MENOPAUSE MATTERS

FEBRUARY 2026

The editor of *Menopause Matters* has wondered when Artificial Intelligence (AI) will transform medical research. Last month, after 25 years in the business of trawling publications, he came across two articles which might provide some answers to his query. The following publications indicate how AI could possibly improve women's health.

Article One

Endometrial cancer risk reduction

Postmenopausal women who are at risk of developing endometrial cancer (EC) are often treated with progestogens as a prophylactic regimen. The indications for treatment may be a bleed that has been investigated or a thickened endometrium discovered incidentally in someone with a metabolic disorder or obesity. A diagnosis of endometrial hyperplasia or benign uterine pathology in patients with high-risk features may trigger progestogen therapy alone, or with additional GLP-1 receptor agonists (GLP-1RAs) as a logical strategy.

Analysing data from more than 400,000 women over the last 20 years with a clinical situation as described above, researchers found GLP-1RA plus progestogen therapy reduced EC risk by two thirds compared with one third using progestogens alone. This protective effect remained consistent across all patient subgroups studied, including body mass indices, age, progestogen routes, and baseline risk levels (Yen et al. *JAMA Netw Open*. 2026; doi:10.1001/jamanetworkopen.2025.58205).

Triple therapy (GLP-1RA, metformin, and progestogens) also demonstrated superior outcomes to progestogens alone. Additionally, GLP-1RA-progestogen therapy reduced hysterectomy rates by 55% at two years and 40% at five years. These findings suggest GLP-1RAs offer significant protective benefits against EC development in high-risk populations, warranting further investigation into underlying mechanisms and clinical applications.

More information was available across the following parameters with the Hazard Ratios in brackets. A hazard ratio of **1.0** indicates no difference between groups, **<1.0** indicates a reduced rate of the event in the treated group, while **>1.0** indicates an increased rate of the event in the treated group

- Progestogen administration route risk reduction: LNG-IUS (HR 0.40), oral progestogens (HR 0.35)
- Baseline pathology risk: endometrial hyperplasia (HR 0.49), benign pathology (HR 0.34)
- BMI ≥30 (HR 0.27) and <30 (HR 0.28)
- Age less than 51 years (HR 0.43) and greater than 51 years (HR 0.55)
- Across various metabolic combinations - GLP-1 RA + progestogen vs metformin + progestogen HR 0.30 (≈70% relative risk reduction)
- Triple therapy (GLP-1 RA + metformin + progestogen): - vs metformin + progestogens: HR 0.37 vs progestogens alone: HR 0.44.
- Surgical endpoints - Hysterectomy risk was also lower with GLP-1 RA + progestogen at 2 years (HR 0.47) and 5 years (HR 0.59) vs progestogens alone

These data are observational and hypothesis-generating but consistently point to an approximate two thirds relative EC risk reduction when GLP-1 RAs are added to progestogen-based therapy.

This was a TriNetX research project which would not have been possible to carry out without AI, so what exactly is TriNetX?

TriNetX is a global health research network/platform that provides access to electronic health record (EHR) data from healthcare organisations worldwide.

Key features include:

- **Massive database** – TriNetX has access to clinical data from millions of patients across hospitals, healthcare systems, and primary care networks, primarily from North America, Europe, and other high-income regions
- **Real-world evidence** – The data gathered contains actual patient records including diagnoses, procedures, medications, laboratory results, and outcomes, rather than controlled trial data
- **Research tool** – It enables researchers to conduct retrospective cohort studies, identify patient populations, and analyse treatment outcomes without direct patient contact
- **De-identified data** – All patient information is anonymised to protect privacy whilst maintaining clinical utility
- **Propensity score matching** – Built-in statistical tools allow researchers to create comparable patient groups, reducing bias in observational studies

Common uses:

- Comparative effectiveness research
- Drug safety surveillance
- Epidemiological studies
- Clinical trial feasibility assessments
- Healthcare outcomes research

In the endometrial cancer study summarised above, TriNetX allowed researchers to analyse hundreds of thousands of patient records to compare outcomes between different treatment groups, providing real-world evidence about GLP-1RA effectiveness that would have been impractical to obtain through traditional randomised controlled trials.

This volume of data and the connectivity between regions, countries and different networks would not be possible without AI.

Links to Biobanks, such as those in the UK and America are feasible, which combined with TriNetX systems would expand and refine precision medicine protocols.

Imagine if each patient's EHR carried their genetic information. At some stage of their life (even at birth), people could have their genome captured, enabling their Genetic Risk Profile for disorders to be calculated. More correctly, this is called a person's **Polygenic Risk Score** for a woman's propensity or her elevated risk of getting endometrial cancer or any malignancy.

This would guide, at a personal level, her need for screening, preventative lifestyle or prophylactic interventions. With TriNetX technology, these risk profiles could be calculated, and an individual's health strategy precisely worked out with sophisticated computing power.

A "Brave New World"?
This article suggests that the future may be closer than we think.

Article Two

Urinary Incontinence – How Can We Do Better?

The thrust of the research presented next is not curative but is in the domain of *quality improvement.* Quality Improvement studies primarily seek to solve local problems and improve care quality within a particular system, or colloquially put - How Can We Do Better?

Let us first look at the article and the editorial that accompanies it and then explore why it is a watershed in AI medical research.

"Urinary incontinence (UI) is a common condition affecting 1 in 3 adult women worldwide. Women with UI experience a lower quality of life, poorer sexual function, and are at higher risk for depression and anxiety. The condition is dramatically underreported and undertreated, despite the availability of effective conservative treatments."
(Blanker et al. *JAMA Intern Med*. 2026; doi:10.1001/jamainternmed.2025.7832).

