



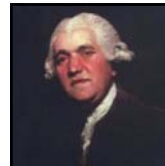
Getting Research into Practice

Peter Croft

Arthritis Research Campaign
National Primary Care Centre

Keele University

Forum X
Boston 2009



Josiah
Wedgwood
1730-1795

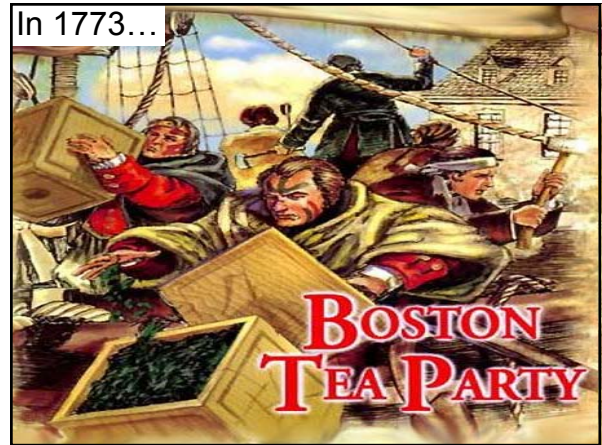


Josiah
Wedgwood
1730-1795




Wedgwood teapot
1765

In 1773...



**BOSTON
TEA PARTY**



Getting Research into Practice

LOTS OF THEORIES

63 theories or models of knowledge
transfer (mostly untested)

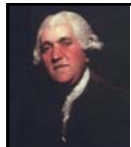
Ward et al BMC HSR 2009

OPTION 1: LET THE EVIDENCE SPEAK FOR ITSELF

The experiment

THEORY: EXAMPLE 1

Champions
Early adopters

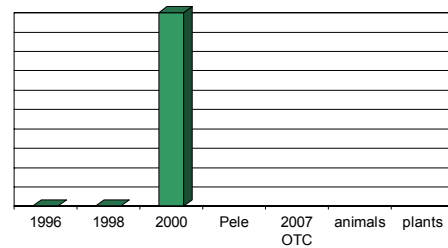


Josiah Wedgwood
1730-1795



- 5000 carefully recorded experiments in clays and glazes
- Champions: Queen Charlotte, Empress Catherine
- Results on to dining tables worldwide

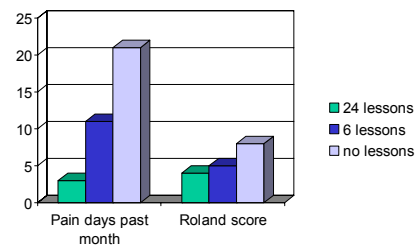
The Viagra Phenomenon



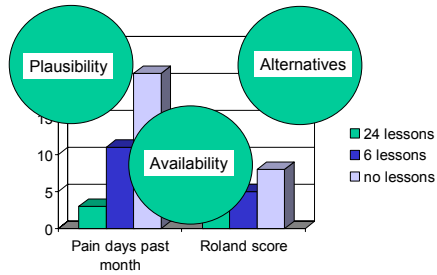
The Alexander Technique for chronic and recurrent BP



Alexander RCT: 1 year follow-up

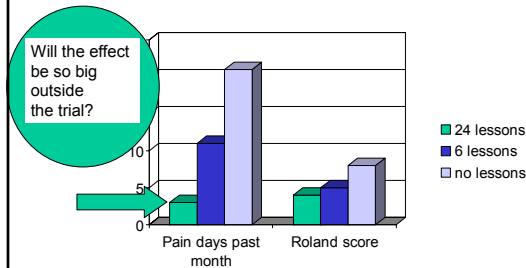


Alexander RCT: ONE WEEK POST-PUBLICATION

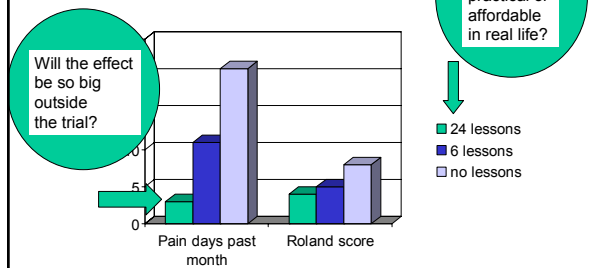


A different issue....

