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DiGA Short Report

Publicly available efficacy data as the basis for evidence-based medical prescribing

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An analysis of the published evidence on the efficacy of the permanently listed digital health applications (DiGAs).

SUMMARY

Based on an analysis of the publicly available full texts of peer-reviewed scientific papers in national and international scientific journals and of accessible peer-reviewed BfArM reports, this report finds that, for the vast majority of the 47 permanently listed DiGAs, convincing scientific evidence of efficacy is publicly available. With only a few exceptions, the published clinical data meet high scientific standards and provide physicians and other healthcare stakeholders with a robust evidence base for clinical decision-making. Occasional sweeping public claims that the efficacy of DiGAs is generally unproven are inconsistent with this evidence – a careful review of the original full-text publications demonstrates the opposite.

For some DiGAs, however, timely peer-reviewed publications are missing. For these applications, physicians cannot assess whether they should prescribe them – permanent listing alone does not replace published evidence.

H.P. Zenner
CLINICAL RESEARCH INSTITUTE

The finding: many DiGAs – but by no means all – have published their efficacy in peer-reviewed journals

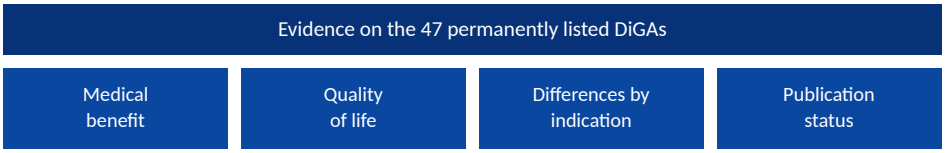
Peer-reviewed published results are the basis of clinical decision-making. Where they exist, the clinical evidence is generally very high – where they are missing, physicians cannot assess a prescription and may refrain from it for that very reason.

The background

With the Digital Healthcare Act (DVG, 2019) and the BfArM's DiGA directory, Germany created the world's first clear regulatory framework that assesses the quality, safety and efficacy of digital health applications and enables their reimbursement by the statutory health insurance (GKV). There are two routes into the directory: permanent listing based on full proof of efficacy from a comparative clinical trial – or provisional listing under Section 139e (4) SGB V with the obligation to provide such proof within one year. The DigiG (2024) additionally extended the scope to class IIb medical devices under the MDR.

Based on a systematic literature search, this analysis examines to what extent peer-reviewed, published DiGA efficacy data are available to physicians and to other healthcare stakeholders such as the statutory health insurers (GKV) and the National Association of Statutory Health Insurance Physicians (KBV).

QUESTIONS EXAMINED IN THIS ANALYSIS



The basis for decision-making

Physicians base their clinical decisions on peer-reviewed published results. The extensive study reports that manufacturers submit to the BfArM, by contrast, are not accessible to them – only what has been published after review counts as a basis for prescribing. The publication status therefore determines whether a permanently listed DiGA is actually accepted in medical practice, by the GKV or by the KBV.

Two publication situations

Many DiGAs – but by no means all – have published their results in peer-reviewed journals. For these applications, the clinical evidence of efficacy is therefore generally very high, in many cases from randomised controlled trials with evidence level 1b.

For some DiGAs, however, timely peer-reviewed publications of the results are missing. For these applications, physicians cannot assess whether they should prescribe them – regardless of how good the data available to the BfArM may be.

The methodology

The analysis is based on a systematic literature search – the gold standard for the evidence-based synthesis of research results. Searches were performed in MEDLINE (PubMed) and additionally in Current Contents, CC Med and GMS (LIVIVO) as well as with Google Scholar; where publications were missing, study reports were requested directly from the manufacturers.

The analysis comprises:

- only applications permanently listed in the DiGA directory (as of 10/2025).
- two documented screening rounds with predefined exclusion criteria.
- grading of the evidence according to Oxford CEBM (2009).
- assessment of the strength of evidence according to the AWMF proposal.
- significance (p-value) and effect size as outcome measures.
- a detailed literature search protocol (LSP).

The assessment

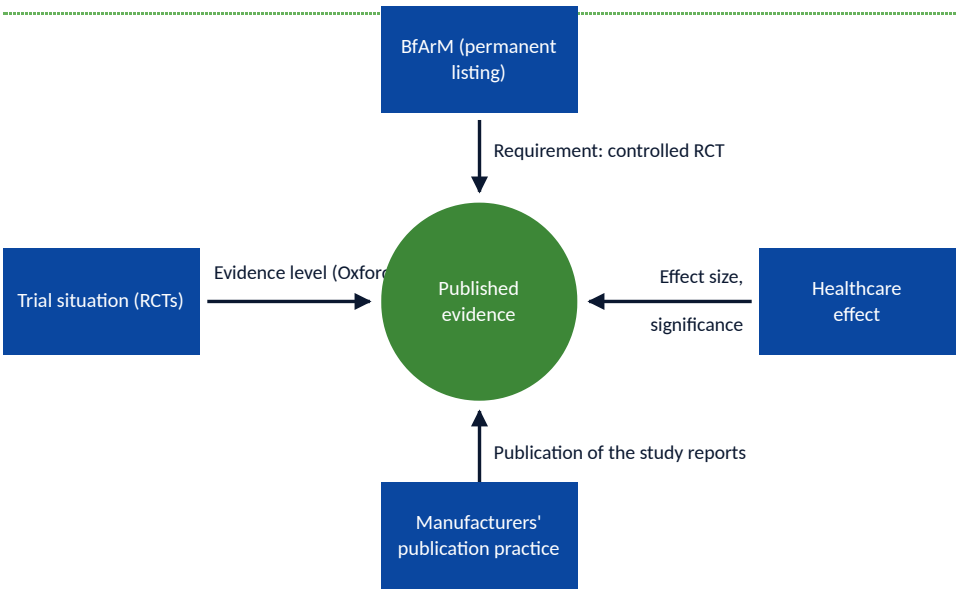
Statistical significance is indispensable. However, a significant p-value alone says nothing about the size of a treatment effect: small differences can be statistically significant and yet clinically meaningless. Both outcome measures were therefore assessed throughout – the **statistical significance** of the between-group difference in the primary endpoint and the **effect size**, for example according to Cohen's d or Hedges' g (0.2: small, 0.5: medium, 0.8 and above: large effect), complemented by ηp^2, odds ratio and NNT.