This is the pretty forthright introduction to an editorial about a novel approach to a urinary incontinence screening article that was published last month. The gist of the article describes how it is possible to screen for urinary incontinence in a middle-aged population of women attending their doctor for their annual check-up. It describes how prior to her appointment, the patient is required to answer the question "Do you have bothersome leakage of urine?"

This was an on-line enquiry, and was sent to a woman three days before the visit to her primary care clinician. It was delivered using an automated system capable of capturing the participant's response and of adding further queries, depending on her responses.

If she was experiencing "bothersome leakage of urine", then another algorithm was activated. This new interactive programme is described by the researchers as the "Identify, Teach, and Treat" educational initiative.

The way this works is that the woman who says she has bothersome urinary symptoms, is supplied with an on-line module about urinary incontinence and its treatments. This system was also programmed to send her doctor information. The doctor was sent an alert that became attached to the patient's Electronic Health Record, in addition to a set for interventions about urinary incontinence, including medications and physical therapy plus information about local subspecialty care facilities (Collins et al. *JAMA Intern Med*. 2026; doi:10.1001/jamainternmed.2025.7826).

So far, the research seems novel and interesting, but it is difficult to envisage how it could be set up to help a community. When the results of Collins and her co-workers' work are revealed, the magnitude of its breadth and complexity become apparent.

The research was initiated by a regional academic centre in the United States, which engaged with the local primary healthcare providers. The "Gown and Town" collaboration that was achieved is a rare combination, and even more remarkable at a time when the medical profession and science were under political attack by the United States Federal Government for ideological motives.

- 43 primary health care practices participated
- 72,000 responses were obtained from women with a mean age of 54 years
- Data about the real-world prevalence of urinary incontinence were obtained – about 10%
- Pre- and post-implementation data were collected which revealed significant increases in UI diagnoses plus referrals for pelvic floor therapy and subspecialty consultations

The data collected could help guide resource allocation and Public Health in general. The real significance of this research is the doors that it opens for electronic data collection from patients. If clinicians can have pre-consultation information available to them before the personal contact, then they will be in a stronger position to expand the value of the doctor/patient interaction. Screening reminders, vaccine schedules, exposure to abuse, dietary and other "habits" can be checked as well as questions about health, exercise.

This research shows it is possible to form links between actual clinical contact and computer data collection, while navigating patient trust and confidentiality issues, ethics committees' misgivings, security issues and storage capacity.

It is probably the first step in chatbot, pre-consultation development. It is a proof-of-concept publication describing the practicalities of patients' collaboration through AI. Chatbots can speak the patient's home language, are available at any time, never judge or criticise, can store data and have access to vast information banks (see Article One above) and are cost effective.

Could we not glean information about patient's attitudes to virtually any aspect of gynaecology and obstetrics? Imagine 72,000 women providing data on the single topic of urinary incontinence from a single study, then extrapolate that principle to voice activated, pre-consultation interaction to provide guidance about how to better use valuable patient contact time.

My prediction is that the type of TriNetX technology and pre-consultation electronic data collection will be large steps in the direction that AI will take us. I think these steps are inevitable, so whether we like it or not, we will have to accept, or even embrace AI.

Another example. A quality improvement study of 16,000 youths (aged 9–14) examined whether electronic health record alerts, could increase HPV vaccination initiation (Kumra et al. JAMA Netw Open. 2026; doi:10.1001/jamanetworkopen.2025.59670).

Alerts combined with education were associated with a 40% higher likelihood of early vaccination initiation, compared with alerts alone. Early initiators also achieved higher cumulative completion rates by year three. These findings suggest that scalable, low-resource interventions integrating EHR tools with brief clinician education can meaningfully advance HPV vaccination and cancer prevention goals.

How to increase your patients' longevity

How can you improve your older patients' chances of a longer life? The answer is by getting them to improve their muscular strength.

This deduction comes from an American study where more than 5,000 old women (mean age 79 years) were followed prospectively for associations between muscular strength and all-cause mortality over a decade (LaMonte et al. *JAMA Netw Open*.2026; doi:10.1001/jamanetworkopen.2025.59367).

Greater grip strength and quicker sitting to standing time were associated with significantly lower mortality risk, even after controlling for physical activity, sedentary time, walking speed, and inflammation markers. Those in the strongest quartiles showed a one third lower mortality risk compared with the weakest. Crucially, these protective associations persisted amongst women not meeting aerobic activity guidelines. The findings support current recommendations promoting muscle-strengthening activities for optimal ageing. The results demonstrate that strength can be easily assessed clinically and its maintenance represents a key modifiable factor for longevity and functional independence in older women.

A physical heat therapy for the genitourinary syndrome of menopause

A randomised trial evaluated a novel heat therapy sexual function and vaginal health device in postmenopausal women with genitourinary syndrome of menopause (Quezada-Bascuñán et al. *Menopause.* 2026; doi:10.1097/GME.0000000000002743).

Sixty-two participants received six weekly treatments with either capacitive-resistive monopolar radiofrequency weekly or sham treatment. The experimental therapy is a form of electromagnetic energy that uses a high-frequency current to generate controlled heating within biological tissues. Outcomes were measured using the Female Sexual Function Index and Vaginal Health Index at baseline, post-treatment, and 12-week follow-up.

The intervention group demonstrated significantly greater improvements in both FSFI and VHI at post-treatment and follow-up, with moderate-to-large effect sizes. Estrogenic status was unchanged and no adverse events occurred. The researchers claim the therapy represents a safe, effective, nonhormonal treatment option for the genitourinary syndrome of menopause.

Editorial clarification. This summary was computer generated.

Athol Kent **Email address atholkent@mweb.co.za**