



What is heard when we truly listen.

A Unique Team Spanning Digital and Healthcare



- A Harvard-trained Cardiologist, Molecular Biologist & practicing physician
 - >10 years of combined academic and pharmaceutical R&D + BD experience
 - ~20 publications / patents, focused on cardiac biomarkers
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- An Oxford-trained Scientist with >30 publications / patents
 - >10 years of industry experience
 - Focus on Respiratory / Inflammatory Disease R&D experience



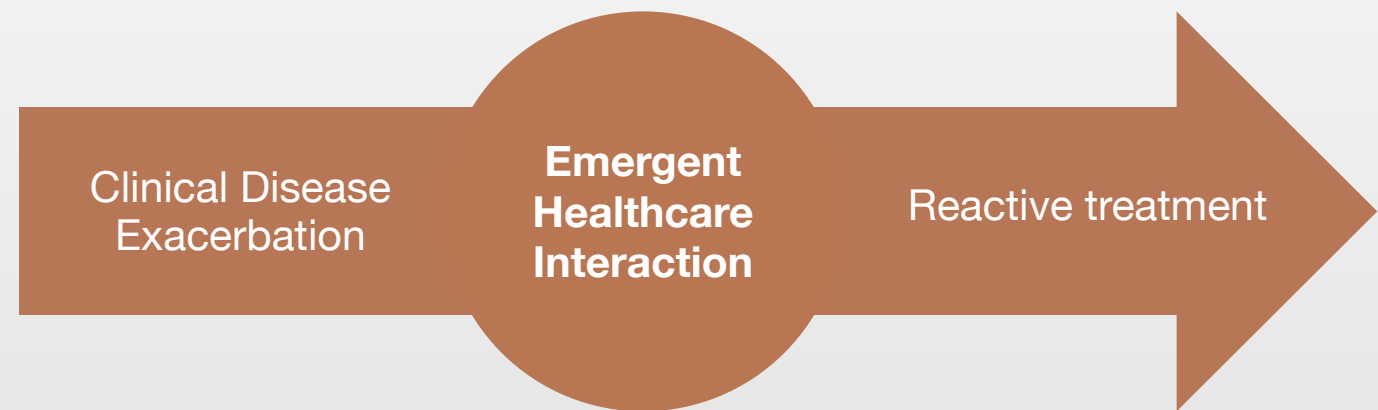
- A Co-founder of Incuna, a global digital healthcare agency
- >10yrs of digital product design & development in healthcare
- >10 years direct commercial digital healthcare experience
- Unique background in acoustic analytics & technology

The Problem, and the Solution

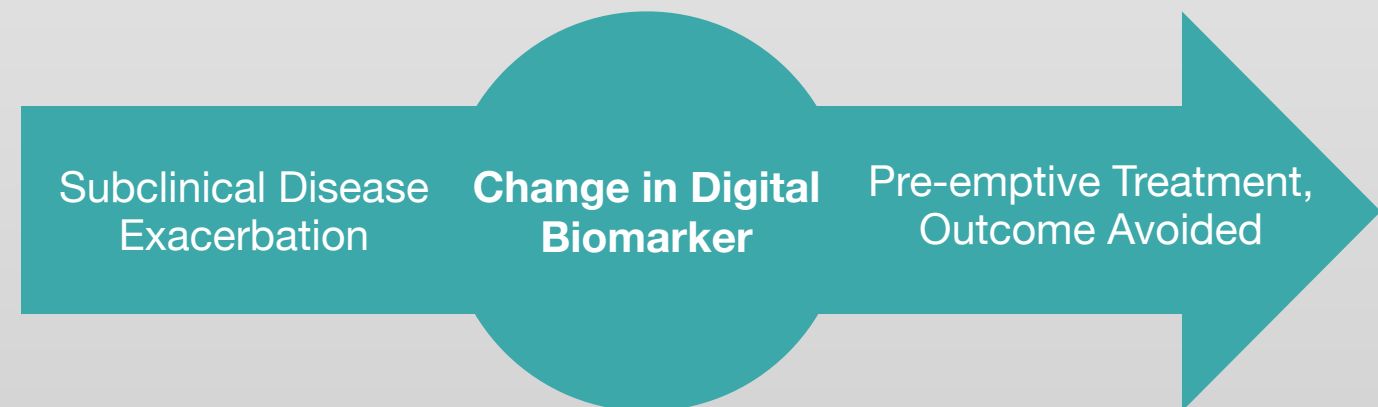
Currently, “mobile health” is an idiom encompassing a multitude of apps without clinical validity and is therefore peripheral to the healthcare system.

