Disclaimer

The information covered in this presentation is for educational purposes only. Any mention of a product, commodity, service or enterprise by name is not an endorsement. The speakers have no relevant financial or nonfinancial relationship(s) within the products or services described, reviewed, evaluated or compared in this presentation.
The Digital Revolution – Hello, World!
US Access to Internet

Several groups are shifting their home internet connectivity away from broadband and toward smartphones

% of each group who have ...

<table>
<thead>
<tr>
<th>Broadband at home</th>
<th>Smartphone, but no broadband at home</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>2015</td>
</tr>
<tr>
<td>All adults</td>
<td>70%</td>
</tr>
<tr>
<td>African Americans</td>
<td>74%</td>
</tr>
<tr>
<td>Rural residents</td>
<td>53%</td>
</tr>
<tr>
<td>Household income &lt; $20K</td>
<td>56%</td>
</tr>
<tr>
<td>$20K - $50K</td>
<td>67%</td>
</tr>
<tr>
<td>$50K - $75K</td>
<td>85%</td>
</tr>
<tr>
<td>Parents</td>
<td>77%</td>
</tr>
<tr>
<td>High school degree or less</td>
<td>50%</td>
</tr>
</tbody>
</table>

Home broadband use has plateaued

% of adults who are home broadband users

![Graph showing home broadband use percentage]

Cost is the major reason most people do not have broadband connections

% of non-broadband users who cite the following as their most important reason for not having broadband service

- 33% Monthly subscription cost
- 43% Cost
- 10% Computer is too expensive
- 12% Smartphone does the job
- 13% Options outside the home
- 3% Service not available or sufficient
- 16% Some other reason
- 14% None given/Don't know

Source: Survey conducted June 10-July 12, 2015. Sample size = 2,001

PEW RESEARCH CENTER
Healthcare’s Digital Revolution is Behind

Conservative Resistance to change

Government regulatory agencies limit how products are developed and commercially approved

“What if we don’t change at all ... and something magical just happens?”
<table>
<thead>
<tr>
<th>Sustaining Innovation</th>
<th>Disruptive Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem is well understood</td>
<td>Problem not well understood</td>
</tr>
<tr>
<td>Existing Market</td>
<td>New Market</td>
</tr>
<tr>
<td>Innovation improves performance, lower cost,</td>
<td>Innovation is dramatic and game changing</td>
</tr>
<tr>
<td>incremental changes</td>
<td>Customer doesn’t know</td>
</tr>
<tr>
<td>Customer is believable</td>
<td>Market is unpredictable</td>
</tr>
<tr>
<td>Market is predictable</td>
<td>Traditional business methods fail</td>
</tr>
<tr>
<td>Traditional business methods are sufficient</td>
<td></td>
</tr>
</tbody>
</table>
INNOVATOR'S DILEMMA

Following a sustaining innovation path makes sense in short term but can doom the company to failure. Dedicating valuable resources to a niche and unproven opportunity can be the future of the company.
Creative Destruction (Schumpeter’s Gale)

New product replaces an outdated one
Creative Destruction of Healthcare

US healthcare is at tipping point.

Driven by
1. Consumer driven care
2. New technology
Personalized Care

Specific
Utilizes genomes and digital technology to understand each person’s unique biologic, physiologic, and anatomic makeup

mHealth could decrease cost to treat chronic conditions by 35% ($700 billion)

Improving behavior
Reducing unnecessary admissions
Detecting changes early
Consumer Driven Care

- Increased transparency
- Actionable insights
- Care coordination
- Collaboration
New Technology

Physiology and wireless sensors
Biology and sequencing the genome
Anatomy, imaging and printing
Electronic health records and health information technology
Wearable Sensors – Body Movement

2006 – Nike and Apple launched Nike+iPod tracker for shoes

2009 – Fitbit
Encourage movement

BodyBugg
Integration of GPS Technology
Body Composition Monitoring

Withholdings wifi scale
Uploads weight, body fat, BMI to app
Stress Sensors

Affectiva Q Sensor
- Detects and records physiological signs of stress and excitement
- Allows tracking how one reacts to stressful situations
Sleep Monitoring

Zeo Sleep Manager Pro
Detects EEG during sleep with headband and uploads to app (Companion for Zeo)
At Home PSG

ResMed ApneaLink Plus
The New Doctor’s Bag
There’s an App for That

Blood Pressure

12-Lead ECG
How long have you had this?

