

The challenges of implementing evidence into practice: the case of peri-operative fasting

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Context of
implementation
research &
practice

Example of
peri-operative
fasting

Link to
implementation
challenges

Implementation Research

Implementation research is the scientific study of methods to promote the uptake of clinical research findings and other evidence-based practices into routine practice, and hence improve the quality of health care....

‘Mind the Gap’!



Practice – quality of care

- Gap between what we know and what happens in practice.
- 30-40% patients not receiving care according to scientific evidence*
- 20-25% receive care not needed or potentially harmful*
- Cancer care outcomes – improved by 30%, 10% reduction in mortality**
- Statins post-stroke patients under prescribed***

*Schuster et al 1998 Milbank Q, 76: 517-563 & Grol 2001 Med Care 39: 1146-1154

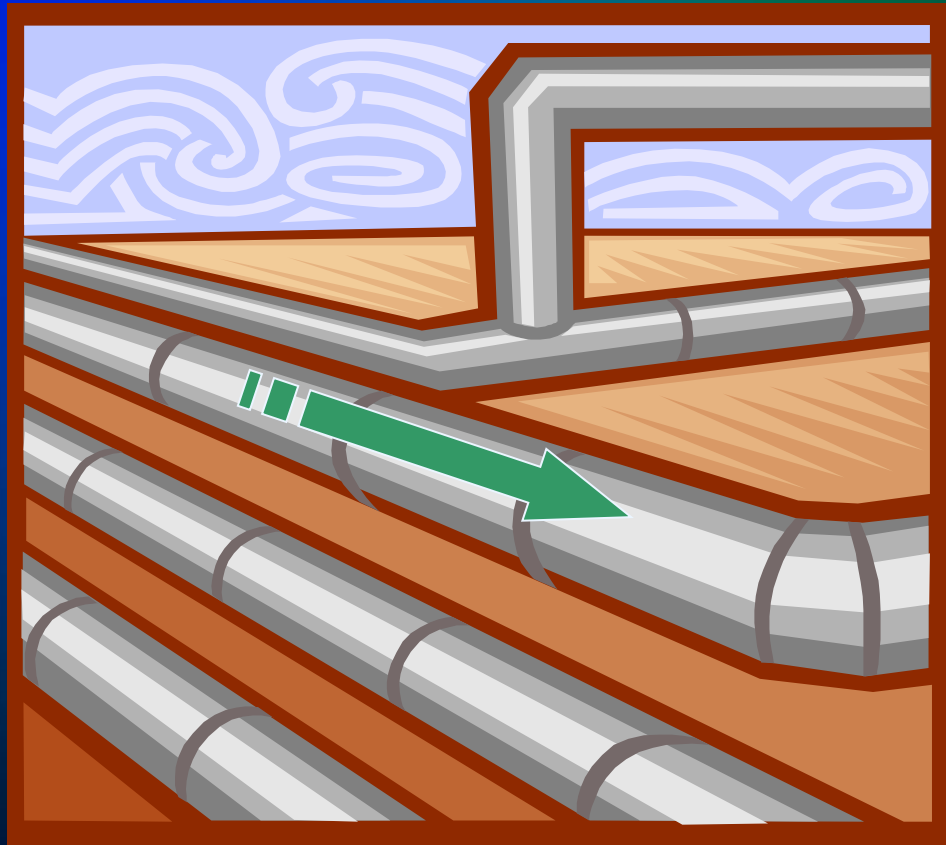
**Ford et al 1990 Semin Oncol, 4: 485-494

*** LaRosa et al JAMA 282: 2340-2346 & Naylor et al ICES

Traditionally-historically

- Focus on individual (behaviour)
 - As ‘rational actors’
- Evidence as a product
- Linear – logical view
- Lack of consideration of other influencing factors

Like water through a pipe...



