Medical Developments International

Market update

Medical Developments International

Vision

Medical Developments International (MDI) is a leading Emergency Medicine Company.

Our aim is to:

1. Provide unique and innovative products to assist our customers in the management of acute and procedural pain and to dominate the analgesic trauma and minor surgical procedures markets internationally.
2. Provide unique and innovative products to assist our customers in the management of delivery of respiratory medications, resuscitation and oxygen therapies to customers and to dominate the Medical Devices for Asthma and COPD market internationally.

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The Business

MDI is delivering two world class “company making” business opportunities.

The risk profile of these opportunities is relatively low and well understood.

Penthrox: Penthrox has the potential to be the market leader in analgesic markets in the USA, Europe and elsewhere. Penthrox is not an opiate and delivers time and cost savings. It is the pain solutions for trauma and minor surgical procedures.

Our Respiratory Medical Devices are amongst the world’s best and will generate significant growth.

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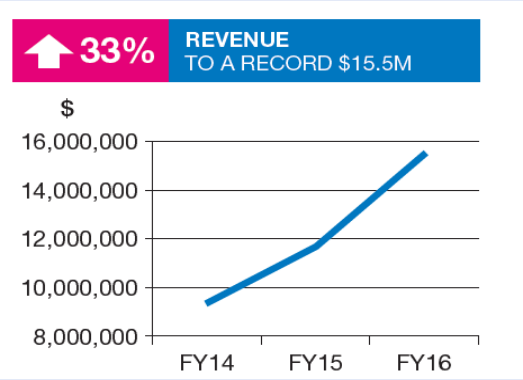
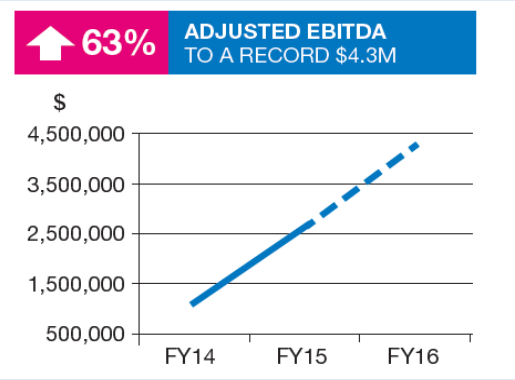
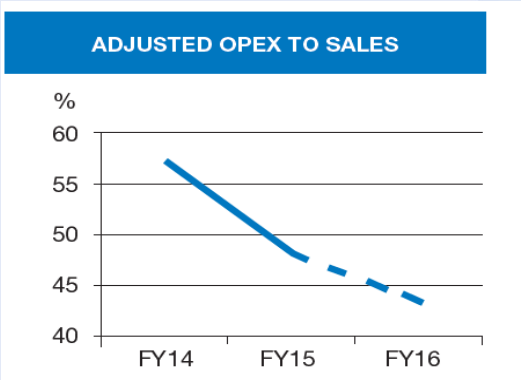
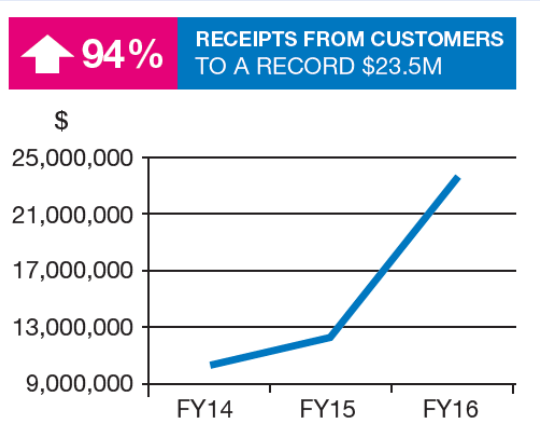
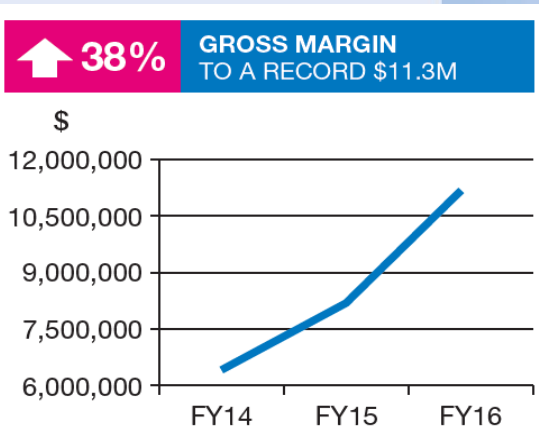
Financial summary of FY16