Aedio’s objective is to identify and clinically validate mobile sensor data as “digital biomarkers” predicting disease exacerbation and serving as a trigger for clinical intervention.

Current Treatment Paradigm



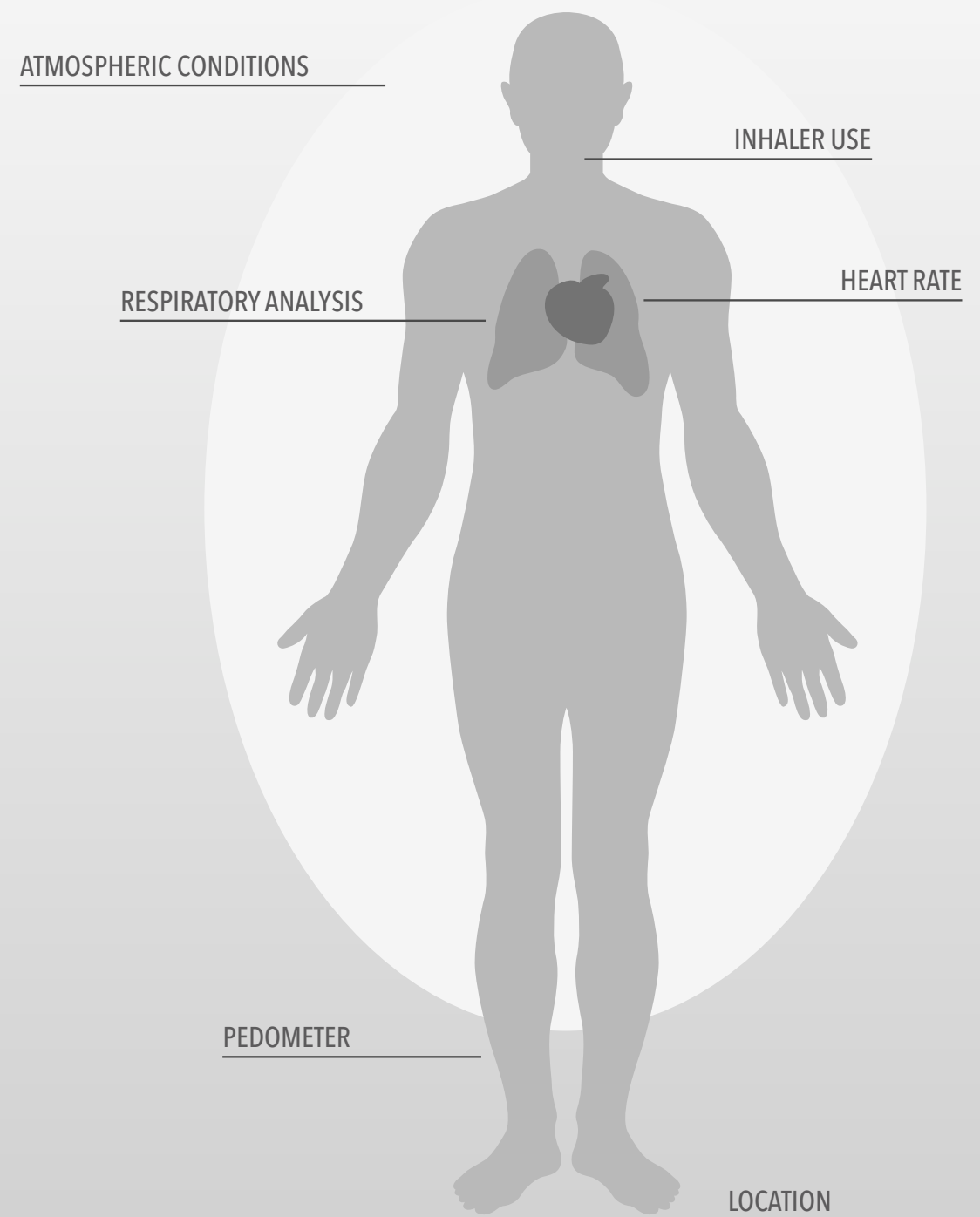
Future Treatment Paradigm



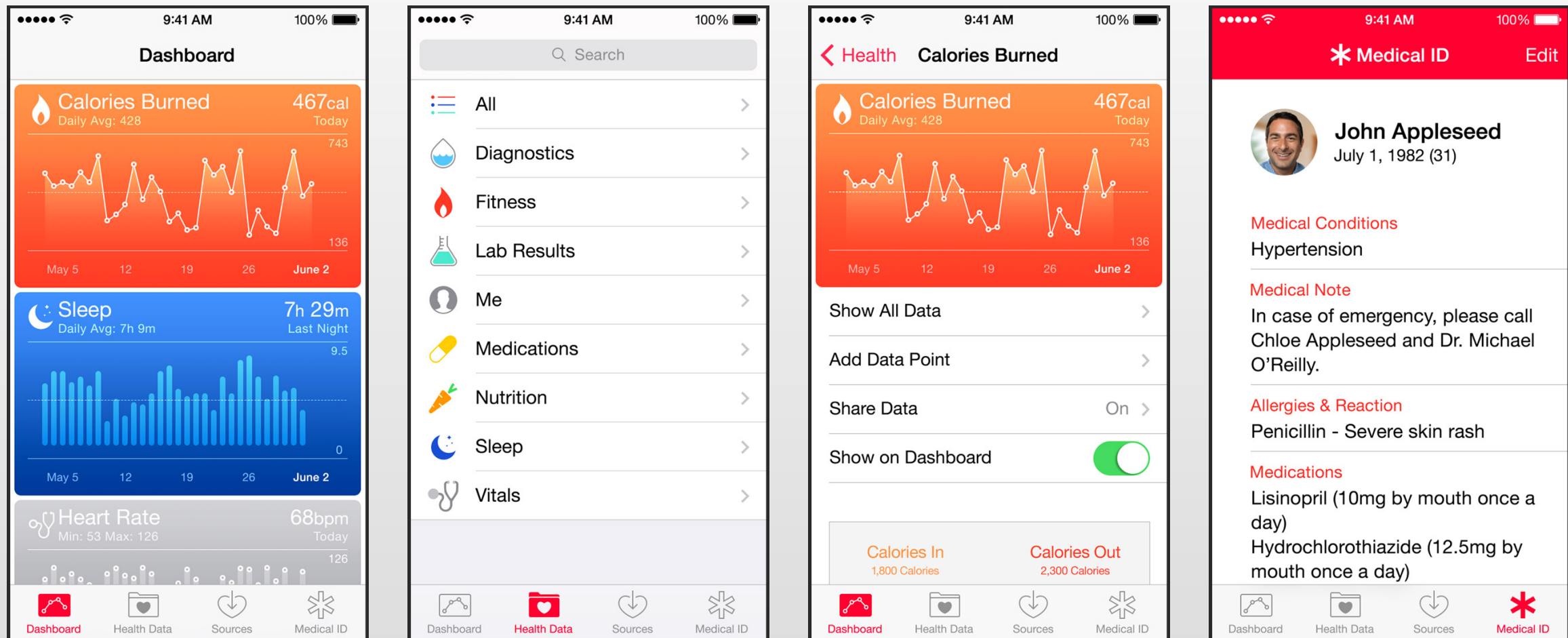
Towards Predictive Medicine

Drawing on our clinical expertise, Aedio will identify “digital biomarkers” that predict impending disease exacerbation, and derive tailored pre-emptive intervention paradigms.

The premise builds upon established observations of patients in tightly monitored clinical settings, but translates them into the mobile world.