Contact sport



Greenhalgh et al 2004 - SDO Report & Milbank Quarterly 2004, 82(4)
Rycroft-Malone J 2005 - Editorial - Worldviews on Evidence-Based Nursing

attitudes

context – work environment

beliefs

organisational slack

presence/absence of
facilitators



organisational culture

resources

leaders

nature of evidence

team functioning

Mediate judgements and decisions



Team

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Kate Seers, Ian Bullock, Nicola Crichton, Leo
Strunin, Claire Allen, Tanya Smith

Funder



Aims of the study

- To evaluate 3 strategies for the implementation of....
- To assess the impact of recommendations on patient outcomes and experiences
- To evaluate the processes of implementation

Interventions

1. Standard dissemination alone (SD) and feedback (F)
2. SD + Web based resource tool championed by opinion leader + F
3. SD+ Plan Do Study Act (PDSA) + F

Approach

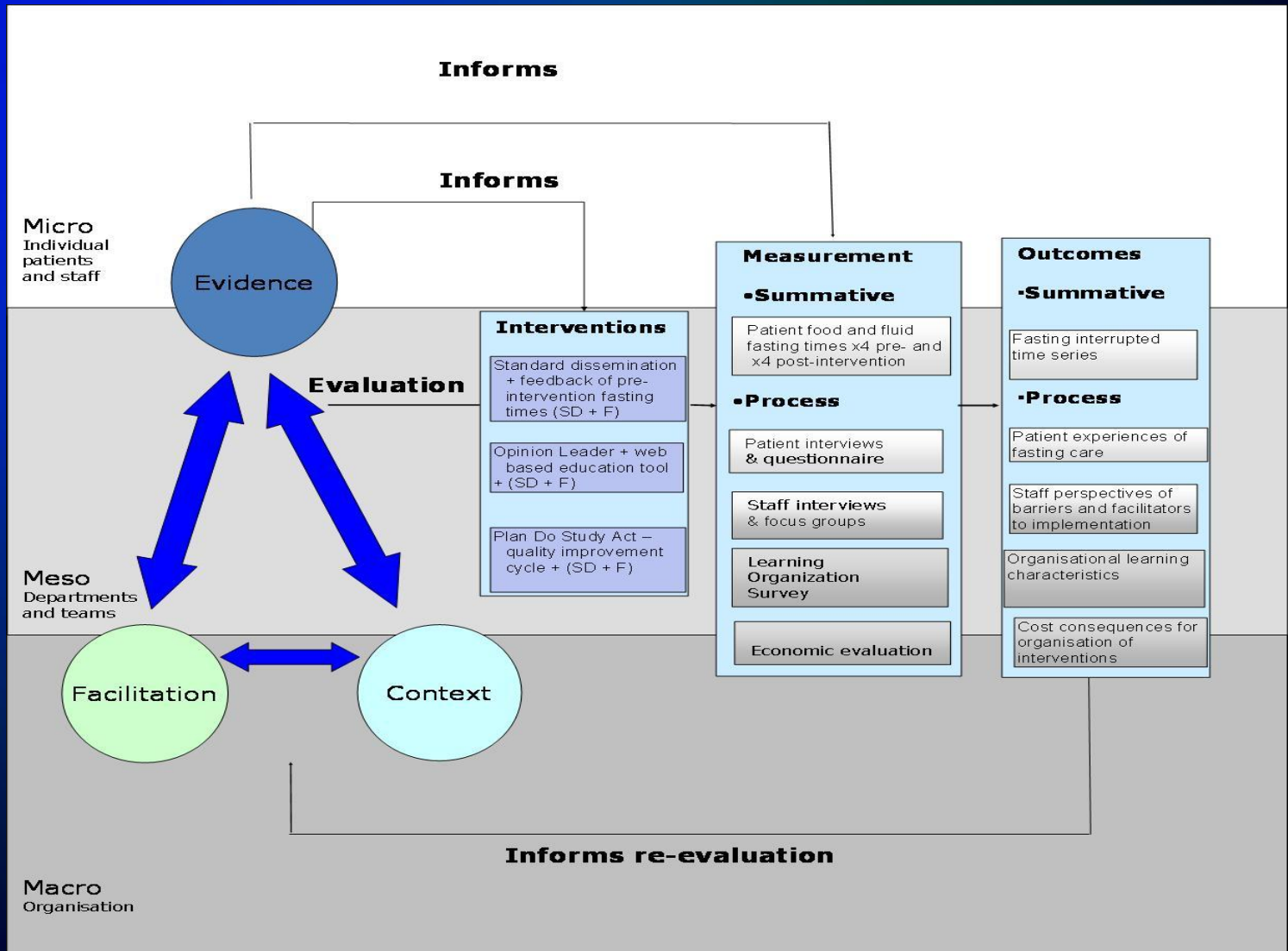
- Pragmatic randomised trial
- Time series
- Embedded process evaluation