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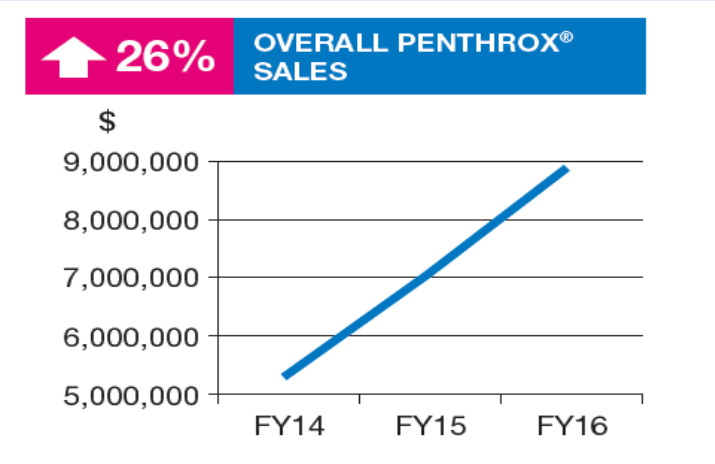
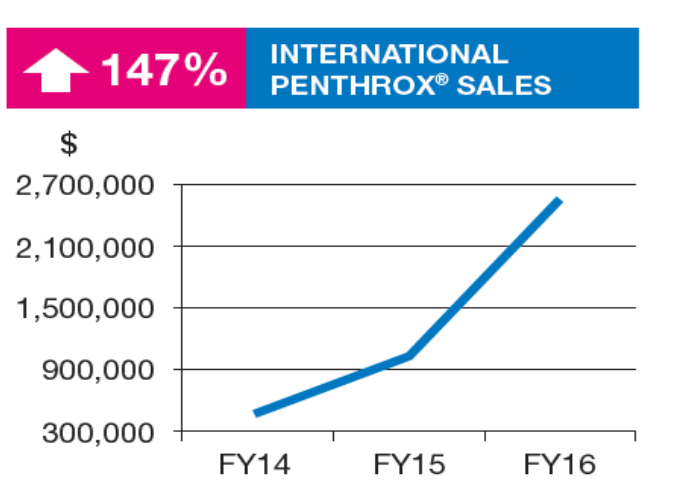
Financial summary of FY16 Penthrox





Other key highlights

- Australian hospitals grew 30%
- Australian ambulance business continues to grow
- Middle East sales growth of 31%

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Key Achievements for Penthrox

- Strong sales growth for Penthrox® globally
- Regulatory approval for Penthrox® in UK, Ireland, France, Belgium and Singapore
- Launch and first sales into new markets including UK, Ireland and Singapore
- Penthrox® is fully reimbursed in the UK and Ireland
- Regulatory submissions made in multiple countries
- Appointed Mundipharma International as distribution partner for Europe
- Received $15m in cash milestone payments
- 5 Patent Applications submitted with more planned

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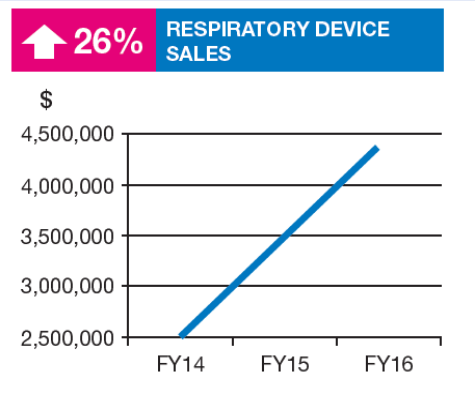
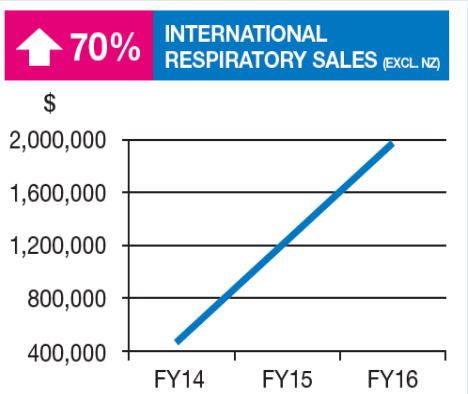
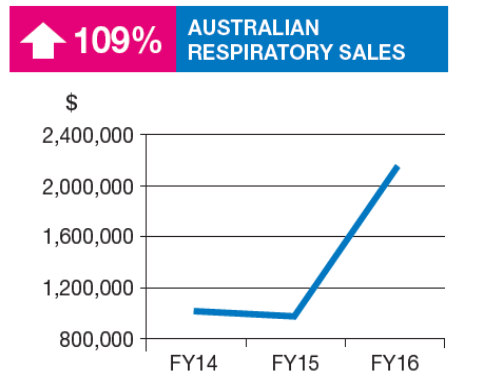
Financial summary of FY16 Respiratory







Other key highlights

- Strong result given New Zealand government contract was not renewed
- Sales into Asia grew by more than 70%
- New distribution partners in the USA

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Key Achievements Respiratory