Validating Apple's HealthKit



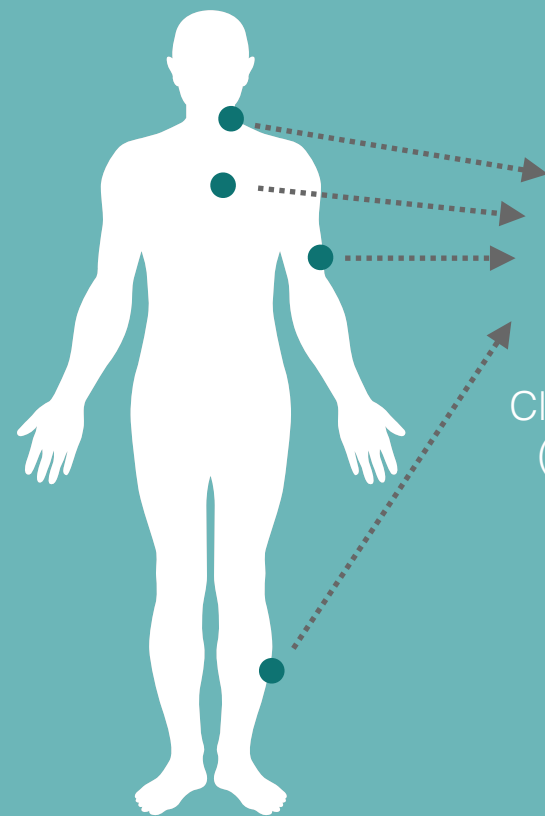
Apple's HealthKit allows a single point of descriptive data review, with no greater utility than each single parameter affords. This is the maturation of mHealth 1.0.

Aedio will provide predictive clinical insight from the data collected. This is mHealth 2.0.

One platform, multiple indications

Chronic diseases, particularly those of the respiratory and cardiac system, can be monitored via mobile devices, combined environmental and behavioral disease “trigger” data, and integrated with patient-reported symptoms to create a coordinated picture of disease state changes over time.

mHealth 1.0 (descriptive)



Sensor data collected



mHealth 2.0 (prescriptive)