Days  Weeks  Months  Years

Male  Female

27°

San Francisco

USA

The red spot is on my lower left arm and has been itching for two days. It is getting larger. I do not take any medications and have no allergies.
Full ICU Monitor
Sotera Wireless ViSi Mobile Monitor

Holter Monitor

Pulse Oximetry
toSense remotely monitor thoracic impedance, heart rate, heart rate variability, respiration rate, skin temperature, and posture.
SENSIMED Triggerfish continuous ocular pressure monitoring

GE VScan
Vein Viewers

Tribogenics MODIS 810 Mobile XRay
Smartphone: Point of Care Lab

1. Dip stick in sample for 2 seconds.
2. Insert stick in the mat. Use white paper as background.
3. Enclose mat in cuboid.
4. Click "Begin" and in the next 30 seconds, centre the ColorMat in camera overlay screen. Wait while the app is processing...
5. View results. Email | Save | Trend.
Glucometer

Google and Novartis Glucose Detecting Contact
SAGE BIONETWORKS AND THE MICHAEL J. FOX FOUNDATION COLLABORATE TO AMPLIFY PARKINSON'S PATIENT VOICE IN RESEARCH

March 09, 2015

- **Parkinson mPower** iPhone app-based clinical study provides intuitive platform for empowering research participants as partners to illuminate Parkinson's disease symptom variation
- **mPower** uses ResearchKit, a new software framework announced today by Apple that turns iPhone into a powerful tool for medical research
- **Fox Insight** virtual clinical study offers every Parkinson's patient the opportunity to securely contribute data to speed the cure

Spatial Memory Test
This test measures your spatial memory by showing you patterns and asking you to recall and repeat them.

Tapping Interval Test
Rest your phone on a flat surface. Then use two fingers on the same hand to alternately tap the buttons that appear keeps tapping for 20 seconds and time your taps to be as consistent as possible.

Say “Aaaaah” into the microphone for as long as you can.
New Technology can Drive Costs Down

Health Partners' online clinic for simple conditions delivers savings of $88 per episode and high patient approval.

Courneya PT¹, Palattao KJ, Gallagher JM.

Patient Flow

Patients opting for Uber, Lyft over ambulance to the ER

Written by Tamara Rosin (Twitter | Google+) | April 05, 2017 | Print | Email

MedStar partners with Lyft for transport of low-priority patients

By EMS1 Staff

Officials said Lyft drivers will not be expected to perform any medical procedures

FORT WORTH, Texas — MedStar Mobile Healthcare has partnered with rideshare company Lyft to help transport low-priority patients.
Doctor on Demand

https://youtu.be/S-e4PnE3eM0
Asthma Care

Basic asthma management is effective
  Behavioral modifications
  Sticking to asthma action plan
  Avoiding triggers
  Medication compliance
Innovations in Asthma Care

Defining asthma phenotypes to guide medications
Vitamin D deficiency
Bronchial Thermoplasty
New Asthma Innovations “Must Haves”

- Earlier exacerbation detection (biomarkers)
- Spirometry
- Improve medication delivery/compliance
- Trigger detection and alerts (indoor/outdoor)
- Improve compliance to AAP
- Allows for two-way communication
- Accounts for co-existing conditions (depression, obesity)
The Ideal Asthma App

Personalized, self-management plan featuring
- Web-based education covering all asthma education
- Monitoring of symptoms
- Monitoring of physiological status
- Monitoring of lung function
- Electronic reminders, alerts, and coaching
- Gives provider regular snapshots of condition and alerts of changes
Asthmapolis
The Asthma Mobile Health Study, a large-scale clinical observational study using ResearchKit

