

### Med Tech

#### 2Q19 HME Oxygen, Sleep, and Complex Rehab Survey

**REPORT HIGHLIGHTS:** We worked with *HME News* to survey 53 home medical equipment companies (HMEs) about oxygen, sleep, and complex rehab technology products. Over the next 12 months (NTM), respondents expect modest growth in their POC purchases. INGN's private label POCs remain the highest rated but it looks likely to lose market share over the NTM. Over the NTM, respondents expect strong sleep patient volume growth but RMD looks likely to lose market share. Respondents expect only modest declines in oxygen and CPAP reimbursement in Round 2021 of Medicare competitive bidding. IVC's power wheelchairs were tied for the second highest rated but it looks likely to gain market share over the NTM. We think the survey results are negative for INGN's domestic B2B business, mixed for RMD's Americas business, and positive for IVC's North American Mobility & Seating business.

- Respondents expect modest growth in their POC purchases. POCs are expected to increase from 21.5% of the ambulatory oxygen market to 31.5% over the next 12 months. However, respondents only expect 2.6% growth in their POC unit purchases over the next 12 months. Applied Home Healthcare's OxyGo (the private label version of INGN's G3) was the highest rated POC at 5.1 out of 7.0, followed by Applied Home Healthcare's OxyGo Fit (the private label version of INGN's G4) and GCE's Zen-O Lite at 4.9. We note that INGN's new G5 was not included in our survey since it has yet not been launched in the B2B channel. INGN looks likely to lose market share. Over the NTM, respondents expect INGN/Applied Home Healthcare's share of their POC purchases to decrease by 4.8%.
- Respondents expect strong growth in sleep patient volume. Respondents saw their sleep patient volume increase by 10.0% in the last 12 months (LTM) and expect their sleep patient volume to grow by 11.2% in NTM. Both of these growth rates are above our prior survey results of 6.2% and 9.0%, respectively. RMD looks likely to lose market share. Over the NTM, respondents expect RMD's share of their flow generator purchases to decrease by 1.1% and its share of their mask purchases to decrease by 1.3%.
- Flow generator pricing worsened slightly while mask pricing improved. Respondents indicated that flow generator prices declined by 2.0% over the LTM (vs. a 1.5% decline in our prior survey), while mask prices declined by 0.2% over the LTM (vs. a 1.6% decline in prior survey).
- Respondents expect modest declines in oxygen and CPAP reimbursement in Round 2021. Contracts for Medicare's latest round of its competitive bidding program (Round 2021) will start on 1/1/21. Respondents expect Medicare oxygen reimbursement to decline by an average of 2.0% and Medicare CPAP reimbursement to decline by an average of 2.8%.
- **IVC looks likely to gain power wheelchair market share.** Quantum/Pride Mobility had the highest rated power wheelchairs (Medicare coded group 3) at 6.7 out of 7.0, followed by IVC and Permobil at 5.6 and Sunrise at 5.3. Over the NTM, respondents expect IVC's share of their power wheelchair purchases to increase by 2.5%.

### **Topic of Discussion:**

Oxygen, Sleep, and Complex Rehab Technology Equipment Markets

#### **Contributing Analysts**

Mike Matson, CFA (617) 457-0949 mmatson@needhamco.com

David Saxon, CFA (617) 457-0922 dsaxon@needhamco.com

#### **Sector Chart**

S&P 500 Healthcare Index (S5HLTH) 06/28/19

#### **Companies Mentioned in Report:**

- INGN: \$65.49, PT: \$111.00
- IVC: \$4.85, PT: \$15.00

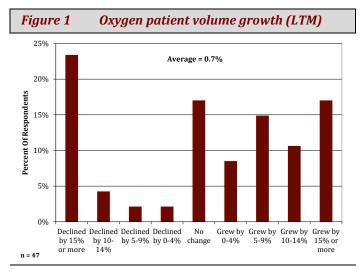
#### Introduction

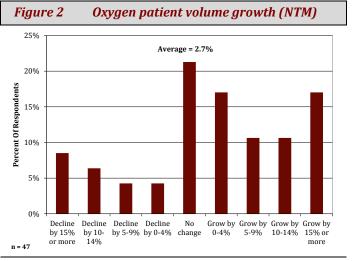
Needham & Company and *HME News* worked together to survey U.S. home medical equipment providers (HMEs) about the sleep and oxygen equipment markets. We received 53 responses to our survey and we note that response rates varied from question to question since none of the questions were mandatory (the response rate for each question is shown on the charts). The survey replies were received between 5/28/18 and 6/12/18.

