



# PainChek

Intelligent Pain Assessment

PainChek Limited (**ASX: PCK**)

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## PainChek to present at NWR Virtual Health Conference

**1 May 2020:** Listed Australian company PainChek Ltd (ASX:PCK) is pleased to provide an opportunity for shareholders and investors to join a virtual presentation by CEO Philip Daffas, who will present at the NWR Virtual Health Conference to be held on Friday 1 May & Monday 4 May.

**Event:** NWR Communications Virtual Health Conference

**Presenting:** Philip Daffas, CEO

**Time/date:** 9am AEST, Monday 4 May

A copy of the presentation follows.

The event is free and investors can register online to view the presentation here:

<https://t.co/sY5jB3KKEi?amp=1>

This ASX announcement has been approved for release by Philip Daffas, Managing Director.

**ENDS:**

**For more information:**

Ian Hobson Company Secretary, PainChek <a href="mailto:ianhobson@bigpond.com">ianhobson@bigpond.com</a> +61 8 9388 8290	Philip Daffas CEO, PainChek <a href="mailto:philip.daffas@painchek.com">philip.daffas@painchek.com</a> 0406 537 235
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### About PainChek®

PainChek® Ltd is an Australian based company that develops pain assessment technologies.

PainChek® is a smart-phone based medical device using artificial intelligence to assess and score pain levels in real time and update medical records in the cloud. PainChek® records a short video of the person's face and analyses the images that indicate pain and records them.

Next, the caregiver uses PainChek® to record their observations of other pain related behaviours that complete the assessment. Finally, PainChek® calculates an overall pain score and stores the result allowing the caregiver to monitor the effect of medication and treatment over time.

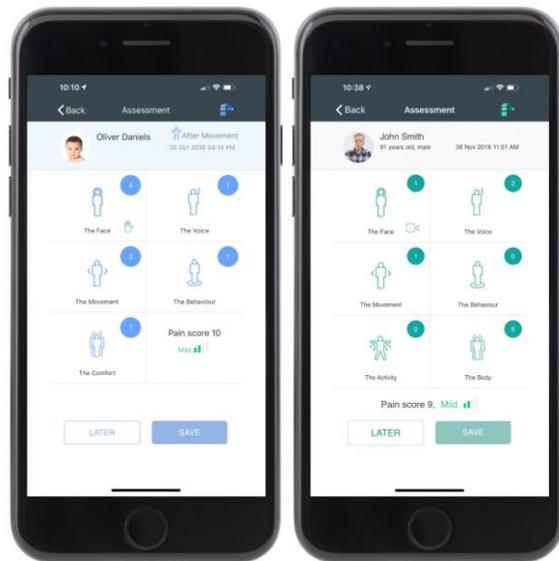
PainChek® is being rolled out globally in two phases: first, PainChek® for adults who are unable to effectively verbalise their pain such as people with dementia, and second, PainChek® for Children who have not yet learnt to speak.

The PainChek® Shared Care Program is a PainChek® licensing model which enables a professional carer to share their resident or patient data securely with other healthcare professionals or designated homebased family carers for ongoing pain assessments or clinical data review.

To find out more, visit [www.painchek.com](http://www.painchek.com)



PainChek® artificial intelligence assesses facial micro-expressions that are indicative of the presence of pain.



PainChek® domains of pain assessment that calculates pain severity score.



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Intelligent Pain Assessment

Philip Daffas CEO & MD  
Investor Presentation & Quarterly Update  
May 2020

PainChek Ltd  
ASX:PCK

# Executive Summary

- **PainChek provides Software-As-A-Service that utilizes AI for the detection of patient pain via video analysis**
  - Targeting enterprise customers who have patients with an inability to communicate pain levels (ie dementia)
  - Video assessment via mobile app, identifies multiple micro-facial expressions to provide standardized automated pain assessment
  - Pain assessments can be conducted at a social distance and fits in with infection control procedures during COVID 19
- **Technology is clinically and commercially validated, has key regulatory approvals and is unique**
  - Multiple peer reviewed publications and clinical trials – 90% + concordance to existing methods
  - TGA, CE Mark - approved for sale in Australia, All Of Europe, NZ, Singapore
  - FDA De Novo clearance submission for US market in process
  - Patent granted in US and Japan - awaiting grants in multiple countries including Europe and Australia - protection until 2037
- **Large global markets - now in global commercialization phase and experiencing rapid uptake**
  - Over 500 aged care facilities and 50,000 beds already signed up to SaaS contracts in Australia – Singapore and UK commenced
  - 80-85%+ long term gross margins and recurring revenue each month
  - Targeting ~50% market penetration in Australia by 2021 (circa 100,000 beds), international sales starting to ramp up
  - Initial B2B sales focus = low cost base and significant operating leverage
  - Multiple new products launched over next 2 years to drive further growth (B2C dementia, infant/toddler)
- **Better outcomes for patients and enterprise customers**
  - Improved patient care – more targeted treatments and better outcomes
  - Improves efficiency - saves customers money – less data entry/labour, less adverse patient events
  - Govt/Regulators increasing focus on quality of care, i.e. Aus Royal Commission, Obamacare