Yu-Feng Yvonne Chan1,2, Pei Wang1, Linda Rogers3, Nicole Tignor1, Micol Zweig1, Steven G Hershman4, Nicholas Genes1,2, Erick R Scott1, Eric Krock4, Marcus Badgeley1, Ron Edgar4, Samantha Violante1, Rosalind Wright1,3,6, Charles A Powell3, Joel T Dudley1,2 & Eric E Schadt1

The feasibility of using mobile health applications to conduct observational clinical studies requires rigorous validation. Here, we report initial findings from the Asthma Mobile Health Study, a research study, including recruitment, consent, and enrollment, conducted entirely remotely by smartphone. We achieved secure bidirectional data flow between investigators and 7,593 participants from across the United States, including many with severe asthma. Our platform enabled prospective collection of longitudinal, multidimensional data (e.g., surveys, devices, geolocation, and air quality) in a subset of users over the 6-month study period. Consistent trending and correlation of interrelated variables support the quality of data obtained via this method. We detected increased reporting of asthma symptoms in regions affected by heat, pollen, and wildfires. Potential challenges with this technology include selection bias, low retention rates, reporting bias, and data security. These issues require attention to realize the full potential of mobile platforms in research and patient care.
Spriomtry

Sandpiper

SpiroSmart
Wheez-o-meter
BreathResearch MyBreath App

Monitoring of breathing
Originally for asthma, now aimed at exercise testing
Asthma Storylines

From Health Storyline and Allergy and Asthma Network

Allows journaling, symptom tracking

Connect with circle of support
Control A+

https://www.youtube.com/watch?v=IZ_MsbQ

Or

https://www.youtube.com/watch?v=YXOWpdyRC8w
Finding someone like me
Forums, Facebook, Groups

The most accessed online resources for health related information are: 56% searched WebMD, 31% on Wikipedia, 29% on health magazine websites, 17% used Facebook, 15% used YouTube, 13% used a blog or multiple blogs, 12% used patient communities, 6% used Twitter and 27% used none of the above

More than 40% of consumers say that information found via social media affects the way they deal with their health.

90% of respondents from 18 to 24 years of age said they would trust medical information shared by others on their social media networks.
ALBUTEROL (PROAIR RESPICLINK®)

Breath actuated dry powder SABA

Indicated: > 12 years for bronchospasm and prevention of exercise-induced bronchospasm

In a study that investigated the peak inspiratory flow rate (PIFR) mean PIFR achieved by subjects was >60 L/min (range = 31 to 110 L/min.), indicating that patients would be able to achieve the required inspiratory flow to operate the MDPI device correctly.

Cleaning: Wipe with dry cloth

Discard: 13 months after removing from foil pouch

http://medlibrary.org/lib/rx/meds/proair-respiclick
http://myproair.com/pdf/Full_Prescribing_And_Patient_Info.pdf
Indication: > 12 years

Dosing: 1 inhalation daily

Delivery 90 and 182 mcg, respectively, of fluticasone furoate per blister when tested at a flow rate of 60 L/min for 4 seconds.

Cleaning: Dry tissue if needed

Discard: 6 weeks after removal from foil tray

http://medlibrary.org/lib/rx/meds/arnuity-ellipta
Indication: > 18 years and older

Dosing: 1 inhalation daily

Delivery: delivers 92 and 184 mcg of fluticasone furoate and 22 mcg of vilanterol per blister when tested at a flow rate of 60 L/min for 4 seconds.

Cleaning: Dry tissue if needed

Discard: 6 weeks after removal from foil tray

http://medlibrary.org/lib/rx/meds/breo-ellipta
• Hold the Respimat upright.
• Turn the clear base in the direction of the white arrows for a half turn until it clicks.
• Flip the orange cap until it snaps fully open.
• Hold the Respimat away from your mouth and gently breathe out.
• Seal your lips around the end of the mouthpiece without covering the air vents.
• Point the Respimat inhaler to the back of your throat.
Respimat

While inhaling slowly and deeply through your mouth press the dose release button. Continue to breathe in slowly and deeply.