#### Part 1: Oxygen Questions

# Oxygen patient volume growth is slow but expected to improve somewhat over the next 12 months

On average, respondents reported 0.7% oxygen patient volume growth in the last 12 months. And respondents expect 2.7% growth in the next 12 months. Of the respondents, 32% saw a decline in their sleep patient volume in the last 12 months and 23% expect a decline in the next 12 months.





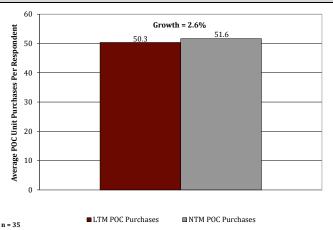
Source: Needham & Company 2Q19 HME Survey

Source: Needham & Company 2Q19 HME Survey

# Respondents expect only low single digit growth in POC unit purchases over the next 12 months

We asked survey respondents how many POCs they purchased in the past 12 months and how many they expect to purchase in the next 12 months to try to predict what POC unit volume growth in Inogen's domestic B2B channel. Respondents report purchasing an average of 50.3 POC units in the last 12 months and expect to purchase 51.6 POC units in the next 12 months which implies growth of 2.6%.

Figure 3 Expected POC volume growth

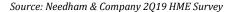


Source: Needham & Company 2Q19 HME Survey

## Inogen looks likely to lose some POC market share in the next 12 months

Inogen's POC market share may decline by 4.6% (not including changes in its Applied Home Healthcare/private label market share) over the next 12 months. Respondents indicated that Inogen's POCs currently make up 21.0% of their purchases and expect this to decrease to 16.3% in the next 12 months. Respironics' and Applied Home Healthcare POC market share may also decrease by 4.0% and 0.2%, respectively, over the next 12 months. ResMed's and Invacare's POC market share may increase by 2.0% and 1.0%, respectively, over the next 12 months while the other smaller manufacturers' market share may increase by 5.8% over the next 12 months.

POC market share Figure 4 40.0% 35.0% 30. 30.0% 25.0% 20.0% 15.0% 10.0% 5.0% 0.0% Applied Home ResMed Inogen Invacare Respironics ■ Current Market Share ■ Market Share In 12 Months n = 42

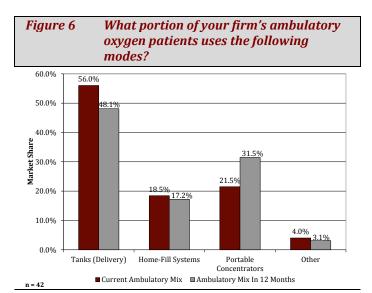


Change in POC market share Figure 5 8.0% 5.8% 6.0% Change In Market Share 4.0% 2.0% 2.0% 1.0% 0.0% Applied ResMed Respironics Other Invacare Home (2.0%)Healthca (4.0%)(4.0%) (4.6%)

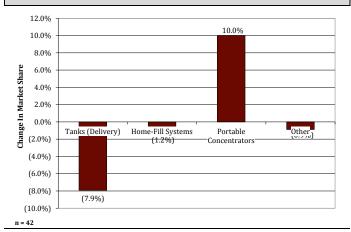
Source: Needham & Company 2Q19 HME Survey

# Survey results indicate that HMEs continue to transition from oxygen tanks to portable oxygen concentrators (POCs)

While delivered tanks currently represent 56.0% of the ambulatory oxygen market, HMEs expect these to see the biggest decline, by 7.9%, to 48.1% of the market over the next 12 months. Delivered tanks are mostly expected to be replaced by POCs, which are expected to increase by 10.0% from 21.5% of the market to 31.5% over the next 12 months.