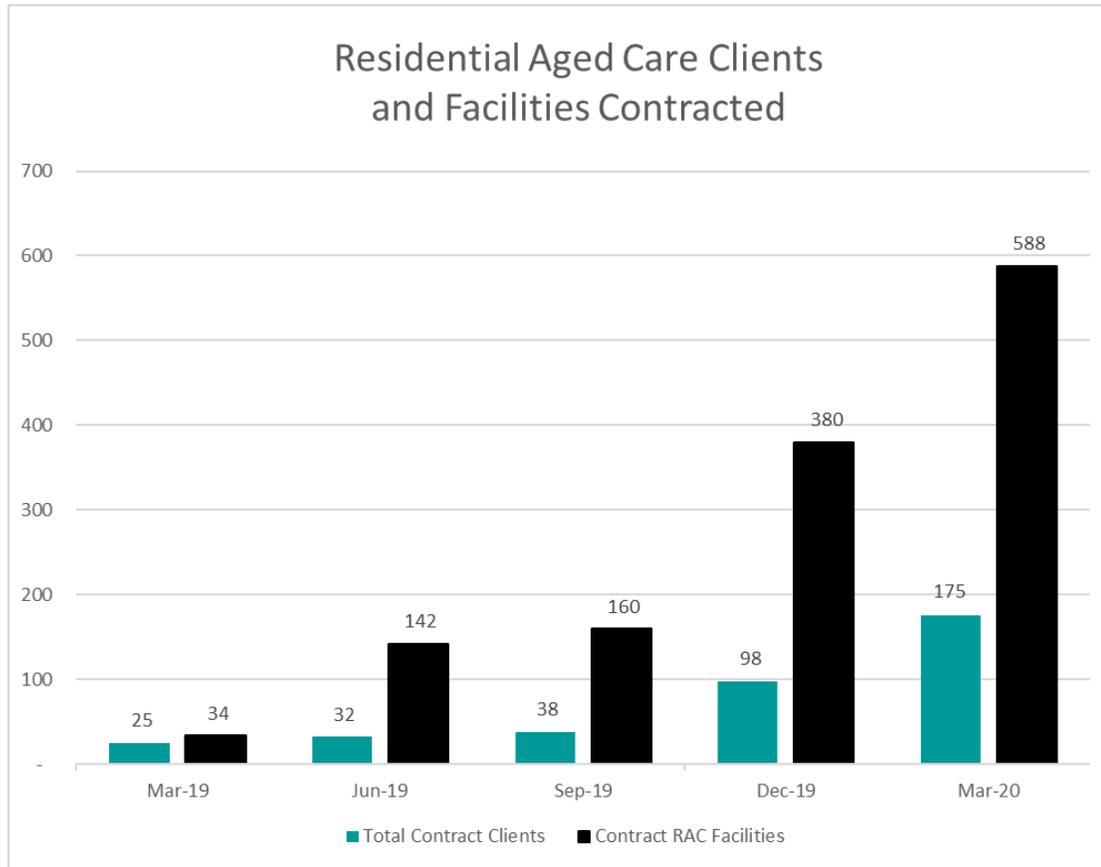
# March 2020 Quarterly Update

- PainChek had its strongest ever quarter delivering 50%+ QOQ growth in all key metrics and its maiden operating positive cashflow quarter
- Strong pipeline of sales to continue growth in the June quarter and to reach 100,000 dementia bed target by Q2 2021
- Sales and delivery model adapted to provide fully remote on-line training, e-learning and technical support

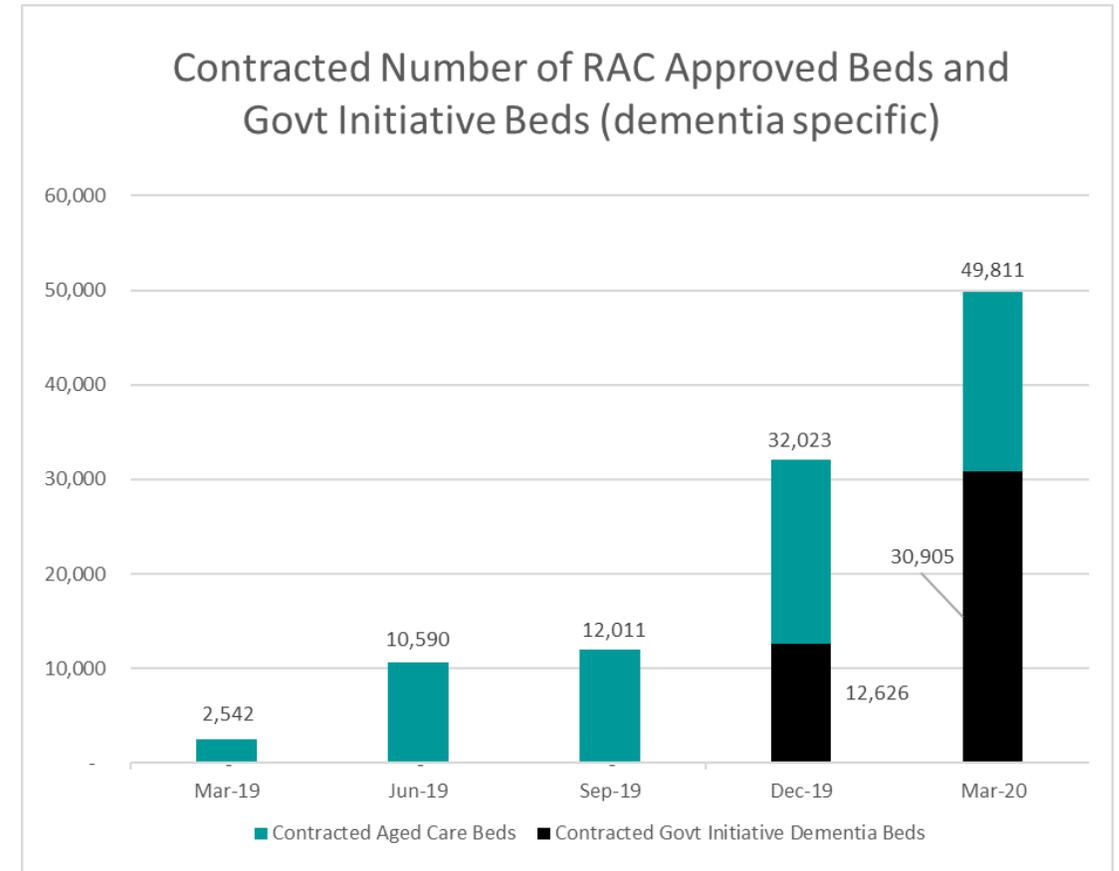
	Dec 2019 Quarter	Mar 2020 Quarter	% Change
Contracted Clients	98	175	↑ 79%
Contracted Facilities (RACs)	380	588	↑ 55%
Approved Places Contracted Beds	32,023	49,811	↑ 56%
Contracted Annualised Recurring Revenue <sup>1</sup>	\$1.39m	\$2.26m	↑ 63%
Net Operating Cashflow For Quarter	-\$0.75m	+\$0.56m	↑ N/A

