PRE-CONGRESS COURSE 6

High standard psychosocial care in your clinic; how to implement new guidelines.

Special Interest Group Psychology and Counselling
London - UK, 7 July 2013

eshre
SCIENCE MOVING
PEOPLE
MOVING SCIENCE

High standard psychosocial care in your clinic; how to implement new guidelines

London, United Kingdom
7 July 2013

Organised by
The ESHRE Special Interest Group Psychology and Counselling

Contents

Course coordinators, course description and target audience **Page 5**

Programme **Page 7**

Speakers' contributions

Tackling the burden of ART, a practical guide for clinical staff - ***Jacky Boivin - United Kingdom*** **Page 9**

Guidelines and then: how to implement psychosocial care in daily practice - ***Nathalie Vermeulen - Belgium*** **Page 18**

The implementation of tailored expectant management in reproductive medicine - ***Noortje Van Den Boogaard - The Netherlands*** **Page 33**

How can mental health professionals work with other clinic staff to implement psychosocial support? - ***Sofia Gameiro - Portugal*** **Page 48**

How doctors could implement psychosocial care - ***Christos Venetis - Greece*** **Page 57**

How to support patients in the waiting period? - ***Deborah Lancastle - United Kingdom*** **Page 71**

Screening on distress in ART patients; theoretical background and practical Implications - ***Angelique van Dongen - The Netherlands*** **Page 81**

Supporting patients in changing lifestyle. Rotterdam Lifestyle interventions - ***Geranne Jiskoot - The Netherlands*** **Page 98**

Upcoming ESHRE Campus Courses **Page 112**

Notes **Page 113**

Course coordinators

Chris Verhaak (The Netherlands) and Uschi Vandenbroeck (Belgium)

Course description

Supported by the ESHRE guideline group, new guidelines for psychosocial care are developed by psychologists, counsellors, nurses and gynaecologists. The guidelines are focused on implementing psychosocial care in different aspects of daily clinical care. The workshop is aimed to facilitate implementing the guidelines in daily practice.

Target audience

Doctors and nurses, psychologists and counselors

Scientific programme

Chairman: Christianne Verhaak - The Netherlands
Chairman: Uschi Van den Broeck - Belgium

09:00 - 09:30	Tackling the burden of ART, a practical guide for clinical staff *Jacky Boivin - United Kingdom*
09:30 - 09:45	Discussion
09:45 - 10:15	Guidelines and then: how to implement psychosocial care in daily practice *Nathalie Vermeulen - Belgium*
10:15 - 10:30	Discussion
10:30 - 11:00	Coffee break
11:00 - 11:30	The implementation of tailored expectant management in reproductive medicine *Noortje Van Den Boogaard - The Netherlands*
11:30 - 11:45	Discussion
11:45 - 12:15	How can mental health professionals work with other clinic staff to implement psychosocial support? *Sofia Gameiro - Portugal*
12:15 - 12:30	Discussion
12:30 - 13:30	Lunch
13:30 - 14:00	How doctors could implement psychosocial care *Christos Venetis - Greece*
14:00 - 14:15	Discussion
14:15 - 14:45	How to support patients in the waiting period? *Deborah Lancastle - United Kingdom*
14:45 - 15:00	Discussion
15:00 - 15:30	Coffee break
15:30 - 16:00	Screening on distress in ART patients; theoretical background and practical implications *Angelique van Dongen - The Netherlands*
16:00 - 16:15	Discussion
16:15 - 16:45	Supporting patients in changing lifestyle. Rotterdam Lifestyle interventions *Geranne Jiskoot - The Netherlands*
16:45 - 17:00	Discussion

Tackling the burden of ART: A practical guide for clinical staff

Jacky Boivin, PhD, CPsychol

School of Psychology
Cardiff

Disclosure (past three years)

- Speaker fees, honorarium and/or research funding from Merck-Serono S.A., Weber-Shandwick, EMD Serono Inc

Learning objectives

- Discover interchange between psychology-medicine
- Learn the Integrated Approach to Infertility Care (IPA Care)
- Describe what is required to take into account clinic issues for compliance and patient quality of life
- Identify work stress and patient difficulty in interactions between staff and patients
- Identify potential impact of taking into account clinic issues

History and evolution

Psyche → Infertility | Infertility → Psyche | Assessment Monitoring Follow-up | Intervention Evaluation | Compliance Systematic reviews

Karl Menninger | Helen Deutch

"Infertility as a psychic conflict sailing under a gynaecological flag" Menninger, 1943

Mahlstedt 195 "Working through" & grief & loss therapies

Hammerli, 2009

Gameiro, 2013

1940 | 1977 | 1978 | 2003 | 2009

Year	% unexplained	% range
< 1960	34.0	(Sandler 1955)
1960 - 1969	21.84	11.2 - 58.0
1970 - 1979	16.13	10.0 - 27.0
1980 - 1982	12.1	5.8 - 19.4

Templeton et al. 1982

Unexplained infertility

Barbara Eck Menning Nurse led, Patient Advocacy

IVF & ART

Evidence-based Medicine

Brandes et al. 2009

"Drop-out" in ART

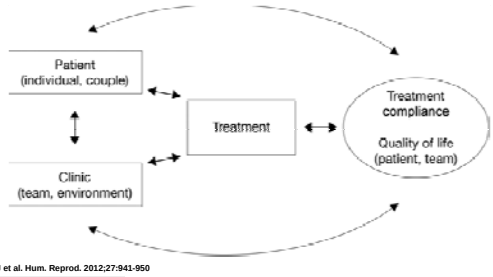
Human Reproduction, Vol.27, No.4 pp. 941–950, 2012
Advanced Access publication on January 18, 2012 doi:10.1093/humrep/der457

human reproduction | OPINION

Tackling burden in ART: an integrated approach for medical staff

Jacky Boivin[1,*], Alice D. Domar[2], Daniel B. Shapiro[3], Tewes H. Wischmann[4], Bart C.J.M. Fauser[5], and Christianne Verhaak[6]

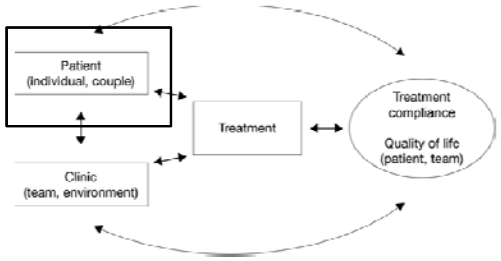
Integrated Approach to Fertility Care



Boivin J et al. Hum. Reprod. 2012;27:941-950

human reproduction

Integrated Approach to Fertility Care



Boivin J et al. Hum. Reprod. 2012;27:941-950

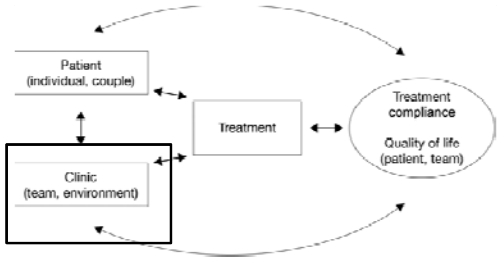
human reproduction

Patient targets (speaker Gameiro)

- **Fear and negative attitudes to treatment**
  - Education (pre-treatment, treatment changeover)
- **Psychological vulnerability & ability to withstand demands of treatment**
  - High-risk referral (pre-treatment), coping interventions (throughout) treatment and beyond
- **Relational strain**
  - High-risk referral (pre-treatment); partner involvement; decisional-support (treatment change-over)

Cardiff Fertility Studies

Integrated Approach to Fertility Care



Boivin J et al. Hum. Reprod. 2012;27:941-950

© The Author 2012. Published by Oxford University Press on behalf of the European Society of Human Reproduction and Embryology. All rights reserved. For Permissions, please email: journals.permissions@oup.com

human reproduction

Practical guide for staff

- Needs assessment
- Intervention development
- Impact assessment

Recognise issues for fertility teams

Shanafelt et al. 2012: Ob/Gyn – 8/25 specialities on rate of burn-out; 50% at least 1 symptom

