

Exercise Prescription for Health

Joseph Cummiskey MD
Immediate past President EFSMA
Member of the FIMS IF Commission
Immediate past Dean FSEM, (RCSI and RCPI)

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Outline

- Why are we not prescribing exercise?
- Some details from the medical literature
- Economic comments
- Political attempts at exercise uptake
- Where the lay community needs are in exercise

Why are we not prescribing exercise?

Our system of medical practice demands that we have a diagnosis first, this is also a third party payer decision.

- Our Medical Chamber should look at the negligence of not prescribing exercise
- Then a management plan, which is part of a College of Physician and Government plan
- Then a prognosis and follow-up, What are our end-points?

Diagnosis is important

- As we practice medicine to-day we need a code for diagnosis
- “Exercise deficiency disorder” (EDS) has been suggested as a possible diagnostic code by Prof Faigenbaum of New Jersey.
- Needs a code number
- Once there is a code diagnosis, prescriptions can be charged
- Biggest objectors to this suggestion were our medical colleagues

Whom are to blame

The conflict between complex systems and design

Blame the Patient,
the Food Industry,
the Medical Schools,
the Government,
Public Education

Evidence



Reports and Guidelines



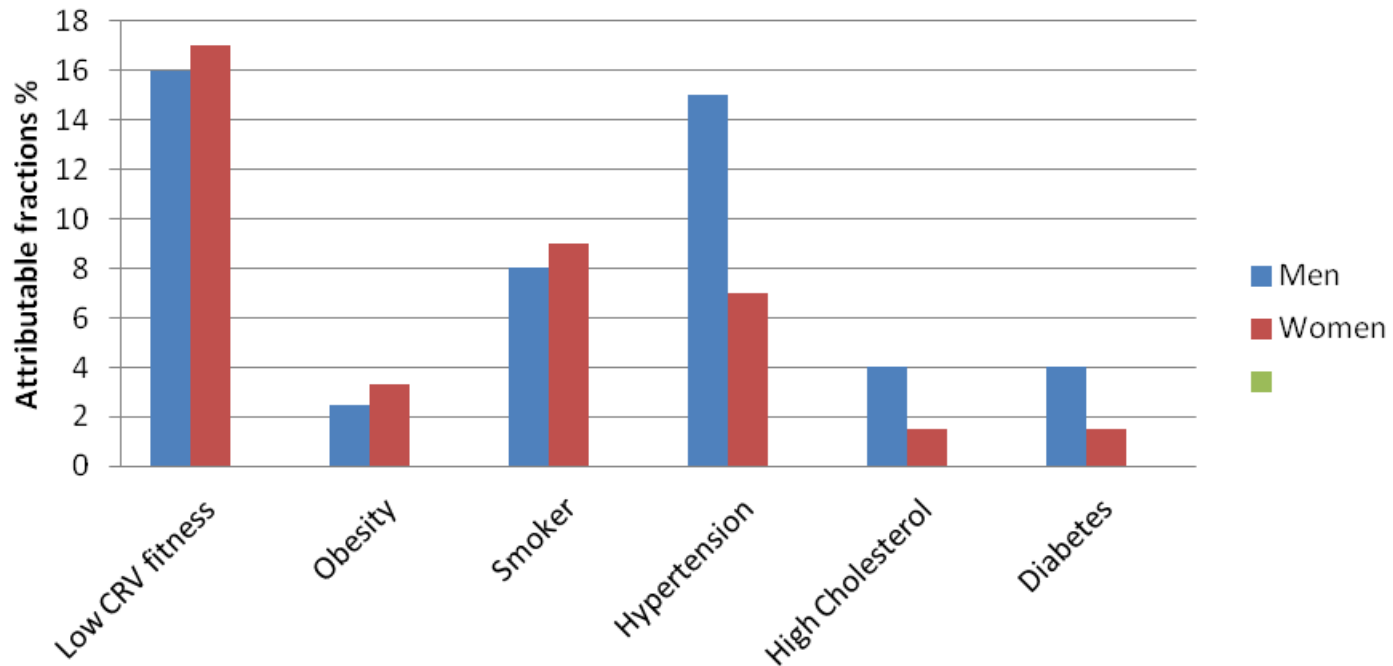
Effect



Medical literature

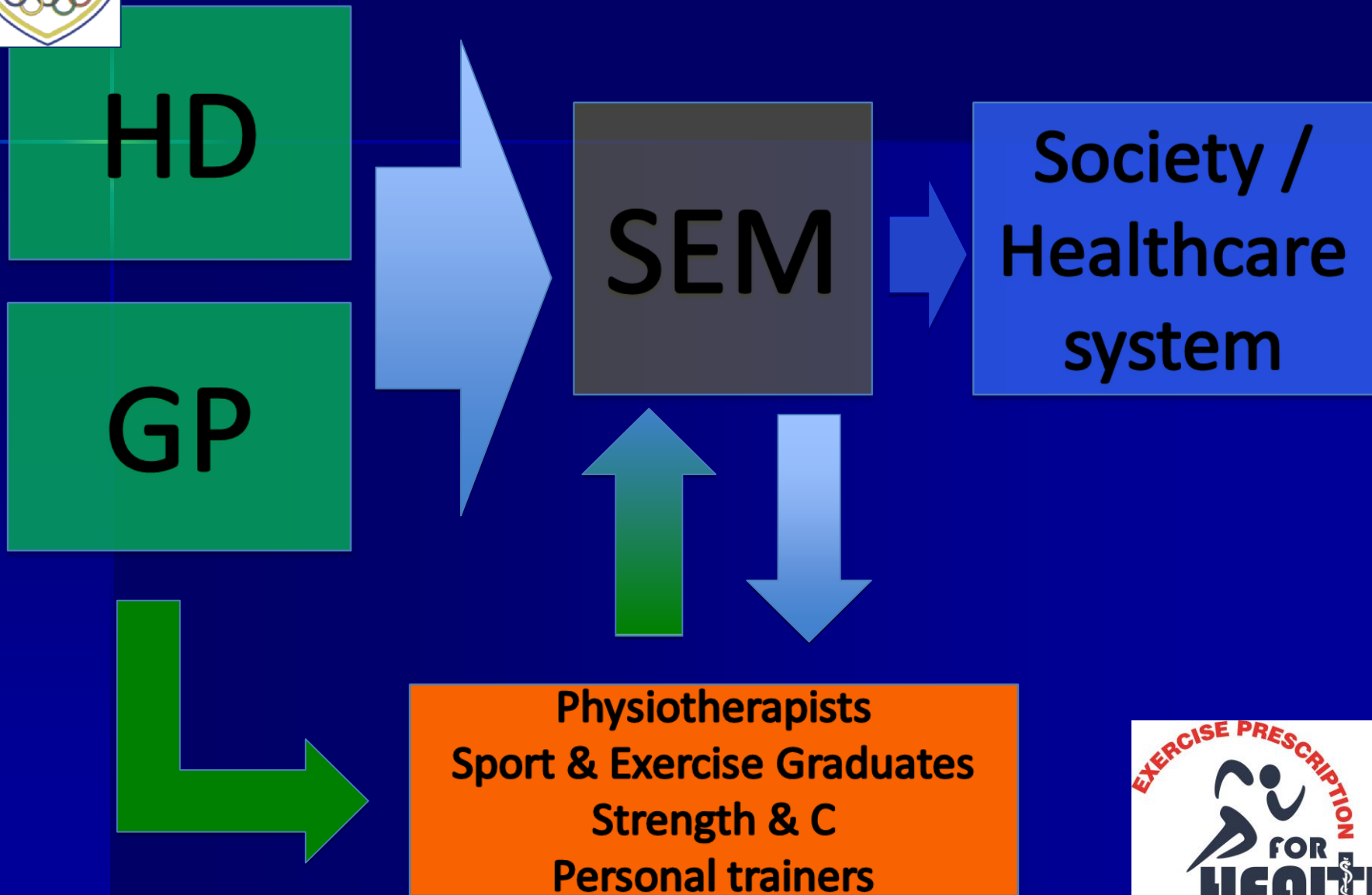
Claude Boucher, USA

Aerobics Center Longitudinal Study





Exercise prescription: Patients' flow



Economic and political comments

Political attempts at
encouraging exercise uptake

The background of the slide is a solid blue color. In the lower half, there are several faint, concentric circular patterns that resemble ripples in water, scattered across the bottom right and center areas.



