



Aga Khan Health Services

Tanzania: Reducing carbon emissions from anaesthetic gases

The Aga Khan Health Service Tanzania (AKHS, T) runs two hospitals in Dar es Salaam and Mwanza with six operating theatres (5 in Dar es salaam and one in Mwanza). The use of anaesthetic agents for surgery represented a Greenhouse Gas (GHG) emission hotspot, with nitrous oxide and isoflurane constituting the greatest part.

AKHS, T revolutionized its anaesthesia practice to discontinue the use of nitrous oxide as a carrier gas as well as isoflurane in favour of more environmentally-friendly alternatives, including oxygen and medical air as carrier gases, and sevoflurane to replace isoflurane. AKHS, T anaesthetists are also prioritizing the use of regional/local anesthesia instead of general anesthesia whenever clinically appropriate.

At the start of 2023, changes in procedures commenced and following gradual reductions of the use of Nitrous oxide by July 2023, the decision was taken to completely discontinue its use and return remaining cylinders to the supplier.

By the end of 2023, this effort had reduced carbon emissions from anesthetics by 44% compared to 2022. While there was a slight reduction of surgical cases during this period (3%) this reduction was highly significant. Tracking the decline in emissions was made possible through the use of AKDN's carbon management tool.

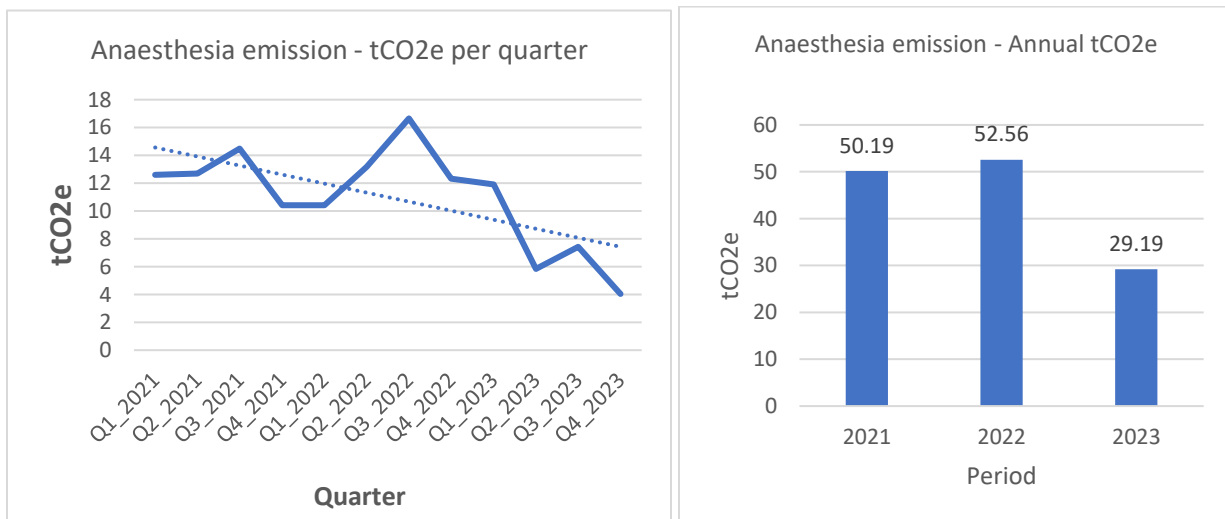


Fig.1. Reduction in CO₂e emissions from anesthetic gas at AKHS, T



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Fig.2: Theatre team at Aga Khan Hospital, Dar es salaam