Hold your breath for up to ten seconds. This allows the medication time to deposit in the airways.

Resume normal breathing.

Close the orange cap until you use the inhaler again.

Respimat is being marketed as a Slow Mist Inhaler, SMI. Another new term to remember about inhalers
<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size and portability</td>
<td>Hand-breathing coordination needed</td>
</tr>
<tr>
<td>Short treatment time</td>
<td>Correct technique is required</td>
</tr>
<tr>
<td>Consistent dose delivered</td>
<td>If no dose counter, it is difficult to know the amount of medication left in the canister</td>
</tr>
<tr>
<td></td>
<td>Fixed drug concentration</td>
</tr>
<tr>
<td></td>
<td>Possible adverse propellant reaction or foreign body aspiration</td>
</tr>
<tr>
<td></td>
<td>Limited range of drugs</td>
</tr>
</tbody>
</table>
common MDI Use Pitfalls

- Failure to coordinate MDI actuation on inhalation
- Too short of a breath hold after inhalation
- Too rapid an inspiratory flow rate
- Inadequate shaking before use
- Premature discontinuation of inspiration as aerosol hits throat
- Delayed actuation of MDI
- Air entrainment through the nose
- Exhaling during actuation
- Improper canister position
- Use of MDI beyond rated capacity
- Cognitive impairment of user
- Inadequate hand strength or flexibility to activate MDI
Advantages and Disadvantages of Dry Powder Inhalers

**ADVANTAGES**
- Small and portable
- Dose counter
- Breath actuated and propellant free
- Quick setup and administration time

**DISADVANTAGES**
- Dependent on patient inspiratory flow rate
- Less recognition of dose delivered
- High oropharyngeal impaction can occur
- Limited range of drugs
- Humidity can affect the medication
Common DPI use pitfalls

Not holding device in the correct position while loading dose
Exhaling into the mouthpiece at the beginning or end of inhalation
Not exhaling to residual volume before inhaling
Not inhaling forcefully
Inadequate or no breath hold
Using a multi-dose device in high humidity
<table>
<thead>
<tr>
<th>Advantages and Disadvantages of Valved Holding Chambers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantages</strong></td>
</tr>
<tr>
<td>Reduced oropharyngeal drug impaction and loss</td>
</tr>
<tr>
<td>Simplifies coordination of MDI actuation and inhalation</td>
</tr>
<tr>
<td>Allows use of MDI during acute asthma exacerbation</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
</tr>
<tr>
<td>Size inconvenience</td>
</tr>
<tr>
<td>Extra expense to the patient</td>
</tr>
<tr>
<td>Patient errors such as firing multiple puffs into the device</td>
</tr>
<tr>
<td>Need to clean and potential for contamination</td>
</tr>
<tr>
<td>Part replacement or reassembling error</td>
</tr>
</tbody>
</table>
What are the Best Tools to use to educate Patients about medication use?


http://www.monaghanmed.com/truzone-pfm-0
Devices to Improve Aerosol Delivery Results

Optimum Inspiratory Flow

Delivery of medication to the lungs is dependent on inspiratory airflow and medication device resistance

- Resistance to airflow differs between devices, therefore inspiratory flow requirements vary
- One device example used to measure inspiratory airflow is the In-Check DIAL©

The In-Check DIAL is a hand held low range inspiratory flow measurement device with a dial top. The dial can be adjusted to accurately simulate the resistance of popular inhaler devices. The In Check DIAL enables clinicians to train patients to the proper inspiratory technique considering force and flow rate to achieve optimal deposition of the medication being inhaled into the lungs. (Janisch. Retrieved from Alliance Tech Medical, Inc.: http://www.alliancetechmedical.com)
<table>
<thead>
<tr>
<th>Device</th>
<th>Optimum Inspiratory Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diskus</td>
<td>30 to 90 L/min</td>
</tr>
<tr>
<td>Flexhaler</td>
<td>60 to 90 L/min</td>
</tr>
<tr>
<td>Common MDI</td>
<td>25 to 60 L/min</td>
</tr>
<tr>
<td>Aerolizer</td>
<td>25 to 90 L/min</td>
</tr>
<tr>
<td>Twisthaler</td>
<td>30 to 60 L/min</td>
</tr>
<tr>
<td>Handihaler</td>
<td>20 to 90 L/min</td>
</tr>
</tbody>
</table>
Device Training

