

Where Tradition Meets Technology: Shaping Evidence-led Innovation in Ayurveda

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Ayurveda is one of the world's oldest medical systems, practiced for thousands of years across multiple countries. Similar to modern medicine, Ayurveda includes oral medications, surgical procedures, and parasurgical interventions.

Ayurvedic medicines are primarily derived from natural sources like medicinal herbs and minerals, and their efficacy can be scientifically evaluated, just like modern medicines. However, Ayurveda also offers unique therapeutic procedures that go beyond conventional drug-based treatments. One important category is Panchakarma, which is primarily performed for detoxification and rejuvenation of the body. Apart from Panchakarma, Ayurveda includes specialized procedure-based therapies. For example, Agnikarma, where therapeutic heat is applied to specific parts of the body using a special instrument called Shalakha, traditionally made from Panchaloha. In Pinda Sweda, heat is applied using medicated herbal boluses wrapped in cloth and applied externally to the body. In most of these procedures, heat is applied, pressure is exerted, and herbal medicines are used simultaneously. However, there are no globally accepted standards for how these procedures are performed. Across different regions, therapists follow different techniques and parameters. Moreover, the effectiveness of these therapies heavily depends on the skill and experience of the therapist. At present, there is no objective way to measure the efficiency or quality of a procedure performed by a therapist. The next major challenge is the non-availability of structured data. To integrate technology for enhancing safety, precision, and effectiveness, we need high-quality procedural and patient data. Unfortunately, such data does not exist today in a usable, standardized form. These are the core problems we are addressing. Our solution, TechnoHeritage Ayurveda, is an all-in-one platform designed to address these challenges.

We develop specialized hardware devices to assist and standardize procedure-based Ayurvedic therapies. These devices are capable of capturing all critical procedural parameters—such as temperature, applied pressure, therapy duration, and other relevant variables. All this data is securely pushed to the cloud in real time. In parallel, we have integrated a patient management system, which records patient details, therapy history, and outcomes, ensuring complete traceability of each procedure. Using this platform, we can digitally capture the performance of highly skilled therapists and use it as a benchmark. This allows us to compare procedures performed by experienced practitioners with those by trainees or new therapists, objectively evaluate performance, and suggest targeted improvements. Most importantly, the collected data can be used for scientific evidence generation, clinical validation, and long-term research. In essence, TechnoHeritage Ayurveda transforms traditional procedural therapies into standardized, measurable, and data-driven healthcare without compromising their original essence. Our solution was selected as one of the Top 21 Health and Heritage Innovations worldwide by the World Health Organization (WHO), and we have been invited to present it at the WHO Global Summit on Traditional Medicine.

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