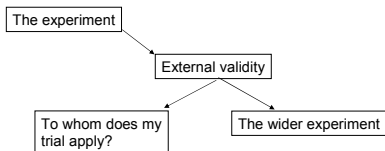
Alexander RCT: 1 year follow-up



Alexander RCT: 1 year follow-up



OPTION 2: BROADEN THE RESEARCH TARGET



THEORY: EXAMPLE 2

“lack of consideration of external validity is ...one explanation for the underuse in routine practice of treatments that were beneficial in trials”

Rothwell PM Lancet 2005

Alexander RCT

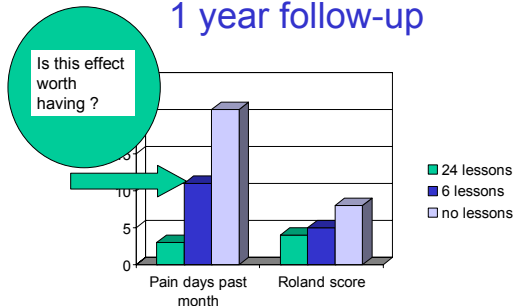
18,342 history of back pain
 ↓
 4,803 replied (26%)
 ↓
 1027 eligible (6%)
 ↓
 579 randomised (3.2%)

You are not alone...

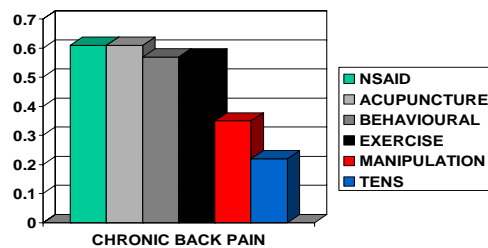
90% of patients with asthma would not have been eligible for trials on which guidelines are based

— Travers et al 2007, Travers et al 2007

Alexander RCT: 1 year follow-up



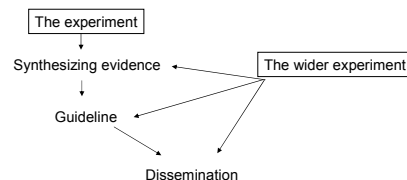
EFFECT SIZES FOR LBP TREATMENTS



'DIRE NEED FOR NEW TREATMENTS' Keller et al Eur Spine J 2007

A SMALL AVERAGE EFFECT
 IN A LARGE POPULATION
 MIGHT PRODUCE
 LOTS OF BENEFIT

OPTION 3: DEVELOP AND DISSEMINATE GUIDELINES



THEORY: EXAMPLE 3

The active dissemination model assumes that information synthesised and disseminated by respected national authorities reliably leads to change in clinical behaviour

Pathman D et al Medical Care 1996



Bed rest and activity: enter the evidence

- 1986: Deyo RCT “people who bed-rest for 2 days rather than 7 days do just as well”
- 1995: Malmivaara RCT in the NEJM “bed rest is bad for you”
- Systematic review
- Guidelines

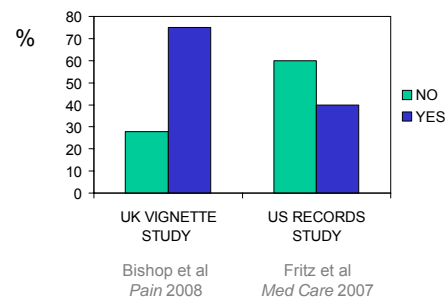
Alexander Technique 2008: ONE WEEK POST-PUBLICATION

The blog....

