EDISON

Respiri

Initiation of coverage

Objective measures for better outcomes

Healthcare equipment

Respiri is an Australian medical device and software-as-a-service (SaaS) company, developing a novel remote patient monitoring approach to respiratory health management. Through its integrated wheezo platform (device, application and health portal) the company provides comprehensive (real-time) monitoring for irregular breathing patterns (wheeze), a key physiological variable in asthma and chronic obstructive pulmonary disease (COPD). Following its strategic pivot in 2021, Respiri has redirected its focus to the US market, which has a large inadequately treated patient population and a supportive environment for preventative RPM reimbursement. Employing a cost-effective partner-based strategy, management has recently onboarded its first two (US) hospital clients. We initiate coverage with a valuation of A$189.1m or A$0.24/share.

Year end	Revenue (A$m)	PBT* (A$m)	EPS* (c)	DPS (A$)	P/E (x)	Yield (%)
06/21	1.4	(8.5)	(1.22)	0.0	N/A	N/A
06/22	0.8	(6.3)	(0.87)	0.0	N/A	N/A
06/23e	5.0	(2.3)	(0.29)	0.0	N/A	N/A
06/24e	8.1	0.4	0.03	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments. FY23/FY24 EPS adjusted for new shares.

A promising alternative to the standard of care

Despite notable advancements in healthcare and the recommendations from the Global Initiative for Asthma (GINA) for chronic monitoring of the afflicted population, the current available options lack objectivity (asthma control questionnaire and test) or are cumbersome/unreliable in a non-clinic setting (peak flow monitors and spirometers). In contrast, the wheezo device has been designed to be user friendly, only requiring c 30 seconds of tidal breath recordings for an objective physiological measure (wheeze rate). These recorded objective measurements along with patient condition notes are transmitted for real-time physician assessment with the aim of improved monitoring to better avoid exacerbations and hospitalisations.

Leveraging the US e-health opportunity

Notwithstanding the relatively large target patient population (asthma and COPD) in the US (45m vs 4.2m in Australia), the key consideration for Respiri's US push is the already established reimbursement infrastructure. In the US, the Centers for Medicare & Medicaid Services (CMS) has established Current Procedural Terminology (CPT) codes for RPM reimbursement coverage (for provider-prescribed services that can also be outsourced to telehealth providers). With key technology patents, two telehealth partners and reimbursement arrangements in place, Respiri is well positioned and has a first-mover advantage.

Valuation: A$189.1m or A$0.24 per basic share

We value Respiri at A$189.1m or A$0.24/share based on the epidemiology approach focusing solely on the US market opportunity and assuming a conservative 2% peak target market penetration. With a pro-forma net cash balance of A$2.8m (including A$1.6m equity issue in September 2022), we estimate the need to raise another A$3m before reaching profitability in FY25.

22 September 2022

Price	**A$0.05**
Market cap	**A$38m**
	US$0.7/A$
Pro-forma net cash (A$m) (Sep 2022)	2.8
Shares in issue (excluding 40m shares to enter circulation on 23 Sept 2022)	761.8m
Free float	83%
Code	RSH
Primary exchange	ASX

Share price performance

%	1m	3m	12m
Abs	2.1	14.3	(34.2)
Rel (local)	8.6	10.6	(28.2)
52-week high/low	A$0.07		A$0.03

Business description

Respiri is an Australia-based medical device and SaaS company focused on respiratory health management through its integrated wheezo platform. The device is a breath sensor that works with the respiri mobile applications to record data such as wheeze rates, breath recordings and other environmental factors and medication usage, which can be accessed by physicians in real time. Wheezo received FDA clearance in March 2021 and was launched in the US in December 2021.

Next events

North Carolina Hospital onboarding	Q3 CY22
CMS doctor driven reimbursement	Q4 CY22
NIHR to Kings study	Q4 CY22
Queen Mary NIHR funded study	Q3 CY22

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Edison profile page

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Investment summary

Company description: Addressing an unmet need

Respiri is a commercial-stage medical device technology and SaaS company focused on the management of respiratory disorders such as asthma and COPD. Headquartered in Melbourne, Australia, the company commenced trading on the Australian stock exchange (ASX) in 2006 under the name KarmelSonix (subsequently changed to iSonea and Respiri in 2011 and 2015, respectively) and has an US operations office located in New York City. Through its integrated platform offering, wheezo (which includes the monitoring device/sensor, associated smartphone applications and heath portal), the company presents a convenient (requiring just 30 seconds of recordings/usage) and objective (capturing wheeze, a proven measure of airway limitation as measured by forced expiratory volume (FEV1)) alternative to the current SoC in respiratory health management in adults and children over the age of two. The platform also allows patients/caregivers to incorporate self-reported symptoms, triggers and medication with these objective measures, giving providers a more holistic picture of the patient that is more actionable in achieving better short- and long-term health.

Wheezo was launched in the domestic Australian market in October 2020, in partnership with pharmaceutical company Cipla to sell and distribute wheezo in pharmacies nationally, and recorded sales of A$270,000 in FY21. Cipla has a sizeable sales and marketing infrastructure covering over 80% of the pharmacy market in Australia. However, a combination of a lack of preventative care reimbursement and COVID-19-related restrictions meant that its pharmacy-focused business struggled to gain anticipated traction in the country. Following a strategic review in 2021, Respiri decided to pivot focus to the US market (FDA clearance in March 2021 and launch in December 2021) to leverage the RPM reimbursement infrastructure in the country to monetise wheezo's potential. The company has partnered with two telehealth providers (mTelehealth and Access Telehealth) and has signed agreements with two large US hospitals – Michigan Children's Hospital and an unnamed hospital in North Carolina. The sales pipeline remains strong with the company pursuing over 120 qualified leads with the potential to translate into future customers. Early trends from pilot programmes should establish the foundation for future growth.

Valuation: A$189.1m or A$0.24 per basic share

We initiate coverage of Respiri with a valuation of A$189.1m or A$0.24/share. Our valuation focuses solely on the US market opportunity, where the revenue model is a combination of device sales (US$50–60/device) and monthly SaaS subscription (US$5–20/month). We value Respiri using a risk-adjusted net present value (NPV) methodology based on epidemiology to assess the addressable market opportunity. As an internal validation approach, we also applied a comparable hospital/respirologist prescription-based method which is discussed in more detail later in the report. Given the very early stage of commercialisation, we have taken a conservative stance, assuming a peak penetration rate of 2% of the addressable population. A faster than anticipated ramp-up with better-than-expected market acceptance and traction and/or geographic expansion (such as to the UK) would offer upside to our estimates.

Financials: Funding anticipated to abate with revenue uplift

During its transition from pre-commercial to the current early commercial stage, Respiri has funded its operations largely through periodic equity injections. Since FY20, it has raised c A$25m in equity, including A$12.5m in FY21 to support the commercial launch of wheezo in Australia and A$1.6m each in May and September 2022 to accelerate Respiri's commercialisation and roll-out strategy in the US. This is against an average annual cash burn of A$6–7m in the past three years. We expect

this figure to come down as Respiri sees incremental growth in revenues with the implementation of signed contracts as it converts its growing sales pipeline. The pro-forma net cash balance following the A$1.6m share placement in September 2022 is A$2.8m, and we anticipate another A$3m in external funding in FY23, before the company becomes self-sustainable, which we estimate will occur in FY25.