<sup>1</sup>Assumes normal commercial pricing terms on the assumption that no contracts are terminated after the first year of government subsidy

# Growth in Beds & Facilities

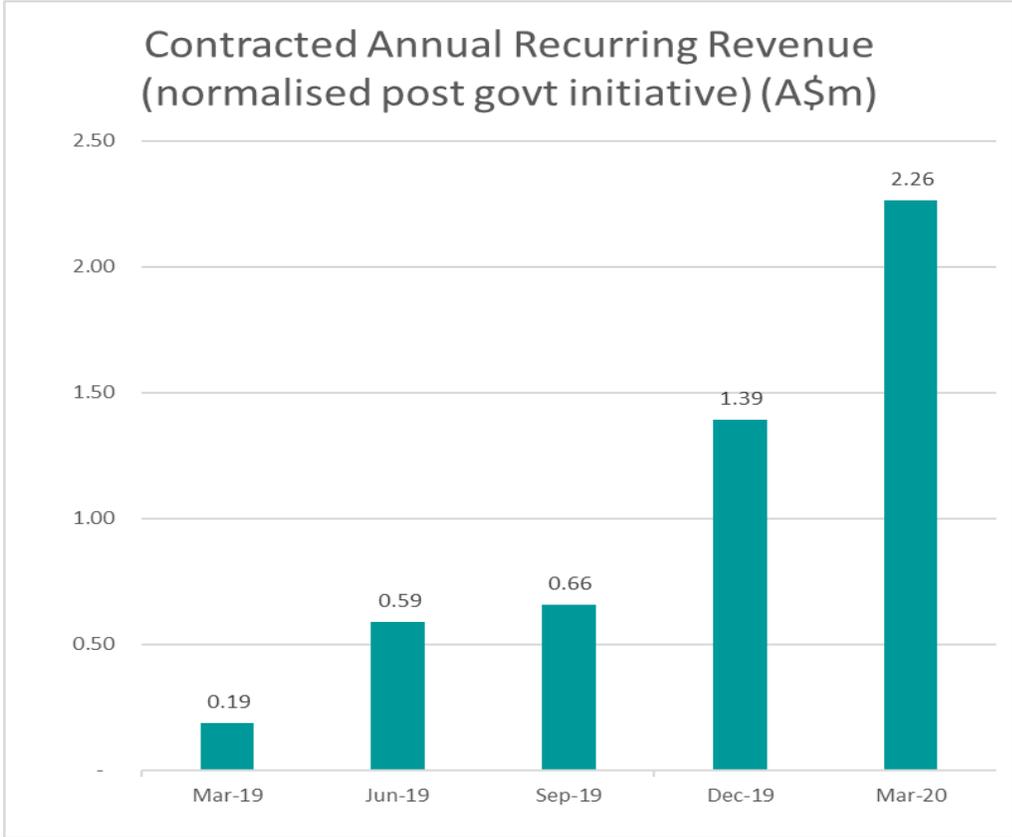


Total number of contracted clients and RACs across all of our markets (Australia, UK, NZ and Singapore). Total clients and RACs increased 79% and 55% respectively in the March 2020 quarter.