% agree/strongly agree:
"Work environment is stressful"

Physician: 48.9
Administrator: 73.7
Staff: 63.9

N=112 ART centres in USA
Gerson et al. 2004 Fertil Steril

Staff perspectives

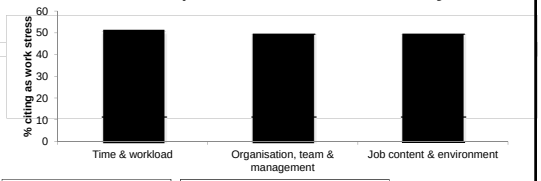
- **"Holding it together"** **(Payne & Goedeke, 2007)**
  - Emotional/physical experiences of patient AND roles/care experiences of specialist teams
- **Change in primary responsibilities** **(Morris, 2001)**
  - Patient centered care Vs medically-orientated responsibilities
- **Dealing with disappointed patients** **(Simpson et al. 2001)**
  - Insufficient time to support distressed patients
- **Quality of care perceived differently than patients** **(Aarts et al. 2011)**
- **How care should be delivered perceived differently than patients** **(Allan, 2002)**
- **Difficulty making changes toward patient centered care** **Huppleschoten et al. 2013**

ESHRE survey

- N=527 members of ESHRE
- Provided text responses to three questions
  - "What are the top three factors that make your work stressful?"
  - "What are the top three factors that make working with patients difficult?"
  - "Which top three factors … would you be most willing to attend a workshop to resolve"
- Textual analysis based on grounded theory (categories & broad themes)
- Sample composition
  - Clinical - 40.4% clinicians, 36.4% embryologists
  - Other - 8.4% administration, 8.4% nurse/mid-wife, 3.4% academic, 2.3% mental Health

Cardiff Fertility Studies

Sources of workplace stress in fertility staff



- "lack of time"; "time pressure"; "… not enough time to think properly"; "over commitment";
- "Excessive amount of work… [work] requests can arrive also when I am not in the office";
- "Working throughout the week Monday - Sunday"
- "restriction of time in patient-doctor contact"

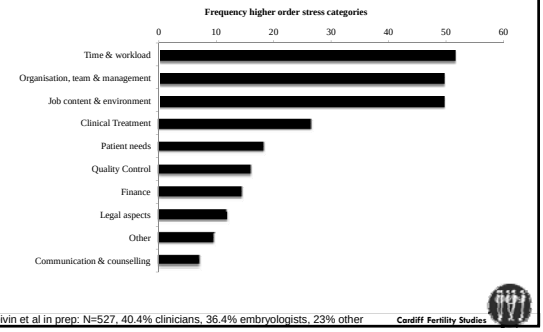
- "Different medical doctors different opinions, difficult to handle…";
- "As a medical director … control of a team [for] the whole process …";
- "The need to work as a good team. I think we do not reach it that much";
- "Insufficient [] support from profession";
- "Shortage in staff";
- "Difficult teamwork between lab-staff and the physicians"
- "bitching – interpersonal conflicts"

- "… burden of administrative tasks";
- "… regulatory procedures";
- "Emails"; "Telephone";
- "Work not well structured & organised";
- "Excessive paperwork in a tiny office";
- "Lack of operating theatres"
- "Poor planning (very busy days.. too easy ones)"

Boivin et al in prep: N=527, 40.4% clinicians, 36.4% embryologists, 23% (other)

Cardiff Fertility Studies

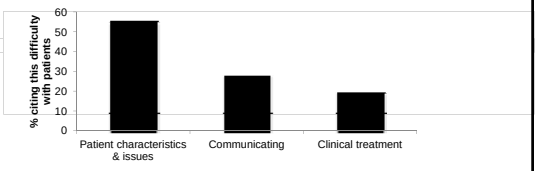
Other workplace stressors



Boivin et al in prep: N=527, 40.4% clinicians, 36.4% embryologists, 23% other

Cardiff Fertility Studies

Sources of difficulty working with patients



"patients with difficult personalities"; "chronically dissatisfied, impatient patients "
"aggressive behaviour"
"their sensitive emotional state due to the infertility problem they face"
•"[Un]realistic expectations … which we cannot meet";
•"[Patients] sensitive emotional state due to …infertility";
•"IMPATIENCE: patients who demand immediate feedback to emails or calls, appointments, treatments start, etc"

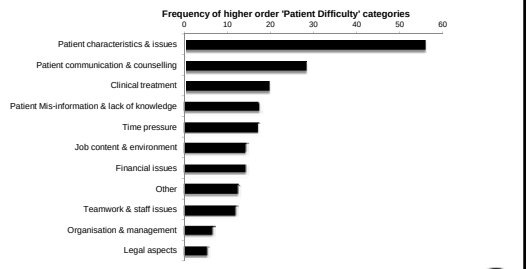
• "to explain in non medical language what we are doing";
•"talking to immigrants …with different cultures and religions"
• "Giving bad notices about treatments, negative pregnancy test, fertilization failure, embryo quality"
•"When patients have difficulties following the rules of the treatments plans"
•"Patients that request the same items/questions over and over again, having to repeat myself several times … over phone and email"

•"limitation of treatment & tests for unexplained infertility …"
• "That we can not make all patients pregnant"
•"How to approach psychological counselling for patients with difficulties"
•How can we motivate [her] to go on and [not] get disappointed"

Boivin et al in prep: N=527, 40.4% clinicians, 36.4% embryologists, 23% (other)

Cardiff Fertility Studies

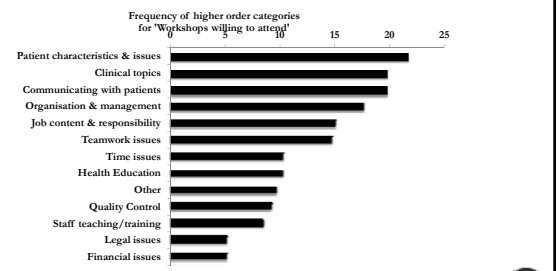
Other difficulties working with patients



Boivin et al in prep: N=527, 40.4% clinicians, 36.4% embryologists, 23% other

Cardiff Fertility Studies

Workshops willing to attend



Boivin et al in prep: N=527, 40.4% clinicians, 36.4% embryologists, 23% other

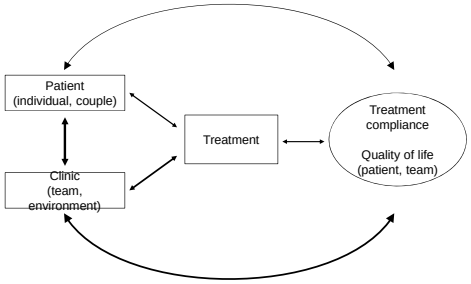
Cardiff Fertility Studies

Broad themes

- Work stress: "Time & lack of time trade offs"
- Patient difficulty: "Keep calm and carry on"
- Workshops: "A little of everything"

Cardiff Fertility Studies

Integrated Approach to Fertility Care



Boivin J et al. Hum. Reprod. 2012;27:941-950

human reproduction

TABLE 9.1
Items With Meta-Analytic *R*s That Are Generalizable Across Organizations

Item	Turnover	Customer	Productivity	Profit
Know what is expected	x	x	x	
Materials and equipment	x	x		
Opportunities to do what I do best	x	x	x	x
Recognition/praise	o	o	o	x
Cares about me	x	x	x	o
Encourages development	o	x	o	x
Opinions count	o	x	x	x
Mission/purpose	o	o	x	x
Committed—quality	x	o	x	x
Best friend		x	o	x
Talked about progress		o	o	
Opportunities to learn and grow	x	x	x	x

Notes. o = Positive, generalizable relationship.
x = Strongest generalizable relationships.