- Purchased Breath-A-Tech, Australia's largest respiratory devices brand
- Strong sales growth in Australian respiratory device sales
- Strong sales growth from international markets
- New distribution deals signed in Europe
- New distribution deals signed with partners in the USA
- New distribution deals signed with partners in Canada
- New distribution deals signed with partners in Asia
- FDA approval of range of anti-static respiratory devices in the USA

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Key Achievements Other

- Relocated Head Office and manufacturing to Scoresby, Victoria, Australia
- Commenced construction of our new Penthrox® Manufacturing Facility
- Ongoing improvement in manufacturing costs and efficiency
- Debt free
- Received R&D Tax Incentive concession of $0.12m
- Awarded a $0.37m State Government grant in relation to the new Penthrox® manufacturing facility
- Progress in product development across all business units
- Continued investment in clinical development programs, trials and registrations in new markets
- Resumed dividends in H1 FY16
- Invested in staff to support a worldwide footprint

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Financial summary

All figures are in AUD$ million unless stated otherwise	FY2014	FY2015	FY2016
Total revenue	9.4	11.7	15.5
R & D investment	0.1	0.1	0.1
EBITDA	1.1	2.6	4.3*
Net profit	0.9	1.5	1.6
Capital investment	1.9	1.5	6.2
Total assets at 30 June	22.6	23.0	41.2
Total equity at 30 June	15.8	17.4	19.0
Weighted average number of shares (millions)	57.7	57.7	58.0
Market Capitalisation	71.3	155.8	321.9
Dividend per share	0	0	4 cents
*adjusted			

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Financial Summary

MDI has been profitable every year since listing on the ASX in 2003 and used those profits for registration and additional clinical studies and:

- has generated a positive cash flow every year;
- pays tax and has paid fully franked dividends;
- has received almost $15 million in upfronts and milestones in the last 15 months; and
- expects a further $13 million in milestone payments to be received over the next 18 months.

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MDI Investor Dashboard (ASX: MVP)

Historical Stock Chart (3 yr)

Current stock Price

5.800

10am

▲ 0.200 (3.57%)

18 Aug,

Day High	5.800
Day Low	5.650
Open	5.700
Prev. Close	5.600
Volume	72,498
52 Wk. High	6.850 (3 May 2016)
52 Wk. Low	2.100 (25 Aug 2015)
Mkt. Cap	330.32 (Mil)

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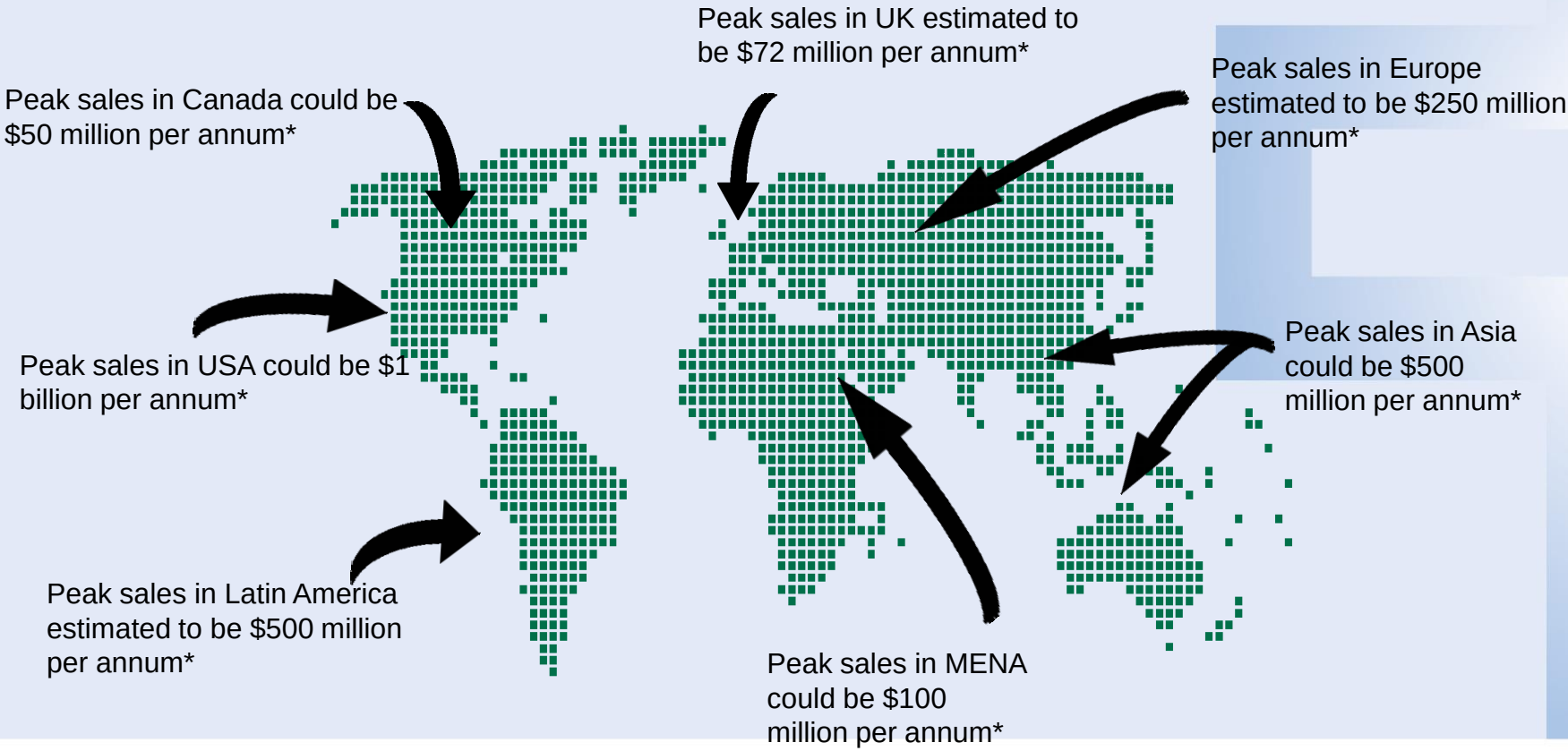
Penthrox