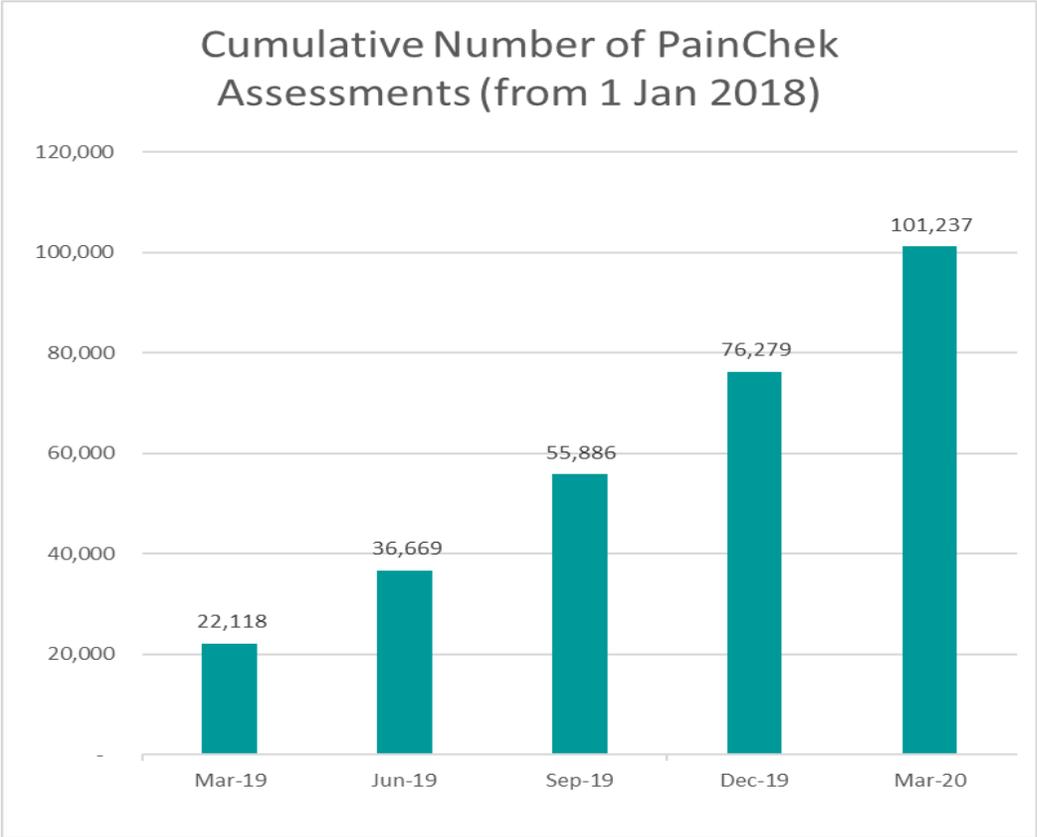


Total approved beds contracted in all markets as well as the dementia specific beds signed under the Government initiative to date. Total beds have increased 56% in the March 2020 quarter.

# Growth in Contracted ARR & Pain Assessments



Contracted ARR for quarters to 30 Sept 2019 were a multiple of MRR x 12 months. Contracted ARR for the quarters ending 31 Dec 2019 and later are presented on a normalised basis post completion of the govt initiative period and reflect normal commercial pricing terms on the assumption that no contracts are terminated after the first year.



Cumulative number of PainChek assessments conducted globally from 1 January 2018

# The problem



Pain assessment is difficult especially for those who cannot communicate such as dementia sufferers or infants/toddlers.

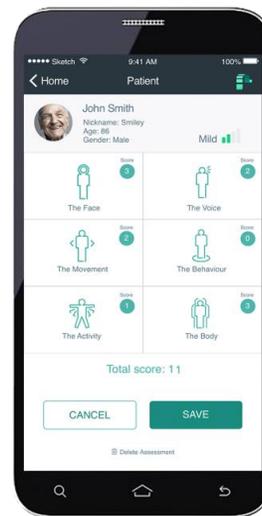
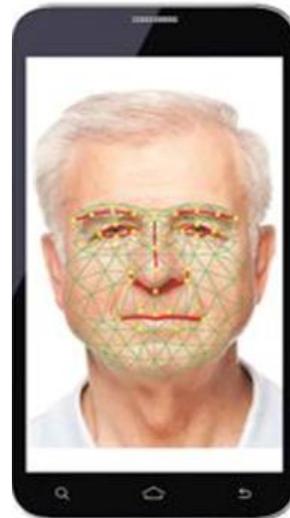
Pain is often under detected. Leading to under treatment and misdiagnosis.

This can lead to adverse impact on quality of care, operational efficiency and compliance



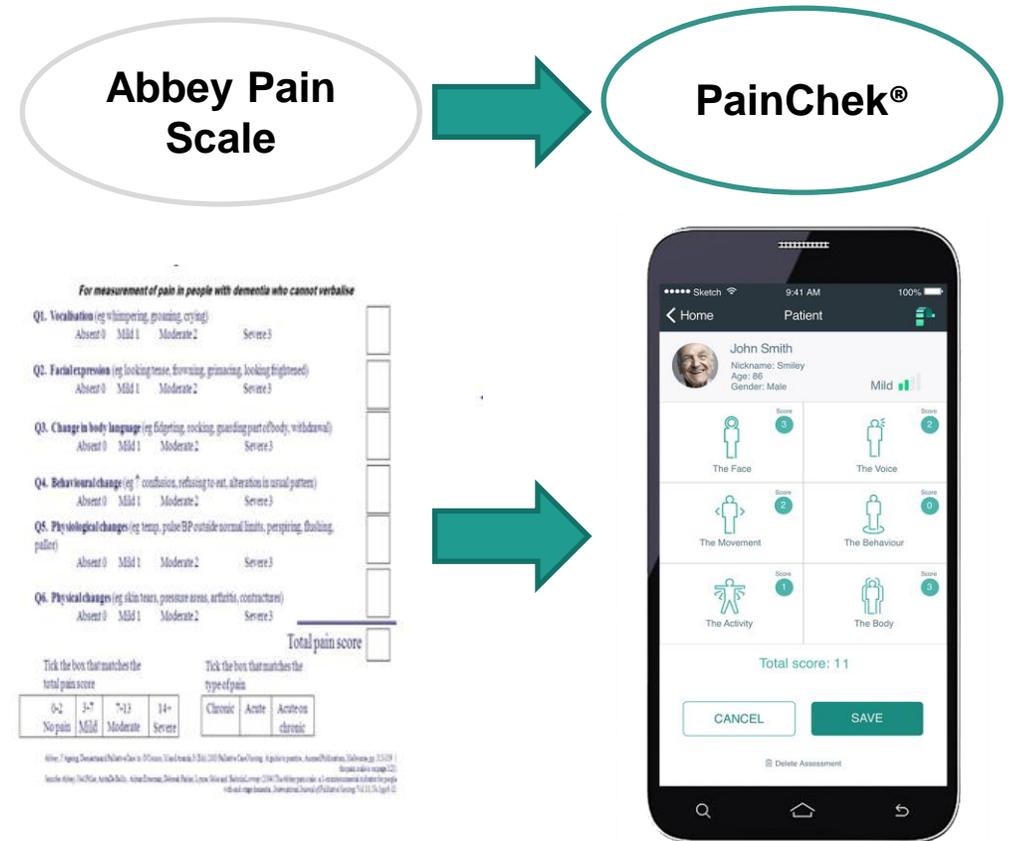
# Our "Why"

