

British Association of Dermatologists (BAD) and American Academy of Dermatology (AAD) Joint Position Statement

on

Guiding Principles for Large Language Models (LLMs) in Dermatology

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Large language models (LLMs) are artificial intelligence systems that are increasingly being used with significant potential to improve our profession. Recent implementations include Open AI's **ChatGPT**, Google's **Bard**, and **Med-PaLM 2**, among others, which have the ability to understand and interpret natural language text, audio, and image queries. Their potential use is vast as they can, in theory, help find relevant information quickly and easily. The optimal use cases for LLMs in healthcare and the associated risks are still being established and have not been tested.

Principle #1: Safety

Outputs from LLMs may be inaccurate and potentially harmful if used to seek medical or healthcare advice.

LLMs are not currently regulated by the Medicines and Healthcare products Regulatory Agency (MHRA) in the United Kingdom or the Food and Drug Administration (FDA) in the United States. There are no models that have been shown to be safe to diagnose or treat skin conditions.

The validity of information and sources cited, particularly when sharing information with patients or when used in documenting patient care, should be checked for accuracy. Different LLMs also have variable and not completely understood limitations (i.e., ChatGPT has a knowledge cut-off of September 2021). Some other examples include query results that can vary depending on how the question or task is presented to the LLM, LLMs can evolve over time, and LLMs can generate different outputs to the same query.

Principle #2: Privacy

Identifiable data entered into LLM prompts.

Avoid entering patient identifiable information and personal health information into LLMs as any data entered is not secure or confidential, and may be used to further train and refine the LLMs. Ethical considerations for data collection, use, and dissemination remain unclear.

Principle #3: Fairness and Generalisability

LLM responses are influenced by training data.

LLMs can perpetuate biases in their training data and, to date, the training and refinement data and procedures for most LLMs are non-public. Because of this, LLMs are likely to generate results that are inaccurate.

We advocate for the inclusion of physicians and the public in the development, evaluation, and deployment of LLMs for dermatology in order to improve patient care and reduce potential harms.

This Position Statement is provided for educational and informational purposes only. It is intended to offer physicians guiding principles and policies regarding the practice of dermatology. This Position Statement is not intended to establish a legal or medical standard of care. Physicians should use their personal and professional judgment in interpreting these guidelines and applying them to the particular circumstances of their individual practice arrangements.