Pre-intervention duration of fasting feedback

19 UK NHS Acute Hospital Trusts randomised to 1 of the 3 interventions

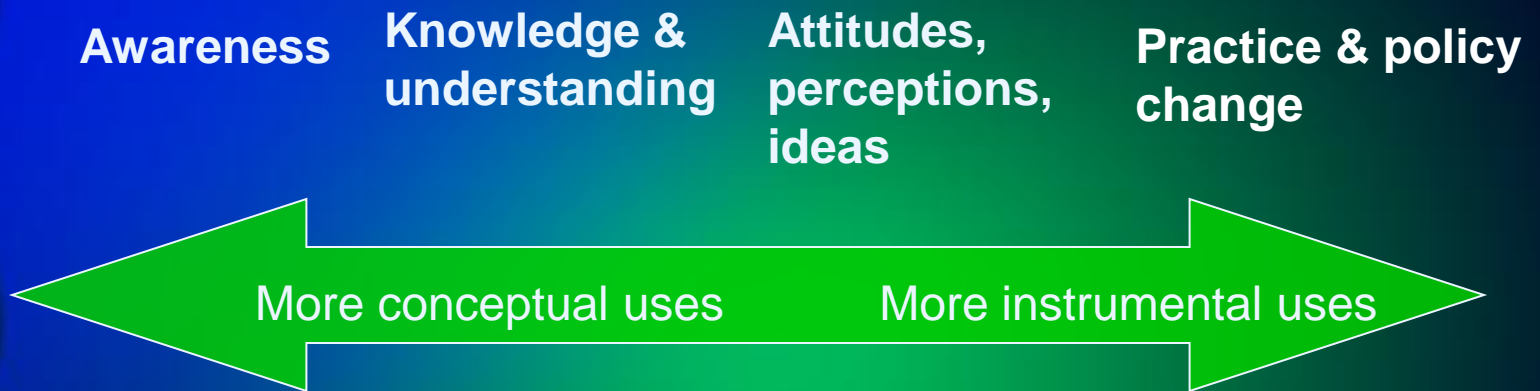
Theoretical framework



Data collected

	Pre Intervention	Post Intervention	Total
Duration of Fasting	1575	1930	3505
Patient experience questionnaires	1069	1215	2284
Local Investigator Audit		54	54
Key Contact Interviews		12	12
Change Agent Interviews	29	12	33
Patient Interviews	35	35	70
Learning Organisation Survey (LOS)	758	318	1076
Focus Groups		5	5

