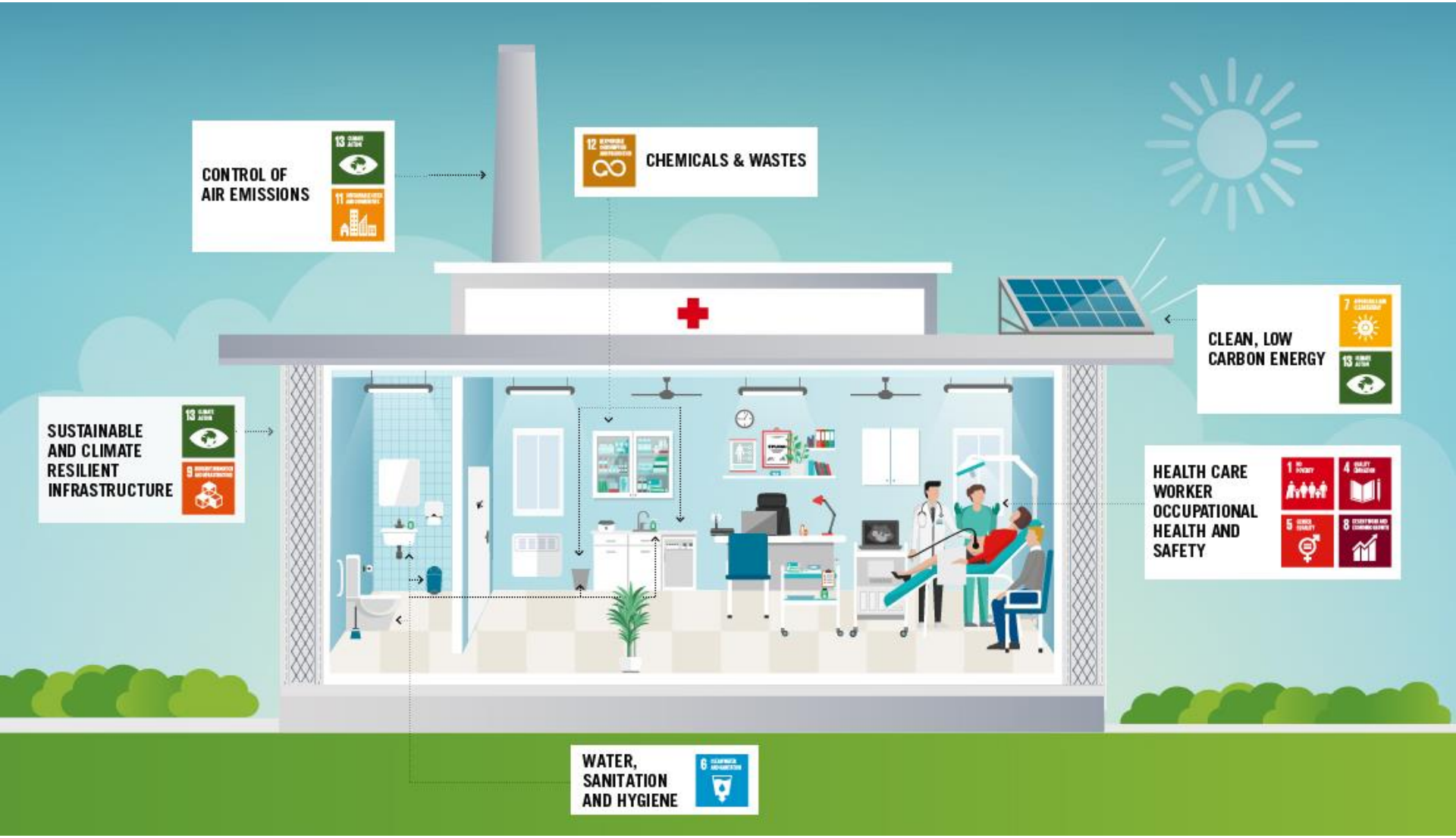
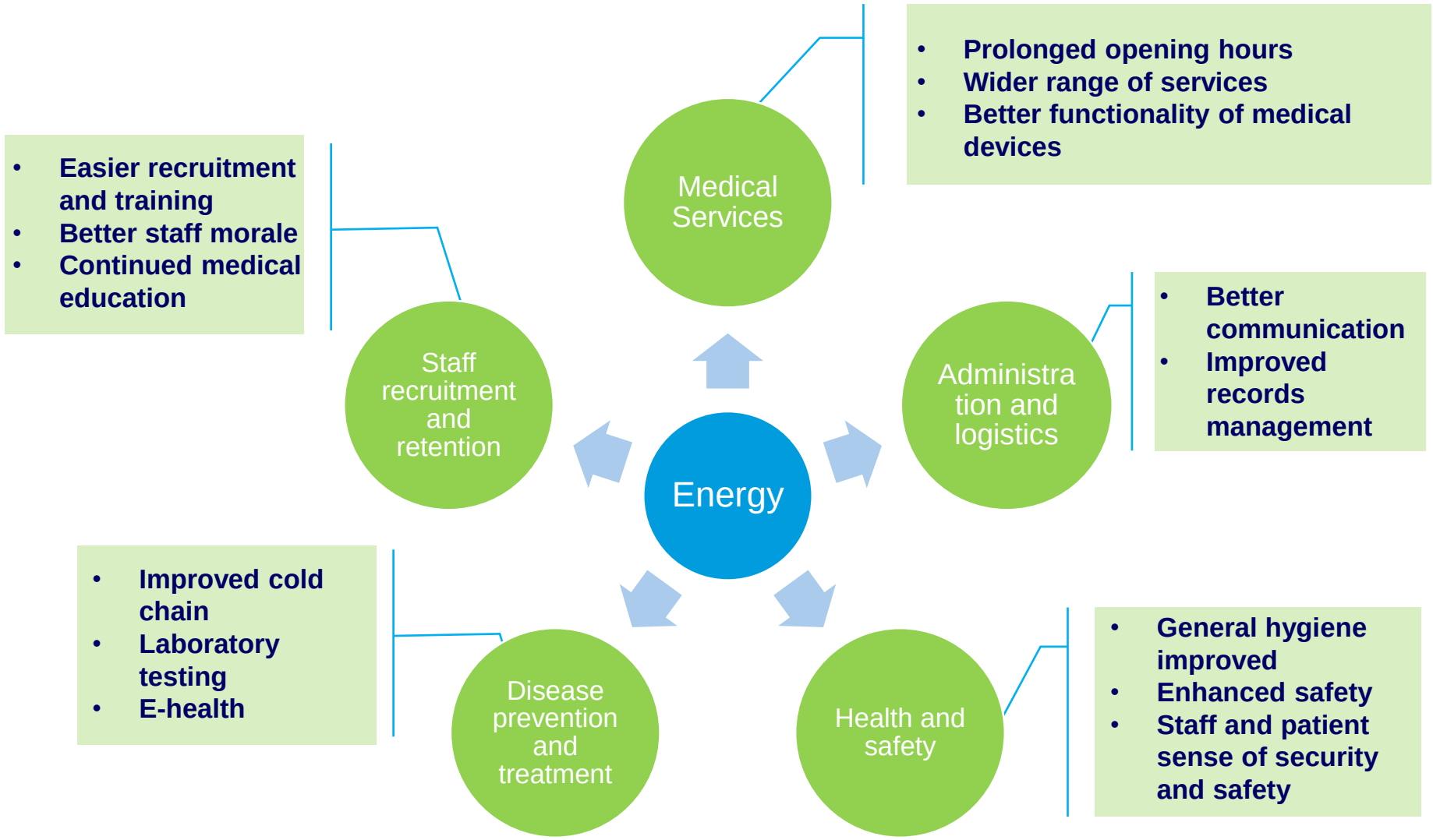
Sustainable energy in health care: looking beyond SDG3