http://use-inhalers.com
Handouts and Flyers

In this section you will find important resources like Patient Instructions and Flyers which you can download and print for free.

For Flyers  Click Here

Patient Instruction Guides
- Printable handouts on inhaler technique
- Step-by-step instructions on correct usage
- Easy to read and understand correct technique

How to Use Twisthaler
Patient Education Guide

www.use-inhalers.com

- For cleaning refer to the patient instructions that accompanies your inhaler.
- Following these step by step instructions will help you to inhale medications effectively.

1. Hold inhaler at a forty-five degree angle.
2. Grasp the mouthpiece and turn the cap.
3. Remove the cap and hold the mouthpiece.
4. Place the mouthpiece in your mouth and breathe.
5. After use, replace the cap and store at room temperature.

Twisthaler is recommended by doctors and pharmacists. It is the only inhaler approved by the FDA that delivers the full dose of medication.

User: wendy.brown@mdsu.edu

Click Here
How to Use MDI
Additional Devices to Review

MDI with Holding Chamber
Twisthaler
Flexhaler
Etc...
Pipeline

Longer acting controller medications asthma/COPD overlap syndrome

Biologics

Interleukin (IL-5)- Monoclonal antibodies (Mepolizumab (Nucala®)) and Monoclonal antibody targeted at the IL-5 receptor (Benralizumab). Indicated for Severe Eosinophilic Asthma

Interleukin (IL-13)- Lebrikizumab


http://www.waojournal.org/content/7/1/32. doi:10.1186/1939-4551-7-32
Questions
Dewey F. Hahlbohm, PA-C, AE-C  
912 Menlo Park Road  
Helena, MT 59602

EDUCATION


Physician Assistant Certificate, University of California San Diego (UCSD) School of Medicine, September 1978.

Bachelor of Arts with Honors in Health Science, UCSD, June 1974.

WORK EXPERIENCE

Physician Assistant, Allergy & Asthma Center, 900 N. Orange Ave. Suite 207, Missoula, MT 59802. July 2012-Present

Physician Assistant, Helena ENT Clinic, St. Peter’s Medical Group, 2475 Broadway, Pod 1A, Helena, MT 59601. Feb 2007-Mar 2011

Physician Assistant, Great Falls Clinic Allergy Department, 1400 29th St. South, Great Falls, MT 59405. Aug 2003-Jan 2010

Medical Consultant, Montana State Asthma Program, October 2010 to June 2013

Physician Assistant, Great Falls Clinic Pulmonary Department, 1400 29th St. South, Great Falls, MT 59405. Mar 2005 – Apr 2006

Physician Assistant, Voc-Rehab, VA Hospital FT Harrison MT 59636. Sep 2002 – May 2004

Instructor, EMT-Basic course, Helena College of Technology of the University of Montana, 1114 Roberts, Helena, MT 59601. Feb 2002 – May 2003

Physician Assistant, Allergy and Asthma Center for Western MT, 2618 S. Ave West, Missoula, MT 59801. July 2001 – October 2002

Montana Medical Research, LLC, 2230 27th Avenue, Missoula, MT 59804. Contract medical services, July 2001 – October 2002


Physician Assistant, Allergy and Asthma Center for Western MT, 2618 S. Ave West, Missoula, MT 59801. September 1980 – May 1985.

Physician Assistant, Allergy and Asthma Center of Eugene, 2233-F Williamette St, Eugene, OR 97405. January 1980 – August 1980.
Physician Assistant, Eugene Hospital and Clinic, 1162 Williamette St, Eugene, OR 97401. February 1979 – December 1979.