Sensitivities: Commercial and regulatory risks dominate

We believe the key sensitivity for Respiri is the execution of its commercial strategy and its traction into bureaucratic hospital systems/networks. Although the initial provider reception has been positive and the company has started to gain momentum (with two hospital contracts), hospital executives and the systems in which they operate tend to have long sales cycles. Management will need to work closely with its provider champions and key opinion leaders (KOLs) to demonstrate tangible clinical utility for wheezo in the initial patient cohorts to bolster its positioning and gain traction initially in associated hospital networks, while also expanding into new systems. Another potential risk could be reimbursement given Respiri's US business model hinges on the ability of physicians to outsource monitoring activities under the RPM CPT codes (via telehealth). Changes in these parameters could affect wheezo's uptake potential. There is also potential intellectual property risk. Respiri holds one provisional patent (a cough detection system) and is awaiting confirmation on two applications, including the October 2020 patent filed for the wheezo apparatus. Patents protect the company's intellectual property and any challenges in securing or maintaining them could be a key hurdle to future growth prospects. Nearer term, the ongoing shortage of semiconductor chips (a key component of the wheezo device) may be a potential risk although, with 12,500 chips in its inventory (sufficient to manufacture an equal number of devices), Respiri has some mitigations in place. Due to the early stage of the launch in the US and the novelty of the device and business model there is uncertainty in terms of the reception and deployment of the product/service by the stakeholders, which introduces high potential variability to our forecasts. We expect to gain clarity in the next six to 12 months as the initial feedback for the first pilot programmes becomes available. This also feeds into financing risk as the company may need to raise significantly higher capital/funding than our current forecasts (if sales or margins are below our current estimates) which could lead to dilution, if actioned through equity raises. Finally, given the rapid advancements in medical devices, the risk of competition (particularly from the continuous monitoring devices currently in development) remains a consideration too.

Harnessing the 'wheeze'

Respiri, including under previous aliases iSonea and KarmelSonix, has been working on developing, modifying and improving its acoustic respiratory monitoring devices and associated algorithms over the last two decades. Wheezo is the newest generation of its digital wheeze monitoring system marketed in the US. The device was awarded the CE mark in Europe, Therapeutic Goods Administration (TGA) approval in Australia and 510(k) clearance in the United States.

GINA recommends chronic monitoring of the afflicted population to avoid instances of symptom worsening and exacerbations that could result in in emergency room visits and/or hospitalisations, which in turns adds to healthcare related costs (discussed in more detail later). However, currently available monitoring options are sub-optimal – either adapted for clinical use (eg stethoscopes, which require physician expertise) or are subjective measures (asthma control test and questionnaires) or are inconvenient and difficult to administer accurately in a home setting (eg spirometers and peak flow monitors). This sub-optimal approach to respiratory heath management could potentially lead to avoidable exacerbations resulting in emergency room visits and/or hospitalizations adding to the healthcare costs.

The wheezo integrated platform targets the unmet need for objective symptom and disease monitoring in the respiratory space with convenience and accuracy with the aim to improve outcomes and reduce healthcare system costs. Wheezo's integrated user-friendly design supports the convenient collection of objective data in the form of wheeze (a high-pitched, whistling sound indicating a narrow or compressed airway), a widely accepted physiological indicator of impaired lung function. The technology behind wheezo includes proprietary sound sensors (to accurately record breathing sounds while blocking out ambient background sounds) and sophisticated signal processing algorithms for the automatic detection and quantification of wheezes and other breathing sounds.

The device employs its proprietary acoustic respiratory monitoring technology to record 30 seconds of normal breathing, with the wheezo placed against the trachea. The proprietary algorithm detects wheeze and calculates the wheeze rate (Exhibit 1).

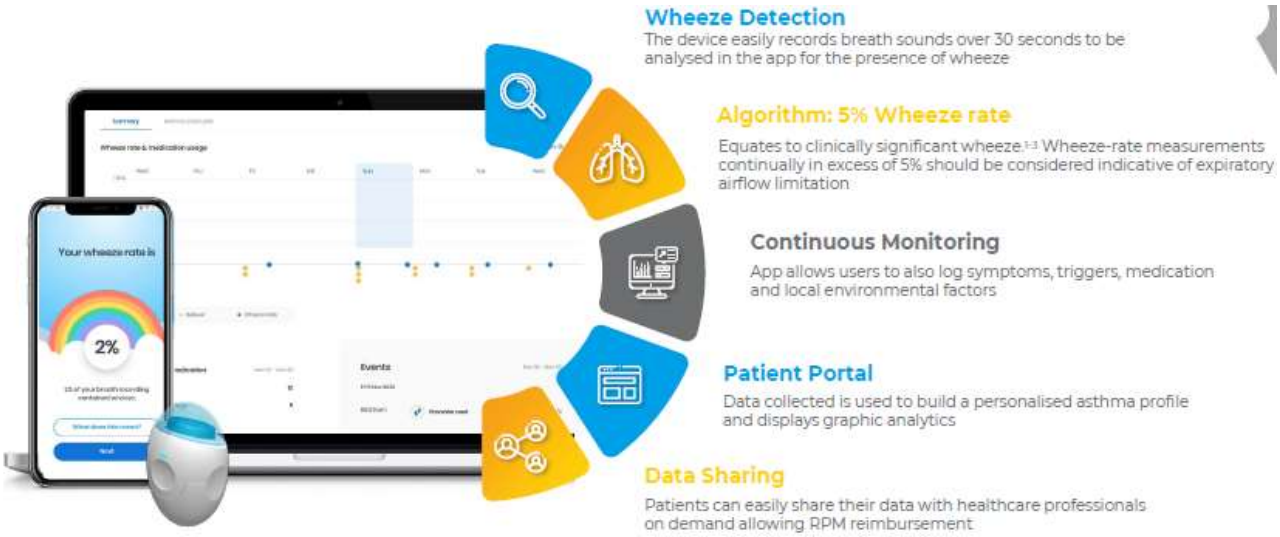
Exhibit 1: The wheezo device and app

Source: Respiri

The platform quantifies wheeze rates based on duration or percentage of the time the user wheezes in a 30-second recording. According to management, a wheeze rate of 5% (or wheezing for 1.5 seconds in a 30-second period) can be considered meaningful, signalling airway narrowing and impairment in lung function (Exhibit 2).

Although the wheezo's base construction shares characteristics with a stethoscope with two sensors/microphones, a key difference is the increased sensitivity to differentiate/block extraneous interference, which better isolates breath sounds. The wheezo has one sensor/microphone at the front to record breathe sounds and another at the back to record ambient sounds to distinguish between a true wheeze and extraneous interference.

Exhibit 2: The wheezo integrated platform



Source: Respiri. Note: 1. Eising 2014; 2. Bentur 2004; 3. Boner 2010.

In addition to the objective collection of data, the associated app allows patients or their caregivers to reflect self-reported symptoms, triggers and medication use alongside local environmental factors such as air irritants and pollen, providing an ongoing holistic picture of symptom monitoring and management. The platform also facilitates sharing data with physicians who can monitor longitudinal data for each patient via the Respiri health portal or access wheeze recording in real time to aid continuous tracking.

De-coding the US (hospital) market opportunity

Following FDA 510(k) clearance in March 2021, Respiri expedited its US market entry to leverage the RPM services reimbursement already established by the CMS under the relevant CPT codes. While the CMS reimburses RPM across the US, RPM reimbursement is also mandated for private payors across 29 states (private payors typically reimburse 120–130% of the amount ear-marked under the CPT codes). As per our understanding, private payors cover RPM in most non-mandated states as well.

While these codes are reimbursed to prescribing physicians, the CMS's increasing support for value-based care (with the aim of reducing emergency health visits and hospitalisations) allows these RPM services to be outsourced to telehealth operators (from 2020) for a monthly fee, typically 40–50% of the monthly amount reimbursed to the physicians. Respiri's US strategy is to partner with these telehealth providers (currently mTelehealth and Access Telehealth) to target larger US healthcare systems/networks. The telehealth provider, in turn, would buy the devices (at US$50–60/device at a gross margin of c 30–40%) and share a portion of the reimbursement pie with Respiri (c 20% of the monthly recurring fee received from physicians, which translates to US$5–20 per patient per month).