TABLE 9.2
Probability of Business Unit Success as a Function of Employee Engagement

Employee engagement Percentile	Success rate (within companies)[a]	Success Rate (across companies)[b]
99	75%	78%
95	67%	71%
75	57%	59%
50	50%	50%
25	43%	41%
5	33%	29%
1	27%	22%

[a]Success rate (within) = percentage of business units with composite performance above the median of business units within a company.
[b]Success rate (across) = percentage of business units with composite performance above the median of business units across companies.

21

Corey et al. 2003

Tackling burden in ART: an integrated approach for medical staff

Table 1
Factors cited by patients as contributing to their decision to end treatment

Patient (individual, couple)

Fear and negative treatment attitudes
Unfavourable attitudes to treatment (e.g. fear about health of baby, perceiving treatment to be unnatural, perceived costs)

Values (ethical, moral) and preferences incompatible with treatment

Idiosyncratic barriers

Psychological and emotional factors
Pre-ART psychological profile

Difficulty in tolerating negative emotions for extended time periods

Uncertainty

Strain of repeated ART cycles

Relational strain
Fear that ART will negatively impact relationship

Perceived and actual asymmetry in treatment focus between partners (particularly prevalent in early phases of medical involvement)

Clinic (team, environment)

Sub-optimal organizational care
Stressful care (disorganized, assembly-line treatment, different staff on clinic visits)

Insufficient information on alternatives, inadequate co-ordination

Depersonalization (poor coordinated follow-up, results at work and without partner present)

Lack of continuity of care and negative doctor attitudes

Overly bureaucratic procedures

Negative staff-patient interactions
Lack of empathy, poor listening skills, insufficient care of the man, insufficient time for questions

Treatment

Physical burden
Worry about physical burden, physical symptoms and discomfort

Injection protocols and adherence to treatment

Cycle monitoring

Disruption of work and daily activities

Worry about cost

Handling of poor prognosis
Loss of hope for success (cycle number dependent)

Boivin et al: Tackling Burden in ART. Humn Reprod, 2012

FertiQoL International

Optional Treatment Module

Aarts et al. 2011 Hum Rep
N=875 patients

Patient-centeredness

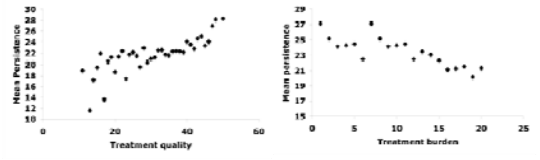
- accessibility
- communication
- respect for values
- continuity
- autonomy
- competence

Predicts treatment quality of life

www.fertiqol.com -- 26 languages

Cardiff Fertility Studies

Treatment quality of life and compliance



FertiQoL validation sample, n = 1027
Persistence = intention to persist with treatment
Boivin et al. 2011 Hum Reprod

Cardiff Fertility Studies

Conclusions

- **Discover interchange psychology-medicine**
  - Psychology responds to innovations…
- **Learn the Integrated Approach to Infertility Care (IPA Care)**
  - …but innovations create need
- **Describe what is required to take into account clinic issues for compliance and patient quality of life**
  - More attention needs to be devoted to staff needs in fertility clinics and how best to address them
- **Identify work stress and patient difficulty in interactions between staff and patients**
  - Time trade offs and need to deliver service despite demanding context important challenges for fertility staff
- **Identify potential impact of taking into account clinic issues**
  - Threats and potential benefits of addressing challenges needs to be identified

Selected Bibliography

Boivin J, Domar A, Shapiro D, Wischmann T, Fauser B, Verhaak C. Tackling burden in ART: an integrated approach for medical staff. Hum Reprod. 2012;27(4):941-950.

Boivin, J, Takefman, J, Braverman, A. Development and preliminary validation of the fertility quality of life (FertiQoL) tool (2011). Human Reproduction, 26(8), 2084–2091.

Gameiro, S, Verhaak, CM, Kremer, J, Boivin J (2013). Why we should talk about compliance with Assisted Reproductive Technologies (ART): a Systematic Review and Meta-Analysis of ART compliance rates. Human Reproduction Update 19 (2): 124-135

E.A.F. Dancet, W.L.D.M. Nelen, W. Sermeus, L. De Leeuw, J.A.M. Kremer and T.M. D'Hooghe. The patients' perspective on fertility care: a systematic review. Human Reproduction Update. 2010;16 (5):467-8

Tackling the burden of ART: A practical guide for clinical staff

Jacky Boivin, PhD, Cpsychol
boivin@cardiff.ac.uk

School of Psychology
Cardiff

ESHRE, London, July, 2013

Guidelines and then: how to implement psychosocial care in daily practice

Dr. Nathalie Vermeulen

(ESHRE - Belgium)

Learning objectives: Key question?

- What are clinical guidelines?
- How does ESHRE develop guidelines?
- What is implementation?
- An implementation strategy
- Implementation strategy: an example
- Implementation strategy: first experience
- Implementation of the guideline on psychosocial care: challenges and tailored approach

No conflicts of interest to disclose.

What are clinical guidelines?

Systematically developed statements to *assist care providers and patient* in making decisions about appropriate health care for specific clinical circumstances

Field & Lohr 1990

What are clinical guidelines?

- Statements including recommendations
- Intended to optimize patient care
- Informed by a systematic review of evidence
- Assessment of benefits and harms of alternative care options

IOM. 2011 Clinical practice guidelines we can trust (report).

What are clinical guidelines?

Decrease variation in care + Increase efficiency of care

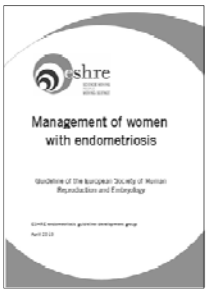
⇩

Improvement quality of care

How does ESHRE development guidelines ?

- Started in 2010
- ESHRE manual for guideline development

How does ESHRE development guidelines ?



In the pipeline:

- ESHRE Guideline on Psychosocial care in fertility units
- ESHRE guideline on management of women with premature ovarian insufficiency

What is implementation?

Implementation: the act of implementing or putting into effect

Guidelines are not self implementing

OR

It was not enough to produce satisfactory soap,
it was also necessary to induce people to wash.

How do you get people to use the guideline?

Joseph Schumpeter, 1939 Shekelle et al. Implementation Science 2012

Implementation?

- 30–40% of patients do not receive care based on available scientific evidence
- 20–25% of provided health care is unnecessary

McGlynn et al. 2003 N Engl J Med Grol. 2001 Med Care

Implementation?

We need a..

There is not 1 implementation strategy or 1 implementation tool with a guarantee for success

Implementation requires a tailored approach

An implementation strategy

- *Relatively little research evidence about how guideline developers should improve implementability*
- *If guideline developers wish to enhance the implementability of their guidelines then current best practice suggests that developers use strategies to support guideline uptake*

Strategies to support guideline uptake
- Pre-emptive identification of potential barriers of recommendations, and a priori generation of solutions to address them by the guideline development group. At a minimum the guideline group should be aware of the potential barriers:
- Use of behaviorally specific language in the guideline
- Use of multiple formats and channels for guideline dissemination based on preferences of the target group of health care practitioners:
- Development of educational resources adapted in content, and vehicle to each target group of health care practitioners;
- Identification of the resource implications of recommendations, ensuring their availability before starting:
- Use of data collection tools (for example, simple audit templates).

Shekelle et al. Implementation Science 2012 7:62

An implementation strategy

1. **Pre-emptive identification of potential barriers of recommendations and a priori generation of solutions to address them by the guideline development group.**
2. **Use of behaviorally specific language in the guideline**
3. **Use of multiple formats and channels for guideline dissemination based on preferences of the target group of health care practitioners**
4. **Development of educational resources adapted in content, and vehicle to each target group of health care practitioners**
5. **Identification of the resource implications of recommendations, ensuring their availability before starting**
6. **Use of data collection tools (for example, simple audit templates)**

Gagliardi et al. Implementation Science 2011, 7:26

An implementation strategy

1. **Pre-emptive identification of potential barriers of recommendations and a priori generation of solutions to address them by the guideline development group.**

HOW ?

