



Advanced Health Intelligence Granted US Patent “Predicting User Body Volume to Manage Medical Treatment”

Advanced Health Intelligence Ltd (ASX/NASDAQ:AHI) (“Advanced Health Intelligence”, “AHI”, or “the Company”) is pleased to announce the granting of US patent application No. 12,125,582 from the US Patent Office for its innovative technology in medical treatment “Predicting User Body Volume to Manage Medical Treatment”.

AHI's Patent: Advancing Innovation in the Digitisation of MedTech-Healthcare

AHI has been granted a patent that enhances the intersection of healthcare and technology. This innovation has far-reaching applications, particularly amid the rapidly growing MedTech-Healthcare digitisation worldwide.

The patent's scope is comprehensive, encompassing various scenarios where patients use digital image captures to calculate and convey volume or dimensional information to healthcare professionals. For instance, AHI's patent applies if a patient employs a digital camera to share volume and/or dimensional details on their body volume with a physician to calculate treatment volumes.

This patent positions AHI as a key stakeholder in the global healthcare ecosystem, providing AHI with a competitive edge and protection to the substantial medication dosing and treatment segment. By securing this patent, as AHI continues to drive its commitment to innovation and excellence, it will further establish itself as a pioneer in digital MedTech-Healthcare technology, providing a competitive edge in the market while protecting its innovative solutions.

In summary, AHI's patent has the potential to significantly impact the Healthcare industry by making medication delivery more trusted, accessible, efficient, and patient-centric. As the healthcare landscape continues to evolve, AHI's innovation and commitment to excellence will play a vital role in shaping the digitisation of medical care, improving outcomes, and enhancing patients' lives worldwide.

AHI continues successfully expanding our patent coverage for our technology suite, further strengthening our position in the remote digital care space. With the increasing adoption of remote digital health assessment and care globally, expanding our patent portfolio is a strong focus to cement our position as a market leader in health and medical innovation. The recently awarded patent is a significant addition to our intellectual property portfolio, demonstrating our commitment to protecting our proprietary technology. We identified several unique functionalities proprietary to AHI and are now positioned to provide deeper coverage and moat protection to potential competitors.

Global leaders such as Apple, Google, Microsoft and Samsung are investing heavily in personal diagnostics through web and mobile device offerings. Our platform is well-positioned to work with these manufacturers and providers, offering a unique, more comprehensive value proposition that sets us apart from competitors that only offer single-sensor input approaches to assessing the human form.

Expanding our IP portfolio, use cases, and global distribution is underway throughout Asia, MENA, the US, and Europe. Protecting our IP is crucial to maintaining our market position and shareholder value. We are pleased to report that the Predicting User Body Volume to Manage Medical Treatment patent has been added to our portfolio, further strengthening our position in the market.

Advanced Health Intelligence's BodyScan: Transforming Medication Management and Treatment

Advanced Health Intelligence's BodyScan technology empowers healthcare professionals with accurate and reliable body composition data, streamlining medication management and treatment. This innovative solution leverages cutting-edge computer vision, neural networks and machine learning to provide precise calculations.

AHI's BodyScan offers a convenient, patient-friendly assessment via a smartphone camera, delivering comprehensive body composition insights in less than one minute. These insights include total mass, surface area, fat-free mass, and total body fat, as well as weight prediction for personalised treatment planning.

The technology boasts enhanced accuracy, minimising human error and risk. Its proprietary computer vision, neural network and machine learning processing modules utilise thousands of data points to generate and guide scaled contours.

Clinically validated and peer-reviewed, AHI's BodyScan has undergone rigorous testing, demonstrating exceptional accuracy against clinical standard measures. Training data from over 7,000 diverse individuals ensures reliability across ethnicities.

By replacing manual, error-prone calculations, BodyScan provides healthcare professionals with a trusted, safe and efficient method for prescribing dosage volumes. This groundbreaking technology enhances medication management, treatment efficacy and patient outcomes.

AHI's BodyScan transforms healthcare by improving accuracy in medication dosing and treatment planning, enhancing patient safety, streamlining clinical workflows and enabling personalised care through precise body composition analysis. Its evidence-based decision-making is supported by peer-reviewed validation.