Through these telehealth partnerships, Respiri has secured contracts with two large hospitals – the Michigan Children's Hospital and an unnamed hospital in North Carolina. As both hospitals belong to large healthcare systems, we believe positive initial pilot results will provide traction to expand within these networks and bolster its US reputation. The company's close partnership with KOL champions (in hospital systems) will be critical in influencing administrators and expanding into other hospital systems.

The company also has a wearable device, Sorfe, under development, and expects to commence prototype testing by CY Q422. We expect this to complement wheezo and expand Respiri's

portfolio offering to sell through its customer base. Due to Sorfe's early development stage, we have not incorporated it in our estimates or valuation.

Targeting an unmet need for asthma and COPD patients

Asthma and COPD are two of the most common chronic inflammatory respiratory disorders globally. While they are characterised as distinct conditions with different pathophysiologies, clinical presentation, lung function measurements and treatment/drug management (see Exhibit 3), the symptoms (particularly during exacerbations/flare-ups) are similar as the conditions reflect airway swelling and inflammation leading to shortness of breath, chest tightness, cough and, notably, wheezing.

Exhibit 3: Asthma versus COPD characteristics

Characteristics	Asthma	COPD
Age of onset	Early in life (often childhood)	Mid-life
Symptoms	Shortness of breath, chest tightness, wheezing and cough	Shortness of breath, chest tightness, wheezing and cough
Triggers	Genetics, environmental factors, allergies	Primarily smoking
Presentation	Intermittent and variable	Persistent
Disease progression	Stable (with exacerbations)	Progressive (with exacerbations)
Treatment	Corticosteroids (first-line maintenance treatment); bronchodilators (such as short-acting beta agonists; termed rescue treatment) in case of exacerbations	Bronchodilators (first-line maintenance treatment); combination with corticosteroids and oxygen in case of exacerbations

Source: various articles; Edison Investment Research

According to the Global Burden of Disease study 2019, 262.4 million people worldwide are affected by asthma. The corresponding figure for COPD was 212.3 million. More importantly, the World Health Organisation estimates that COPD is the third leading cause of death worldwide after cardiovascular diseases and cancer, causing more than three million deaths per year.

The US Centers for Disease Control and Prevention (CDC) states that in 2020, asthma and COPD prevalence in the country was 7.8% and 5.6% of the total population (or 25 million and 18 million cases), respectively. The annual economic burden of asthma and COPD (medical expenses, days missed from work and school, and deaths) is estimated to cost the US economy US$80bn and US$49bn, respectively. Per in-patient visit costs US$8,238 (asthma) and US$27,597 (COPD) to insurers and payors and this figure is incrementally linked to the number of exacerbations experienced. According to a journal review, COPD patients experience up to three exacerbations in a year, often requiring emergency room visits or hospitalisation (in 25–47% of cases). These figures highlight the need for a more holistic approach, with effective and predictive tools for continuous disease monitoring and management for early indication and detection of symptom worsening and exacerbations. Currently available options can largely be grouped into lung function tests (using devices such as peak flow monitors and spirometers), fractional exhaled nitric oxide (FeNO) tests, acoustic/sound-based tests (such as stethoscopes) or questionnaires that rely on the responder's response and recall (Exhibit 4).

Exhibit 4: Currently used tests/devices to monitor asthma and COPD

Type of tests	Description	Advantages	Disadvantages
Stethoscopes	Commonly used medical device for auscultation (listening to sounds produced in the body). Detects for abnormal breath sounds such as wheezing.	■ First-line of diagnosis in a clinical setting ■ Inexpensive	■ Auscultation process depends on the doctor's subjectivity ■ Can be affected by ambient/environmental noises ■ Home-monitoring requires training and is prone to error
Peak flow meter	Portable, hand-held device that measures the maximum amount of air which can be blown out in one forced exhalation. The measurement is termed as the peak expiratory flow (PEF) or peak expiratory flow rate (PEFR). A peak flow rate in the range of 50–80% of the 'normal' rate (as established by a healthcare provider) signals caution (reflecting narrowing of airway) and a rate of less than 50% signals a medical alert.	■ Portable ■ Inexpensive (typically US$10–25)	■ Device needs to be used in a specific manner that may be difficult to administer at home ■ Multiple reading required to average out the results ■ Difficult to use with children and elderly patients
Spirometers	Requires forced breathing into a device called a spirometer. This device measures the amount of air is exhaled and inhaled, as well as how fast the air is blown out. Spirometry measures two key factors: expiratory forced vital capacity (FVC) and forced expiratory volume in one second (FEV_1). An FEV_1/FVC ratio <70% suggests airway blockage.	■ Considered as 'gold-standard' for lung function tests	■ Requires trained administration/clinical setting for accurate results ■ Multiple reading required to average out the results ■ Difficult to use with children and elderly patients ■ Expensive (US$900–3,000)
Fractional exhaled nitric oxide (FeNO) test	Nitric oxide is normally produced by bodies and high levels of the gas are considered an indication of airway inflammation. The FeNO test requires exhaling into a small, hand-held machine for 10 seconds at a steady pace.	■ Does not require forced exhalation of air	■ Can only be administered in a clinical setting ■ Expensive (upwards of US$1,500)
Asthma control test/questionnaires	Self-assessment tool required to provide ratings on a scale based on different parameters	■ Easy to use in case of home-monitoring	■ Subjective ■ Dependent on patient response and recall

Source: Various articles, Edison Investment Research

Smart devices to improve respiratory monitoring

Exhibit 4 above highlights the key limitations of the currently available options and reiterates the need for a more holistic approach in respiratory monitoring with regard to convenience and real-time assessments. As a result, a sizable portion of recent development activities has been focused on developing acoustics/sound-based device alternatives and wearable devices versus the traditional exhalation volume tools for the management of asthma and COPD. According to Allied Market Research, the intelligent asthma monitoring device market (smart asthma monitoring devices and inhalers) was valued at US$180.5m in 2020 and will reach US$1.7bn by 2030, a CAGR of 25%.

While several acoustic devices for respiratory disease management are at various stages of development, the first set of required hurdles for commercialisation include sophisticated sensors and algorithms, computational processes to produce accurate inferences and the ability to deliver clinical utility for the patient and physician. With its extensive experience and years of research on wheezo, Respiri has a head start and an early-mover advantage. The most competitive device (to wheezo) currently available on the market is manufactured by a Japanese medical device player, Omron (WheezeScan). This device was launched in six European countries in December 2020 and is also a hand-held device platform (device and symptom tracking app) detecting wheeze. However, WheezeScan is only targeted at paediatric patients between the ages of four months and seven years and is not as sophisticated as wheezo, in our view. For instance, the results from WheezeScan appear to be binary, wheeze/no wheeze and do not detect the severity/proportion of wheeze in the overall sound recording. Moreover, WheezeScan not enabled to transmit data/information with healthcare providers and therefore holds limited utility in the RPM space. WheezeScan in CE marked and a clinical validation study is ongoing in the US.

Other than hand-held devices, we view the next closest peers as manufacturers of acoustic/sound-based continuous monitoring devices or wearables. Several of these offerings appear to be under development, including Health Care Originals' ADAMM, a continuous monitoring wearable for

asthma and COPD, Respira Labs' wearable lung monitor, Sylvee, and Resmetrix Medical's wearable respiratory monitoring system. Respiri also has a continuous monitoring device under development (Sorfe), for which it expects prototype testing to commence by the end of 2022. The wearable device is positioned to complement wheezo.