Potential global sales $2 billion+



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*Bases on company estimates including assumptions around market penetration and reimbursement levels

Penthrox value proposition

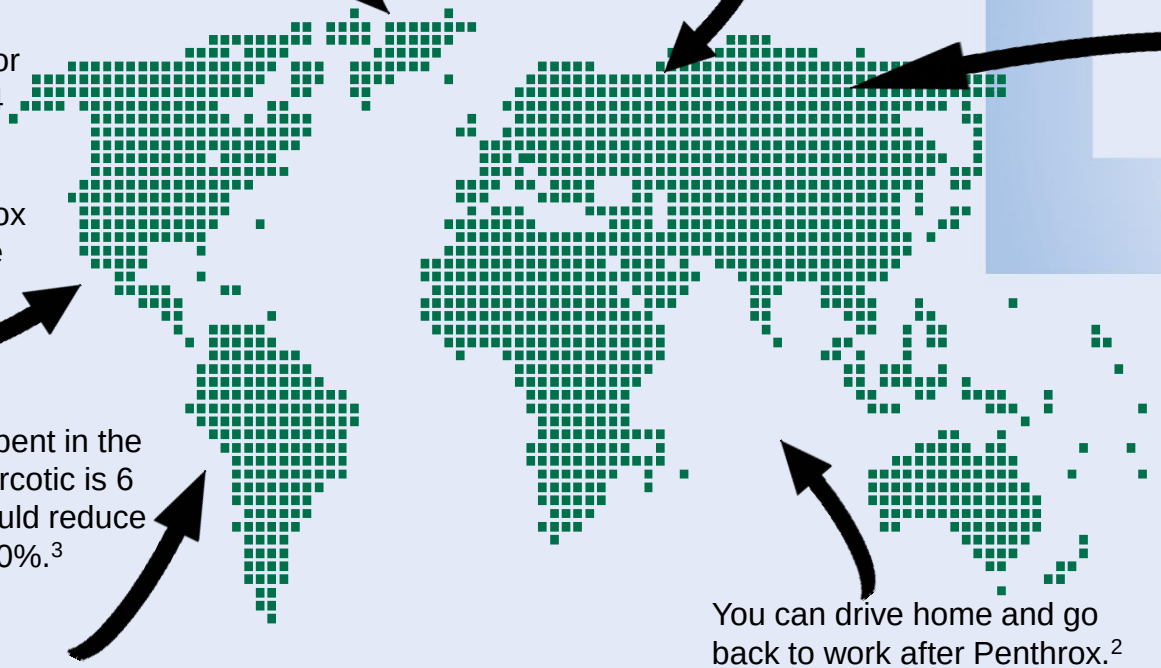
Non-narcotic trauma relief, non-addictive, safe.[1]

Not a restricted medicine

Penthrox can materially improve the throughput of patients[7,8] in the ER. It enables better time to analgesia and less medical care and observation compared with narcotics.

In 2008 the average cost for an ER bed for a category 4 trauma was USD$1298[4] (without medical care or medication costs). Penthrox could materially reduce the cost of treatment.

Penthrox improved time to analgesia.[5,6]



The average time spent in the ER if you have a narcotic is 6 hours. Penthrox could reduce that by more than 50%.[3]

You can drive home and go back to work after Penthrox.[2]

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1. Penthrox Summary of Product Characteristics (SPC), 2015
2. Nguyen et al., Journal of Gastroenterology and Hepatology, 30 (Suppl. 3): 55, 2015
3. Company estimate
4. US Agency for Healthcare Research and Quality. Emergency Room Services-Mean and Median Expenses per Person With Expense and Distribution of Expenses by Source of Payment: 2008. Medical Expenditure Panel Survey Household Component Data.
5. Sokoloff et al. BMJ Open 2014; 4e004288. doi:10.1136/bmjopen-2013-004288
6. Ng et al. Clinical Evaluation of Penthrox® (Methoxyflurane) and Tramadol for the Singapore Emergency Ambulance Service. SEMS. 27 Feb 2016.
7. Spruyt et al., BMJ Supportive & Palliative Care, 4(4):342-8. 2014
8. Nguyen et al. Endosc Int Open. 3(5): E487-93. 2015.