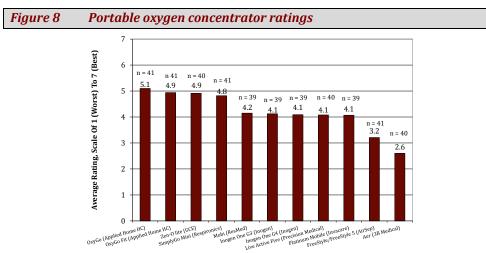


Source: Needham & Company 2Q19 HME Survey

Source: Needham & Company 2Q19 HME Survey

# Applied Home Healthcare's OxyGo POCs (which are private label versions of Inogen's G3 and G4) received the highest ratings

Applied Home Healthcare's OxyGo (the private label version of Inogen's G3) was the highest rated POC at 5.1 out of 7.0, followed by Applied Home Healthcare's OxyGo Fit (the private label version of Inogen's G4) and GCE's Zen-O life both at 4.9, and Respironics' SimplyGo Mini rated 4.8. We note that Inogen announced the launch of its new G5 POC on 4/3/19 (see <a href="here">here</a>). The G5 will replace the G3 and is expected to be smaller, lighter, and offer connectivity. We did not include the G5 in our survey since Inogen has not yet launched it in its B2B channel.

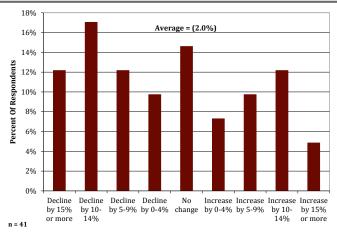


Source: Needham & Company 2Q19 HME Survey

# Oxygen reimbursement is expected to see only a small decline in Round 2021 of Medicare competitive bidding

Respondents indicated that they expect oxygen reimbursement to decline by an average of 2.0% following the next round of Medicare competitive bidding in 2021.

Figure 9 Expected reimbursement impact of round 2021 of Medicare's competitive bidding



Source: Needham & Company 2Q19 HME Survey

### **Part 2: Sleep Questions**

# Respondents expect faster sleep patient volume growth compared to our prior survey

In our earlier surveys, we asked HMEs about their sleep revenue growth. However, we switched to asking about patient volume growth instead, starting with our 4Q13 survey, since revenue growth is affected by reimbursement changes and since we think that patient volume growth is more important for ResMed. As a result of this change, the responses to this question are not directly comparable to our prior surveys, although we have added these results to our time series chart in Figure 3.

On average, respondents reported 10.0% sleep patient volume growth in the last 12 months, which is an improvement from the 6.2% growth reported in our 4Q18 survey. And respondents expect 11.2% growth in the next 12 months, which is an improvement from the 9.0% growth expected in our 4Q18 survey. Of the respondents, just 14% saw a decline in their sleep patient volume in the last 12 months and just 9% expect a decline in the next 12 months.

Figure 10 Sleep patient volume growth (LTM) 45% Average = 10.0% 40% 35% Percent Of Respondent 30% 25% 20% 10% 5% 0% Declined Declined Declined No Grew by Grew by Grew by by 0-9% change 10-19% 20-29%

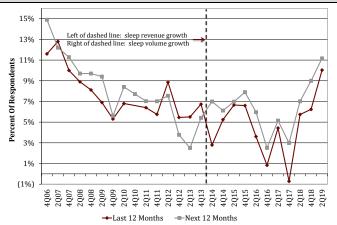
Source: Needham & Company 2Q19 HME Survey

Figure 11 Sleep patient volume growth (NTM) 35% Average = 11.2% 30% 25% Percent Of Respon 20% 10% 5% 0% Decline Decline Decline Decline No Grow by Grow by Grow by by 0-9% change 10-19% 20-29%