Our purpose is to give a **voice to people who cannot verbalise their pain**



# Pain Assessment in dementia is ready for disruption

- Abbey Pain Scale and similar manual systems are the current standard of care in developed countries for assessment of pain in dementia patients
- Key inputs in the Abbey Pain Scale rely on significant amount of subjective measures that can vary greatly between practitioners/carers.
- PainChek builds on the benefits of the Abbey Pain Scale, maintaining clinical practice while improving clinical process and brings it into the digital age by:
  - Using video/AI to automate the facial expression assessment - eliminating subjectivity and improving accuracy
  - Eliminating paperwork – all digital
  - 42 data points with prompts = faster assessments
  - Automatic logging of pain scores over time – monitor pain trends
  - Integrates into medical records
  - Helps Care homes meet accreditation standards and protect income and revenues



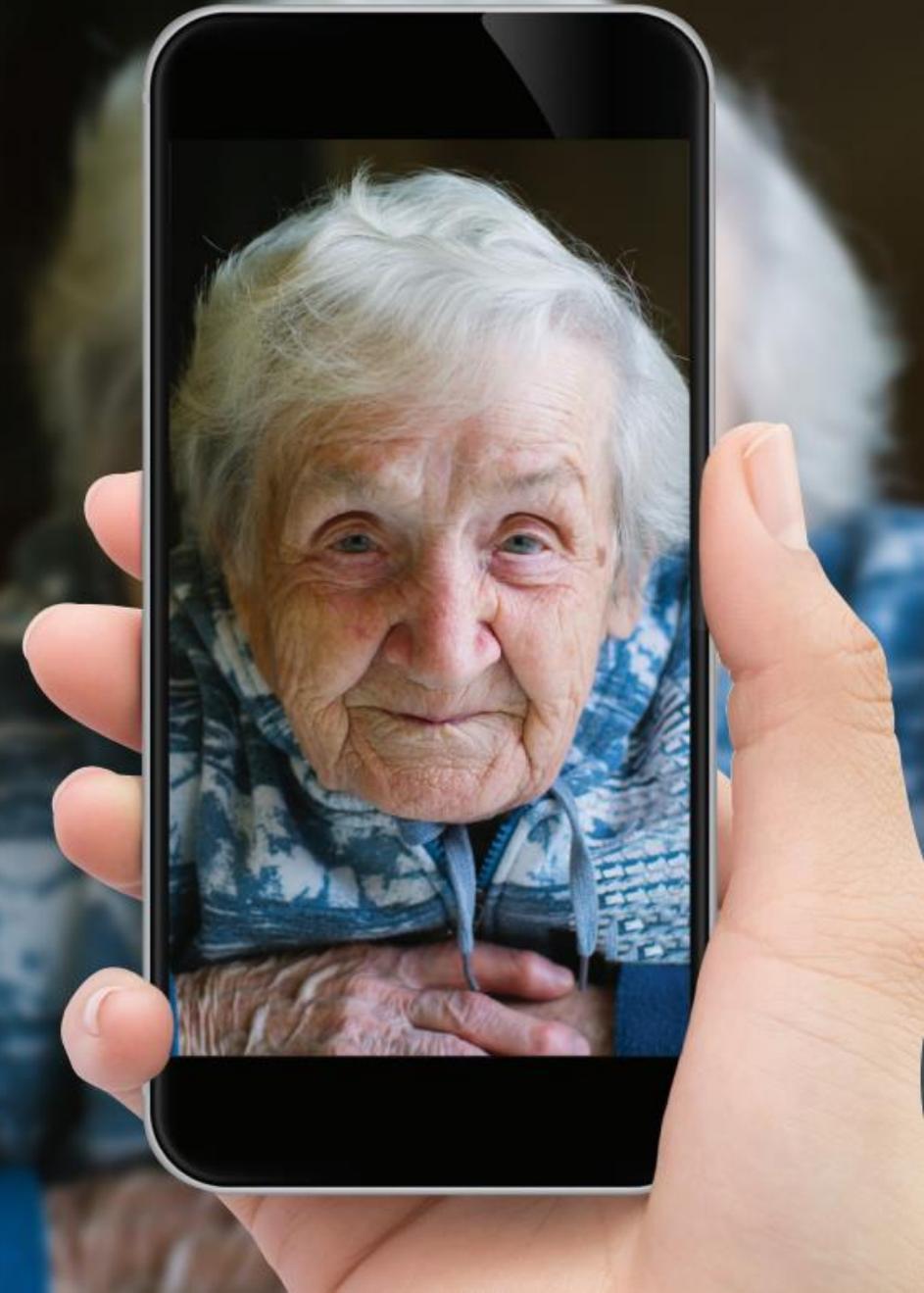
# PainChek® - protecting the vulnerable during COVID 19