“Digital Biomarker”
analytics



Signal of disease state change
relayed to user, care provider

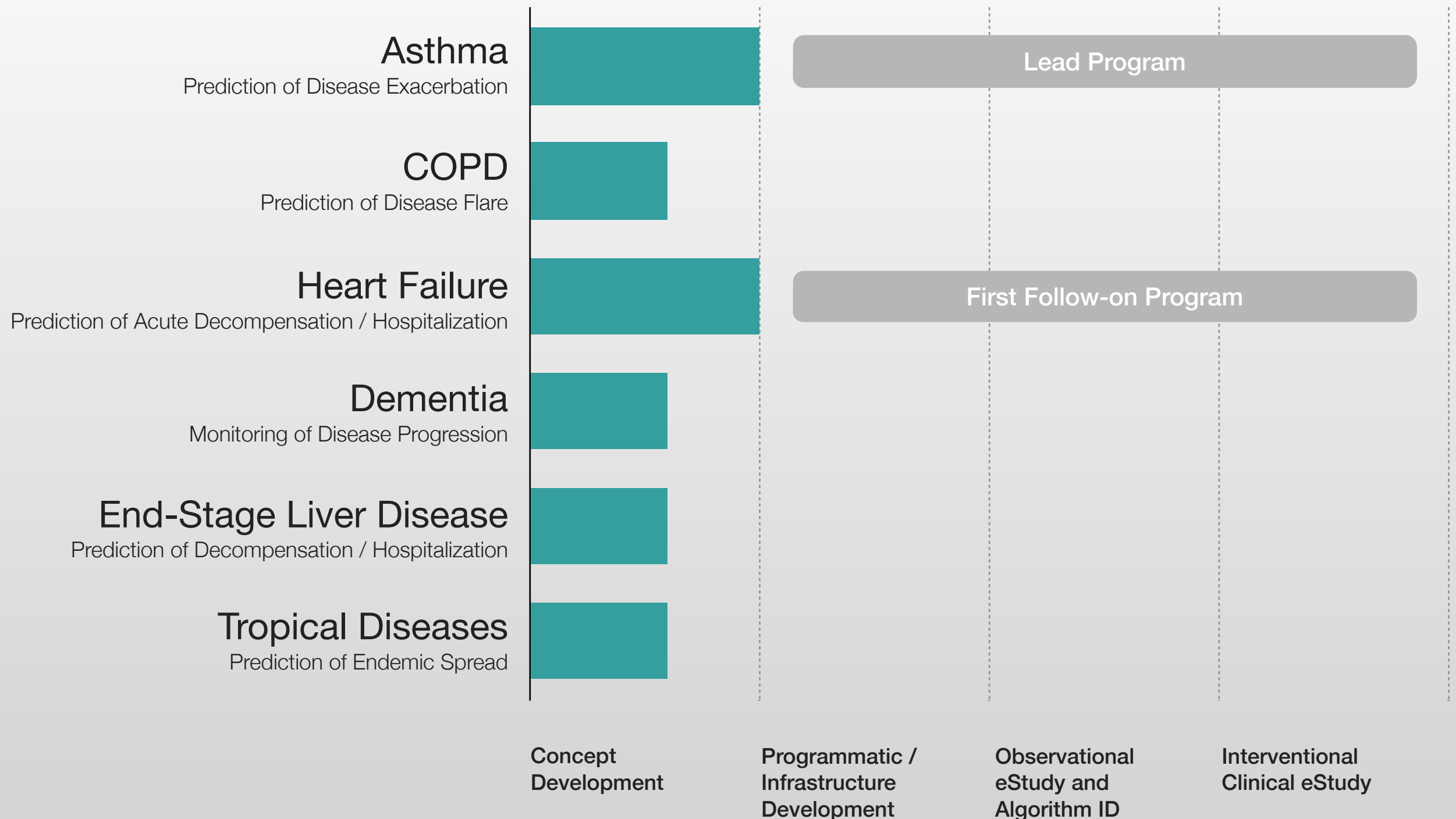


Intervention administered



We have created a functioning prototype app
that runs on an iPhone, and uniquely collects
cardiorespiratory data.

Aedio Platform: a Pipeline of “Digiceuticals”



The Roadmap

~\$14M to take initial indication to registration

~\$12M to validate follow-on programs to registration

Stage 1 6 months -1 year

- Technology platform development

Cost*

- \$1.2m
 - \$0.4m platform development cost (incl FTE, breakdown in slide to follow)
 - \$0.8m other FTE and overhead

Output

- Analytics platform established;
- Aedio App v1 deployed on mobile app stores

Stage 2 ~1 year

- Observational eStudy
 - Derivation of proprietary disease change predictive algorithms
- Filing of intellectual property

~\$4.5m

- \$2.0m study cost
- \$0.5m external consultant and contracted functional support cost
- \$0.25m digital infrastructure and FTE costs
- \$1.6m internal FTE and overhead

- Establish predictive algorithm
- File intellectual property

Stage 3 ~2 years

- Interventional eStudy
 - Proof of outcome benefit
- Regulatory submission of app / algorithm and negotiation for reimbursement

~\$7.5m

- \$2m study cost
- \$1.0m external consultant and contracted functional support cost
- \$0.5m digital infrastructure and FTE costs
- \$4.0m internal FTE and overhead

- Validation of digital intervention
- Reimbursement strategy executed

Stage 4 ~3-4 years per disease

- Expansion into secondary pipeline diseases (see pipeline slide to follow)

~12.0m

- Estimated cost of the addition of each pipeline program assuming infrastructure in place as above