Penthrox

New Markets and submissions in FY17 and beyond

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Penthrox USA

MVP submitted a detailed regulatory package to the FDA in January 2016. We received a written response from the FDA detailing it's opinion on the strengths of our regulatory package and by inference the work required to get Penthrox approved for sale in the United States of America.

Amongst those requirements is the need to perform a Pivotal Phase III Clinical Trial (in addition to the STOP study and Bone Marrow Biopsy Phase III studies which MVP has successfully completed.

MVP is still working through the details of the Phase III study for the USA.

MVP has a track record of successfully completing Phase III studies on time and budget.

MVP is moving ahead to appoint advisors to find a partner for Penthrox in the USA.

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Penthrox
Clinical development program

Additional clinical trials and studies are planned for FY17 (and beyond) which will broaden the indications for use of Penthrox® including:

1. PIP Study – a European and USA compliant paediatric study.
2. PASS – as Post Authorisation Safety Study designed to track the users of Penthrox in Europe.
3. A Phase III Pivotal trial in the USA. Work has commenced on MVPs' Pivotal Phase III Study.
4. We are developing a program of work to support additional indications for Penthrox worldwide. Our longer term ambition is to extend the use of Penthrox into:
    i. Post operative breakthrough pain
    ii. Breakthrough cancer pain
    iii. repeat use scenarios

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Penthrox
Intellectual Property

MDI is protecting its future by generating intellectual property from its manufacturing technology and delivery devices.

In the last 12 months MDI has filed and is managing the following patents and trademarks:

- 4 Penthrox Inhaler patents
- 1 manufacturing patent
- Numerous trademark filings to mirror global growth

MDI is also generating significant “Data Exclusivity” rights from its successful regulatory approvals around the world.

Note: “Data Exclusivity” works like a patent and protects the product in market from competition but usually for a shorter period of time.

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Penthrox
Manufacturing

MDI has invested millions of dollars developing new manufacturing techniques and methods and creating valuable intellectual property.

MDI has:

1. Intellectual property.
2. Global production capacity.
3. Lowest cost to manufacture.
4. Significant competitive advantage.

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Penthrox
Outlook

In addition to the global trauma market, MDI has plans to develop applications for its products in the following markets:

- Minor Surgical Procedure
- Military
- Break Through Pain (cancer and post operative)
- Home Use trauma
- World Aid (*no needles, opioid's or infection*)
- Dentistry procedures
- Cosmetic procedures

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Penthrox
Outlook

MVP's ambition is to globalise Penthrox and in doing so make it the main stream analgesic of choice around the world. That process has begun. Over the next 12 months we expect to:

1. Obtain approval to sell Penthrox in the remaining markets in Europe and in a number of courtiers outside the EU;
2. Conclude additional distribution partnership for new countries;
3. Commence and progress work on gathering the clinical data needed to submit a "New Drug Application" to the Food & Drug Administration in the USA;
4. Commence work on producing other Analgesic and Anaesthetic products using the intellectual property that is our new manufacturing process;
5. Complete our manufacturing facility which will have special purpose Research and Development laboratories dedicated to improving the way we manufacture Penthrox.

