



mMed™ Patent Portfolio for mobile medication management

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Benefits of IP Partnering for Drug Delivery Telemanagement

***Presented Jan. 20, 2016,
by Napoleon Monroe at***



Who: Introduction



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- 1970 entered the Pharma industry, helping to develop self-injection devices; including the **original EpiPen and nerve agent antidote delivery systems**.
- Inventor of **commercially successful products** to improve patient outcomes.
- Former employer, Henry Schein, filed and was subsequently granted **7 patents essential to drug delivery telemanagement**. These are known as the mMed Patent Portfolio. All are based on my inventions. **Priority dates are 2006**.
- Later I founded New Directions Technology Consulting LLC (New Directions), which was **contracted** by Henry Schein, the patent assignee, **to monetize the mMed Patent Portfolio**.

What: Benefits of Telemanagement IP Partnering



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- **Freedom to operate.**
- **Bolster ongoing value** in rapidly changing environments.
- **Extending product life and reach.**
- **Revenue growth potential** from new products/services, and from sale/licensing of rights.
- **Enhanced ability to license/cross license/exclude**, as in other industries.

What: Benefits of Telemanagement IP Partnering *(cont'd)*



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- **Channel control** possibilities.
- **Avoidance of costs** of litigation/settlement with other IP owners.
- Possible **tax advantages**. Foreign and potential future domestic.
- Added **incentives to partner**.
- **Improved stakeholder relations**.

What: Benefits of Telemanagement IP Partnering *(cont'd)*



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- Licenses/acquisitions may be capitalized. Previous costs were likely expensed.
- Economies of scale when extending use to other products/acquisitions.
- IP assets can be used as collateral.
- A platform to encourage **internal creativity** inventions and synergies within existing businesses.
- **Builds a reputation** for **management strength, longer-term vision, culture** that fosters intrapreneurship and innovation.
- **Synergies** between benefits.

What: Telemanagement IP Possibilities



Potential System Elements

Capabilities for communications of medication telemanagement data through a smartphone or other device with short- and long-range communications capabilities, and delivery of information to caregivers and/or a central monitoring facility operated by medical professionals.

1. A medication container with embedded sensors and AIDC capability
2. Communication device with integrated applications

IP Partnering with New Directions



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Greatest potential is for Pharma and their partners practicing telemanagement.

- **Purchase mMed Patent Portfolio or exclusive license***
 - Control the protected technology, providing instant competitive advantages based on **early mMed priority dates.**
- **Purchase nonexclusive licenses***
 - Favorable rate for early licensees.
 - Ensures that any portfolio purchaser/exclusive licensor cannot assert the portfolio against you.

**Can be “field of use” license, such as for veterinary or military application.*

Developments in Medication Telemanagement



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- Many dosage forms.
- **Specialty focus.**
- Lots of partnering, including investments.
- Many different design approaches and regulatory strategies.
- Expect many more wearables, **including pumps and patches. Telemanagement to guide placement, refill and use** through a smartphone.
- Detailed review by patent counsel will be performed, as marketed products evolve.

Examples: Medication Telemanagement/Injection



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Yposmed

Partnership with Thinfilm
announced December 2015



Aterica Veta

- Smart case for EpiPen
- Targeted to ship February 2016



Medication Telemanagement/ Injection *(cont'd)*



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Bayer Betaferon

- Developer: Medicom (Bang and Olafson)
- Clinicals in Europe

Unilife LISA

- Partnered with several Pharma multinationals
- “Capable of connectivity”



Medication Telemanagement/ Injection *(cont'd)*



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Panasonic with JCR Pharmaceuticals for HGH in Japan

- Data-logging and communications capabilities
- Other versions for other companies



Medication Telemanagement/ Inhalation



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Propeller Health
Partnered with GSK
and others