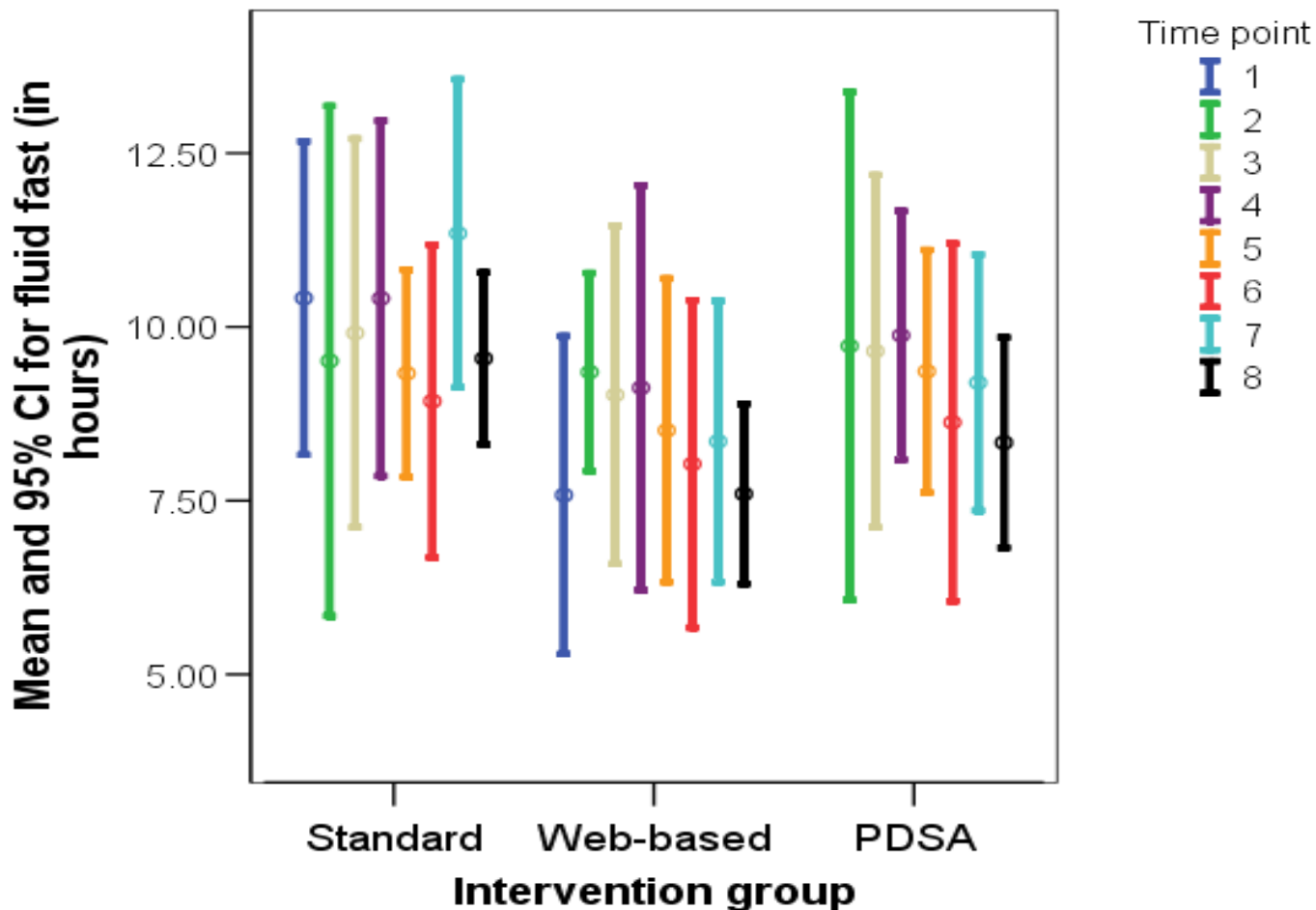
Impact



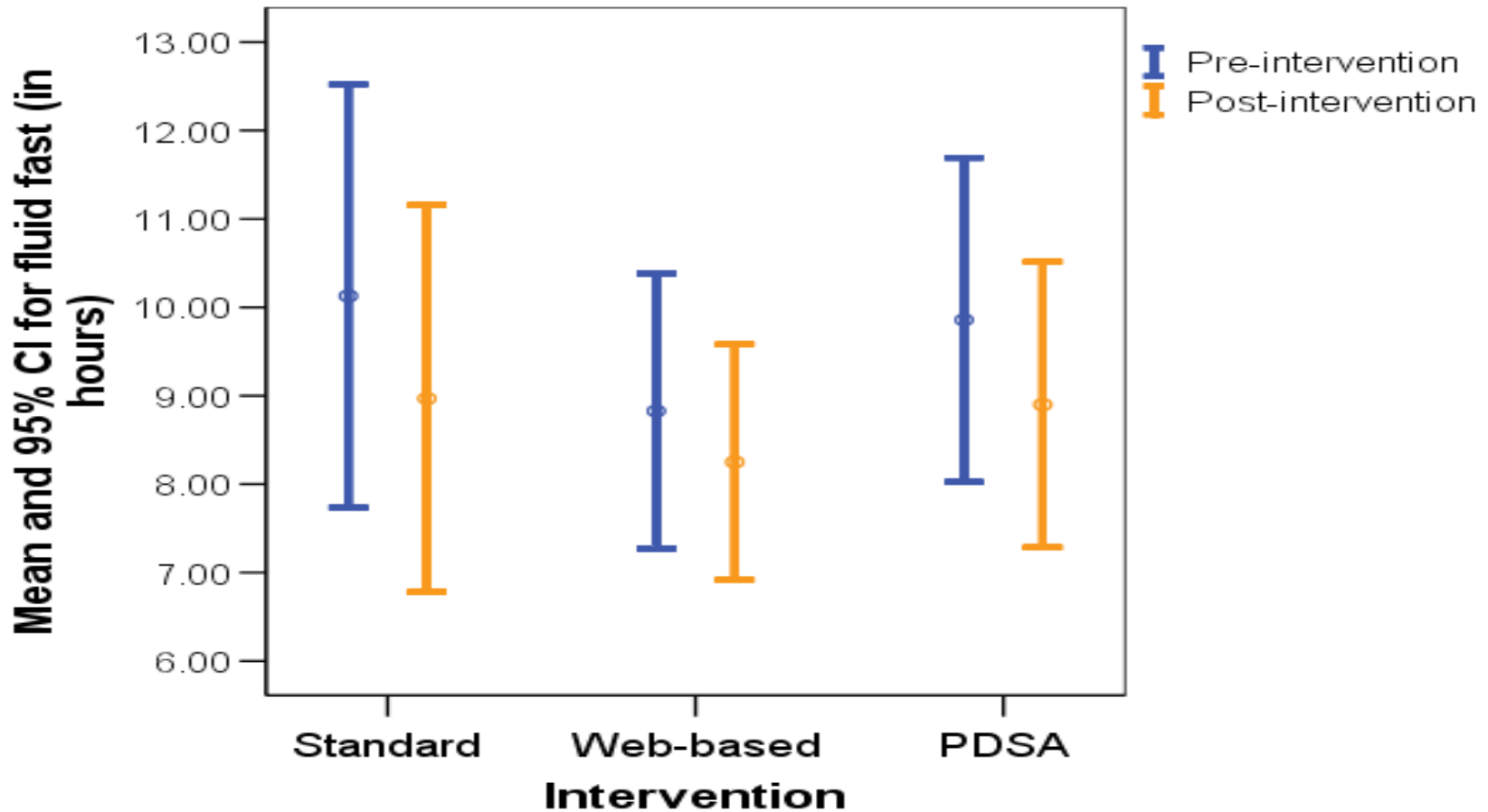
Continuum of research use

(Nutley et al 2007, Weiss 1979)