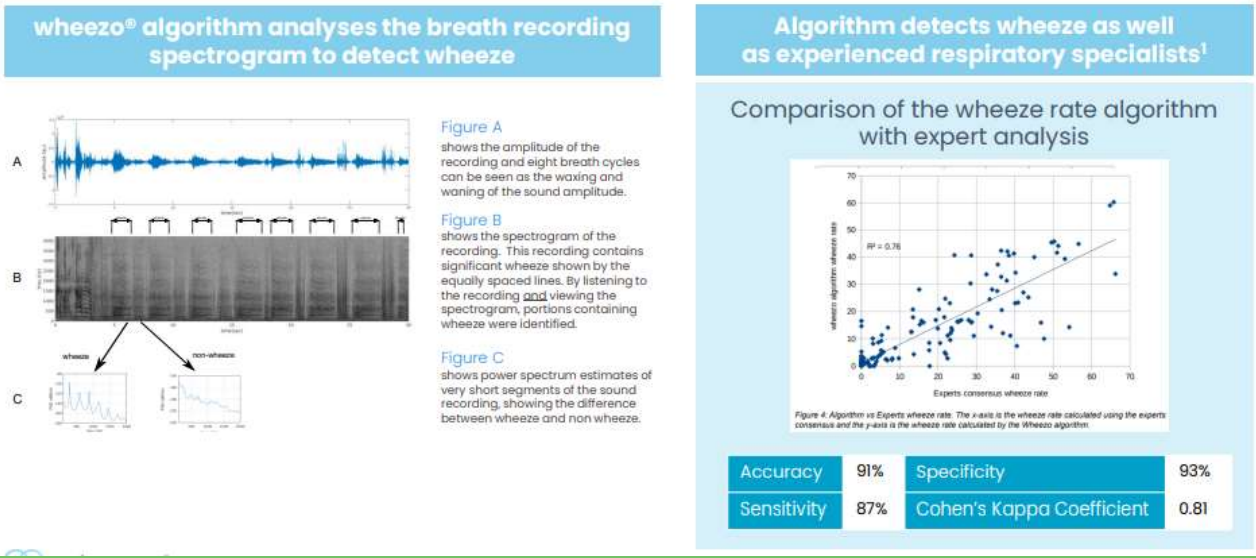
Another interesting category is digital, Bluetooth-connected smart inhalers. These devices have sensors that can be designed to attach to existing inhalers and record and track medication use. They can be paired wirelessly with a smart device or a computer to allow data to be transferred from the smart inhaler automatically and allow healthcare providers keep track of medication dosage, usage and adherence. Some of the key players active in this category are Propeller Health (acquired by ResMed in July 2019 for A$225m), Gecko Health (acquired by Teva in September 2015), Adherium, Cohero Health and Inspiro Medical (acquired by Opko Health in May 2014). We note that none of these devices is eligible for RPM reimbursement although they do qualify for reimbursement under the newly introduced Remote Therapeutic Monitoring CPT codes (approved by the CMS in January 2022). However, traction has been limited to date. Although not deemed a direct competitive threat to wheezo, we see potential in the future to position these as complementary services, possibly in collaboration.

Wheezo's credentials – clinically validated

As mentioned earlier, the current SoC for wheeze detection requires a health professional clinically trained to use a stethoscope. This traditional approach is somewhat subjective based on the provider's audible assessment and experience but does not incorporate any parameters to support objective patient-directed monitoring of wheeze (outside of the visit) in a non-clinical setting. Respiri asserts that the wheezo algorithm objectively analyses the breath recording spectrogram to detect wheeze with accuracy similar to a respiratory specialist (see Exhibit 5).

In a validation report prepared by Respiri for the FDA submission for wheezo, it compared an expert assessment of wheeze with that of wheezo's (wheeze) detection algorithm. Breath sound data were recorded from 76 patients using the wheezo device across both hospital settings and at home. The 56 hospitalised patients (ranging from 21–87 years) had exacerbations including 27 patients with asthma, 26 with COPD and one with vocal cord dysfunction. Three successful recordings were obtained from each hospitalised patient. The data recorded at home were obtained from 20 volunteers who participated in the study. Two different wheezo devices were used for the hospital and home readings. A database of 189 recordings was created to evaluate the performance of wheezo in detecting and recording abnormal breath sounds reported as wheeze rate. Three experts were appointed to listen to the recordings and provide an assessment – two respiratory physicians (Dr Neil Skjodt and Dr Kevin Chan) and one respiratory technology expert (Ronald Platt). The analysis concluded that wheeze rate measured by wheezo's algorithm versus the experts' consensus (on presence of wheeze) had accuracy of 91%, true positive (sensitivity) of 87% and correctly detected no wheeze (a true negative) with 93% specificity. The Cohen's kappa coefficient was calculated as 0.81, which reflects an 'almost perfect' agreement. A poster confirming these findings was also presented at the European Respiratory Society International Congress in 2021, validating the FDA submission work.

Exhibit 5: Wheezo's algorithm performance versus respiratory specialists



Source: Respiri

Focus on monetising the US RPM opportunity

Following a strategic review in 2021, Respiri's near-term commercial strategy is focused solely on the US market opportunity, with the company diverting resources, marketing and outreach efforts towards accessing and educating stakeholders on wheezo's potential and maximising traction and market acceptance. We see merit in this strategy given that the US market is not only more than 10 times the size of Respiri's domestic Australia market (target population 45 million versus 4.2 million in Australia) but is also uniquely positioned as market with reimbursement coverage for preventative respiratory care and remote patient monitoring (combination of CPT reimbursement codes).

RPM reimbursement economics

A combination of factors including the advancement of enabling integrated platforms and technologies (allowing remote monitoring of patient health and medical information in real time), the rapid rise in medical costs, especially for emergency hospital visits, and demand for patient convenience have been factors in the growth in remote patient monitoring services. The CMS, under the Hospital Readmissions Reduction Program (HRRP), established in March 2010, levies penalties/fines (up to 3% of the reimbursement) on hospitals with higher-than-expected readmission rates (typically within 30 days of discharge). Over the lifetime of the programme, c 55% of all US hospitals and 93% of all general acute hospitals subject to HRRP evaluation have been penalised at least once, further intensifying the need for enhanced and consistent monitoring.

RPM was first approved for reimbursement by the CMS in 2019, with a few CPT codes aimed at covering the monitoring of physiological data such as heart rate, blood pressure, blood sugar and respiratory parameters from patients at home. Emergency orders with the global COVID-19 pandemic have also fuelled the traction of remote services and reset healthcare expectations.

It is important to highlight that RPM reimbursement in the US is physician led (ie reimbursement is directed to the healthcare provider for offering the monitoring services), although since 2020 these services are allowed to be outsourced to third-party providers such as telehealth companies. These companies assist healthcare providers in implementing and running the RPM programme, eg with patient enrolment, monitoring, compliance and billing in return for a share of the reimbursement pie. Exhibit 6 presents an overview of the 2022 RMP CPT reimbursement codes.

Exhibit 6: 2022 US remote patient monitoring CPT codes

Code	Description	Monthly amount reimbursed per patient	One time/recuring payment	Notes
CPT 99453	Initial set-up and patient education on equipment.	US$19.04	One-time	One-time fee/payment. Billed once per patient when commencing services. Requires collection of a patient's physiological data for at least 16 days during the 30-day billing period. RPM device must be FDA approved.
CPT 99454	Supply of devices, collection, transmission and report/summary of services to the clinician.	US$55.72	Recurring	Requires collection of a patient's physiological data for at least 16 days during the 30-day billing period.
CPT 99457	Remote physiological monitoring services by clinical staff/MD/QHCP for the first 20 cumulative minutes of RPM services over a 30-day period.	US$50.18	Recurring	One live, two-way, real-time interaction is required (video, phone call or face-to-face). At least 20 minutes of continuous interaction per month.
CPT 99458	Remote physiological monitoring services by clinical staff/MD/QHCP for an additional cumulative 20 minutes of RPM services over a 30-day period.	US$40.82 (x2)	Recurring	Add-on code to CPT 99457 and covers additional 20-mintute interactions in a month (up to a further two, a total of 60 minutes of interactions including CPT 99457.
CPT 99091	Collection and interpretation of data by physician or QHCP, 30 minutes.	US$56.41	Recurring	Cannot be claimed in combination with CPT 99457 and CPT 99458.

