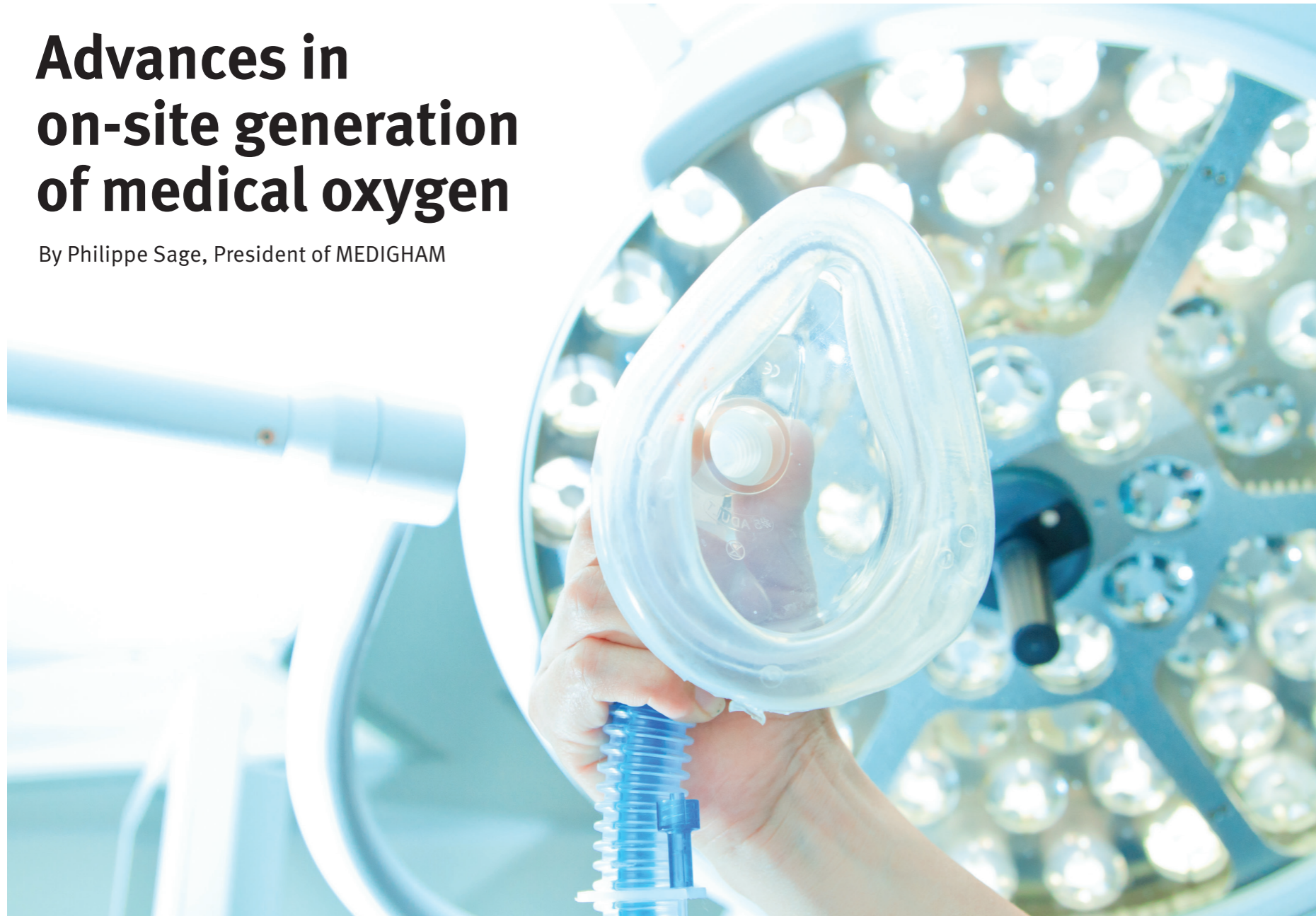


Advances in on-site generation of medical oxygen

By Philippe Sage, President of MEDIGHAM



The on-site production of medical gases is a well-established practice for healthcare facilities around the world. In fact, the vast majority of hospitals produce one or more of the three gases needed to attend their patients – vacuum, medical air and medical oxygen – via this route.

But if the benefits of producing medical air and vacuum are no longer in question, on-site production of medicinal oxygen encounters many more obstacles from the established providers to protect their commercial

activities with, often, biased arguments.

That's the view of MEDIGHAM® (the Medical Gas Generators for Hospitals, International Association of Manufacturers), a not-for-profit international association of companies that design and manufacture the generators or components required for on-site medical gas production.

MEDIGHAM's mission is to represent and develop the on-site production of medical gases in order to ensure the continuous improvement of the safety of patients, the security of installations,

and environmental protection. This is achieved through the exchange of views towards the regulatory framework, drawing upon the vast experience of its members in the safe production, handling and use of medical and specialty gases.

In this respect, MEDIGHAM's associates have been actively contributing in recent months, at both a national and international level, to the revision of the ISO Standard 7396, expected to be published by end of 2015 and giving an improved technical

regulatory framework for the installation of on-site medical gas production at healthcare facilities.

MEDIGHAM associates have equipped thousands of healthcare facilities around the world with oxygen PSA technology since the dramatic increase in demand driven by the publication of the Oxygen 93% monograph at European Pharmacopeia in 2011, and the association cites this as one of the most significant developments in advancing the onsite generation of medical oxygen in recent years.

The fast growing development of this activity has allowed for greater investment in R&D that leads to major improvements of the technology used for and around the PSA systems to ensure a stable concentration of oxygen, with a full set of features to guarantee the continuity of supply at any time.

Yet MEDIGHAM believes there is still potential to be explored in onsite oxygen generation, partly in overcoming the aforementioned obstacles from established providers, and partly due to technology innovation. MEDIGHAM sees potential to reduce the energy consumption and overall costs of production, and is cooperating with relevant institutions to support innovative developments for:

1. Producing medicinal oxygen or other medicinal gases
2. Facilitating the work of care givers to provide acute care at hospitals sites, whatever the environmental constraints or locations of these facilities
3. Improving the cost-efficiency and safety of medicinal gases delivered to the patient.

The on-site production of medical oxygen is expected to capture a considerable share of the global medical hospital oxygen market (worth around €2.5bn per year according to available sources and publications) based not only on its economic appeal, but also on the reliability of supply and security of installation.

Indeed, most of the issues associated with remote production at centralised industrial sites – such as road transport hazards for products classified as dangerous in developing countries, lack of appropriate infrastructures in developing countries or remote areas, and the storage of large quantities of product required – are clearly addressed by the autonomy provided by on-site gas generation. On-site oxygen generation delivers product at the right quantity, the right quality, and when needed.

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Freedom

Every healthcare facility is a specific case with its own environment, constraints and needs, and decision-makers have the freedom to select the most appropriate means to cover their expectations – either remote, or on-site production, or a combination of both solutions.

Market developments have undoubtedly led to advances in the on-site generation of medical oxygen, and paved the way for increased choice. It is the intention of MEDIGHAM to strongly defend this freedom; to facilitate the communication between producers, authorities and users and to contribute actively, in its scope of expertise, to the development of improvements and new alternatives in the future.

ABOUT THE AUTHOR

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