

# 澳大利亚生物技术协会 澳大利亚医疗技术公司名录



## 公司介绍

公司名称: Quanticare Technologies

主要联系人姓名: Philip Goebel

主要联系人职务: 首席执行官

公司网址: [www.quanticare.co](http://www.quanticare.co)

公司地址: Level 3, Old Metallurgy Building, University of Melbourne, Carlton, VIC 3010

公司未上市

## 公司简介

**Quanticare Technologies** 目前正在进行新技术开发以帮助临床预测分析, 实现主动照护。首个开发产品“Footprints”(“足印”)是一个配有感应器的助行器。该产品可以通过监测行走表现来预防老年人走路时跌倒。

在健康技术领域, 可用于健康护理的预测性分析技术着实令人兴奋。智能设备和可穿戴技术产品所生成的数据能够增进人们对日常活动和疾病之间相关性的了解, 从而增进实现主动照护的可能性。这些数据的临床使用价值显而易见: 预测性分析可生成主动、个性化的预防措施, 以减少昂贵的住院治疗和其他并发症。

走路时跌倒是由于走路步伐质量的逐渐衰退, 所以对步伐进行连续的监测会有助于开展积极主动的预防措施。该“足印”助行器不但采用现今临床医师所采用的步伐测斜方法来研究跌倒风险, 同时, 不断地以被动的方式根据具体情况在即将跌倒前恰当的提供协助。该医疗干预可以优化和测量其有效性。该“足印”助行器将从根本扭转预防跌倒的概念, 使助行器对数据作出反应并优先杜绝事故发生。

**Quanticare Technologies** 是一家精英医疗器械初创公司, 自 2014 年中开始运营, 并于 2014 年末赢得墨尔本大学颁发的创业者奖金和 Janssen 健康和科技挑战大奖 (HaTCH)。Quanticare Technologies 首席执行官和创业者之一 Philip Goebel 毕业于墨尔本大学, 获得物理治疗博士, 并曾在维多利亚政府的医疗技术人才竞赛中晋级半决赛。

Quanticare Technologies 将是在医疗护理领域开展预测性分析，实现积极主动预防措施的先驱公司之一。鉴于现有对医疗不良事件的预期，Quanticare Technologies 将抢先紧抓这一商机，把握成功，获得专业的知识和经验。当 Quanticare Technologies 收集越来越多医疗数据后，将会把预测分析应用到其他领域中。如今的健康护理是“患者拉动，事件驱动”的系统，未来的模式将是“医疗工作者推动，数据驱动”的系统。如今，Quanticare Technologies 将这一未来带入预防跌倒领域。

### 关键技术或领先技术

Quanticare Technologies 感应器的核心部件是一个对准使用者足部的单眼相机。由于相机距地面的高度是固定的，我们可以对其进行校准，以实际的距离刻度生成像素点。我们使用精密的电脑视觉技术对图像进行分割，然后对分割的图像上的一些关键点进行跟踪。

对于这种测量步态时空属性的方法，其优势是通过将感应器嵌入使用者的助步工具中，患者不需做任何行为改变或穿戴特殊物件。

感应器生成的数据将以一个可被操作的方式传达给看护者。通过我们正在开发的网页应用，看护者将可以根据时间轴查看数据，并且设置触发器，使其在检测到步伐有显著变化时进行通知。该网页应用能及时预防跌倒并优化治疗和检测疗效。该网页应用将是看护者的工具，可被用来远程检测，自动优化工作量和生成报告。

### 类别

设备类: 老年护理

### 关键或领先技术的发展阶段

临床前阶段

### 合作机会

我们目前总部位于墨尔本大学，专注于开发核心技术。我们以检验数据为目的展开实地试验。与此同时，为评估该技术的影响，我们将寻求资金扶持来购买开展大规模实地试验的资源。

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# Directory of Australian medtech companies



## COMPANY DETAILS

**Company name:** Quanticare Technologies

**Key contact name:** Philip Goebel

**Job title of key contact:** Chief Executive Officer

**Company website address:** [www.quanticare.co](http://www.quanticare.co)

**Company address:** Level 3, Old Metallurgy Building, University of Melbourne, Carlton, VIC 3010

**The company is Unlisted.**

## ABOUT THE COMPANY

Quanticare Technologies is building technology which will support the clinical application of predictive analytics to enable proactive care. The first product in development is Footprints, a walking frame with an integrated sensor which measures walking performance to prevent falls in the elderly in residential aged care facilities.

There has been a lot of excitement in the health technology industry about the potential of predictive analytics in healthcare. Data generated through connected/smart objects and wearable technology has the potential to enable more proactive care by understanding day to day behaviours and their relationships with illness. The clinical utility of this data is clear: predictive analytics which can lead to proactive and preventative measures which are personalised to reduce costly hospitalisations and complications.

Since falls are the result a slow deterioration of gait quality being able to continuously monitor gait will enable more proactive falls prevention measures. The Footprints walking frame will measure the same clinometric properties of gait that clinicians use today to understand falls risk but do so: continuously, passively and contextually so that treatment can be delivered before a fall happens, interventions can be optimised and their efficacy measured. The Footprints walking frame will transform falls prevention from an event driven system to a data driven.

Quanticare Technologies is a lean medical device startup that has been in operation since mid-2014 and since then have already been awarded Entrepreneurial Fellowships at the University of Melbourne and also won the Janssen Health and Technology Challenge (HaTCH) grand prize in late 2014. The CEO and co-founder, Philip Goebel is a graduate of the doctor of physiotherapy program at the University of Melbourne and has been a previous semi-finalist in the Victorian Government MedTech's Got Talent program.

Quanticare Technologies will be one of the first companies to deploy predictive analytics in healthcare enabling proactive, preventative care. By looking for the early opportunities where the prediction of adverse medical events can create business value we will achieve this and gain the

expertise and experience to apply predictive analytics to other problem areas in healthcare as more and more health data is digitally captured. Healthcare today is a "patient pull ,event driven" system, and the paradigm for the future will be a "health provider push, data driven" system. Quanticare is bringing this future to the area of falls prevention today.

### **KEY OR LEAD TECHNOLOGY**

The core component of our sensor is a monocular camera which is directed at the users feet. Because it is at a fixed height from the ground we can calibrate it which allows the camera to create a pixel to real distance scale. We then use sophisticated computer vision techniques to segment the image and then track a number of key points on the segmented image.

The advantage of this approach to measuring spatio-temporal properties of gait are that by embedding the sensor into an object they already use to walk with we not requiring any substantial new behaviour change such as needing to wear a particular object.

The data that our sensor will generate will be presented in an actionable manner to caregivers. Through the web application that we are developing caregivers will be able to view data in a time series and set triggers to be notified if significant changes to gait measurements are detected. This web application will enable more timely care for falls prevention as well as optimising treatment and measuring treatment efficacy. This web application will be the tool that caregivers use for remote monitoring, automated caseload prioritization and report generation.

### **Category**

**Devices:** Aged care

### **Point of development of key or lead technology**

Pre-clinical

### **OPPORTUNITIES SOUGHT**

We are currently based out of Melbourne University and have been focused on core technology development. We are beginning field trials for data validation purposes and will be looking for funding for the resources to be able run extensive field trials for impact evaluation.