Source: Centers for Medicare & Medicaid Services. Note: QHCP = qualified healthcare professional.

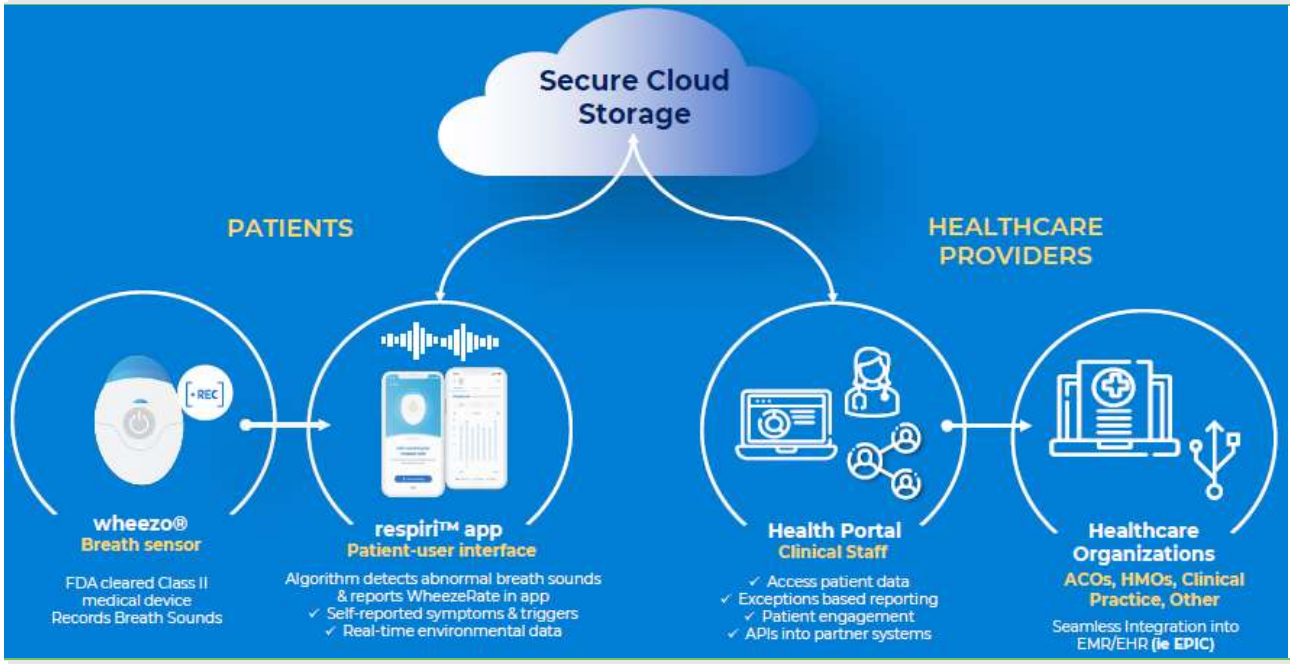
A physician can claim a recurring payout of US$180–190 per patient per month, depending on the level of service provided. The healthcare provider can claim a minimum of US$55.72 for the passive collection of data, without active oversight. As mentioned, these services can be outsourced to third-party providers for a share of the per-patient monthly reimbursement. This arrangement enables the telehealth company to take on the infrastructure and logistics burden, a key incentive for providers in addition to an improved standard of patient care.

The RPM market opportunity remains sizeable. According to a report by Research and Markets, the global market for RPM devices will reach US$85bn by 2026 (from US$20bn in 2019, a CAGR of c 23%), driven by the demand to reduce healthcare costs and address the increasing prevalence of chronic diseases.

Respiri US business strategy

Respiri's US go-to-market strategy hinges on its ability and success in demonstrating wheezo's benefits to physicians/pulmonologists, hospital network administrators, accountable care organisations and payors, both in terms of clinical utility and associated costs savings (related to the avoidance of hospitalisations/emergency visits on exacerbations). The company is partnering with telehealth providers with established RPM infrastructure to target hospital networks/healthcare providers and relevant stakeholders (Exhibit 7).

Exhibit 7: Respiri's US commercialisation model



Source: Respiri corporate presentation, July 2022

Respiri currently has strategic partnerships with two leading US telehealth providers, mTelehealth and Access Telehealth. The first arrangement was signed with mTelehealth in December 2021 and is a five-year, non-exclusive distribution and marketing partnership. mTelehealth initially placed an order worth US$150,000 for 1,000 wheezo units as well as other associated services, with an additional US$24,000 order in February 2022. mTelehealth forecasts a minimum of US$1m in wheezo-derived revenue (device sales only) during the term of the agreement with a contracted minimum quarterly commitment of 1,000 wheezo units per quarter. These devices are expected to be used in pilot programmes for testing and evaluation, a key initial step in gauging market response and feedback, as well as seeking reimbursement for the device. Although we only have limited information on the progress made by mTelehealth in its market outreach efforts, an update from management is likely in the next few months. More recently, Access Telehealth placed a small order for wheezo units for their customers (~US$10k). This is anticipated to increase to handle customer demand.

The second partnership with Access Telehealth was signed in March 2022 and appears to have had more market traction. Through this arrangement, the company has signed two customer contracts. The first is with the Michigan Children's Hospital, a 228-bed facility for paediatric patients with extensive asthma outpatient services, and the second (more recent) contract is with an undisclosed, North Carolina-based customer focused on COPD management. We note that both customers are part of large hospital chains/healthcare systems and a strong display of clinical utility and performance from the initial pilot programmes could create an opportunity to accelerate adoption across the broader group entities.

- The Michigan Children's Hospital is part of the of the NYSE-listed Tenet Healthcare Corporation which operates more than 60 hospitals and 110 outpatient centres across the US and recorded revenues of US$19.5bn in 2021.
- The unnamed North Carolina customer is part of a larger healthcare network focused on the region, which manages upwards of 60,000 in-patient admissions, 187,000 emergency department visits and 2,000,000 outpatient visits per year.

In July, Respiri announced that, with partner Access Telehealth, it has successful concluded a system integration of the companies' platforms (the wheezo ecosystem and Access Telehealth's

RPM platform, Remotli) with the Michigan Children's Hospital. To support the integration programme, Respiri has developed an application programming interface functionality, which allows its health portal to integrate with Remotli to capture key metrics such as wheeze rates, the key physiological parameter required for RPM reimbursement by payors. We note that the need for new systems to be implemented has historically been a major barrier to entry for new services into hospitals and healthcare providers, and this one-time investment for the development of the API should allow Respiri easier/faster integration with new Access Telehealth-engaged healthcare customers. The hospital will run small pilots in the first few months (100–150 patients/month) to gauge an initial response.

Recruitment is expected to commence in the coming weeks and would mark the first patient use of wheezo in the US, feedback from which is likely to set the direction for future uptake. Onboarding for the second customer is anticipated in Q4 CY22 with an initial pool of 150 COPD patients. We expect these initial deals to provide a sound launchpad for Respiri to expand in the US market. If successful, we anticipate improved traction in the next few quarters in terms of further potential deals.