Questionnaire for the guideline development group:

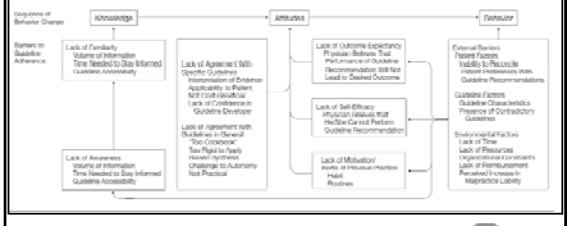
- **Which are potential barriers of each recommendation?**
- **Which are potential facilitators?**

Gagliardi et al. Implementation Science 2011, 7:26

An implementation strategy

Which are potential barriers of each recommendation?

Figure. Barriers to Physician Adherence to Practice Guidelines in Relation to Behavior Change



Cabana MD, et al. JAMA. 1999 Oct 20;282(15):1458-65.

An implementation strategy

Which are potential barriers of each recommendation?

Types of barriers – 4 categories:

Barriers related to the "professional"

- Attitudes/ believes of the clinician
- Skills/knowledge of the clinician
- Lack of agreement with the guideline
- Inertia of previous practice
- Lack of Outcome Expectancy, disbelieve in significant outcome change

Barriers related to the "guideline"

- Guideline is difficult to use,
- Recommendations not identifiable
- Recommendations don't contain a specific and unambiguous action
- Recommendations are not concise,
- Recommendations don't contain sufficient information as which patients and in which conditions they should be applied

Cabana MD, et al. JAMA. 1999 Oct 20;282(15):1458-65.

An implementation strategy

Which are potential barriers of each recommendation?

Types of barriers – 4 categories:

Barriers related to the "patient"

- Recommendation does not reconcile with the patient preferences
- Patients may be resistant or perceive no need for guideline recommendations
- Patient may perceive the recommendation as offensive or embarrassing

Barriers related to the "environment"

- External factors related to the system
- Acquisition of new resources or facilities
- lack of a reminder system, lack of counseling materials
- insufficient staff or consultant support
- poor reimbursement
- Increased practice costs, and increased liability
- lack of time

Cabana MD, et al. JAMA. 1999 Oct 20;282(15):1458-65.

An implementation strategy

1. Pre-emptive identification of potential barriers of recommendations and a priori generation of solutions to address them by the guideline development group.

Which are potential facilitators?

Barriers related to the "professional"

Barriers related to the "guideline"

Barriers related to the "patient"

Barriers related to the "environment"

⇨

Facilitators, depending on the barriers

- a patient version of the guideline
- option grid to ease decision-making
- addition of pictures, video-material
- educational material
- meeting, courses
- clinical audit and feedback
- ...

Cabana MD, et al. JAMA. 1999 Oct 20;282(15):1458-65.

An implementation strategy

2. Use of behaviorally specific language in the guideline

Summary points

Psychological research shows that the more precisely behaviours are specified, the more they are likely to be carried out

Rewriting guidelines to increase behavioural specificity may be the simplest, most effective method of increasing implementation

Specifying what, who, when, where, and how will assist implementation

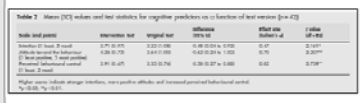
Behavioural analysis of the controlling antecedents and consequences of implementation may help develop effective interventions

Michie S, Lester K. BMJ 2004, 28(7435), 343-345.

An implementation strategy

2. Use of behaviorally specific language in the guideline

- To determine whether writing clinical guideline recommendations in behaviourally specified ''plain English'' language increases the likelihood of their implementation by service users (patients)



Michie S, Lester K. Qual Saf Health Care 2005, 14:367–370.

An implementation strategy

3. Use of multiple formats and channels for guideline dissemination based on preferences of the target group of health care practitioners

Standard publications

- full-length version are posted on the ESHRE Website
- publication in Human Reproduction
- inclusion on the National Guidelines Clearinghouse's Website.

Additional publications

- patient version
- online version of the guideline

An implementation strategy

3. Use of multiple formats and channels for guideline dissemination based on preferences of the target group of health care practitioners

Announcements

- announcement in "Focus on Reproduction"
- a newsflash on the ESHRE website's homepage
- a news item in the monthly digital ESHRE newsletter
- specific guideline session at the annual ESHRE meeting
- all related National Societies are separately informed about the guideline release
- all appropriate remaining stakeholders - for instance, European policy makers, patients societies and industry representatives - will be separately informed.

An implementation strategy

4. Development of educational resources adapted in content, and vehicle to each target group of health care practitioners

- Informational or educational resources for patients/caregivers
- Tools / Questions for clinicians to facilitate discussion
- Decision aids to support patient involvement:

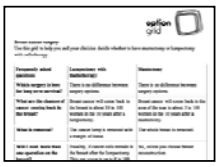
An implementation strategy

4. Development of educational resources adapted in content, and vehicle to each target group of health care practitioners

Option Grids

- *Options more visible and*
- *Clinicians found it easier to undertake shared decision making*

⇒ *enhance patients' confidence and voice, increasing their involvement in collaborative dialogs.*



Case 2 **A 50 years old woman with breast cancer.**
This patient used an Option Grid to compare mastectomy to lumpectomy (conservation surgery with radiotherapy). She noticed the difference in the local cancer recurrence rate, observing that it was double in lumpectomy. She was also alerted to the side-effects of radiotherapy, such as breast tenderness and shrinkage. These issues were important to her decision.

Elwyn, G., et al. Patient Educ Couns 2013, 90(2), 207-212.

An implementation strategy

5. Identification of the resource implications of recommendations, ensuring their availability before starting

Anticipated changes, resources and competencies required to adapt and accommodate guideline utilization

- Technical
- Regulatory
- Human resources
- Professional
- Workflow
- Costs

⇨ *Environmental barriers*

An implementation strategy

6. Use of data collection tools (for example, simple audit templates)

- Development of quality indicators
  - *The first quality indicator: there should be evidence in the medical record that the patient's current emotional well-being was assessed within 1 month of the patient's first visit with a medical oncologist.*
  - *The second quality indicator stipulates that, if a problem with emotional well-being was identified, there is evidence in the patient's medical record that action was taken to address the problem or an explanation is provided for why no action was taken.*
- Performance of the indicators
  - *1st indicator: ranged from 12% to 86% across sites (median, 47%). (13% of patients)*
  - *2nd indicator: 13% to 100% (median, 57%).*
- Providing feedback about the quality of psychosocial care (QOPI)

	T0	12 months later	
1st indicator	*64%*	*73%*	*P .001*
2nd indicator	*74%*	*76%*	*P .41*

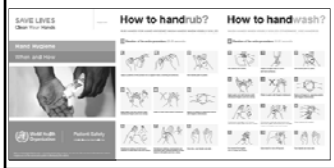
Jacobsen and Wagner. Journal of clinical oncology. 2012;30(11):1154-9.

Implementation strategy: Example
WHO hand hygiene guidelines

- Full guideline and summary document
- Action plan for implementation
- Tools for system change:
  - **Guide to implementation**
  - **Material for reproducing, adapting and translating WHO hand hygiene illustrations**
- Tools for education
  - **Slides for education**
  - **Training films**
- Tools for evaluation and feedback
  - **Soap/Handrub Consumption Survey**
  - **Questionnaire on knowledge of hand hygiene**
- Tools as reminders at the workplace

Implementation strategy: Example

WHO hand hygiene guidelines



Implementation strategy: First experience

ESHRE endometriosis guideline

- Results of a questionnaire on barriers and facilitators
- Different versions of the guideline:
  - **Text version**
  - **Online tool**
  - **Patient version**
  - **Option grid / decision-aid**
  - **...**

Implementation of the guideline on psychosocial care: challenges and tailored approach

Implementation of the guideline on psychosocial care: challenges and tailored approach

IMPLEMENTATION STRATEGY

1. **Pre-emptive identification of potential barriers of recommendations and a priori generation of solutions to address them by the guideline development group.**
2. **Use of behaviorally specific language in the guideline**
3. **Use of multiple formats and channels for guideline dissemination based on preferences of the target group of health care practitioners**
4. **Development of educational resources adapted in content, and vehicle to each target group of health care practitioners**
5. **Identification of the resource implications of recommendations, ensuring their availability before starting**
6. **Use of data collection tools (for example, simple audit templates)**

Gagliardi et al. Implementation Science 2011, 7:26

Implementation of the guideline on psychosocial care: challenges and tailored approach

2. Use of behaviorally specific language in the guideline

- Who, what, when, where and how
- Scientific language, scientific evidence reporting

3. Use of multiple formats and channels for guideline dissemination based on preferences of the target group of health care practitioners

- full-length version are posted on the ESHRE Website
- publication in Human Reproduction
- inclusion on the National Guidelines Clearinghouse's Website.