Source: Needham & Company 2Q19 HME Survey

June 28, 2019 Needham & Company, LLC

Figure 12 Sleep revenue/volume growth (time series)

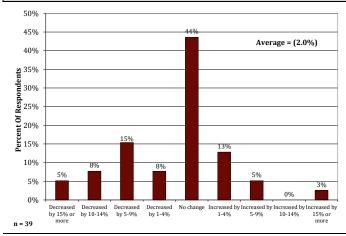


Source: Needham & Company 2Q19 HME Survey and prior surveys

### Flow generator pricing worsened slightly from our prior survey

Respondents indicated that flow generator prices declined by 2.0% in the last 12 months versus a 1.5% decline in our 4Q18 survey. While the price decline increased slightly from our prior survey, the longer term trend has been improving since 2014.

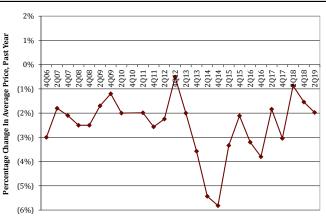
Figure 13 Change in flow generator prices (LTM)



series)

Change in flow generator prices (time

Figure 14



Source: Needham & Company 2019 HME Survey

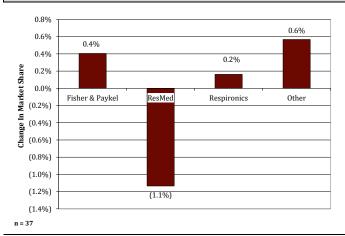
Source: Needham & Company 2019 HME Survey and prior surveys

#### ResMed looks likely to lose some flow generator market share in the next 12 months

ResMed's flow generator market share may decrease by 1.1% over the next 12 months. Respondents indicated that ResMed's flow generators currently make up 52.3% of their purchases and expect this to decrease to 51.2% in the next 12 months. Respironics' and Fisher & Paykel's flow generator market share may increase by 0.2% and 0.4%, respectively, over the next 12 months while the other smaller manufacturers' market share may increase by 0.6% over the next 12 months.

Figure 15 Flow generator market share 60.0% 2.3% 50.0% Market Share %0.08 20.0% 10.0% 0.0% Fisher & Pavkel Other ResMed Respironics ■ Current Market Share ■ Market Share In 12 Months n = 37

Figure 16 Change in flow generator market share

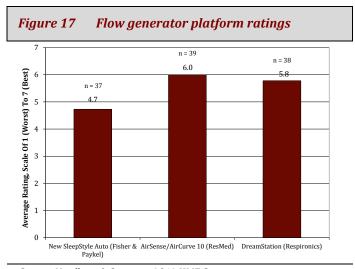


Source: Needham & Company 2Q19 HME Survey

Source: Needham & Company 2Q19 HME Survey

## ResMed's flow generators remain the highest rated

ResMed's AirSense 10 flow generator platform was rated 6.0 out of 7.0, above Respironics' DreamStation flow generator platform, which was rated 5.8 and well above Fisher & Paykel's Icon+ flow generator platform at 4.7. This survey is similar to our 4Q18 survey where ResMed's flow generator platform also held the top-rated spot.

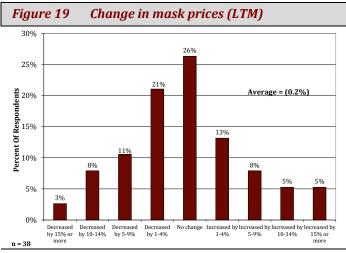


Source: Needham & Company 2Q19 HME Survey

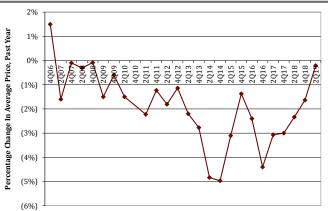
Source: Needham & Company 2Q19 HME Survey and prior surveys

#### Mask pricing improved from our prior survey

Respondents indicated that mask prices declined by 0.2% in the last 12 months versus a 1.6% decline in our 4Q18 survey. This represents the fifth consecutive improvement in mask pricing.