....enter Dr Crane MD

“.....a person with back pain without sciatica should rest until spasm subsides”

DO PATIENTS GET ADVICE TO STAY ACTIVE?



You are not alone....

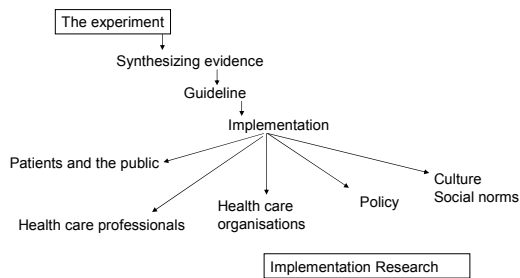
- US and Netherlands 30-40% of patients do not receive care consistent with current scientific evidence
- 20-25% of care which is provided is not needed or potentially harmful

Eccles et al J Clin Epi 2008

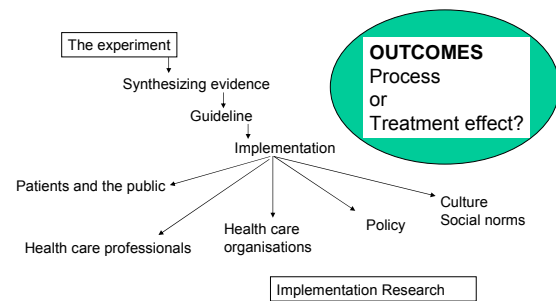
The problem with the active dissemination model is that **information alone does not often change behaviour**

Pathman D et al Medical Care 1996

OPTION 4: IMPLEMENTATION RESEARCH



OPTION 4: ...or PRAGMATIC STUDIES OF EFFECTIVENESS?



RCTs to change culture

- **AUSTRALIA:** (*Buchbinder R, Wyatt M*)
- **SCOTLAND:** major shift in public beliefs and professional advice about staying active (*Waddell G*)
- **NORWAY:** shift in public beliefs towards activity and away from investigation (*Werner E*)

RCT of posted guidelines versus educational support package

Netherlands, 113 primary care physiotherapy practices, 500 patients.

Bekkering et al

- | | |
|---------------------------------|---------------------|
| Active intervention resulted in | • Physical function |
| • Reduced sessions | • Pain |
| • More functional goals | No difference |
| • More active treatments | |
| • Better patient education | |

Small effect sizes

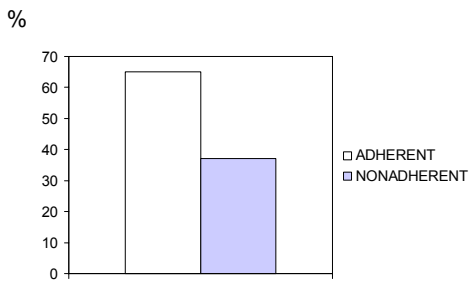
Process changes but not
clinical outcomes

Small effect sizes

Process changes but not
clinical outcomes

Be patient

THE EFFECTIVENESS OF GUIDELINES



Fritz et al *Med Care* 2007

Small effect sizes

Process changes but not
clinical outcomes

Need more theory!

THEORY: EXAMPLE 4

Awareness
Agreement
Adoption
Adherence

Pathman et al *Medical Care* 1996

Barriers to implementing guidelines: a qualitative study

- 72 general practitioners
- Agreement with content
- Do not agree that guidelines fit with what patients want
- Too many providers and sources of information
- Poor access to pain services

Chenot JM et al *Implementation Science* 2008

Most GPs were aware and accepted guidelines...