- patient version
- online version of the guideline
- Different announcements

Implementation of the guideline on psychosocial care: challenges and tailored approach

4. Development of educational resources adapted in content, and vehicle to each target group of health care practitioners

- Decision aids to support patient involvement
- Presentation/ leaflet to aid in raising awareness of the guideline

=> Depends on barrier analysis

5. Identification of the resource implications of recommendations, ensuring their availability before starting

6. Use of data collection tools (for example, simple audit templates)

=> Study implementation

Implementation of the guideline on psychosocial care: challenges and tailored approach

1. Pre-emptive identification of potential barriers of recommendations and a priori generation of solutions to address them by the guideline development group.

Literature search for barriers / facilitators

⇒ Some evidence exists on:
- ⇒ Guidelines on psychosocial care for cancer patients
- ⇒ Guideline on psychosocial care after disasters, terrorism and shocking events
- ⇒ Guideline on dementia

⇒ Could this be extrapolated to psychosocial care in fertility units?

Survey for guideline group members

Implementation of the guideline on psychosocial care: challenges and tailored approach

Barriers related to the "professional"

- Knowledge
- Attitude
- Values
- Self-efficacy
- Communication skills
- Time

Facilitators could be...

- Training of clinicians (basic psychosocial care, communication skills)
- Integration of psychosocial care in student education
- Provide leaflet with key information, for instance results of a survey among patients expectations, needs
- Feedback system, system of rewards
- Reminders

Schofield P, et al. Psycho-oncology 2006, 15(10):863-872.

Implementation of the guideline on psychosocial care: challenges and tailored approach

Barriers related to the "guideline"

- Language
- psychology – clinicians barrier
- Dissemination
- Confidence
- Lack of high quality evidence

Additional barriers from analysis using the GLIA tool

Facilitators could be...

- Include clinicians in GDG and review
- Rigorous methodology
- Organise meeting, courses

Schofield P, et al. Psycho-oncology 2006, 15(10):863-872.

Implementation of the guideline on psychosocial care: challenges and tailored approach

Barriers related to the "patient"

- Attitudes
- Patients resistant to diagnosis and treatment
- perceiving testing as unethical for undocumented patients,
- questionable relevance of pre-test counseling,
- lack of expertise in discussing sexuality,
- language barriers,
- lack of time
- 'in denail'
- Stigma and resistance

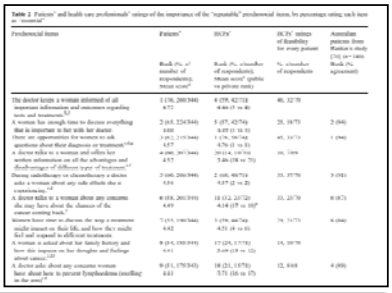
Facilitators could be...

- Patient version of the guideline
- Tools for increasing awareness among patients
- Combining visits for medical and psychosocial care

Schofield P, et al. 2006. Manirankunda L, et al. AIDS Educ Prev 2012

Implementation of the guideline on psychosocial care: challenges and tailored approach

How do patient feel about the guideline and recommendations ?



Lam WW, et al. Supportive care in cancer 2009, 17(3):219-229.

Implementation of the guideline on psychosocial care: challenges and tailored approach

Barriers related to the "environment"

- Time
- Role definition
- Lack of assessment systems
- Lack of private interruption-free consultation spaces
- Lack of appropriate allied health professionals for referral
- Lack of quality information resources

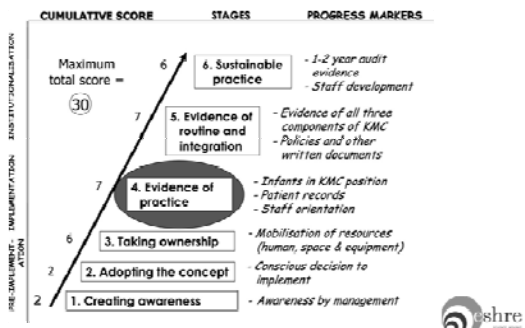
Facilitators could be...

- Information for clinicians
- Easy, quick, rapidly available tools
- Proposal for psychosocial care should be sustainable and cost-effective

Schofield P, et al. Psycho-oncology 2006, 15(10):863-872.

Implementation of the guideline on psychosocial care: challenges and tailored approach

Model for progress monitoring



Bergh et al. *Implementation Science* 2012 **7**:75

Implementation of the guideline on psychosocial care: challenges and tailored approach

Take home message

Knowing is not enough; we must apply.

Willing is not enough; we must do.

Johann Wolfgang Von Goethe (1749 – 1832)

Do you have any remarks or input on the implementation of the guideline on psychosocial care in fertility units ?

Do you want to be invited as reviewer of the guideline ?

Please contact me:

Dr. Nathalie Vermeulen
Research specialist

Telephone (ESHRE central office): + 32 (0)2 269 09 69
E-mail: nathalie@eshre.eu

Patients' and professionals' barriers and facilitators of tailored expectant management

N.M. van den Boogaard, M.D.
VU medical centre and Academic Medical centre Amsterdam

Conflict of interest

- None

Learning objectives

- Tailored expectant management (TEM) in reproductive medicine: Who, how and why?
- Risk factors for non-adherence to TEM
- Qualitative study on patients´ and professionals´ barriers and facilitators of TEM
- Nationwide survey of impact of the barriers and facilitators on:
  - Patients´ appreciation of TEM
  - Professional´ adherence to TEM
- RCT to test implementation strategy: Improvement Study

Tailored Expectant Management

Expectant management for 6-12 months in subfertile couples with unexplained or male subfertility and a chance of natural conception of >30% per year

ESHRE, NICE fertility guidelines:

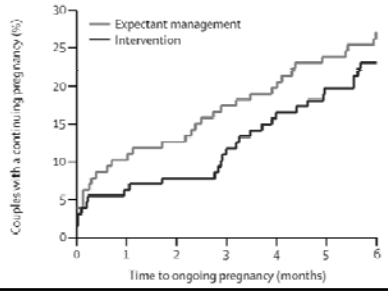
- Each couples should receive information about their chances on a spontaneous conception
- Patients should not be exposed to ineffective treatment

Dutch Fertility guidelines:

Coules with unexplained or male subfertility and a chance of natural conception of >30% ⇨ Expectant management 6-12 months

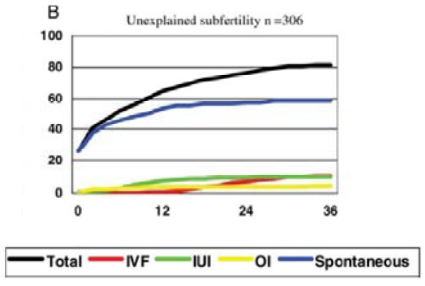
Tailored expectant management, who?

Couples with unexplained or male subfertility and an intermediate chance of natural conception



Steures Lancet 2006

Tailored expectant management, who?