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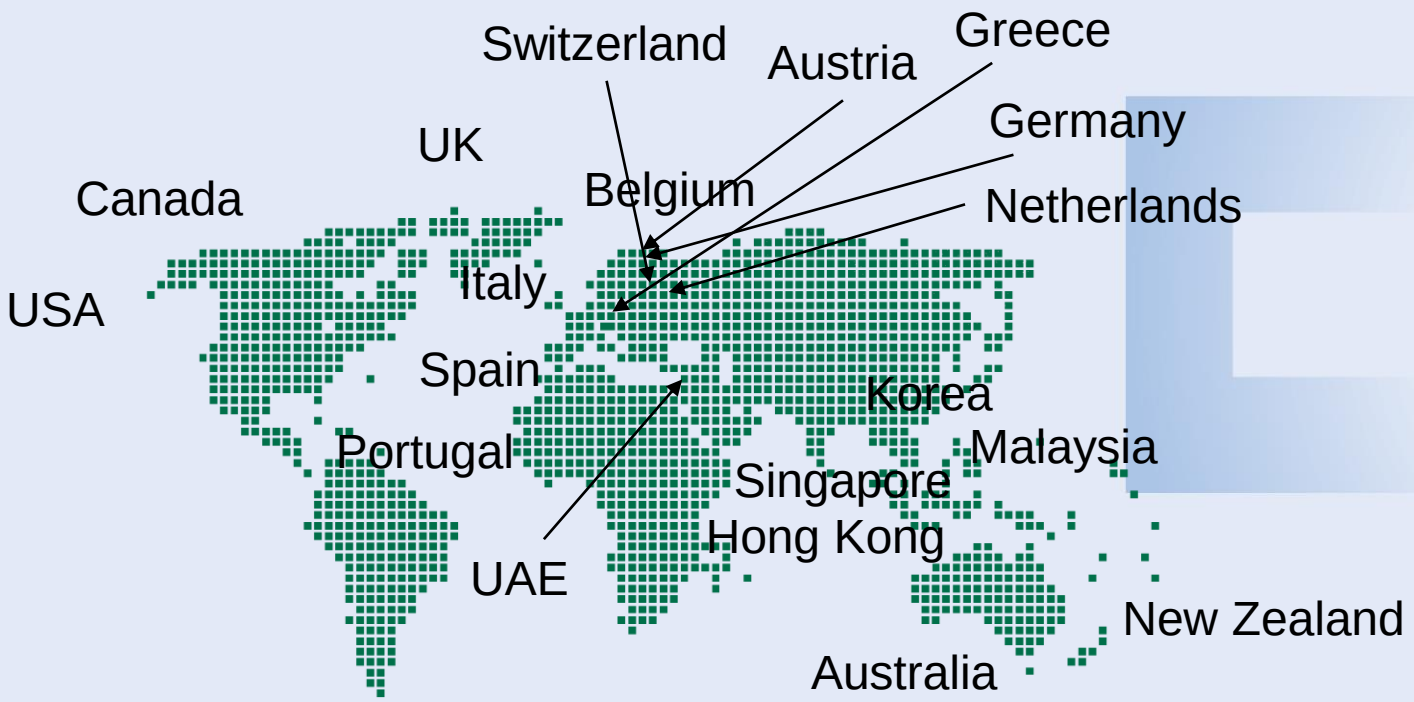
Respiratory Devices

Existing distribution network



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Respiratory Devices
Intellectual Property

MDI is protecting its future by generating intellectual property from its new range of respiratory devices.

MDI has filed and is a number of global patents and more than 20 international Trade Marks and Registered Designs.

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Respiratory Devices
Outlook

MVP's ambition is to globalise its Respiratory Devices. That process has begun. We already have partners and make sales in more than 18 countries.

Over the next 12 months we expect to:

1. Obtain additional partnership deals in the USA and deliver sales growth;
2. Obtain additional partnership deals in other countries around the world;
3. Consolidate our position as the largest supplier of Respiratory Devices in Australia;
4. Introduce new products;
5. Continue to drive down costs and increase the range and quality of our products;

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MDI Corporate Overview

David Williams

Non-Executive Chairman

The Managing Director of Kidder Williams Ltd, with 32 years experience in investment banking.

Dr Harry Oxer

Non-Executive Director

A Medical Consultant to MVP and St John Ambulance in Western Australia.

Leon Hoare

Non-Executive Director

Recent Managing Director of Smith & Nephew in Australia and New Zealand.

Max Johnston

Non-Executive Director

Recent MD of J&J Asia Pacific. A Non-Executive Director of Enero Group Ltd, Polynovo Limited and Chairman of Probiotec Limited.

Allan McCallum

Non-Executive Director

Over 15 years public companies experience including an ASX 50 company.

Phillip Powell

Non-Executive Director

A Chartered Accountant and has an extensive finance background.

Management Team

John Sharman

Chief Executive Officer

Mark Edwards

Group Financial Controller & Company Secretary

Glenn Gilbert

Associate Director, Commercial

Scott Courtney

Director of Operations & Research

Maggie Oh

Director of Scientific Affairs

Keith Jeffs

General Manager, Sales & Marketing

Jake Golding

Quality Assurance & Validation Manager

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MDI Global strategy

New and revised materials and process
(lowest cost producer and significant IP)

New Business Partners

Product innovation
(worlds best delivery devices and significant IP)

Clinical trials
(Commercial clinical studies to support marketing and product development)

Regulatory Approval and new markets

Medical Developments International

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Disclaimer

This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as 'believes', 'expects', 'anticipates', 'projects', 'intends', 'should', 'seeks', 'estimates', 'future' or similar expressions or by discussion of, among other things, strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation, among others:

1. pricing and product initiatives of competitors;
2. legislative and regulatory developments and economic conditions;
3. delay or inability in obtaining regulatory approvals or bringing products to market;
4. fluctuations in currency exchange rates and general financial market conditions;
5. uncertainties in the discovery, development or marketing of new products or new uses of existing products, including without limitation negative results of clinical trials or research projects, unexpected side-effects of pipeline or marketed products;
6. increased government pricing pressures;
7. interruptions in production;
8. loss or inability to obtain adequate protection for intellectual property rights;
9. litigation;
10. loss of key executives or other employees; and
11. adverse publicity and news coverage.