...but implementation was tempered with their concern for the whole person

Corbett M et al Family Practice In Press

THE CONFLICT

STANDARDISATION and CONSISTENCY
Versus
INDIVIDUALISED PERSONAL CARE

THEORY: EXAMPLE 5

The Normalisation Model:

Will the introduction of the new intervention help rather than hinder

- Patient-clinician communication
- Skills in the team
- Organisation of care
- Wider policy

May C BMC HSR 2006

The IMPaCT Back Study

(Foster, Tooth, Ong, Main, Hay, et al)

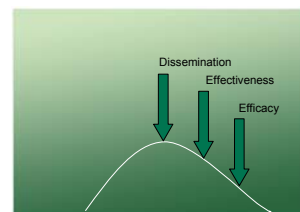


- Communication Doctors - screening tool
- Skill mix Physiotherapists trained
- Team working Physiotherapists mentored
- Organisation Management buy-in

RESEARCH includes doctor perceptions, physiotherapist satisfaction, integration to usual practice, costs

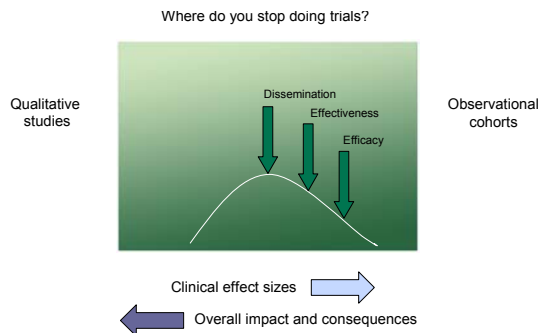
IN SUMMARY...

The Forum X Pragmatism Meter



Clinical effect sizes →
← Overall impact and consequences

The Forum X Pragmatism Meter



ALTERNATIVE 1: IMPOSE STANDARDISATION



April 4th 1984
The Black List

DOING BETTER – MEASURING AND PAYING FOR QUALITY

Payments to primary care
for achieving
quality standards
have reduced
health inequalities

Lancet 2008

ALTERNATIVE 2 IDENTIFY THE RIGHT OUTCOMES

e.g. Avoid harmful, unnecessary or costly
treatments

ALTERNATIVE 3: POPULATION SOLUTIONS

EDUCATION LEVEL

Likelihood of reporting LBP disability falls
by 14% for each additional year of formal
education

(Hagen KB et al *Soc Sci Med* 2006)

ALTERNATIVE 4

"How can I cope with this enormity
in a measured world"

M. Tsvetaeva



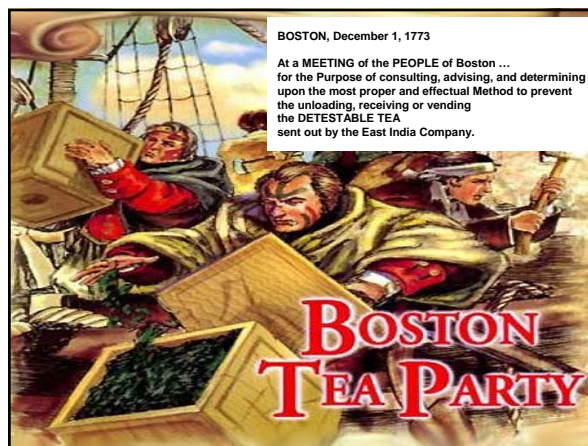
SOME
STANDARDISATION
is good.....

But so is some diversity,
choice, pluralism and
irrationality

Di Blasi Z et al Lancet 2001:

Consistent finding from RCTs

"Physicians who adopt a warm, friendly and
reassuring manner are more effective than
those who keep consultation formal and do not
offer reassurance"



A GOOD CUP OF TEA



"It revives the weary, and soothes the nervy"

A GOOD CUP OF TEA

Compared with placebo,
6 weeks of tea consumption led to
lower post-stress cortisol
and
greater subjective relaxation

Stepptoe A et al Psychopharmacology 2007

Thanks to colleagues and staff at the

Arthritis Research Campaign
National Primary Care Centre
Keele University



and to Stephanie Tooth, Mark
Porcheret, Raymond Ostelo

AND TO OUR BOSTON HOSTS