Source: Needham & Company 2Q19 HME Survey and prior surveys

Source: Needham & Company 2Q19 HME Survey

## ResMed looks likely to lose some mask market share in the next 12 months

ResMed's mask market share may decline by 1.3% over the next 12 months. Respondents indicated that ResMed's masks currently make up 50.0% of their purchases and expect this to decrease to 48.7% in the next 12 months. Respironics' and Fisher & Paykel's mask market share may increase by 0.9% and 0.1%, respectively, over the next 12 months while the other smaller manufacturers' market share may increase by 0.3% over the next 12 months.

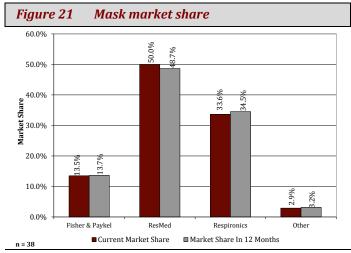
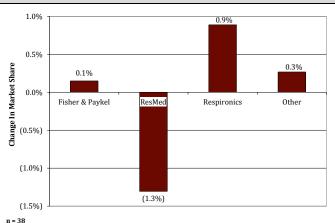


Figure 22 Change in mask market share



Source: Needham & Company 2Q19 HME Survey

Source: Needham & Company 2Q19 HME Survey

## ResMed had the second highest rated nasal mask...

Respironics' nasal masks were the highest rated for the third consecutive survey, according to our survey's respondents, followed by ResMed in second place and Fisher & Paykel in third place. In standard nasal masks, Respironics' DreamWear Nasal was rated 6.0 out of 7.0, followed by ResMed's AirFit N20 and AirFit N30i at 5.9 and 5.8, respectively, Respironics' DreamWisp at 5.7, and Fisher & Paykel's Eson 2 and Zest Q at 5.6 and 5.1, respectively.

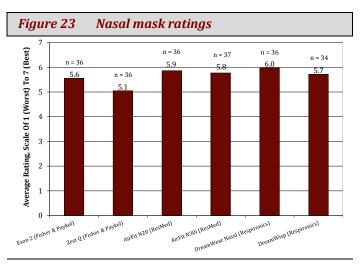
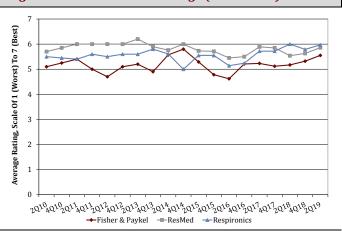


Figure 24 Nasal mask ratings (time series)

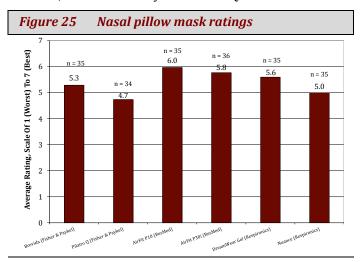


Note: Uses highest rated mask if more than one was rated Source: Needham & Company 2Q19 HME Survey and prior surveys

Source: Needham & Company 2Q19 HME Survey

### ...the highest rated nasal pillow mask...

ResMed maintained the highest ratings in the nasal pillow category followed by Respironics in second place and Fisher & Paykel in third place. ResMed's AirFit P10 was rated the highest at 6.0 out of 7.0, with ResMed's P30i rated 5.8, Respironics' DreamWear Gel rated 5.6, Fisher & Paykel's Brevida rated 5.3, Respironics' Nuance rated 5.0, and Fisher & Paykel's Pilairo Q rated 4.7.



Source: Needham & Company 2Q19 HME Survey

Note: Uses highest rated mask if more than one was rated Source: Needham & Company 2Q19 HME Survey and prior surveys

### ...and tied for the highest rated full face mask

ResMed tied with Fisher & Paykel for the highest rating in the full face mask category followed by Respironics. ResMed's AirFit F20 and Fisher & Paykel's Simplus were both rated 5.9 out of 7.0, while ResMed's AirFit F30 was rated 5.7 followed by Respironics' DreamWear Full and Amara View rated at 5.6 and 5.5, respectively, and Fisher & Paykel's Vitera at 4.6.