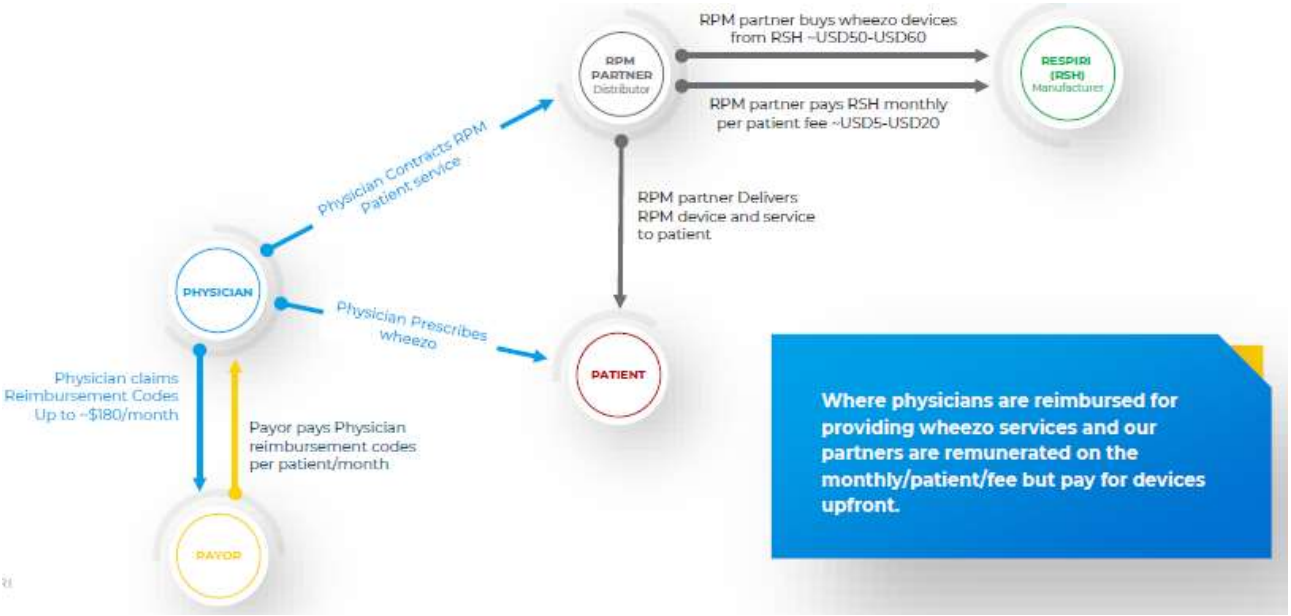
Management has indicted that in addition to the two aforementioned contracts, Respiri has several commercial deals in late-stage negotiations. The sales pipeline also looks robust, with the company pursuing upwards of 120 qualified leads with the potential to translate into future customers. We highlight that Respiri has communicated its intention to expand its telehealth partnerships prudently and gradually in a bid to maintain wheezo's premium positioning and avoid commoditising the device. We expect the near-term outreach efforts to be undertaken alongside the two partnerships already in place. While these partnerships are a reasonable business strategy, they also increase Respiri's reliance on limited partners to deliver the desired market exposure and traction.

A SaaS-focused revenue model

Respiri's revenue mode in the US is made up of two distinct revenue streams, both paid to the company by the telehealth partner (see Exhibit 8):

- **Device revenue:** the telehealth partner will purchase the devices from Respiri at a per-unit cost ranging from US$50–60 (based on volumes). Gross margins are estimated to be in the range of 30–40% (management has indicated that it costs $35 to manufacture one device).
- **SaaS annuity:** this will be a recurring revenue stream, which Respiri expects to be in the range of US$5–20 per patient per month. The exact payment will depend on the number of CPT reimbursement codes claimed by the physician, ranging from US$55 to US$185. The telehealth provider charges a percentage of this reimbursed amount as a fee for providing the device to physicians to prescribe it to patients, as well as monitoring services, which account for an estimated 40–50% of provider reimbursement. In turn, Respiri will be paid roughly 20% of the fee received by the telehealth partner. This SaaS annuity is expected to lead to a 100% gross margin, and we expect this to drive Respiri's top-line growth incrementally as the business matures.

Exhibit 8: Respiri's US revenue model

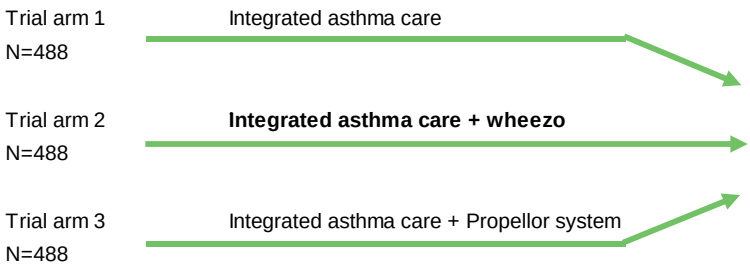


Source: Respiri corporate presentation, July 2022

UK clinical study a potential catalyst in near to medium term

In July 2022, Respiri announced that its wheezo platform had been selected as one of two investigational arms in a UK study to assess the outcomes from combining integrated RPM platforms with SoC in paediatric asthma patients (less than 16 years of age). The £2m Technology Enhanced integrAted asthMa care (TEAM-care) study will be a three-arm, randomised, 30-month, 1,464-patient clinical trial, undertaken by King's College London and funded by the National Institute for Health Research (Exhibit 9). The other two arms will be the control arm (SoC integrated asthma care) and the interventional arm, which will include the Propeller Health digital inhaler sensor system. The key primary endpoint for the trial will be to measure unscheduled NHS use (consultation in primary, secondary or out-of-hours care with symptoms of acute asthma) versus control. The secondary endpoints include child health quality of life, asthma control and use of medicines and rate of NHS use. The trial is expected to commence in Q4 CY22, with final readouts expected by end CY23. Interim data will be made available as the trial progresses.

Exhibit 9: TEAM-care study design



Source: Adapted from Respiri press release, 11 July 2022.

We anticipate this development to benefit Respiri in a few different ways. Firstly, the trial is government sponsored and Respiri is only required to provide the wheezo device, data management and support services. This amounts to significant cost savings for the company. More importantly, the agreement accords the company an exclusive, perpetual and royalty-free licence to use the outcomes of the TEAM-care study for further research and development activities. With

asthma treatment and management estimated to cost £1.1bn annually in the UK (direct costs), clinical utility and cost-saving potential, if established, should support Respiri in making inroads with the NHS to tap the UK market. We also expect results from the UK study, if favourable, to influence market perception and receptiveness positively in other markets, such as the US.

In addition to the above, wheezo has also been chosen by the Queen Mary University of London for the ongoing NIHR-funded (£2m) Achieving Control of Asthma in Children in Africa study. The aim of the study, which commenced in 2019, was to identify 3,000 children (between 12 and 16 years of age) with asthma symptoms across six sub-Saharan countries to assess their asthma control, current treatment and potential barriers to achieving good asthma control. Data released from the study indicated a high proportion of undiagnosed asthma cases as well as low percentage of children with objective markers of asthma. By using wheezo, the study aims to detect wheeze in this group to identify probable cases of undiagnosed asthma. Respiri will provide the wheezo devices for this study. Positive results here could help position wheezo as a cost-effective, portable and user-friendly device in developing countries, expanding the market potential materially.

New-generation wearable device to bolster portfolio

As a complement to wheezo, Respiri has also been developing a continuous monitoring wearable device, Sorfe, targeted at nocturnal symptom tracking and transition care. This will include remote patient monitoring after discharge from hospital following a serious asthma or COPD exacerbation. Unlike wheezo, which monitors breathing sounds when placed against the trachea, Sorfe will be a wearable (to be worn on the chest) to support continual monitoring, which could help track the treatment regime and pre-empt the chance of further exacerbation. While further details on the design and other specifications will be available at a later date, management has communicated that provisional patents have been filed for Sorfe and it has commenced work on the required documentation for regulatory submissions. We note that Respiri had a previously FDA-cleared continuous monitoring device called Wholter and had been planning to develop a wireless, app-enabled version to fit the modern-day framework of its RPM business model in the US. Prototype testing for Sorfe in humans is expected to commence by CY Q422. Given the early-stage development and limited information currently available on Sorfe, we have not included the device in our valuation of Respiri but note the upside optionality as development/commercialisation progresses.