Brandes et al. HR, 2010

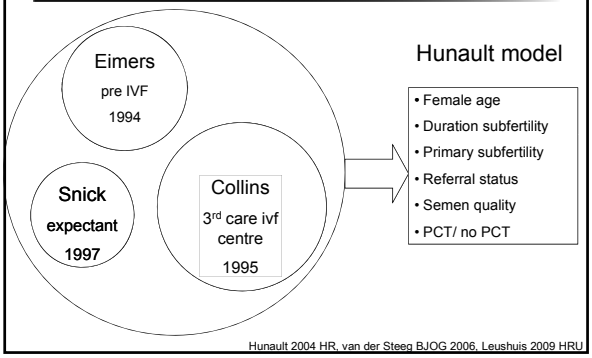
Tailored expectant management, how?

Prediction models can help to differentiate between couples who need treatment from couples who are likely to conceive spontaneously [1 2 3 4]

After the fertiltiy work up, 30-40% of the couples is eligible for TEM for 6-12 months [5]

1: Hunault 2004 Human Reproduction, 2: Steures 2004 Fertil Steril, 3: Templeton 2000 Ann N Y Acad Sci
4: Leushuis 2009 Human Reproduction Update 5: van der Steeg 2007 Human Reproduction

Prediction natural conception



Hunault 2004 HR, van der Steeg BJOG 2006, Leushuis 2009 HRU

Tailored expectant management, why?

- Prevention unnecessary treatment and its´ complications
- Cost effective

Poor implementation

Implementation TEM is poor, estimated overtreatment 35[1]

- Implementation study on the barriers and facilitators of TEM to gain insight and improve implementation

1: van den Boogaard 2011 Human Reproduction

Risk factors for non-adherence to TEM

Multi centre prospective cohort study
Study protocol adviced TEM if prognosis >40%

3021 couples with unexplained or male subfertility
↓
1130 couples (38%) prognosis of >40%
↓
367 couples (37%) started treatment within 12 months
↓
153 couples (15%) started treatment within 6 months

van den Boogaard et al. 2011 Human Reproduction

Risk factors for non-adherence to TEM

	Treatment within 6 months n=153 (15%)	
PATIENT CHARACTERISTICS	**OR**	**95% CI**
Mean maternal age (per year older)	1.06	1.01 to 1.1
Mean duration of subfertility (per year longer)	1.37	1.1 to 1.8
History ≥1 live birth	0.99	0.65 to 1.5
History ≥1 miscarriage	1.54	0.93 to 2.6
Socio Economic Status (%) High Low	 0.88 0.99	 0.53 to 1.5 0.59 to 1.6
CLINICAL CHARACTERISTICS		
Fertility meeting (yes)	0.84	0.52 to 1.36
Fertility doctor (yes)	0.62	0.39 to 0.99
Clinic with IVF-ICSI license (yes)	0.89	0.47 to 1.7
Clinic with Satellite IVF (yes)	1.43	0.89 to 2.3

van den Boogaard et al. 2011 Human Reproduction

Qualitative study

- Semi structured in depth interviews with 21 subfertile patients counselled for TEM
- Focus-group interviews with 21 professionals in the field of reproductive medicine

Interviews:

- Patients could choose the location (hospital or home)
- Preferred to interview the couples separate
- Topic list based on literature, adapted after each interview
- Until data saturation
- Audio taped and fully transcribed

van den Boogaard et al. 2011 Human Reproduction

Qualitative study

Analyses

- 2 researches
- Open coding > axial coding > selective coding
- Codes compared and discrepancies discussed
- Maxqda

Results qualitative study – patients (1)

Barrier: Lack of confidence in the natural conception

"At that moment, that they sent us home to try it again ourselves I really thought: but we are already trying for such a long time, why would we succeed now? We did not come to the hospital to be sent home!"

Results qualitative study – patients (2)

Barrier:

Not informing the couple about the option of TEM during the first consultation

"If we would have known from the beginning that expectant management could be an option I could have changed my expectations and I would not have been so disappointed and sad."

Results qualitative study – patients

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Lack of confidence in the natural conception (b)	Not informing the couple about the option of TEM during the first consultation (b)	Inappropriate expectations prior to the first consult (b)	The length of time taken for the whole process (b)
Patient information material about prognosis and TEM (f)	Unclear way of counselling and communicating chances (b)	Misunderstandings the reason for TEM (b)	Practice in other clinics (b)
A perception that TEM is considered as a waste of time (b)	Not explicitly mentioning TEM, but conceal TEM in waiting period for treatment (f)	Overestimation of the success rates of treatment (b)	
Complexity of the prognostic model (b)		Inability to comprehend and retain information given during the consult (b)	
		Irrational interpretation of pregnancy chances (b)	
		Progressing female age (b)	
		Twin is a welcome complication (b)	

Results qualitative study – patients

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Lack of confidence in natural conception (b)	Not informing the couple about the option of TEM during the first consultation (b)	Inappropriate expectations prior to the first consult (b)	The length of time taken for the whole process (b)
Patient information material about prognosis and TEM (f)	Unclear way of counselling and communicating chances (b)	Misunderstandings the reason for TEM (b)	Practice in other clinics (b)
Perception that TEM is considered as a waste of time (b)	Not explicitly mentioning TEM, but conceal TEM in waiting period for treatment (f)	Overestimation of the success rates of treatment (b)	
Complexity of the prognostic model (b)		Inability to comprehend and retain information given during the consult (b)	
		Irrational interpretation of pregnancy chances (b)	
		Progressing female age (b)	

Results qualitative study – patients

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Lack of confidence in the natural conception (b)	Not informing the couple about the option TEM during the 1st consultation (b)	Inappropriate expectations prior to the first consult (b)	The length of time taken for the whole process (b)
Patient information material about prognosis and TEM (f)	Unclear way of counselling and communicating chances (b)	Misunderstandings the reason for TEM (b)	Practice in other clinics (b)
A perception that TEM is considered as a waste of time (b)	Not explicitly mentioning TEM, but conceal TEM in waiting period for treatment (f)	Overestimation of the success rates of treatment (b)	
Complexity of the prognostic model (b)		Inability to comprehend and retain information given during the consult (b)	
		Irrational interpretation of pregnancy chances (b)	
		Progressing female age (b)	

Results qualitative study – patients

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Lack of confidence in the natural conception (b)	Not informing the couple about the option of TEM during the first consultation (b)	Inappropriate expectations prior to first consult (b)	The length of time taken for the whole process (b)
Patient information material about prognosis and TEM (f)	Unclear way of counselling and communicating chances (b)	Misunderstandings the reason for TEM (b)	Practice in other clinics (b)
A perception that TEM is considered as a waste of time (b)	Not explicitly mentioning TEM, but conceal TEM in waiting period for treatment (f)	Overestimation of success rates of treatment (b)	
Complexity of the prognostic model (b)		Inability to comprehend and retain information given during the consult (b)	
		Irrational interpretation of pregnancy chances (b)	
		Progressing female age (b)	
		Twin is a welcome complication (b)	

Results qualitative study – patients

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Lack of confidence in the natural conception (b)	Not informing the couple about the option of TEM during the first consultation (b)	Inappropriate expectations prior to the first consult (b)	Length of time taken for the whole process (b)
Patient information material about prognosis and TEM (f)	Unclear way of counselling and communicating chances (b)	Misunderstandings the reason for TEM (b)	Practice in other clinics (b)
A perception that TEM is considered as a waste of time (b)	Not explicitly mentioning TEM, but conceal TEM in waiting period for treatment (f)	Overestimation of the success rates of treatment (b)	
Complexity of the prognostic model (b)		Inability to comprehend and retain information given during the consult (b)	
		Irrational interpretation of pregnancy chances (b)	
		Progressing female age (b)	

Results qualitative study – professionals (1)

Barrier:

Expectations of immediate treatment after the fertility work up

"If you take your time for the first consultation and explain the steps of the fertility work-up and all the options after the work up, including expectant management, you will save a lot of time, incomprehension, discussions and dissatisfied patients"

Results qualitative study – professionals (2)