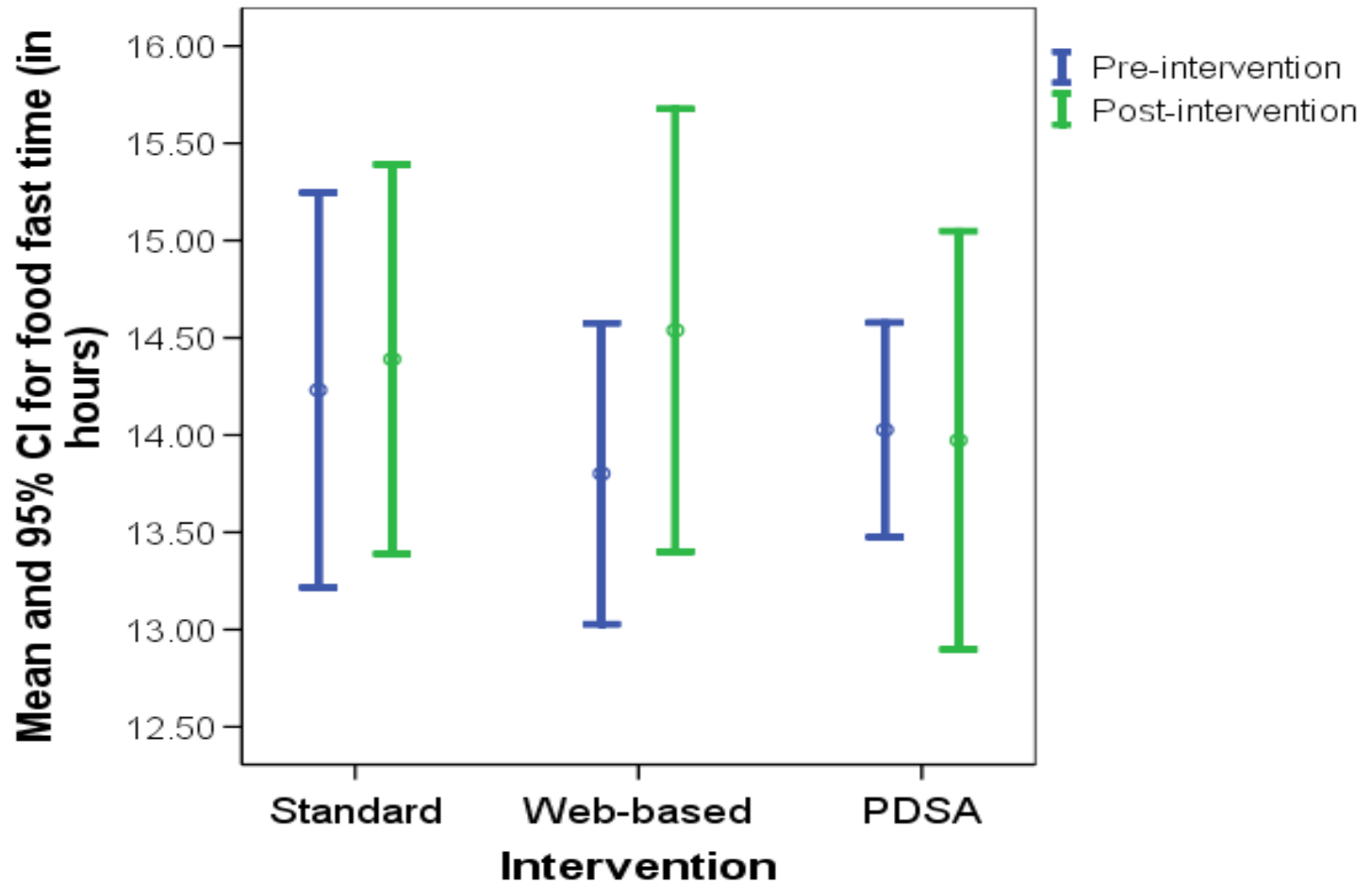
Comparison of mean fluid fast times at the eight time points for each intervention group (1-4 pre-intervention and 5-8 post-intervention)