Cohero
Announced \$2M financing
in December 2015



Medication Telemanagement/ Oral Solids

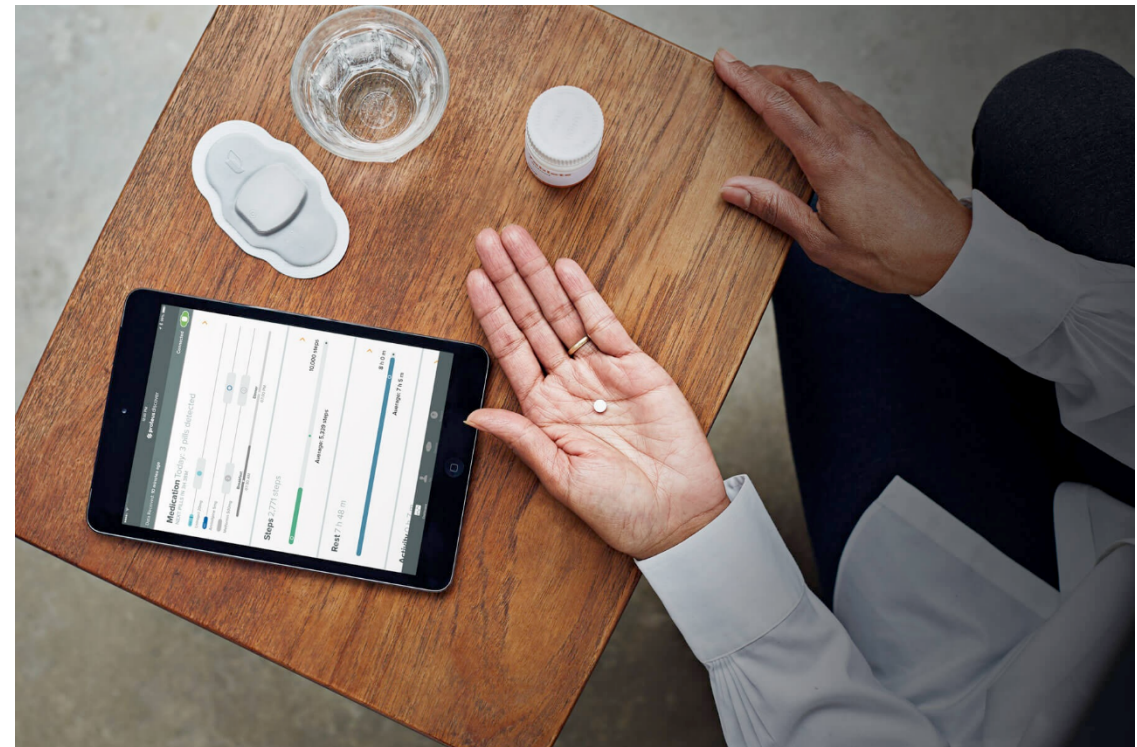


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Proteus

- Ingestable sensor
- Probably the most publicized and best funded



Medication Telemanagement Oral Solids - Packaging



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Med-ic Smart blister pack



Aardex West Rock

- **MEMSCap** and other packaging
- Some research shows that when a package is opened the patient takes the med most of the time



Medication Telemanagement Oral Solids - Dispensers



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Vitality NantHealth GlowCap

- Early introducer
- Currently not taking orders
- Reintroduction in 2016



Medication Telemanagement/ Oral Solids - Dispensers



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IMPak Health KRAKEN

- Primarily oral dosage forms
- Provider-owned business
- **Provider taking the technologies more broadly into disease management**

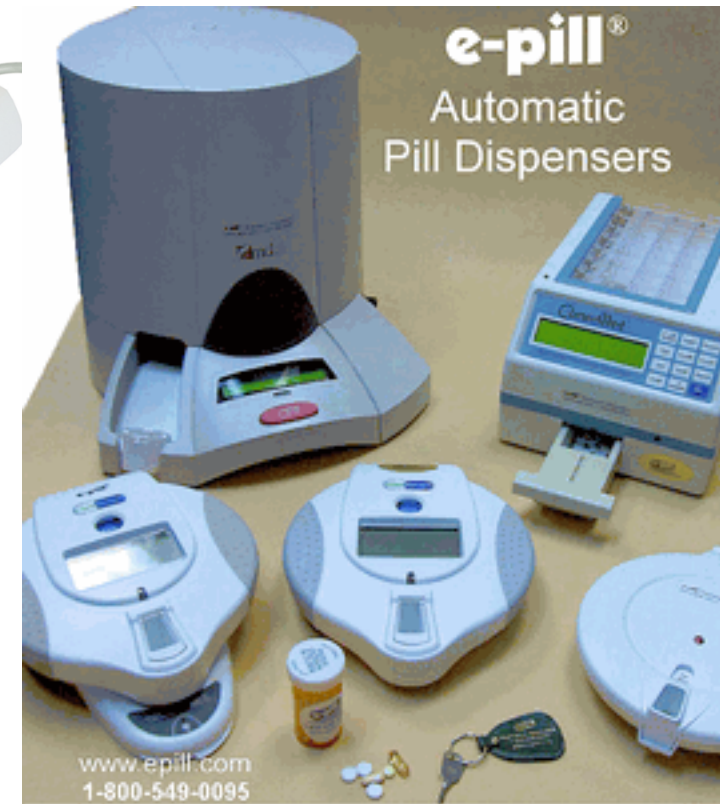


Medication Telemanagement/ Many Other Dispensers



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Thank You



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MMed patent portfolio found at
www.mmedhealth.com**

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Attribution



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