World Health Organization



Importance of energy to health services

(in particular access to electricity)



Source: WHO & World Bank (2015). Access to Modern Energy Services for Health Facilities in Resource – Constrained Settings.

Status: Energy in Healthcare in High-income countries

where much higher environmental efficiency is accompanied by high health-care expenditures, it will be critical to **reduce** greenhouse gas emissions, including:

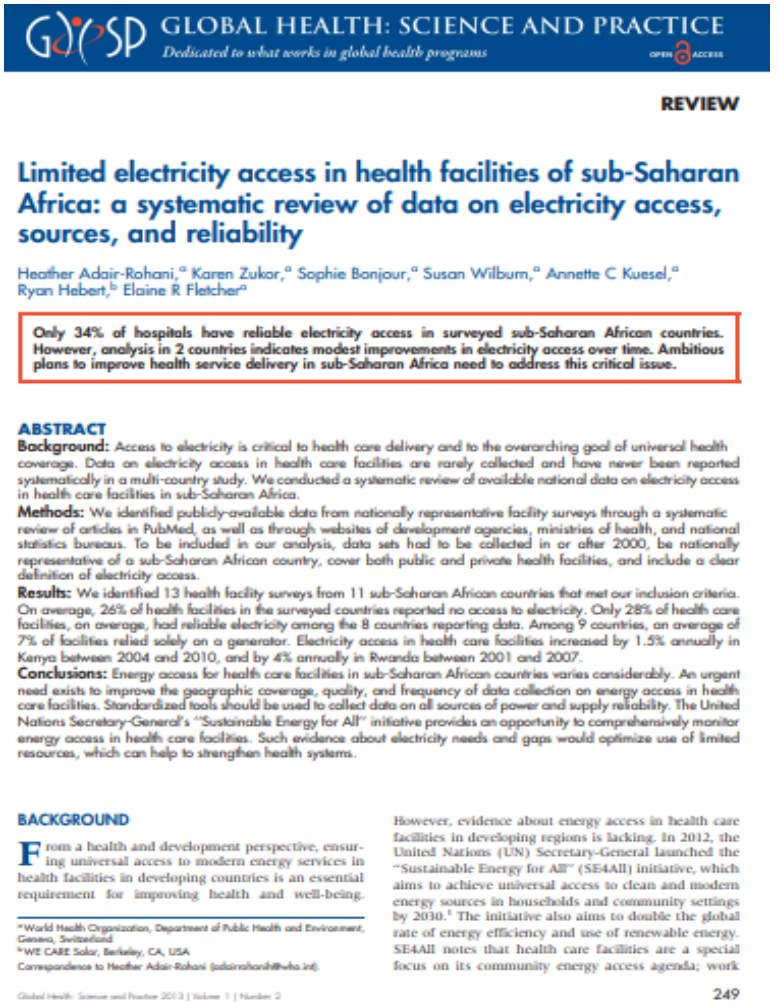
- anaesthetic gases and asthma inhaler propellants, and air pollution;
- especially from health-care-related transport (e.g. the health and social care services in England generate 5% of all road traffic, producing air pollution, greenhouse gases, road trauma, and noise); and
- investing in energy efficiency and green building design.

Status: Energy in Healthcare in low-and-middle income countries

World Health Organization

1 billion people globally are still served by **health facilities with no access to electricity**

- WHO -led review found nationally representative data for only 14 developing countries globally; 11 of these were in sub-Saharan Africa.
- Among the 11 African countries assessed an average of **26% of health facilities did not have any access to electricity.**
- Only **34% of hospitals on average had "reliable" electricity** (defined as no outages of more than two hours in the past week) across the eight countries for which such data was available



GHSP GLOBAL HEALTH: SCIENCE AND PRACTICE
Dedicated to what works in global health programs
OPEN ACCESS

REVIEW

Limited electricity access in health facilities of sub-Saharan Africa: a systematic review of data on electricity access, sources, and reliability

Heather Adair-Rohani,[a] Karen Zukor,[a] Sophie Bonjour,[a] Susan Wilburn,[a] Annette C Kuesel,[a] Ryan Hebert,[b] Elaine R Fletcher[a]

Only 34% of hospitals have reliable electricity access in surveyed sub-Saharan African countries. However, analysis in 2 countries indicates modest improvements in electricity access over time. Ambitious plans to improve health service delivery in sub-Saharan Africa need to address this critical issue.

ABSTRACT

Background: Access to electricity is critical to health care delivery and to the overarching goal of universal health coverage. Data on electricity access in health care facilities are rarely collected and have never been reported systematically in a multi-country study. We conducted a systematic review of available national data on electricity access in health care facilities in sub-Saharan Africa.

Methods: We identified publicly-available data from nationally representative facility surveys through a systematic review of articles in PubMed, as well as through websites of development agencies, ministries of health, and national statistics bureaus. To be included in our analysis, data sets had to be collected in or after 2000, be nationally representative of a sub-Saharan African country, cover both public and private health facilities, and include a clear definition of electricity access.

Results: We identified 13 health facility surveys from 11 sub-Saharan African countries that met our inclusion criteria. On average, 26% of health facilities in the surveyed countries reported no access to electricity. Only 28% of health care facilities, on average, had reliable electricity among the 8 countries reporting data. Among 9 countries, an average of 7% of facilities relied solely on a generator. Electricity access in health care facilities increased by 1.5% annually in Kenya between 2004 and 2010, and by 4% annually in Rwanda between 2001 and 2007.

Conclusions: Energy access for health care facilities in sub-Saharan African countries varies considerably. An urgent need exists to improve the geographic coverage, quality, and frequency of data collection on energy access in health care facilities. Standardized tools should be used to collect data on all sources of power and supply reliability. The United Nations Secretary-General's "Sustainable Energy for All" initiative provides an opportunity to comprehensively monitor energy access in health care facilities. Such evidence about electricity needs and gaps would optimize use of limited resources, which can help to strengthen health systems.