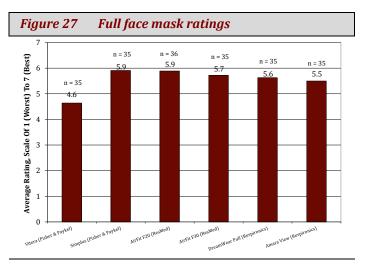
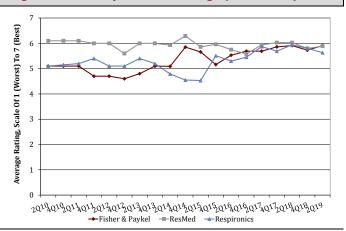


Figure 28 Full face mask ratings (time series)



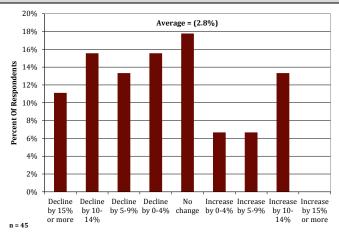
Note: Uses highest rated mask if more than one was rated Source: Needham & Company 2Q19 HME Survey and prior surveys

Source: Needham & Company 2Q19 HME Survey

# CPAP reimbursement is expected to see only a small decline in Round 2021 of Medicare competitive bidding

Respondents indicated that they expect CPAP reimbursement to decline by an average of 2.8% following the next round of Medicare competitive bidding in 2021.

Figure 29 Expected reimbursement impact of round 2021 of Medicare's competitive bidding



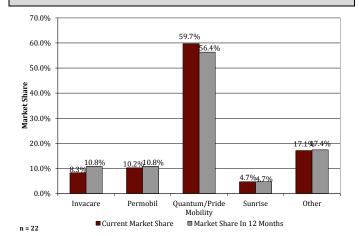
Source: Needham & Company 2Q19 HME Survey

#### Part 3: Complex Rehab Technology Questions

### Invacare looks likely to gain power wheelchair market share in the next 12 months

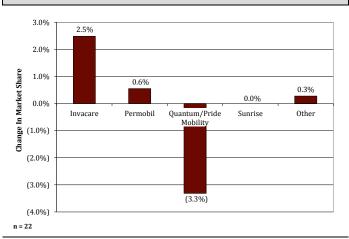
Invacare's power wheelchair market share may increase by 2.5% over the next 12 months. Respondents indicated that Invacare's power wheelchairs currently make up 8.3% of their purchases and expect this to increase to 10.8% in the next 12 months. Quantum/Pride Mobility's power wheelchair market share may decrease by 3.3% while Permobil's power wheelchair market share may increase by 0.6% and Sunrise's power wheelchair market share is expected to remain flat. And the other smaller manufacturers' market share may increase by 0.3% over the next 12 months.

Figure 30 Power wheelchair market share



Note: Only Medicare coded group 3 power wheelchair product lines Source: Needham & Company 2Q19 HME Survey

Figure 31 Change in power wheelchair market share

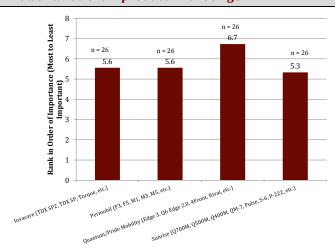


Note: Only Medicare coded group 3 power wheelchair product lines Source: Needham & Company 2Q19 HME Survey

# Quantum/Pride Mobility have the highest rated power wheelchairs

According to our survey's respondents, Pride Mobility has the highest rated power wheelchairs followed by Invacare and Permobil. Pride Mobility's power wheelchairs (e.g. Edge 3, Q6 Edge 2.0, 4Front, Rival, etc.) were rated 6.7 out of 7.0 followed by Invacare's (e.g. TDX SP2, TDX SP, Torque, etc.) and Permobil's (e.g. F3, F5, M1, M3, M5, etc.) power wheelchairs which were both rated 5.6, trailed by Sunrise's (e.g. Q700M, Q500M, Q400M, QM-7, Pulse, S-6, P-222, etc.) power wheelchairs at 5.3.