There can be no assurance that any existing or future regulatory filings will satisfy any health authorities' requirements regarding any one or more product candidates nor can there be any assurance that such product candidates will be approved by any health authorities for sale in any market or that they will reach any particular level of sales.

Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described herein as anticipated, believed, estimated or expected. Medical Development International Limited is providing this information as of the date of this document and does not assume any obligation to update any forward-looking statements contained in this document as a result of new information, future events or developments or otherwise.

Any statements regarding earnings is not a profit forecast and should not be interpreted to mean that Medical Developments International's earnings for this year or any subsequent period will necessarily match or exceed the historical published earnings of Medical Developments International.

For marketed products discussed in this presentation, please see full prescribing information on our website at www.medicaldev.com

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Annexure

About Penthrox

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Penthrox
A world class opportunity

Penthrox®

- Market Leader for trauma pain
- Opiate sparing, fast acting inhalational analgesic
- 85% of patients reach clinical analgesia within 10 breaths[1]
- Is a solution to a significant unmet clinical need
- Demonstrated safety and efficacy profile for 30+ years
- World class regulatory dossier completed and being used to generate regulatory approvals around the world (*work commenced in USA and Europe*)
- Manufactured in Australia

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1 Coffey et al., Emerg Med J, 31(8): 613-8, 2014

Penthrox
A world class opportunity

Penthrox®

- Sold in 15 countries around the world including Australia, UK, Europe, South Africa, Singapore with France and Belgium in the coming months.
- Major distribution deals signed in Europe and elsewhere in 2015.
- $15 million in upfronts and milestones received.
- Sales commenced in UK, Ireland, Singapore in 2016.
- Patents covering new Penthrox delivery devices.
- Significant Intellectual Property relating to manufacturing process.

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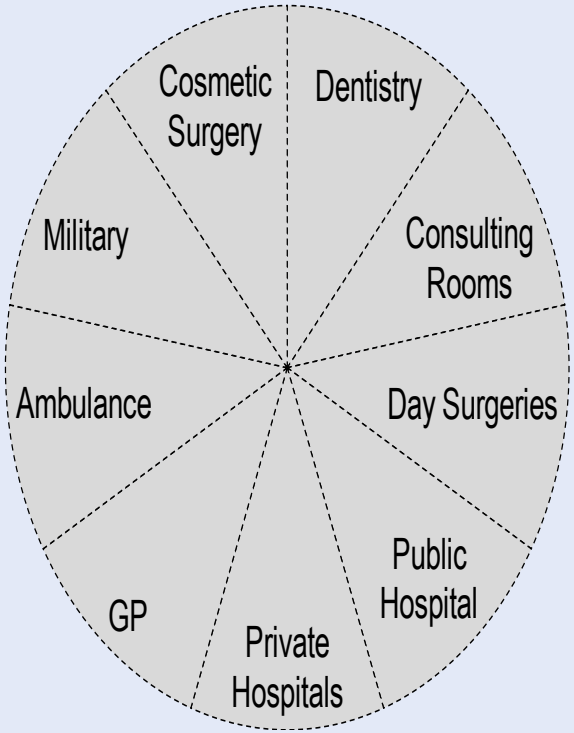
Penthrox
Clinical application

Painful procedures

- Burn injuries
- Breaks, fractures and dislocations
- Abdomen pain
- Chest pain
- Other acute pain



Either as an adjunct to or replacement of current forms of pain relief

Painful procedures

- Cutaneous excisions
- Liquid nitrogen removals of skin-cancers, warts, etc.
- Invasive angiographies
- Dental procedures
- Colonoscopy
- Imaging
- Other non-general anaesthetic painful procedures
- Cosmetic procedures

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Penthrox
Non- narcotic and clinically proven efficacy

VAS scores compared, IV morphine vs IN fentanyl vs Penthrox

Summary of mean VAS Pain Scores						
Time	**0**	**5 minutes**	**10 minutes**	**15 minutes**	**20 minutes**	**30 minutes**
Morphine	67	42	41	-	35	33
Fentanyl	68	55	46	-	37	37
Penthrox®	65	43	37	31	30	-
Summary of mean reduction in VAS Pain Scores						
Time	**0**	**5 minutes**	**10 minutes**	**15 minutes**	**20 minutes**	**30 minutes**
Morphine	0	25	26	-	32	34
Fentanyl	0	13	22	-	31	31
Penthrox®	0	22	28	34	35	-

