland	50	96,55%
Syria	4	34.48%
Taiwan	46	80,49%
Tajikistan	24	24.14%
Tanzania	11	20.69%
Thailand	39	63,41%
East Timor	0	3.45%
Togo	2	20.69%
Trinidad and Tobago	11	20.69%
Tunisia	26	82.76%
Turkey	41	90,24%
Turkmenistan	21	20.69%
Uganda	15	31.03%

List Nations	Tot	%
Ukraine	29	48,78%
United Arab Emirates	1	41.38%
United Kingdom	58	100,00%
United States	79	100,00%
Uruguay	23	41.38%
Uzbekistan	24	24.14%
Vanuatu	11	20.69%
Vietnam	59	80,49%
Yemen	7	62.07%
Zambia	5	6.90%