## Implement Remotely

- PainChek® harnesses online communication channels, such as video conferencing, webinars, and email, to roll-out with no need for our team to access aged care facilities.
- PainChek® has now released a robust digital training program that can be accessed by all carers anywhere, any time.

## Reduce Risk

- PainChek® assessments are conducted from up to 3m away, so residents and carers can keep appropriate distance.
- PainChek® assessments are rapid (2-3 minutes), protecting residents and carers by mitigating air transmission time.
- Pain assessment documentation is stored electronically, minimising paper handling and related risks.



# PainChek® - Dementia Is A Large Market Opportunity

- 47Million living with dementia globally - estimated to increase to 75 Million by 2025

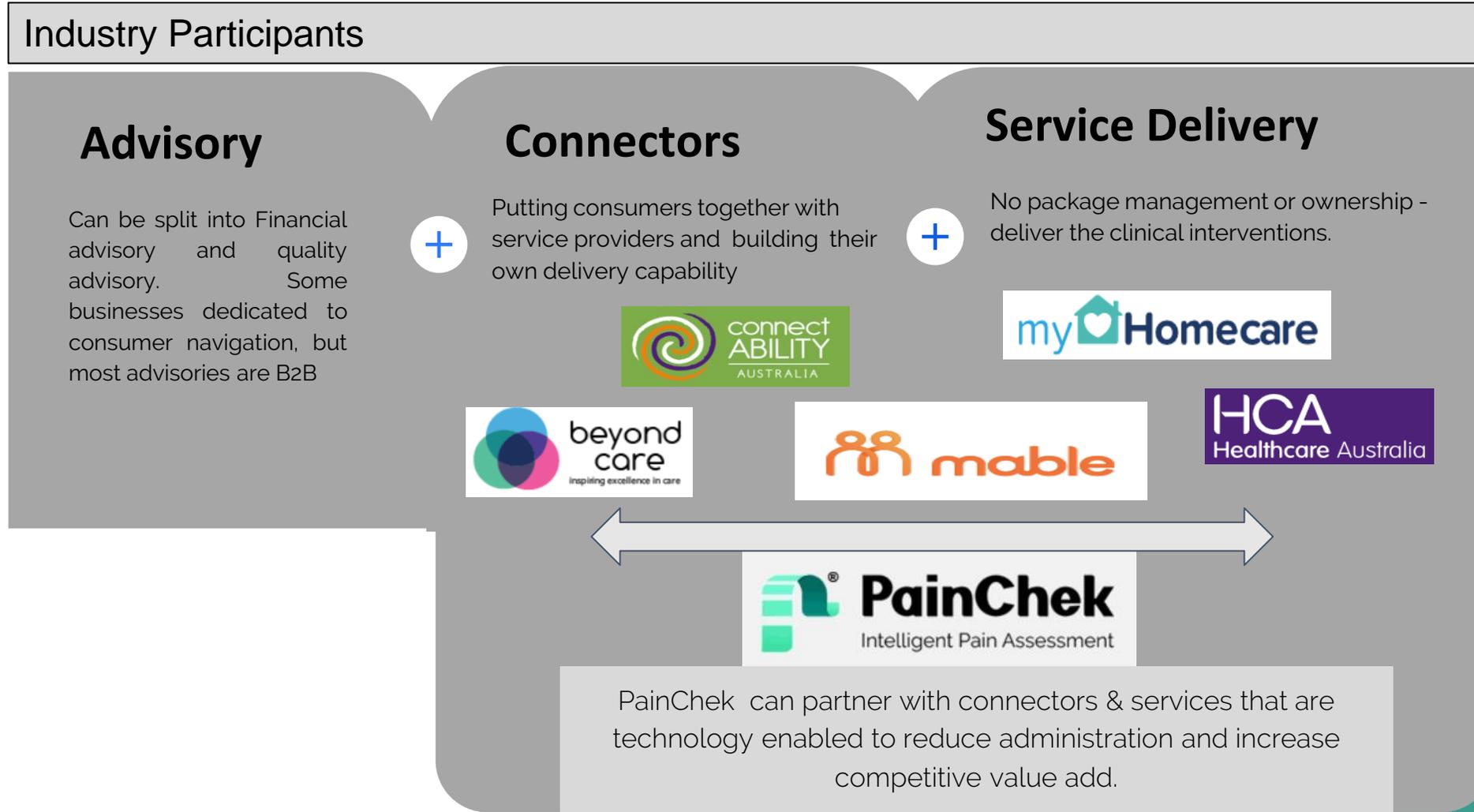
ENTERPRISE DEMENTIA MARKET VALUE					
	Aus	UK	US	ROW est	TOTAL
No. Aged Care Beds	0.22m	0.54m	1.7m	4.5m	6.96m
Annual Market Value @ A\$4 per bed per month	<b>A\$11m</b>	<b>A\$26m</b>	<b>A\$81m</b>	<b>A\$216m</b>	<b>A\$334m</b>