- Validation of novel algorithms for follow-on diseases

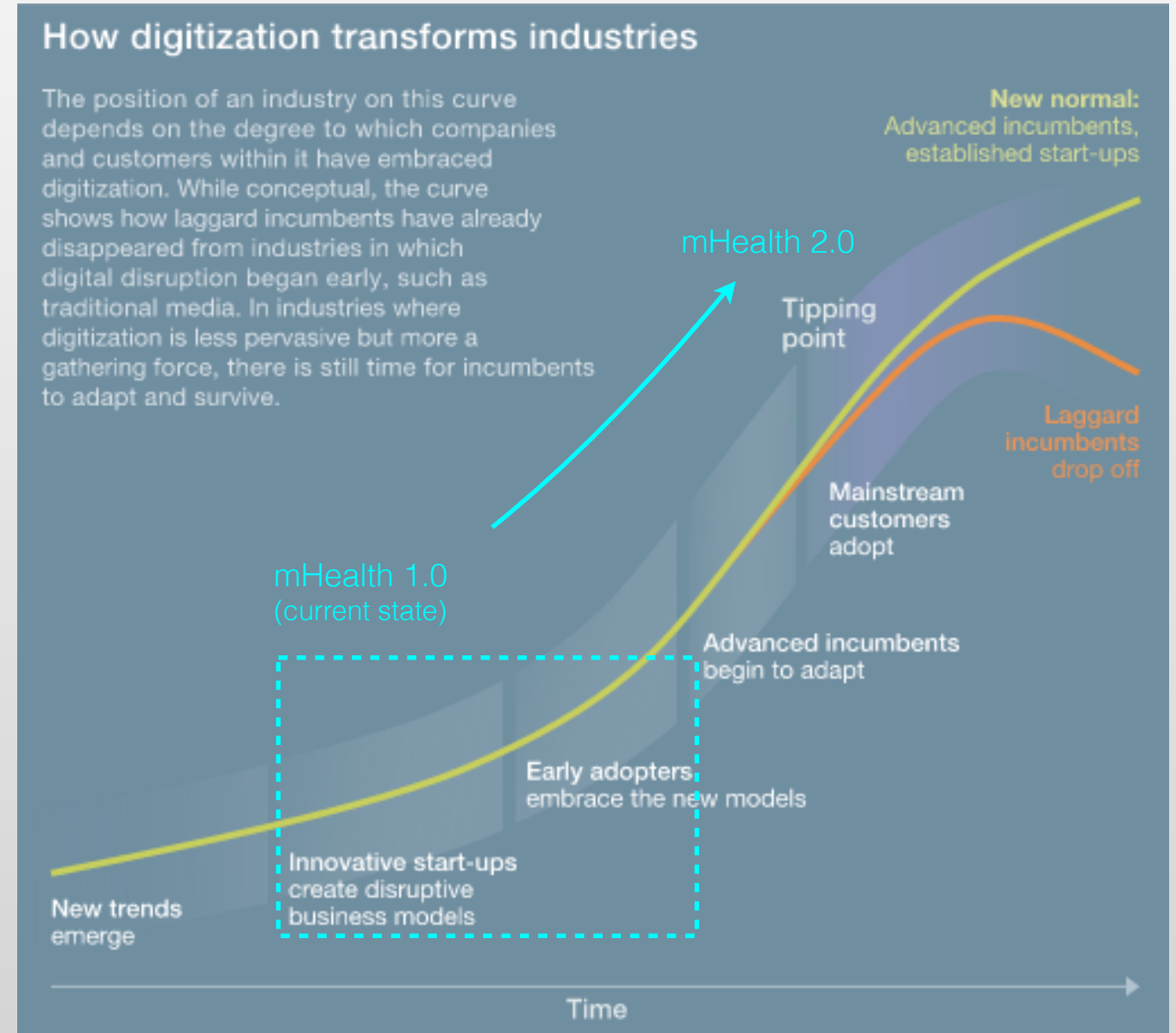
*Costs are approximated from programmatic planning completed to date