CERTIFICATIONS
National Commission for Certification of Physician Assistants
National Asthma Educator Certification Board - Certified
Basic Life Support Certified
National Ski Patrol, Senior patroller and Outdoor Emergency Care Certified
MT State License # 270, Physician Assistant – Certified

PRESENTATIONS
Extensive resume of presentations on all aspects of medicine to Montana Academy of PA’s, American Academy of PA’s, American Academy of Allergy, Asthma and Immunology, Certified Asthma Educators, Respiratory Therapists, Cooperative Health Centers, School Administrators of Montana, Montana Asthma Task Force, and numerous community presentations.

PUBLICATIONS
Stinging Insect Allergy, Advance for NPs & PAs, Vol 4, No. 4, April 2013


The Light Pen in Motor Function Testing. Submitted for presentation, Symposium on Computer Applications in Medical Care, Baltimore, MD, October 1983.


PERSONAL FACTORS

Married for 40 years, two daughters, one son

Hobbies: Skiing, outdoor activities, boating, physical fitness, sports car racing, reading, woodworking

AFFILIATIONS

Montana Veterans Foundation, Immediate Past-President Board of Directors, Helena, MT. Member since 2003, Member State Health Care Committee, 2003 to 2015

Association of Asthma Educators, Board of Directors, member since 2005, faculty since 2009, Board member 2012-Present

Past-President, Allergy, Asthma and Immunology PA’s of the American Academy of Physician Assistants, Member of AAPA since 1985

Allied Health Member, American Academy of Allergy, Asthma and Immunology 2012-Present

Member Board of Directors and Chief Delegate, Montana Academy of Physician Assistants, 2012-Present

Member Montana Asthma Advisory Group, Planning committee member

Member of the Society of PA’s in Otolaryngology of the American Academy of Physician Assistants

National Ski Patrol member since 1996, Senior Patroller, Great Divide Ski Area

American Lung Association of the Northern Rockies, Treasurer and Member Board of Directors, 1983-1985 and 2002 to 2006

Vietnam Veterans of America Chapter 626 Helena, MT. Life Member, Member State Health Care Committee, 2002 to present
Health Care Provider Health care professional with 6+ years of experience gained as a respiratory therapist in the neonatal and pediatric intensive care units. Expertise in patient assessment, treatment of respiratory diseases, and research.

Education

Doctorate of Health Science Expected 2018 Leadership and Organizational Behavior A.T. Still University, Mesa, Arizona
Bachelor of Science Expected 2016 Nursing Boise State University, Boise, Idaho
Master of Business Administration 2014 General Management and International Business Tiffin University, Tiffin, Ohio
Associate of Science 2013 Nursing Excelsior College, Albany, New York
Bachelor of Science 2012 Respiratory Therapy Boise State University, Boise, Idaho
Associate of Science 2009 Respiratory Therapy Clarion University of Pennsylvania, Clarion, Pennsylvania
Master of Business Administration 2004 Business Administration Tiffin University, Tiffin, Ohio
Bachelor of Science 2002 Respiratory Therapy Boise State University, Boise, Idaho
Associate of Science 2000 Respiratory Therapy Clarion University of Pennsylvania, Clarion, Pennsylvania
Associate of Arts 1998 Liberal Arts Clarion University of Pennsylvania, Clarion, Pennsylvania

PROFESSIONAL EXPERIENCE

University Hospitals – Rainbow Babies and Children’s Hospital Nurse – Neonatal Intensive Care Unit 2015 - Present
Collaborates with all member of the healthcare team to ensure effective and efficient patient care
Responsible for maintaining communication with the parents of patients
Histories to determine nursing care priorities

Perform the duties of a nurse as described in the job description

Observes and documents patient care

Manages and performs routine dressings

Obtain and evaluate laboratory testing specimens

Delivering oxygen

Conduct admission, transfer, and discharge procedures

Properly administer all treatments and medications as ordered

Administration of standard and specialized feedings orally, and through OG/NG tubes