CONSUMER DEMENTIA MARKET VALUE					
	Aus	EU	US	ROW est	TOTAL
No. of People living With Dementia at home	0.3m	5.6m	5.1m	32.4m	43.5m
Annual Market Value @ \$7 monthly subscription	<b>A\$25m</b>	<b>A\$475m</b>	<b>A\$432m</b>	<b>A\$2,720m</b>	<b>A\$3,655m</b>



<sup>1</sup> World Alzheimer Report 2016  
<sup>2</sup> Alzheimer's Australia key facts and statistics 2017  
<sup>3,4</sup> Australian health care statistics  
<sup>5</sup> Estimated based on Australian dementia data ratios  
<sup>6</sup> Estimated based on Australian population ratios  
<sup>7</sup> Management Estimates

# PainChek positioned to enter \$2bn+ annual Australian home care market



# Collaboration with Philips Healthcare to enter global hospital market

- PainChek integration with hospital patient monitoring systems is easy and provides value add to existing vital signs
- 25-42% of all hospital beds occupied with people living with dementia



- Can deliver early warning pain alerts and reduce the risk and costs of a delirium

ANNUAL HOSPITAL MARKET VALUE					
	Aus	EU	US	ROW est	TOTAL
No. of hospital beds	0.1m	1.5m	1.0m	2.6m	5.2m
Annual Market Value @ \$1per bed per day	<b>A\$36m</b>	<b>A\$547m</b>	<b>A\$365m</b>	<b>A\$950m</b>	<b>A\$1,900m</b>

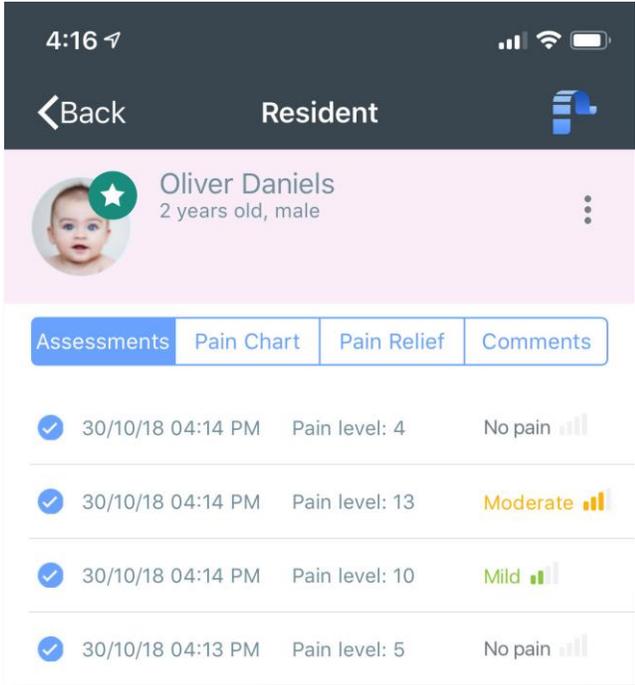
<sup>1</sup> Australian health care statistics

<sup>2</sup> Management Estimates

# New Product Development: Pre-verbal Children's App

- Parents/practitioners have difficulty discerning whether pre-verbal children (0-3 years) are in genuine pain or just crying from discomfort, hungry, wanting attention etc.
- We have leveraged the same facial recognition technology from dementia/elderly and have already developed a pre-verbal children's app
- Massive target market – carers/parents of the 400m 0-3 year olds worldwide
- Opportunity dwarfs dementia market and customer acquisition cost is low

### APP SCREENSHOT



### TARGET MARKET

Childrens Hospitals  
 Post Natal Wards  
 Mums & Dads  
 Grandparents  
 Health care professionals  
 Nannies  
 Babysitters  
 Day care workers

CONSUMER PRE-VERBAL CHILDREN MARKET VALUE	
Indicative App Price	A\$10/month
Net Revenue after app store commissions	A\$7/month
No. 0-3 year olds Worldwide	400m
MARKET SHARE EXAMPLES	
0.1% Global Market Share	400k subscribers = <b>A\$33.6m Annualised Revenue</b>
1% Global Market Share	4m subscribers = <b>A\$336m Annualised Revenue</b>

1 <http://www.ecology.com/birth-death-rates>  
 2 ABS 2016  
 3 Management Estimates

# Pipeline Of New Product Launches To Support Growth

- Initial Market entry with Enterprise versions to validate utility with Health Care Professionals (HCP) sector and build value
- Direct to Carer market expansion when HCP support in place and DTC training materials
- 47 Million people living with dementia at home worldwide – 400 Million pre-verbal children (between 0-3 years)
- Product development to include vocalization for Kids, delirium predictor for Adults
- Significant market expansion potential into new customer bases i.e. hospitals, GP's and allied health sectors

Product Type	Global Market Size Key Metric	Aus Launch	EU Launch	US Launch
Enterprise Dementia	6.96m Aged Care Beds	Late 2017	Oct 2019	Target CY 2021/22
Home Carer Dementia	43.5m people living with dementia at home	Pilots commenced	Target CY 2020	Target CY 2021/22
Enterprise Pre-Verbal Children	100m kids born in or pass through hospitals each year	Target CY 2021 for TGA clearance	Target CY 2021 for CE Mark clearance	Target CY 2022
Home Carer Pre-Verbal Children	400m kids between the aged of 0-3 years	Target CY 2021	Target 2021	Target CY 2022