HARVARD
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Dire Predictions

The Global Economic Burden of Non-communicable Diseases

Over the next 20 years NCDs will cost 30 Trillion USD, representing 48% of the accumulated GDP in 2010 dollars

The House of Lords, UK, Science and Technology Committee

The above group has launched a new short inquiry into sports and exercise science and medicine post 2012.

Commenting, Lord Krebs, Chairman of the Committee,

“There is an ever-growing body of evidence showing that increasing the amount of exercise people take can be of huge benefit in treating a wide range of chronic conditions.

However, we are not convinced that health professionals currently have the skills or support to prescribe appropriate training regimes for their patients”

Cultural Co-operation

Cultural Co-operation has occurred in the UK,
Europe and the World

The Foresight report of the C of E by the Government
office for Science 17.10.2007, highlighted the
unsustainable health and economic costs of a
nation that continues to be largely sedentary

Where are we in 2015?

We have disimproved!

We need another approach to implement exercise
programs in the general population

EDS

**“Exercise deficiency
syndrome”**



Tests for Exercise Deficiency syndrome

Gold standard is the clinical hospital based CP exercise stress test

- VO₂ max, hypoxemia of exercise, RER, EIB, serum lactate acid threshold, exercise measured in METS
- max HR, arrhythmias, BP response to exercise

Other measures

Abdominal girth

Mean Body Index

Vital signs

Pulse, BP, Ht, Wt,

Hours of exercise per week should be

a fifth vital sign in all Hx and PE.

Prescribing exercise is not enough

It is achieving cardio-pulmonary and musculoskeletal fitness that is the goal

“Exercise deficiency syndrome”

Cardio-pulmonary fitness

- A level of fitness that permits one to endure cardio-pulmonary stress for longer at a higher speed.
- A level of exercise that shifts the anaerobic threshold to the right of the graph of serum lactate plotted against measures of exercise work on the horizontal.

Musculoskeletal conditioning

- The strength or power of a muscle activity that permits a person to function at a higher level.
- We aim this at the core muscles of the trunk and the large muscle groups of the arms and the legs

FIMS implementation of EPH 2014

Essential

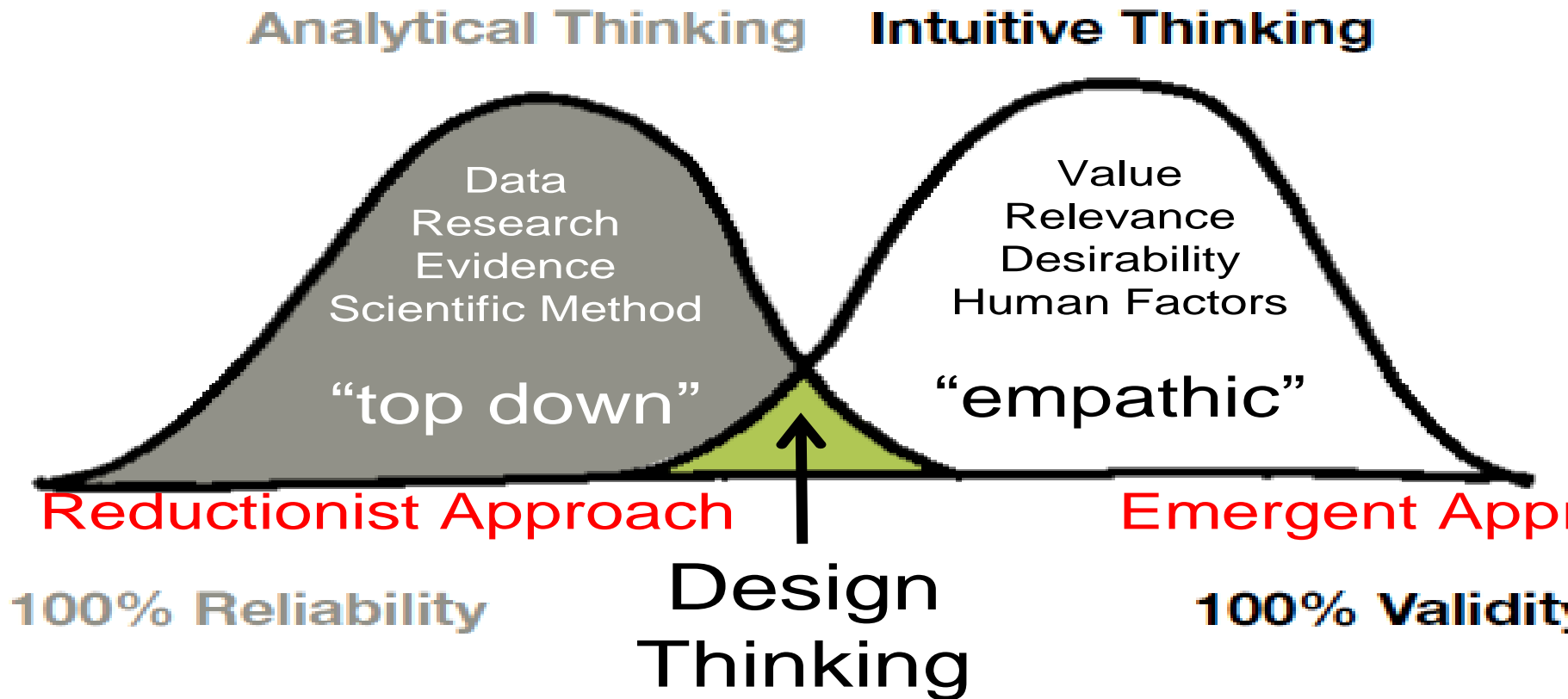
- We must accept that the top down approach on its own has failed
- A diagnostic code for exercise deficiency syndrome is necessary
- An enticement system for doctors, administrators and patients is necessary
- Education of doctors, trainers, patients and administrators must be done.