The rise of Prescription Apps

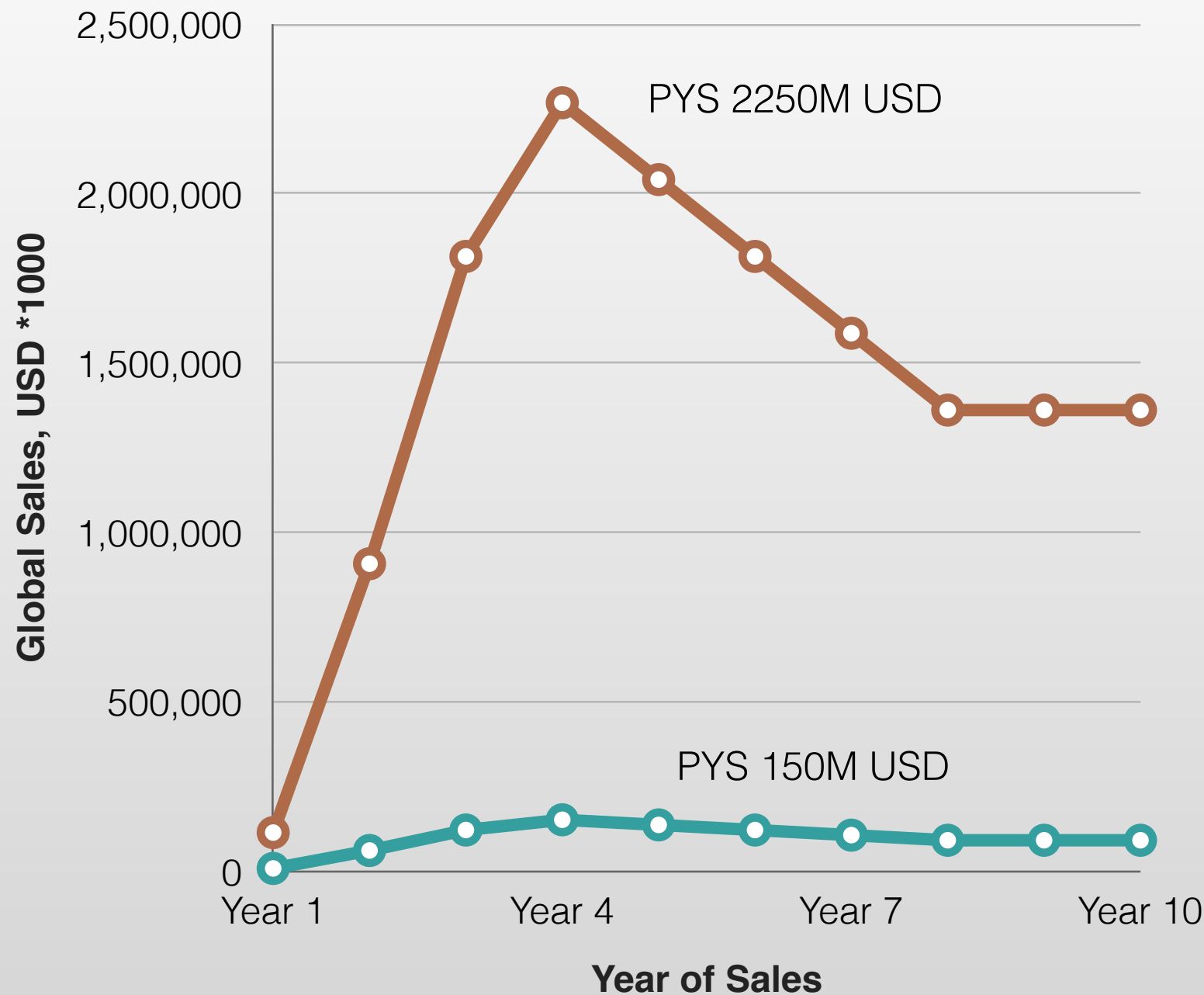
With a regulatory process now in place, payers are beginning to reimburse for health outcomes, regardless of the means to the end.

- WellDoc's BlueStar app available only by prescription, reimbursed in the US.
- Caterna's Vision App available by prescription and reimbursed in Germany.

Validated apps are moving mobile health from Descriptive to Prescriptive, the next evolution of mobile health.



Aedio Asthma Revenue Forecasts



“Direct-to-Consumer” revenue model assumes a monthly subscription akin to current home medical monitors (Ambio, ADT, Verizon, minimum \$5 USD / mo), with 5% penetration into mild-to-moderate asthma population.*

“Reimbursed Product” revenue model assumes health insurance payer reimbursement (based on WellDoc Diabetes Manager reimbursement of \$100 USD / mo), with 10% penetration into severe asthma population.* **

- Direct-to-Consumer
- Reimbursed Product

*Propeller Health and Peters SP. Resp Med. 100(7) 1139-1151, 2006.

**Assumptions are consistent with independent market research conducted by iSonea, available [here](#)



Listening to your
hyperdata



From managing to
preempting



Technology without
intrusion

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Aedio