Note: Target dates for all US and Childrens App launches depend on commencement of trials which have been delayed by COVID-19

# Highlights of PainChek® Business and Revenue Model

- ✓ Patent coverage and no direct competition – we have first mover advantage for 15 years+
- ✓ 80-85%+ gross margins – very low cost of goods sold
- ✓ Small sales force requirement
  - Initial enterprise B2B model requires small global sales force (less than 10 people)
  - Advocates such as Dementia Support Australia are evangelising the product and supporting adoption
  - Govt/Regulators are directing providers towards our product through focus on quality of care
- ✓ Embedded nature of PainChek® technology
  - Zero churn to date
  - Our software becomes embedded in workflows and eliminates paperwork
  - Staff become “reliant” on the technology
- ✓ Attractive pricing for rapid enterprise adoption
  - \$4 per bed per month – not a “pain point” for enterprise adoption
- ✓ Low customer acquisition cost for consumer model
  - Commission only paid to app stores
  - Adoption at enterprise/practice level will drive consumer growth
- ✓ Low operating costs; significant operating leverage
  - Only 13 staff in entire company currently
  - Current operating costs are approx. \$550k per/month all in

# Diversified customer and partners

## Example Aged Care Customers

## Advocates



Dementia Support Australia



St Louis Home Care



st andrews village



Kaloma



St. Basil's



# Integration partners

- PainChek is integrated with aged care management systems covering more than 160,000 aged care beds in Australia and 40,000 beds in the UK
- This means a point of care PainChek assessment on a resident is automatically transmitted to the care management system in the aged care center driving better care and reducing duplication of data entry.



# Australian Federal Government Support of \$5m – extended to June 2021

- Aus Federal govt. has pledged \$5m for PainChek to implement into Residential aged care market
- Government is paying for a 12-month PainChek license subscription for up to 100k beds
- Govt wants to aid rapid adoption of PainChek and thus increase the quality of care
- Aged care providers under the scheme will roll onto commercial SaaS contracts after 12 months
- First revenue streams from this program received in Dec 2019 and March 2020 (AUD 1.75 M)



Channel 10 Perth Evening News – 29 April  
Sky News – 30 April  
Audience: 100,000+.





**Philip Daffas**  
CEO & Managing Director, MBA, BSc

Philip is a highly accomplished global business leader and people manager. Philip has held senior global leadership positions with Cochlear and Roche in Europe, US and Australia.



**Prof. Jeff Hughes**  
Chief Scientific Officer PhD, MPS

Jeff is a professor in the School of Pharmacy, Curtin University in Western Australia.. Jeff is one of the team who developed the PainChek® concept.



**Andrew Hogan**  
Manager, National Rollout

Andy is a Psychologist, management consultant, business leader and executive coach. Andrew has worked in both Australia and the UK across aged care and home care services.



**Scott Robertson**  
Chief Technology Officer, MBA, B.Eng.  
(Comp. Systems)

Scott has over 25 years' experience designing, deploying and managing enterprise software systems. adapting to changing client needs..



**David Allsopp**  
Head of Business Development ANZ

David has extensive account management, relationship management. He is renowned for establishing trusting, transparent and long-standing relationships in the healthcare space.



**Pete Shergill**  
Business Development Director, UK

Pete is a UK Healthcare business leader and pharmacist with over 15 years of experience across Health and Social Care. Previous senior commercial roles with Lloyds Pharmacy UK and I-Care UK - a major residential aged care software provider

# THE TEAM



**John Murray**

**Non- Exec Chair**

25 years in tech and Venture Capital. Founder of Technology Venture Partners, ex Chair of Residential Aged Care provider. Multiple non-exec board roles.

LLB, Member of Institute of Chartered Accountants of Scotland, MAICD.



**Philip Daffas**

**CEO & Managing Director**

Philip is a highly accomplished global business leader and people manager. Philip has held senior global leadership positions with Cochlear and Roche in Europe, US and Australia.



**Ross Harricks**

**Non-Exec Director**

Senior global medical device executive with Nucleus and healthcare NED.



**Adam Davey**

**Non-Exec Director**

Corporate finance executive with extensive capital markets experience.

# Catalysts and Expected Newsflow

- ✓ Govt contract signed and expansion of Australian customer base – Q4 2019
- ✓ First UK sales of Enterprise Dementia product - Q4 2019
- ✓ First NZ sales of Enterprise Dementia product - Q4 2019
- ✓ FDA de Novo pre-sub supplement completed for Adult product – Q1 2020
- ✓ Philips Healthcare programme update - Q1 2020
- Launch Home care dementia product in Australia and Europe - 2H 2020
- TGA and CE Mark submission for Pre-verbal Children product – CY 2021
- FDA de Novo clearance submitted for US market – CY 2021
- Government trial outcomes research report - Q2 2021
- Launch Pre-verbal Children product in Australia and UK- CY 2021
- US Adult product launch - expected CY 2021/early 2022

N.B. COVID 19 is impacting global clinical trials – the above timings have been adapted based on best current estimates



# PainChek® Financial Update

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- Shares on issue: 1,035,522,400
- Market cap undiluted at 12c = \$124m
- Market Cap fully diluted at 12c = \$128m
- Unlisted Options/PR on issue: 33,547,957
- Fully diluted capital: 1,069,070,357
- Cash at bank @ 31 March'20: \$6.4m



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