Facilitator:

A regular Fertility meeting, a local protocol and local consensus

"When I have to decide on my own this couple needs an expectant management,I think the consult will end differently than when it was decided during a central fertility meeting. It feels more comfortable when it is discussed with the whole team

Results qualitative study – professionals

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Existing prognostic models do not include all the relevant predictors (b)	Limited knowledge about the prognostic models and subsequent TEM (b)	High expectations of success with treatment (b)	A regular Fertility meeting (f)
Lack of adequate patient information materials (b)	Difficulties convincing couples who have their minds made up (b)	Urgency for action in the couple (b)	Local protocol (f)
Not convinced about the usefulness of the prognostic models and TEM (b)	Difficulties in counselling and communicating chances (b)	Expectations of immediate treatment after the fertility work up (b)	Local consensus (f)
Explaining TEM takes time (b)	Comparison of treatment chances versus spontaneous pregnancy chances (f)	Couples' misinterpretation of chances (b)	Centralisation of fertility care (f)
	Close relationship with couple (b)	Progressing female age (b)	Regional organisation (f)
		Miscarriage population (b)	

Results qualitative study – professionals

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Existing prognostic models do not include all the relevant predictors (b)	Limited knowledge about the prognostic models and subsequent TEM (b)	High expectations of success with treatment (b)	A regular Fertility meeting (f)
Lack of adequate patient information materials (b)	Difficulties convincing couples who have their minds made up (b)	Urgency for action in the couple (b)	Local protocol (f)
Not convinced about usefulness of prognostic model and TEM (b)	Difficulties in counselling and communicating chances (b)	Expectations of immediate treatment after the fertility work up (b)	Local consensus (f)
Explaining TEM takes time (b)	Comparison of treatment chances versus spontaneous pregnancy chances (f)	Couples' misinterpretation of chances (b)	Centralisation of fertility care (f)
	Close relationship with couple (b)	Progressing female age (b)	Regional organisation (f)

Results qualitative study – professionals

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Existing prognostic models do not include all the relevant predictors (b)	Limited knowledge about prognostic models and subsequent TEM (b)	High expectations of success with treatment (b)	A regular Fertility meeting (f)
Lack of adequate patient information materials (b)	Difficulties convincing couples who have their minds made up (b)	Urgency for action in the couple (b)	Local protocol (f)
Not convinced about the usefulness of the prognostic models and TEM (b)	Difficulties in counselling and communicating chances (b)	Expectations of immediate treatment after the fertility work up (b)	Local consensus (f)
Explaining TEM takes time (b)	Comparison of treatment chances vs. spontaneous pregnancy chances (f)	Couples' misinterpretation of chances (b)	Centralisation of fertility care (f)
	Close relationship with couple (b)	Progressing female age (b)	Regional organisation (f)
		Miscarriage population (b)	

Results qualitative study – professionals

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Existing prognostic models do not include all the relevant predictors (b)	Limited knowledge about the prognostic models and subsequent TEM (b)	High expectations of success with treatment (b)	A regular Fertility meeting (f)
Lack of adequate patient information materials (b)	Difficulties convincing couples who have their minds made up (b)	Urgency for action in the couple (b)	Local protocol (f)
Not convinced about the usefulness of the prognostic models and TEM (b)	Difficulties in counselling and communicating chances (b)	Expectations of immediate treatment after fertility work-up (b)	Local consensus (f)
Explaining TEM takes time (b)	Comparison of treatment chances versus spontaneous pregnancy chances (f)	Couples' misinterpretation of chances (b)	Centralisation of fertility care (f)
	Close relationship with couple (b)	Progressing female age (b)	Regional organisation (f)
		Miscarriage population (b)	

Results qualitative study – professionals

Domain 1 Characteristics of the intervention	*Domain 2 Characteristics of the professional*	*Domain 3 Characteristics of the patient*	*Domain 4 Characteristics of the context*
Existing prognostic models do not include all the relevant predictors (b)	Limited knowledge about the prognostic models and subsequent TEM (b)	High expectations of success with treatment (b)	Regular Fertility meeting (f)
Lack of adequate patient information materials (b)	Difficulties convincing couples who have their minds made up (b)	Urgency for action in the couple (b)	Local protocol (f)
Not convinced about the usefulness of the prognostic models and TEM (b)	Difficulties in counselling and communicating chances (b)	Expectations of immediate treatment after the fertility work up (b)	Local consensus (f)
Explaining TEM takes time (b)	Comparison of treatment chances versus spontaneous pregnancy chances (f)	Couples' misinterpretation of chances (b)	Centralisation of fertility care (f)
	Close relationship with couple (b)	Progressing female age (b)	Regional organisation (f)
		Miscarriage population (b)	

Conclusion qualitative study

Patients: 14 barriers and 2 facilitators were identified
Professionals: 14 barriers and 6 facilitators were identified

What is the impact of the barriers and facilitators on:
- Patients´ appreciation of TEM
- Professional´ adherence to TEM

⇨ **Nationwide survey among patients and professionals**

van den Boogaard et al. 2011 Human Reproduction

Nationwide survey

Methods:
Two questionnaires were developped:
1. Paper questionnaire for patients
2. Online questionnaire for professionals

Questionairres:
- Baseline characteristics
- Barriers and facilitators translated into statemenst
- Level of agreement per statement on 5 point likert scale

- Professionals: adherence to TEM on 10 point likert scale
- Patients: appreciation of TEM on 10 point likert scale
- Two reminders within 7 weeks

Methods (II)

Invited population:

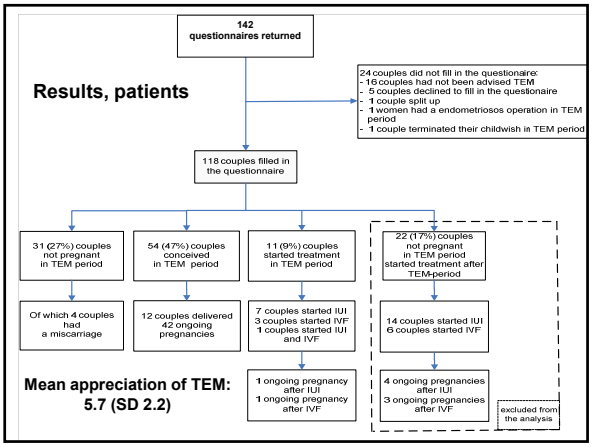
167 registered Dutch fertility physicians

195 subfertile couples who had been counselled for TEM

Analyses

- Per domain sumscore was tested for internal consistency
- Logistic regression analyses to identify association between baseline characteristics, the barriers & facilitators and patients' appreciation of TEM and professionals' adherence to TEM
- Backward selection method, P<0.15

Results, patients



Mean appreciation of TEM: 5.7 (SD 2.2)

Percentage of couples that perceive this as a barrier (b) or facilitator (f)	Couples n= 96
Lack of confidence in the natural conception (b)	85 (89%)
Knowledge of the factors used in the prognostic model (b)	75 (78%)
A need for more instructions about TEM period (b)	45 (47%)
A need for more information material about prognosis and TEM (b)	39 (41%)
Characteristics of the professional	
Preference for being informed about the option of TEM during the first consultation (f)	42 (44%)
Comparing spontaneous pregnancy chance with treatment (f)	29 (30%)
Unclear way of counselling and communicating chances (b)	9 (9%)
Characteristics of the patient	
Expected to get a cause for the subfertility (b)	84 (87%)
Expected to get treatment (b)	27 (28%)
Expected to get a cause for the subfertility and treatment (b)	19 (20%)
First reaction to prognosis and subsequent TEM: positive* negative** mixed feelings: happy and disappointed	 43 (45%) 28 (29%) 66 (69%)
Understanding that with good prognosis, treatment was not indicated (f)	85 (88%)
Twin is a welcome complication despite the risks (b)	76 (79%)
Knowledge that good prognosis was reason for TEM (f)	74 (77%)
Inability to remember prognosis (b)	52 (54%)
Progressing female age (b)	52 (54%)
Longer duration of subfertility (b)	63 (66%)
Expected that with treatment >50% of all couples conceive (b)	43 (45%)
Expected to have a good spontaneous prognosis and not needing treatment (f)	36 (37%)