The between-group difference in the primary endpoint is the demonstrable parameter of the positive healthcare effect; health-related quality of life, typically a secondary endpoint, was recorded in addition.

Publications and reviewed reports on all **47 DiGAs permanently listed in October 2025** were examined. The majority use psychotherapeutic methods as their main mechanism of action; only a few rely on physiotherapy, speech therapy or pure behaviour change. Successful trials were adequately powered (50 to 3,143 participants); dropout rates varied considerably between 1.7 and 84.4 percent. Double-blind trials are inherently impossible for DiGAs.

Whether BfArM approval also translates into publicly verifiable evidence is determined by the interplay of approval requirements, the trial situation, the healthcare effect and the manufacturers' publication practice – the model below summarises the four determinants of the published evidence.

FOUR DETERMINANTS OF THE PUBLISHED EVIDENCE



The results

High effect sizes from controlled trials are shown by, among others, Selfapy and HelloBetter (anxiety disorders), Selfapy, Deprexis and Elona (depression), HelloBetter (diabetes, stress and burnout), Kranus Lutera (bladder/prostate disorders), Vivira (back pain), the NichtraucherHelden app, Somnio (insomnia) and Kalmeda (tinnitus).

Medium effect sizes are achieved by, among others, Oviva (obesity), Velibra and Invirto (anxiety disorders), PINK! Coach (breast cancer), Vitadio (diabetes), Selfapy (eating disorders), Companion patella, NeuroNation Med, Elevida (multiple sclerosis) and Kaia (back pain).

Low effect sizes were found for, among others, Untire, Novego, Levidex, Priovi and Vorvida; for Zanadio the effect size remained insufficient. For further DiGAs – such as Mindable, Kranus Edera, Mawendo and Neolexon Aphasie – no effect size was published, so the magnitude of efficacy remains open.

For **18 DiGAs**, no peer-reviewed publications exist to date (10/2025); their permanent listing rests solely on the reports available to the BfArM. Physicians therefore lack the basis for a prescribing decision for these applications.

SWOT ANALYSIS OF DIGA-BASED CARE

internal perspective (e.g. trial situation, effect sizes, publications)

Strengths
- peer-reviewed RCTs (evidence level 1b)
- very high evidence of efficacy

Weaknesses
- missing timely peer-reviewed publications
- 18 DiGAs without a reviewed publication

Opportunities
- publication of the BfArM study report
- e.g. on the DiGA's homepage

Threats
- no publication, no basis for prescribing
- loss of trust among prescribers

external perspective (e.g. healthcare reality, prescribers, regulation)

THE STEPS OF THE ANALYSIS AT A GLANCE

- Search strategy and database research
- Compilation of the raw list
- First screening (abstracts)
- Base list and full-text retrieval
- Second screening (full texts)
- Literature analysis and cross-references
- Evidence level according to Oxford CEBM
- Effect sizes and overall assessment

Components of the systematic review

The conclusion

For the vast majority of DiGAs, convincing scientific evidence of efficacy is publicly available. With only a few exceptions, the published clinical data meet high scientific standards and provide physicians and other healthcare stakeholders with a robust evidence base for clinical decision-making.

This finding stands in clear contrast to the inaccurate and insufficiently substantiated claims occasionally made publicly by individual healthcare stakeholders that the efficacy of DiGAs has generally not been demonstrated, or has been demonstrated only inadequately. Such sweeping assessments are inconsistent with the publicly available scientific evidence. Anyone seeking to assess the quality of the evidence supporting the efficacy of DiGAs is therefore well advised to consult the original scientific publications, including the full-text articles. A careful review of these publications demonstrates that, for the overwhelming majority of DiGAs, convincing evidence of efficacy has been established to a high scientific standard.

For some DiGAs, however, timely peer-reviewed publications are missing. For these applications, physicians cannot assess whether they should prescribe them – permanent listing alone does not replace published evidence.

The implications

A viable way forward: manufacturers publish the latest version of the study report submitted to the BfArM – for example on the DiGA's application homepage. This report is peer-reviewed: it was assessed by the BfArM in the approval procedure.

Prescribers would thus receive a reviewed, citable basis for decision-making even without a journal publication – and the credibility of the DiGA directory would be strengthened. For manufacturers, the timely, complete publication of their results is becoming a competitive factor.

The outlook

DiGA manufacturers should systematically expand the published evidence base by publishing the peer-reviewed results of all DiGAs immediately after DiGA listing, with consistently calculated and reported effect sizes.

Added to this is the expectation of trials with longer observation periods and of real-world observational studies.

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