BACKGROUND

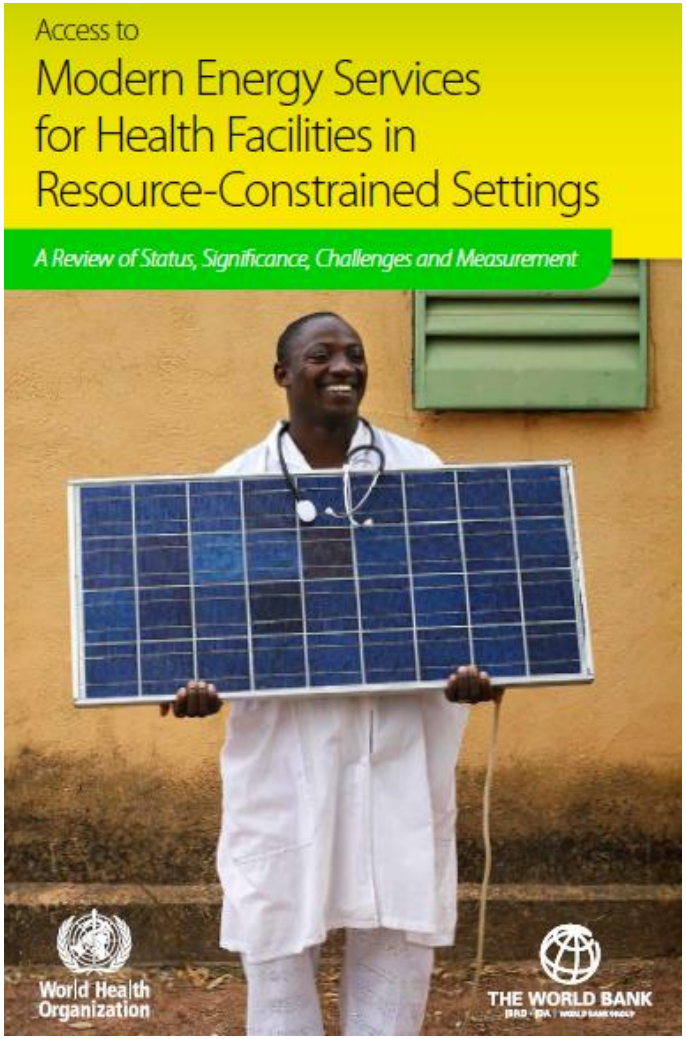
From a health and development perspective, ensuring universal access to modern energy services in health facilities in developing countries is an essential requirement for improving health and well-being.

However, evidence about energy access in health care facilities in developing regions is lacking. In 2012, the United Nations (UN) Secretary-General launched the "Sustainable Energy for All" (SE4All) initiative, which aims to achieve universal access to clean and modern energy sources in households and community settings by 2030.[1] The initiative also aims to double the global rate of energy efficiency and use of renewable energy. SE4All notes that health care facilities are a special focus on its community energy access agenda; work

[a]World Health Organization, Department of Public Health and Environment, Geneva, Switzerland
[b]WE CARE Solar, Berkeley, CA, USA
Correspondence to Heather Adair-Rohani (adairrohanih@who.int).

Source: Adair-Rohani, H., Zukor, K., Bonjour, S., Wilburn, S., Kuesel, A.C., Hebert, R. and Fletcher, E.R., 2013. Limited electricity access in health facilities of sub-Saharan Africa: a systematic review of data on electricity access, sources, and reliability. *Global Health: Science and Practice*, *1*(2), pp.249-261.

Filling the gaps



Overarching theme: the need for closer cooperation between health and energy sectors.

Two parallel tracks to improve access to energy:

1. **Improve monitoring of energy access** through 1) piloting and validating **measurement framework**, and 2) **harmonizing approaches**, indicators, and data collection efforts

2. **Scale up clean and sustainable energy access**

    1. **Research**: better define optimal energy technologies suitable for resource constrained settings

    2. **Policy and finance innovation**: new policies, standards and regulations to support procurement, installation, and sustainable energy

    3. **Capacity-building:** strengthen capacity of health facility managers to procure, implement, and operate energy systems

Source: World Health Organization, 2014. Access to modern energy services for health facilities in resource-constrained settings: a review of status, significance, challenges and measurement.

World Health Organization

Thank you!

Lydia Abebe

labebe@who.int

Air Pollution and Health

Around 3 billion people cook using polluting open fires or simple stoves fuelled by kerosene, biomass (wood, animal dung and crop waste) and coal.

Each year, close to 4 million people die prematurely from illness attributable to household air pollution from inefficient cooking practices using polluting stoves paired with solid fuels and kerosene.

Household air pollution causes noncommunicable diseases including stroke, ischaemic heart disease, chronic obstructive pulmonary disease (COPD) and lung cancer.

Close to half of deaths due to pneumonia among children under 5 years of age are caused by particulate matter (soot) inhaled from household air pollution.