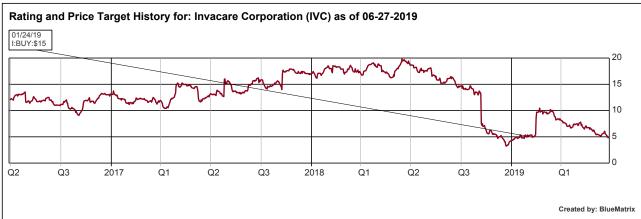
Figure 32 Power wheelchair product line ratings



Note: Only Medicare coded group 3 power wheelchair product lines Source: Needham & Company 2Q19 HME Survey









#### ANALYST CERTIFICATION

I, Mike Matson hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company (ies) and its (their) securities. I, also certify that I, have not been, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

#### RATINGS DISTRIBUTIONS FOR NEEDHAM & COMPANY, LLC

	% of companies under coverage with this rating	% for which investment banking services have been provided for in the past 12 months
Strong Buy	7	14
Buy	61	25
Hold	30	1
Underperform	1	0
Rating Suspended	<1	0
Restricted	<1	0

Needham & Company, LLC employs a rating system based on the following:



Strong Buy: A security, which at the time the rating is instituted, we expect to outperform the average total return of the broader market as well as the securities in the analyst's coverage universe over the next 12 months.

Buy: A security, which at the time the rating is instituted, we expect to outperform the average total return of the broader market over the next 12 months.

Hold: A security, which at the time the rating is instituted, we expect to perform approximately in line with the average total return of the broader market over the next 12 months.

<u>Underperform:</u> A security, which at the time the rating is instituted, we expect to underperform the average total return of the broader market over the next 12 months.

Rating Suspended: We have suspended the rating and/or price target, if any, for this security, because there is not a sufficient fundamental basis for determining a rating or price target. The previous rating and price target, if any, are no longer in effect and should not be relied upon. This rating also includes the previous designation of "Under Review".

Restricted: Needham & Company, LLC policy and/or applicable law and regulations preclude certain types of communications, including an investment recommendation, during the course of Needham & Company, LLC's engagement in an investment banking transaction and in certain other circumstances.

For disclosure purposes, in accordance with FINRA requirements, please note that our Strong Buy and Buy ratings most closely correspond to a "Buy" recommendation. When combined, 67% of companies under coverage would have a "Buy" rating and 23% have had investment banking services provided within the past 12 months. Hold ratings mostly correspond to a "Hold/Neutral" recommendation; while our Underperform rating closely corresponds to the "Sell" recommendation required by the FINRA.

Our rating system attempts to incorporate industry, company and/or overall market risk and volatility. Consequently, at any given point in time, our investment rating on a security and its implied price appreciation may not correspond to the stated 12-month price target. For valuation methods used to determine our price targets and risks related to our price targets, please contact your Needham & Company, LLC salesperson for a copy of the most recent research report.

Price charts and rating histories for companies under coverage and discussed in this report are available at <a href="http://www.needhamco.com/">http://www.needhamco.com/</a>. You may also request this information by writing to: Needham & Company, LLC, Attn: Compliance/Research, 250 Park Ave., New York, NY 10177

By issuing this research report, each Needham & Company, LLC analyst and associate whose name appears within this report hereby certifies that (i) the recommendations and opinions expressed in the research report accurately reflect the research analyst's and associate's personal views about any and all of the subject securities or issuers discussed herein and (ii) no part of the research analyst's or associate's compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst or associate in the research report.

#### **Disclosures**

The research analyst and research associate have received compensation based upon various factors, including quality of research, investor client feedback, and the Firm's overall revenues, which includes investment banking revenues for the following: Inogen, Inc., Invacare Corporation and ResMed Inc.