The criteria for the cross study comparison were a similar study design and endpoint as the Penthrox® study, MEOF-001. Borland et al (2007) has a similar study design and endpoints as those of MEOF-001 (Table 2). Borland et al (2007) compared two active drugs, IV morphine against IN fentanyl. The VAS scores observed for the three drugs at Baseline, 5, 10, 20 and 30 minutes are compared in Table 1 . The results demonstrate that Penthrox® is as effective as the alternate opioid analgesic agents that are currently used in A&E but has a significantly better safety profile. Treatment with Penthrox® does not result in respiratory depression as demonstrated in clinical trials of the development programme – MEOF-001, 06/61, MEOF-003. The retrospective observational study Vital Signs Report (see Vital Signs Report) showed no deleterious effects on pulse rate, systolic BP, or respiratory rate. Methoxyflurane has negligible effects on the cardiovascular system and can be safely administered to patients in shock. In fact, a stabilising action of methoxyflurane on cardiorespiratory function has been reported (Virenque et al. 1975)

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Penthrox
Benefits to medical professionals

Rapid onset of action	Minimal waiting time before a painful procedure can be performed (3 minutes) and rapid pain relief when a patient is treated for burns, trauma, etc.
Inhaled self-administration	Medical professionals can perform a procedure/attend to an injury whilst the patient is self-administering with minimal supervision needed.
Improve patient compliance	Effective at calming patients before procedures; makes patients more compliant and cooperative during treatments/procedures.
Portable, easy to use	Easy to store in a range of clinical settings (doctor's bag, ambulance, GP/specialist consulting rooms, hospital departments, military unit, etc.)
Opiate sparing	Addiction and the use of narcotics is increasingly problematic. Penthrox is non narcotic and non addictive, making it the better solution for medical professionals.

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Penthrox
Benefits over Nitrous Oxide

The benefits of using Penthrox® over Nitrous Oxide include:

- Penthrox does not effect vital signs; no clinical depression of respiration or circulation.
- Penthrox is self-administered and easy to use.
- Penthrox is compact and can be used in any location or situation.
- Penthrox does not carry any risk of overdose.
- Single use device ensures no cleaning or cross contamination.
- Medical professionals can perform a procedure / attend to an injury almost immediately whilst the patient is self-administering with minimal supervision.
- Penthrox offset ranges from 3-5 minutes up to 20 minutes.
- Penthrox is easy and stable to store.
- After using Penthrox there is no long observation period needed before patients can go home (possibly drive themselves).

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Penthrox
Benefits over Morphine

The benefits of using Penthrox® over Morphine are the same as detailed for Nitrous. In addition there more specific benefits Penthrox has over Morphine include:

- Penthrox does not effect vital signs; no clinical depression of respiration or circulation.
- Penthrox can be used on children, Morphine often cannot.
- Penthrox is not a narcotic, nor is it an opioid or drug of addiction.
- Penthrox has less severe side effects.
- Penthrox is non invasive – no needles.
- Penthrox has a quicker onset to pain relief.
- Penthrox can be used by a wider community of health professionals including first aiders and volunteers.
- Morphine has considerable, expensive and complex administration and monitoring protocols during its use and for a significant time during recovery.
- After using Penthrox there is no long observation period needed before patients can go home (possibly drive themselves).
- Penthrox does not require specific storage and use protocols.
- Penthrox can be disposed of easily and safely.

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Annexure

About Respiratory Devices

Medical Developments International

MDI Medical
Respiratory division

MDI has a long history of investing R&D resources to design and improve respiratory devices used to deliver Asthma and COPD medication.

In 2011 MDI launched a new range of products using MDI's Cross Valve Technology™, a patented system of drug delivery which ensures very low resistance during inhalation and exhalation, while maximising the dose of medication available.

In 2015 MDI invested in developing its own particle size distribution testing and design laboratory.

2016 MDI received FDA approval to sell its range of Anti Static Space Chamber devices in the USA and elsewhere.

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MDI Medical
Respiratory division

MDI offers a range of devices that can be used to help patients manage and take control of their asthma and COPD.

- Space Chamber Plus™ anti-static range
- Space Chamber Plus™ aerosol spacer
- Space Chamber™ re-usable
- Compact Spacer Chamber Plus™
- Breath-A-Tech™ spacer range
- Breath-Alert® peak flow meter
- EZ-fit face masks
- KDK oxygen regulators

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MDI Medical
Respiratory division

Recently approved by the FDA for sale in the USA.

Recently approved for full reimbursement in the UK.

New distribution partners in the USA (AmerisourceBergen) and first sales.

Growing business internationally.

MDI now has marketing approvals for its Medical Devices and is making sales in:

> USA, UK, Australia, Singapore, Hong Kong, Canada, Malaysia, Belgium, Germany, Netherlands, Greece, Italy, Spain, Denmark, New Zealand, UAE, Austria, Switzerland, Portugal, Spain.

Medical Developments International

Respiratory division
Future

MDI is investing heavily in developing new and innovative products

- Anti static spacers
- Anti static mask – (1st of its kind)
- Electronic peak flow
- Smart phone asthma & COPD applications
- Collapsible spacer
- Additional patentable devices and technology

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