AHI boasts an extensive and growing global patent portfolio, with granted patents in key markets, including Australia, the United States, Japan, South Korea, Singapore, New Zealand, China, Canada, and Europe.

We continue to pioneer, ensuring AHI remains at the forefront of the demand for digital health innovation.

Why is this patent so significant?

The Critical Importance of Accurate Body Volume Calculations in Medication Administration

Calculating precise body volume, specifically body surface area (BSA) or ideal body weight (IBW), is essential for safe and effective medication administration. The accuracy of these calculations has a direct impact on medication dosing, as many medications are dosed based on BSA or IBW. Inaccurate calculations can lead to underdosing or overdosing, compromising the efficacy and safety of treatment. This applies to many treatments, from oncology to acute infection, and is even more heightened when the therapeutic effect changes body volume, as is the case for GLP-1 diabetes and obesity medications.

Body volume significantly influences pharmacokinetics, affecting how drugs are distributed, metabolised and eliminated within the body. Incorrect calculations can alter drug concentrations, resulting in adverse effects. Furthermore, overdosing due to inaccurate body volume calculations increases toxicity risk, particularly for medications with narrow therapeutic indexes.

In pediatric and geriatric populations, accurate body volume calculations are vital due to their unique physiological characteristics, significantly impacting drug pharmacokinetics. Additionally, in obese patients, excess body weight affects drug distribution, making accurate calculations crucial to prevent underdosing.

The importance of precise body volume calculations cannot be overstated, as it ensures medications are administered effectively and safely, minimising the risk of adverse reactions and toxicity. Healthcare professionals must prioritise accurate calculations to provide optimal patient care.

Calculating Body Volume: A Crucial Step in Medication Administration

Body volume calculations are a critical component of medication administration, and several methods are employed to ensure accuracy. The most commonly used method is Body Surface Area (BSA), which utilises established formulas such as Mostellerⁱ or Du Boisⁱⁱ to calculate the body's surface area.

Ideal Body Weight (IBW) is another essential method for medications with linear pharmacokinetics. Formulas like Devine or Robinson are used to determine IBW, which provides a reliable basis for medication dosing.

In instances where medications exhibit non-linear pharmacokinetics or IBW is not applicable, Actual Body Weight (ABW) is used. This approach acknowledges individual variations in body composition and ensures accurate dosing.

Lean Body Weight (LBW) calculations are employed for medications with significant tissue distribution. Formulas like James or Janmahasatianⁱⁱⁱ enable healthcare professionals to determine LBW, facilitating precise medication administration.

The Vital Importance of Accurate Body Volume Calculations in Clinical Practice

Accurate body volume calculations have far-reaching implications for various clinical applications, significantly

impacting patient outcomes. Inaccurate dosing of antibiotics, for instance, can lead to treatment failure or the development of drug-resistant pathogens.

Chemotherapy dosing requires utmost precision, as correct dosing ensures optimal efficacy while minimising toxicity. Anaesthetics also demand accurate dosing to prevent overdose-related complications, which can be life-threatening.

In paediatric care, correct dosing is crucial for ensuring safety and efficacy, as children's developing physiology necessitates tailored medication administration.

To guarantee accurate body volume calculations, healthcare professionals must adhere to best practices. This includes utilising validated formulas, such as Mosteller or Du Bois, to ensure reliability.

Patient-specific factors, including obesity, edema, or ascites, must also be considered in order to adjust calculations accordingly. Verifying calculations through double-checking is essential to prevent errors.

Consulting reputable pharmacology resources provides medication-specific dosing guidelines, further ensuring accuracy.

By embracing these principles, healthcare professionals can confidently administer medications, optimising patient outcomes.

The Limitations of LBW, BSA and IBW Calculations: A Call for Caution

Lean Body Weight (LBW), Body Surface Area (BSA) and Ideal Body Weight (IBW) calculations, widely used in healthcare to inform medication dosing, nutritional assessments and treatment plans, are prone to inaccuracies due to inherent limitations.