What the lay community needs to know,
has come to expect and
what we must deliver in
an exercise program

The patient is central to all exercise
programs

Holly Witteman, Ph.D., Assistant Professor Medicine,
Université Laval, Scientist at CHU de Québec in Patient-Centered
Outcomes Research Institute (PCORI), **a Type 1 DM pt.**

Roger Martin, Rotman School of Business, University of Toronto



We're
Already
Experts



KNOWING

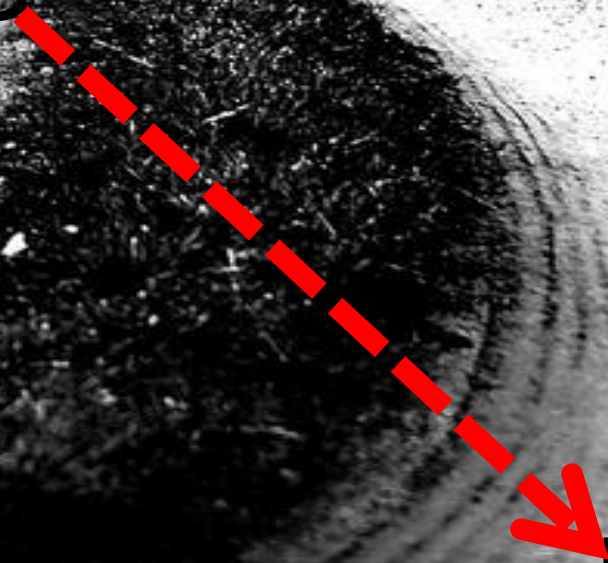
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Can We
Become
Experts?