Sensitivities

In our opinion the key sensitivity for Respiri is successful execution of its US commercial strategy. The initial targeted customer base for wheezo in the US is hospitals that are associated with long sales cycles due to bureaucratic hurdles. The wheezo health portal, as well as the telehealth partners' RPM platform, would need to be integrated with a hospital's electronic health record or electronic medical record systems (which store the patient's medical history and related data), which can be a time-consuming exercise and may be met with resistance. We note, however that the development of the application programming interface functionality by Respiri should facilitate integration and mitigate some of this risk. Looking ahead, management will need to demonstrate tangible clinical utility for wheezo in the initial patient cohorts to bolster its positioning and gain traction initially in associated hospital networks while also expanding into new systems. Respiri's long-term success relies on the acceptance of its product and technology by the stakeholders.

Another risk could be regulatory in nature given Respiri's US business model hinges on the ability of physicians to outsource monitoring activities under RPM CPT codes. The CMS allowed patient monitoring to be outsourced from 2020 onwards and any changes in these parameters (codes, amounts and reimbursement caveats) could truncate some of the upside potential in terms of payor reimbursement (ie while physicians will still be able to claim reimbursement for data collection and

services under the relevant CPT code(s), reimbursement for outsourced monitoring services may be affected.

Intellectual property risk is another key sensitivity. Respiri holds a patent for its cough detection system (provisional patent application number 2021903056) and has filed a further two patent applications (apparatus for detecting breath sounds, WO/2021/081589, and processing recordings of a subject's breathing, WO/2022/082272), for which it is awaiting confirmation. Respiri's commercial success depends on its ability to obtain patents and defend its intellectual property.

Timely and adequate access to input material for its devices is also a key sensitivity, in our opinion. Respiri's wheezo device uses semiconductor chips as one of its key components. The ongoing global supply shortage of these chips, therefore, may be a risk. However, Respiri has mitigated some of this uncertainty by stockpiling 12,500 chips in inventory, sufficient to manufacture a similar number of devices. It also has 20,000 units of finished goods in inventory. Together we expect this to be sufficient to meet projected demand into end-FY24.

Due to the early stage of the launch in US and the novelty of the device and business model there is uncertainty in terms of the reception and deployment of the product/service by the stakeholders, which introduces high potential variability to our forecasts (although our estimates are fairly conservative). We expect to gain clarity in the next six to 12 months as the initial feedback for the first pilot programmes becomes available. This also increases the financing risk as the company may need to raise significantly higher capital/funding than our current forecasts (if sales or margins are below our current estimates) which could lead to dilution, if capital is funded through equity raises.

Both the technology and medical device industries are highly competitive and, given the rapid advancements in the space, risk of competition (particularly from the continuous monitoring devices currently in development) remains a consideration, requiring Respiri to continue innovating to remain competitive.

Valuation

We initiate coverage of Respiri with a valuation of A$189.1m or A$0.24/share. We see the US as the core market for Respiri in the near to medium terms and, as a result, our valuation focuses solely on the US market opportunity, where the revenue model is a combination of device sales (US$50–60/device) and a monthly SaaS annuity (US$5–20/month). We value Respiri using a risk-adjusted NPV methodology based on the epidemiology based approach to estimate the market opportunity Given the very early stage of commercialisation, we have taken a conservative approach, assuming a peak penetration rate of 2% of the addressable population. Our assumptions are detailed in Exhibit 10 below.

Exhibit 10: Risk-adjusted NPV assumptions for wheezo

Valuation approach	Assumptions
Epidemiology-based	■ **Target population:** all asthma and COPD patients in the US (c 26 million and c 18 million, respectively and growing by 0.5% per year) based on prevalence rates indicated by the CDC. ■ **Peak penetration:** given the novel technology and uncertainty about the uptake of the RPM model, our estimates of peak penetration are conservative at 2% of the target population. Our model incorporates a gradual ramp-up, with peak penetration/peak sales estimated to be reached by FY 2035. ■ **Revenue model:** we incorporate two distinct revenue streams in our model: 1) revenue from incremental device sales (we assume a price of $55 per device (midpoint of the management guided range of US$50–60) and 2) a SaaS-based annuity income stream of US$12.5 per patient per month (midpoint of the management guided range of US$5–20). We assume a patient compliance rate of 75%. Our model does not factor in inflation-adjusted prices at this time. ■ **Costs:** we assume COGS will continue to decline as the percentage of revenue from SaaS services (which is expected to come with a 100% gross margin) goes up over the years. We have kept our estimates for operating expenses constant at 40% of sales (more or less equally split between R&D and SG&A) based on management guidance.

Source: Edison Investment Research

To internally validate our valuation, we use a comparable, prescription-led methodology to ascertain Respiri's market potential (note that the key customers are hospitals/pulmonologists). Below we present the set of assumption using the prescription-based methodology which would provide us roughly the same valuation as the epidemiology-based valuation approach:

- **Target population:** based on the number of hospitals (c 6,100) and number of pulmonologists (c 12,400), we calculate an average of two pulmonologists each hospital seeing an average of 15 patients per day per pulmonologist and prescribing the wheezo to 40% of patients (which translates to c 3,000 wheezos prescribed per year per hospital).
- **Peak penetration**: we assume a peak penetration rate of 5% of all US hospitals (c 300 hospitals) and expect Respiri to hit the target in 2035.
- Revenue/unit (device and SaaS) and cost assumptions are the same as the epidemiology approach.

In addition to the above, our model currently does not include the probability of needing to replace/upgrade the wheezo devices with time as we do not have clarity on the likely device life. Moreover, if there is a replacement, it is unclear whether Respiri will be reimbursed for the replacement devices and whether it will be at the same rate as the first batch. Another broad assumption is with regard to discount rates. We assume a 12.5% discount rate to value Respiri. This is higher than the 10% rate we typically assume for commercial assets but, given the novelty of the device and business model, we believe it is prudent to incorporate a higher level of risk. We note that a faster than anticipated ramp-up with better-than-expected market acceptance and traction and/or geographic expansion (such as into the UK) would offer upside to our estimates. We will revisit our assumptions as things become clearer as commercialisation progresses. A breakdown of our NPV based on the above assumptions is presented in Exhibit 11.

Exhibit 11: Respiri risk-adjusted NPV

Product	Indication	Geography	Clinical stage	Launch	Peak	Peak sales (A$m)	NPV (A$m)	Probability	rNPV (A$m)	rNPV/ share* (A$)
Wheezo	Asthma and COPD	United States	FDA 510 (k) clearance	2022	2035	109.7	186.2	100%	186.2	0.23
Pro-forma net cash (including September 2022 share placement)							2.8	100%	2.8	0.00
Valuation							**189.1**		**189.1**	**0.24**

Source: Edison Investment Research. Note: *Shares outstanding – 801.8m (including 40 million from the September placement).

Financials

During its transition from pre-commercial to the current early commercial stage, Respiri has funded its operations largely through periodic equity injections. Since FY20, it has raised c A$25m in equity, including A$12.5m in FY21 to support the commercial launch of wheezo in Australia and A$1.6m each in May and September 2022 to accelerate Respiri's commercialisation and roll-out strategy in the US. This is against an average annual cash burn of A$6–7m in the past three years. The FY22 operating cash burn was A$8.5m (A$7.3m in FY21) although this was partially affected by inventory build-up and other non-recurring expenses related to the US launch. We expect this figure to come down in the forecast years Respiri sees incremental growth in revenues with the implementation of signed contracts and conversion of its sales pipeline (discussed below). The net cash balance at the end of FY22 was A$1.2m (down from A$8.0m at end-FY21), which has been bolstered by an additional A$1.6m private placement (including A$100k contribution from management). Based on the pro-form cash balance of A$2.8m and our cash flow projections, we calculate another A$3m in external funding in FY23 before the company becomes self-sustainable, which we estimate will occur in FY25.