The Firm, at the time of publication, makes a market in the subject company Inogen, Inc. .

#### **Equity Options Disclosure**

Any Equity Options or Technical Strategy Opinions ("Opinions") contained within this report was prepared by the Equity Options Sales and Trading Desk of Needham & Company, LLC ("Needham" or the "Firm") for distribution to Needham's clients. This Opinion consists of market information and general market commentary only. It is not intended to be an analysis of any security or to provide any information sufficient upon which to base an investment decision.

THIS EQUITY OPTIONS OR TECHNICAL STRATEGY OPINION IS NOT A PRODUCT OF NEEDHAM'S RESEARCH DEPARTMENT AND IS NOT A RESEARCH REPORT. Unless otherwise specifically stated, the information and commentary expressed herein are solely those of the author and may differ from the information, views and analysis expressed by Needham's Research Department or other departments of the Firm or its affiliates.

Needham and its affiliates may have positions (long or short), effect transactions or make a market in the securities or financial instruments referenced in this Opinion. Needham or its affiliates may engage in securities transactions that are not consistent with the information and commentary expressed in this Opinion. Needham may have provided investment banking or other services to the issuers mentioned herein and may solicit such services in the future.

If this Opinion includes extracts or summary material derived from research reports produced by Needham's Research Department, you are directed to the most recent research report for further details, including analyst certifications and other important disclosures. Copies of such reports may be obtained from your Needham sales representative or at <a href="https://www.needhamco.com">www.needhamco.com</a>

This material is provided for informational purposes only and is not intended as a recommendation or an offer or solicitation for the purchase or sale of any security or financial instrument. Any investment decision by you should be based on your specific investment objectives and financial situation. Please contact your Needham sales representative for specific guidance.

The information contained in this Opinion has been obtained from or is based upon sources believed to be reliable, but neither Needham nor the author makes any representation or warranty as to its accuracy or completeness. The information contained in this Opinion is as of the date specified herein. Needham does not undertake any obligation to monitor or update the information. Past performance is not indicative of future results and no representation or warranty, express or implied, is made with respect to future performance. Needham disclaims all liability for any loss that may arise (whether direct or consequential) from any use of the information contained in this Opinion.

Structured securities, options, futures and other derivatives are complex instruments, may involve a high degree of risk, and may be appropriate investments only for sophisticated investors who are capable of understanding and assuming the risks involved. Because of the importance of tax considerations to many options transactions, any investor considering the purchase or sale of any options contract should consult with his or her tax advisor as to how taxes affect the outcome of contemplated transactions. Needham and its affiliates do not provide tax advice.

OPTIONS ARE NOT SUITABLE FOR ALL INVESTORS. For further information on the risks associated therewith, please consult the Options Clearing Corporation's options risk disclosure document available at the following web address: <a href="http://www.optionsclearing.com/about/publications/character-risks.jsp">http://www.optionsclearing.com/about/publications/character-risks.jsp</a>

Clients should call the Equity Sales and Trading Desk for additional information.



This report is for informational purposes only and does not constitute a solicitation or an offer to buy or sell any securities mentioned herein. Information contained in this report has been obtained from sources believed to be reliable, but Needham & Company, LLC makes no representation as to its accuracy or completeness, except with respect to the Disclosure Section of the report. Any opinions expressed herein reflect our judgment as of the date of the materials and are subject to change without notice. The securities discussed in this report may not be suitable for all investors and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. Investors must make their own investment decisions based on their financial situations and investment objectives. The value of income from your investment may vary because of changes in interest rates, changes in the financial and operational conditions of the companies and other factors. Investors should be aware that the market price of securities discussed in this report may be volatile. Due to industry, company and overall market risk and volatility, at the securities current price, our investment rating may not correspond to the stated price target. Additional information regarding the securities mentioned in this report is available upon request.

© Copyright 2019, Needham & Company, LLC, Member FINRA, SIPC.