LBW oversimplifies body composition, neglecting muscle mass, bone density and body fat distribution, leading to misclassification of individuals with muscular builds or athletic physiques, inaccurate assessments for elderly or frail patients and limited applicability for diverse ethnicities and populations.

BSA formulas, such as Mosteller and Du Bois, assume uniform body proportions, which may not hold true for all individuals. In contrast, variations in body composition, age and sex can introduce significant errors. Simplifications in calculation methods can further compromise accuracy.

IBW formulas, like Devine and Robinson^{iv}, rely on outdated data and assumptions, failing to account for individual variations in muscle mass, bone density and body composition. These calculations may not accurately reflect optimal weight for diverse populations.

Inaccurate LBW, BSA, and IBW calculations can lead to medication dosing errors, nutritional mismanagement, inadequate treatment planning and compromised patient outcomes. Healthcare professionals must recognise these limitations and exercise caution when applying these formulas, considering individual patient characteristics, clinical context and alternative assessment methods to ensure effective care.

AHI considers this patent especially pertinent in the current landscape of increasing prescription rates for GLP-1-based therapies, including Ozempic and Mounjaro, in treating metabolic disorders.

Advanced Health Intelligence is committed to informing shareholders about significant advancements across its intellectual property portfolio, scientific breakthroughs, innovative developments and commercial achievements.

The Chairman and CEO of Advanced Health Intelligence Ltd have approved this announcement.

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About Advanced Health Intelligence Ltd

AHI offers a cutting-edge, smartphone-based health risk identification solution that enables individuals to run their own comprehensive health assessments and risk stratification. Utilising smartphone sensor technology, individuals can efficiently conduct a single scan or a series of scans to identify established risk markers for various health conditions. The resulting data can then be shared with healthcare providers, insurers, employers, and government agencies, facilitating timely triage and appropriate care pathway allocation.

AHI's scientific research capability is dedicated to developing advanced data capture techniques, optimising data input signal quality, and continuously enhancing and validating AHI's solutions through rigorous scientific processes.

AHI has assembled a team of experts in machine learning, artificial intelligence, biomathematical modelling and systems biology, computer vision, clinical expertise, and medically trained data scientists to develop and deploy this cutting-edge risk assessment tool.

Over the past decade, AHI has been at the forefront of health-tech innovation, pioneering smartphones in digital-first healthcare. Our journey began with the groundbreaking development of the world's first on-device body dimensioning capability.

Since then, we have continued to evolve and adapt our solutions to meet the dynamic needs of health systems players, who are dedicated to delivering high-quality patient care and early detection of escalating health conditions. AHI's patented technology has enabled us to push the boundaries of early detection through digital healthcare, offering a suite of modular solutions that are transforming the industry and offering earlier intervention opportunities.

Our comprehensive solutions encompass:

- Anthropometric and body composition analysis to identify obesity-related comorbidities, including diabetes risk stratification.
- Predictive modelling of blood biomarkers (including HbA1C, HDL-C, LDL-C) and 10-year cardiovascular risk estimation.
- Facial blood analysis technology to assess vital signs non-invasively and provide risk stratification for cardiovascular disease.
- Device-derived dermatological image analysis for identifying over 588 skin conditions across 134 categories, including melanoma detection.
- Atrial Fibrillation technology enables the detection of Atrial Fibrillation using a mobile device, allowing for early identification and monitoring of this common heart condition through a simple, non-invasive, and user-friendly smartphone-based solution.

AHI has developed a biometrically driven triage solution using only a smartphone. This solution enables the identification of health risks across populations and can inform individuals' direction to appropriate care pathways for proactive health management. The technology provides cost-effective health risk assessment access to billions of smartphone users worldwide, empowering these individuals to take charge of their health journey and improving health outcomes globally.

ⁱ https://www.rxlist.com/body_surface_area/definition.htm

ⁱⁱ <https://www.ncbi.nlm.nih.gov/>

ⁱⁱⁱ <https://pmc.ncbi.nlm.nih.gov/articles/PMC4337860/>

^{iv} <https://reference.medscape.com/calculator/246/ideal-body-weight>