Neonatal/Pediatric Respiratory Therapist 2009 - 2015
Such as nasal cannulas, high-flow cannulas, simple masks, and air-entrainment masks
Pulmonary hygiene therapies, such as chest physiotherapy, coughing exercises, vest therapy, flutter
therapy, high-frequency chest wall oscillation, and intrapulmonary percussive ventilation
Administration of aerosolized medication via small and large volume nebulizers, metered dosed inhalers, dry powder inhalers and delivery of Ribavirin via the small particle aerosol generator (SPAG-2) nebulize
Performing and assisting with intubations and extubations, and caring for patient receiving mechanical ventilation
home ventilators, such as Drager XL, GE Carestation, LTV 900, 1100, and 1200, Vision Bipap, Trilogy, iivent, and Flight 60
ventilation (HFOV 3100a and 3100b) and airway pressure release ventilation (APRV)
providing care at all high-risk deliveries in the labor and delivery unit and all high-level traumas in the emergency department
Administration of inhaled gas therapy, such as Heliox and inhaled nitric oxide (iNO)
about their respiratory conditions and teaching appropriate disease management techniques
Managing airways and mechanical ventilation during internal transfers, such as CT, MRI, labor and delivery, and the emergency department
arterial, venous, and capillary blood gases
health records, Allscripts

AWARDS

University Hospitals 2015 Belcher-Weir Family Innovation Challenge – Clip-Ox: The Easy Solution for Delivery Room Pulse Oximetry

Crain’s Cleveland Business 2015 Health Care Hero – Allied Health American Respiratory Care Foundation
2013 William F. Miller, MD Postgraduate Education Recognition Award

Jared B Rice MBA, RN, RRT-ACCS-NPS, RPFT, AE-C 849 Mannering Road, Eastlake, Ohio, 44095 814-657-0212, Jared_rice77@yahoo.com

3 | Page

CREDENTIAALS


2012 - Present
ABSTRACTS

Airway temperature change during intrapulmonary percussive ventilation applied directly to an artificial airway

2015

Space weather: The next frontier in asthma research 2014
Comparison of adding a pediatric Omni-flex connector or a Sentek swivel Y on delta pressure and mean airway pressure on the Sensormedics 3100A 2014
Effects of the water chamber level on delta pressure and mean airway pressure on the 3100A high frequency oscillator 2012
Effects of adding a pediatric Omni-flex connector on delta pressure and mean airway pressure on the SensorMedics 3100A 2012
Effects of adding PEEP and oxygen flow on delivered FiO2 in the IPV breathing Circuit 2011

PRESENTATIONS

Air Pollution and Its Effect on Lung Health Presented in 2015 to students at Lakeland Community College

Inhaled Corticosteroids – Powerful Drugs – What’s Their Place Unresponsive Asthma Exacerbation in the PICU Presented at 2015 Summer FOOCUS Conference at Orlando Florida

Management of Unresponsive Asthma Exacerbation in the Pediatric Intensive Care Unit Presented at 2014 AAE Annual Conference, Asthma Round Up at San Antonio Texas

VOLUNTEER EXPERIENCE

Boise State University 2015 - 2016
Jared B Rice MBA, RN, RRT-ACCS-NPS, RPFT, AE-C 849 Mannering Road, Eastlake, Ohio, 44095 814-657-0212, Jared_rice77@yahoo.com

College of Nursing Student Representative

Association of Asthma Educators 2013 - Present Board Director, Co-Chair of Membership Marketing, and Public Relations, and administrator of Facebook page

International Children’s Heart Association Al-Sadr Hospitals, Al Najaf, Iraq
2012

Provided instructional methodology to prepare health practitioners with the skills, technology, and knowledge to diagnose and care for children with congenital heart disease to developing countries that request help.

PROFESSIONAL MEMBERSHIP

American Assembly for Men in Nursing 2015 - Present
American Nurses Association 2015 - Present
Association of Asthma Educators 2013 - Present
American Association of Respiratory Care 2010 - Present