FY22 was marked by Respiri's entry into the US with the signing of the first deal worth with mTelehealth in December. The FY22 revenues stood at A$772k (A$1.4m in FY21), which includes A$519k in R&D tax credit and grants received from the Australian government, A$137.7k (US$100k) recorded as licensing fee from mTelehealth and A$116k for device and subscription sales in Australia. As expected, sales from Australia declined by c 60% (A$270k in FY21) following the decision by the company to focus instead on the US market. With two signed hospital deals in place and several others in the pipeline, we estimate a ramp-up in sales in the forecast years and project Respiri's FY23 and FY24 revenue to be A$5.0m and A$8.1m, respectively. These figures include R&D tax credits, which the company expects to continue to receive in the coming years. Following its collaboration with Entech Electronics in February 2020, Respiri has been able to bring down its manufacturing costs significantly and has indicated that the cost of manufacturing per device stands at US$35 which translates to gross margin of 30–40% on device sales. We highlight that the SaaS subscription-based revenue stream comes with 100% gross margins. Exhibit 12 presents a breakup of our forecast revenues and gross margins for FY23 and FY24.

Exhibit 12: Estimates for FY23 and FY24 revenue and gross margin breakup

All figures in A$'000	FY23e	FY24e
Revenue from device sales	1,485	1,500
Gross profit (COGS – 36%)	*951*	*960*
Revenue from subscription sales	3,038	6,106
Gross profit (COGS – 0%)	*3,038*	*6,106*
Government R&D tax credit	500	500
Gross profit (COGS – 0%)	*500*	*500*
Total revenue	**5,023**	**8,106**
Gross profit	4,483	7,561
Gross margin (%)	***89%***	***93%***

Source: Edison Investment Research

Following the re-routing of all wheezo inventory to the US, Respiri has disclosed that it has around 20,000 finished wheezo units in inventory and a further 12,500 semiconductor chips in place to manufacture more devices. Based on our calculations, this should be sufficient to meet demand into end-FY24.

In terms of operating expenses, we estimate the cost base to come down materially in FY23 onwards following the change in business models (self-commercialisation model in Australia versus the partnership model in the US). We estimate that the key cost savings in FY21 have come from selling and marketing expenses, which we forecast will come down significantly following Respiri's decision to partner with a telehealth partner who is likely to shoulder the majoring of the sales and marketing efforts with some support from Respiri. Selling and marketing costs in FY22 stood at A$917k (down c 60% from A$2.2m in FY21). We expect these remain at similar levels in FY23 (A$962k) and gradually ramp up thereafter as the business scales up in the US. We also project the remaining operating expenses (including R&D) to be in line with the historical trend, according to management guidance. Overall, based on our current assumptions, we expect the company to become cash flow positive from FY25.

Exhibit 13: Financial summary

A$'000s	2020	2021	2022	2023e	2024e
Year-end June	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	2,205	1,436	772	5,023	8,106
Cost of Sales	0	(1,263)	(259)	(540)	(545)
Gross Profit	2,205	173	513	4,483	7,561
R&D expenses	(2,035)	(1,387)	(1,463)	(1,537)	(1,749)
Sales & marketing expenses	(784)	(2,185)	(917)	(962)	(1,293)
General & corporate expenses	(3,367)	(5,032)	(4,371)	(4,257)	(4,146)
EBITDA	(3,981)	(8,432)	(6,238)	(2,272)	372
Depreciation	(10)	(80)	(82)	(27)	(24)
Amortisation	0	0	0	0	0
Operating Profit (before amort. and except.)	(3,992)	(8,512)	(6,320)	(2,300)	348
Intangible Amortisation	0	0	0	0	0
Share-based payments	(3,271)	(2,530)	(311)	(327)	(343)
Exceptionals	0	0	0	0	0
Operating Profit	(7,263)	(11,042)	(6,631)	(2,626)	5
Net Interest	2	1	7	4	5
Profit Before Tax (norm)	(3,990)	(8,510)	(6,313)	(2,295)	354
Profit Before Tax (reported)	(7,261)	(11,040)	(6,624)	(2,622)	11
Tax	0	0	0	0	(73)
Profit After Tax (norm)	(3,990)	(8,510)	(6,313)	(2,295)	281
Profit After Tax (reported)	(7,261)	(11,040)	(6,624)	(2,622)	(62)
Average Number of Shares Outstanding (m)	570.1	699.1	728.6	791.8	801.8
EPS - normalised (c)	(0.70)	(1.22)	(0.87)	(0.29)	0.03
EPS - normalised and fully diluted (c)	(0.70)	(1.22)	(0.87)	(0.29)	0.03
Dividend per share (A$)	0.0	0.0	0.0	0.0	0.0
BALANCE SHEET					
Fixed Assets	188	162	83	72	66
Intangible Assets	0	0	0	0	0
Tangible Assets	188	162	83	72	66
Investments	0	0	0	0	0
Current Assets	4,431	8,945	4,123	6,113	6,108
Stocks	309	537	2,651	2,659	2,827
Debtors	8	136	50	327	528
Cash	3,552	7,973	1,217	2,924	2,548
Other	561	299	204	204	204
Current Liabilities	(1,996)	(1,467)	(1,198)	(1,200)	(1,250)
Creditors	(1,131)	(1,295)	(790)	(792)	(842)
Short term borrowings	(717)	0	0	0	0
Other current liabilities	(148)	(172)	(408)	(408)	(408)
Long Term Liabilities	(128)	(71)	0	(3,000)	(3,000)
Long term borrowings	0	0	0	(3,000)	(3,000)
Other long term liabilities	(128)	(71)	0	0	0
Net Assets	2,495	7,570	3,008	1,986	1,923
CASH FLOW					
Operating Cash Flow	(4,688)	(7,339)	(8,478)	(2,877)	(358)
Net Interest	2	1	7	4	5
Tax	0	0	0	0	0
Capex	(13)	(54)	(2)	(17)	(18)
Acquisitions/disposals	0	0	0	0	0
Financing	8,106	12,533	1,639	1,600	0
Dividends	0	0	0	0	0
Net Cash Flow	3,407	5,141	(6,834)	(1,289)	(370)
Opening net debt/(cash)	500	(2,835)	(7,973)	(1,217)	76
Other	(72)	(3)	78	(4)	(5)
Closing net debt/(cash)	(2,835)	(7,973)	(1,217)	76	452

Source: Company accounts, Edison Investment Research

Contact details	Revenue by geography
Suite 1 Level 9, 432 St Kilda Rd, Melbourne VIC 3004 Australia https://respiri.co/	N/A

Management team

CEO: Marjan Mikel	Executive Chairman: Nicholas Smedley
Marjan has been at the helm of Respiri, taking it from R&D to commercialisation since 2020. He is an experienced managing director and board member, with a career spanning Australia, Europe and Japan. Marjan's focus has been in the healthcare industry, from pharmaceuticals and information services and technology to medical devices and sleep disorder solutions. He founded and subsequently sold Healthy Sleep Solutions after developing it into a successful business, with ResMed as a joint venture/shareholder partner.	Nicholas is an experienced investment banker and M&A advisor, with 14 years' experience at UBS and KPMG. He has worked on M&A transactions in the UK, Hong Kong, China and Australia, with transactions up to A$9bn. Nicholas currently oversees investments in the property, aged care, technology and medtech space. Key areas of expertise include M&A, debt structuring, corporate governance and innovation.

Principal shareholders	(%)
Citicorp Nominees	3.70
Netwealth Investments Super Services	2.78
Peter Karl Braun	2.19
Netwealth Investments Wrap Services	2.17
Mallamanda	2.06

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