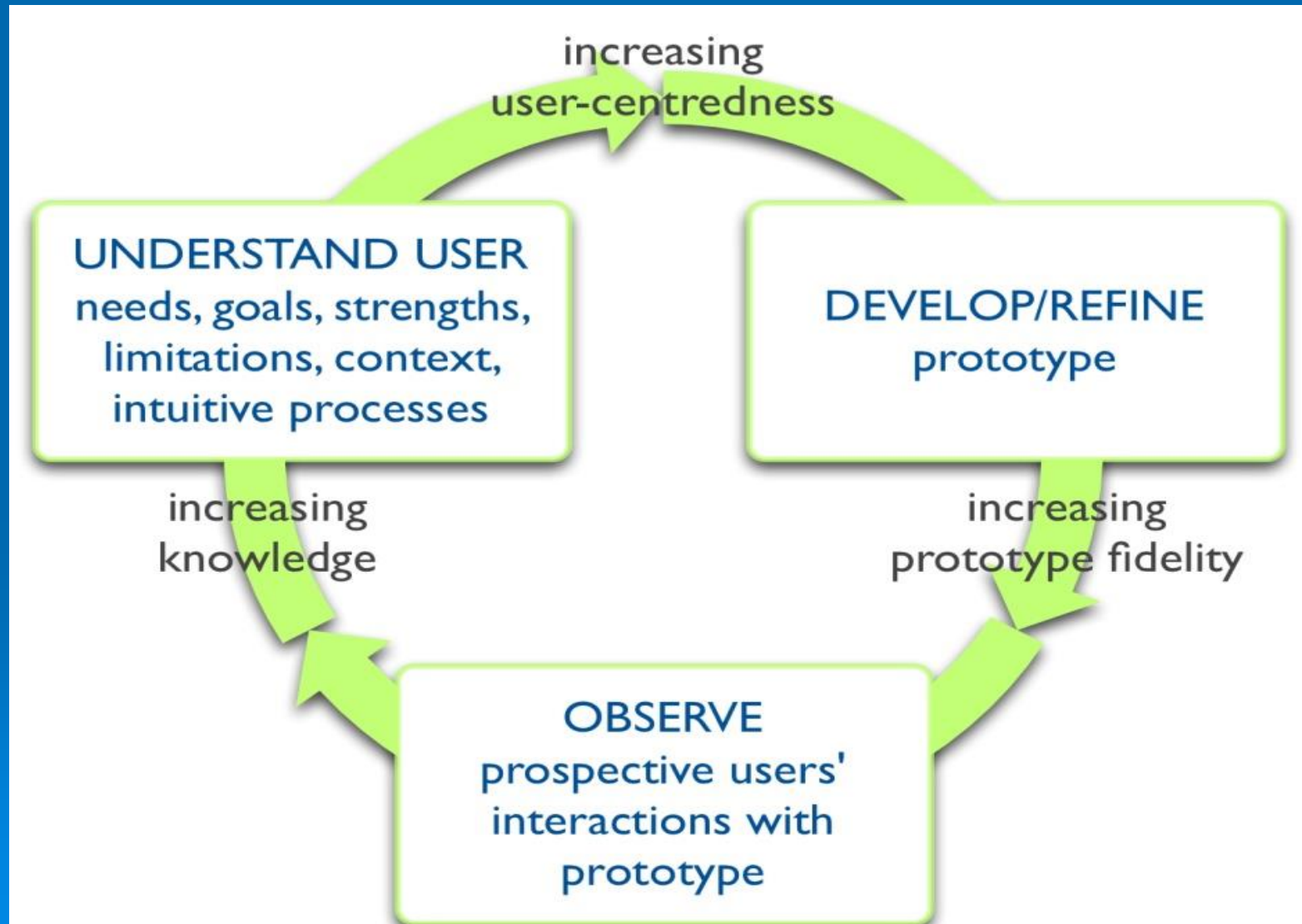


DOING

implementation
human factors



User Centredness



THE PRESCRIPTION

- This will be dealt with in detail by
 - Dr Petra Zupet (Slovenia) EPH in practice
 - Prof Herbert Lollgren (Germany) on need for an ECG
 - Prof Mats Börjesson (Sweden): ECG of “special” classes of athletes.
- All I will say now is that all patients should commence and continue with a program for core muscles of back and abdomen

Summary

Understand why exercise is not being prescribed enough

- Medical literature must be shared with doctors and pts.
- Exercise should become the 5th vital sign
- “Exercise deficiency syndrome”
is a diagnosis and a potential code for billing
- Economic comments are for a catastrophic outcome and may have medico legal consequences if exercise is not prescribed
- Political attempts at exercise uptake have fallen short

What the lay community needs to know, has come to expect and what we must deliver in an exercise program; the patient is central

END

With a special thank you to **FIMS symposium Quebec 20.6.2014**

Pierre Fremont , Quebec Chairman

Claude Boucher, Louisiana, USA, Plenary session keynote speaker.

Karim Khan, Editor BJSM, UK,

Gordan Matheson, Emeritus Professor of SM, Stanford Ca

Holly Witteman, Laval University, Quebec

Martin Schweltnus, Prof SM, Cape Town, SA,

Paul Poirier, Laval University, Quebec, Quebec Heart and Lung Institute

Joseph Cummiskey, FIMS, EC, Ireland,

Mats Borjesson, Cardiologist and SM, Sweden,

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