Comparison of pre and post intervention mean fluid fast times for each intervention group



Comparison of pre and post intervention mean food fast times for each intervention group



The headline

- No significant differences across intervention groups:
 - duration of food fast – mean time
 - duration of fluid fast – mean time

Food	13.97	14.17
Fluid	9.59	8.91

Within site – fluid fast

- Within 6 of the 19 sites – significant reduction in fluid fast time:
 - 3 standard interventions sites
 - 1 web-based intervention site
 - 2 PDSA intervention sites
- 1 site (PDSA) got significantly worse (6.45 – 7.9)

Site	Pre (hrs)	Post (hrs)
A	12.3	10.5
P	12.9	11.2
Q	12.5	7.7
J	8.9	6.4
K	12.8	11.4
N	10.6	8.1

Impact on practice & local policy

- Development of policies
- Shifts to include fasting as an equal priority in op list planning
- Implementing staggered admission
- Revision of patient information
- Practical tools – e.g. writing times on cups, using white boards

Influences

$$SI = f(e, c, f)$$

Evidence (e)

- Badging positive – evidence underpinning (on the whole) ‘accepted’
- Message ‘simple’

Evidence + interaction

....with individuals

- Smoothed or obstructed the progress of new practices
- Cautionary practice – risk taking (e.g. tighter fasting times)
- Patients follow their own routines, and may chose to be cautious

Influences: Context (c)

- Professional cultures
- Power structures/relations – this issue ‘belongs’ to certain professionals
- Communication & team working
- Impact on authority and responsibility for decision making re fasting
- Impact on individualising fasting times

Wider context

- Wider changes in NHS
- Context of 19 participating trusts
- 'Readiness' of organisations
- Fasting not a priority (for the organisation)

Influences: Facilitation

- Integrating change agent role into 'day job'
- Lack of engagement (e.g. attendance at PDSA meetings)– resistance (e.g. to change lists)
- Working with different groups and personalities
- OL role required seniority

The challenge for all of us in the knowledge business...



"Yes, it's quite a noise - but are we having any impact?"

Challenges – Implementation research

- Heterogeneity
- Implementation fidelity
- What is a long enough intervention period?
- Translating impact of practice change into impact on outcomes



So...

Using evidence in practice:

IS

- Complex
- Active
- Multi-dimensional
- Context-specific

IS NOT

- Linear
- Passive
- Rational
- Deductive

Close attention to....