Association with reported appreciation of TEM

Multivariable association between the patients' appreciation of TEM and patient characteristics, barriers and facilitators	P- value
Domain of the intervention	
Need for patient information about prognosis and TEM, sum score	0.047
Domain of the professional	
Not informing the couple about the option of TEM during the first consultation	0.955
Comparing natural conception chance with treatment	0.124
Domain the patient	
Understanding that with good prognosis, treatment was not indicated	0.810
Domain of the clinic	
Practice in other clinics	0.463

Results, professionals

70% (117/167) professionals responded

Baseline characteristics	Professionals n = 117
Male (%)	39 (33%)
Age (mean, SD)	45 (9.7)
Years of experience (median, range)	11 (8.5)
Fertility doctors (%)	45 (39%)
University hospital	37 (32%)
Teaching hospital	55 (47%)
Non-teaching hospital	23 (20%)
Private clinic	2 (17%)
Self reported adherence to TEM (%, median)	63% (75)

Barriers & facilitators of Tailored Expectant Management	Percentage of Professionals that perceive this as a barrier
Domain of the intervention	
Missing factors in the prognostic models	40%
Not convinced about the prognostic models & TEM	29%
Use of the model takes time	16%
Domain of professional	
Forget to use the model	36%
Difficulties in counselling and communicating chances	18%
Limited knowledge about the prognostic models & TEM	17%
Close relation with the couple	16%
Not (always) have access to the model	13%
Treatment will generate income	0%
Domain of the patient	
Progressing female age	80%
Urgency for action in the couple	74%
Expectations' of immediate treatment after the fertility work up	59%
Miscarriage population	37%
Couples misinterpretation of chances	22%
Domain of the Context	
Regular fertility meeting	89%
Local protocol & consensus	89%
Centralisation of fertility care (clinic level / professional level)	72%
Electronic Patiënt File	58%

Barriers & facilitators of Tailored Expectant Management	Percentage of Professionals that perceive this as a barrier
Domain of the intervention	
Missing factors in the prognostic models	40%
Not convinced about the prognostic models & TEM	29%
Use of the model takes time	16%
Domain of professional	
Forget to use the model	36%
Difficulties in counselling and communicating chances	18%
Limited knowledge about the prognostic models & TEM	17%
Close relation with the couple	16%
Not (always) have access to the model	13%
Treatment will generate income	0%
Domain of the patient	
Progressing female age	80%
Urgency for action in the couple	74%
Expectations' of immediate treatment after the fertility work up	59%
Miscarriage population	37%
Couples misinterpretation of chances	22%
Domain of the Context	
Regular fertility meeting	89%
Local protocol & consensus	89%
Centralisation of fertility care (clinic level / professional level)	72%
Electronic Patiënt File	58%

Barriers & facilitators of Tailored Expectant Management	Percentage of Professionals that perceive this as a barrier
Domain of the intervention	
Missing factors in the prognostic models	40%
Not convinced about the prognostic models & TEM	29%
Use of the model takes time	16%
Domain of professional	
Forget to use the model	36%
Difficulties in counselling and communicating chances	18%
Limited knowledge about the prognostic models & TEM	17%
Close relation with the couple	16%
Not (always) have access to the model	13%
Treatment will generate income	0%
Domain of the patient	
Progressing female age	80%
Urgency for action in the couple	74%
Expectations' of immediate treatment after the fertility work up	59%
Miscarriage population	37%
Couples misinterpretation of chances	22%
Domain of the Context	
Regular fertility meeting	89%
Local protocol & consensus	89%
Centralisation of fertility care (clinic level / professional level)	72%
Electronic Patiënt File	58%

Barriers & facilitators of Tailored Expectant Management	Percentage of Professionals that perceive this as a barrier
Domain of the intervention	
Missing factors in the prognostic models	40%
Not convinced about the prognostic models & TEM	29%
Use of the model takes time	16%
Domain of professional	
Forget to use the model	36%
Difficulties in counselling and communicating chances	18%
Limited knowledge about the prognostic models & TEM	17%
Close relation with the couple	16%
Not (always) have access to the model	13%
Treatment will generate income	0%
Domain of the patient	
Progressing female age	80%
Urgency for action in the couple	74%
Expectations' of immediate treatment after the fertility work up	59%
Miscarriage population	37%
Couples misinterpretation of chances	22%
Domain of the Context	
Regular fertility meeting	89%
Local protocol & consensus	89%
Centralisation of fertility care (clinic level / professional level)	72%
Electronic Patiënt File	58%

Association with reported adherence to TEM

Per domain sumscore showed internal consistency (Cronbach α >0.7)

Multivariable association between the professionals' reported adherence to TEM and the professional' characteristics, barriers and facilitators	P value
Professional and Clinical characteristics	
Type physician: fertility doctor	0.041
Regular seeing fertility patients	0.195
Local protocol	0.981
Local consensus Fertility meeting	0.380 0.667
Sum score** barriers in the domain of the professional	0.008
Sum score** facilitators in the domain of the clinic Interaction term fertility meeting * sumscore clinic	0.091 0.374

Conclusions nation-wide survey

- Patients` mean appreciation of TEM 5.7 (1-10 scale)
- Professional´ self reported adherence to TEM was 63%

- A lower appreciation of TEM was associated with a need for patient information materials

- Professional being a fertility doctor increases the adherence to TEM
- Professionals experience most barriers in the patient domain
- The barriers in the professional domain are associated with a lower adherence to TEM

van den Boogaard et al. 2011 Human Reproduction

Implementation strategy

Implementation strategy addresses three levels:

(1) Patient level: education materials:information leaflet & website

(2) Professional level: audit & feedback, educational outreach visit, communication training, access to a digital version of prognostic model

(3) Organizational level: local protocol

Primary outcome: percentage guideline adherence on TEM.

Improvement study

IMPROvEMENT

- Ongoing study
- Cluster randomised controlles trial
- 25 hospitals in the Netherlands
- Randomisation between implementation strategy and care as usual

- Primary outcome: will be the percentage guideline adherence on TEM.
- Cost effectiveness analysis

ZonMw

van den Boogaard et al. 2013 Implementation Science

Take home message

- Implementation of TEM is poor >
- Implementation of TEM:
  - ↓ higher female age & longer duration of subfertility
  - ↑ if counselled by fertility-doctor instead of gynaecologist
- Low patient satisfaction of TEM is associated with need for more information about TEM
- Professional' adherence to TEM is associated with type of doctor and with barriers in professional domain (knowledge, counselling skills)
- A clustered RCT is testing a implementation strategy

IMPROvEMENT

HOW CAN MENTAL HEALTH PROFESSIONALS WORK WITH OTHER CLINIC STAFF TO IMPLEMENT PSYCHOSOCIAL SUPPORT?

SOFIA GAMEIRO, PHD

ESHRE Pre-Congress Course 6
London, 7th July 2013

Conflict of interest (past three years)

- Honorarium and/or research funding from Merck-Serono S.A.

Learning objectives

- Understand the rational and goals of the New ESHRE Psychology & Counselling Guidelines
- Acknowledge the implications of the Guidelines in the provision of psychosocial support at fertility clinics
- Discuss ways of
  - Supporting other clinic staff in the deliverance of psychosocial support
  - Developing feasible interventions than can be integrated in routine care
  - Enhancing quality of care for everyone (patients, staff, clinic)

New ESHRE Guidelines for Psychology and Counselling in Infertility

- Best practice advice on how to **incorporate psychosocial care in routine infertility care** to the **benefit of patients and health care providers** in the field of infertility and Medically Assisted Reproduction
- **Key-moments across the patients' treatment pathway** at which psychosocial care can/should be provided

Cardiff Fertility Studies

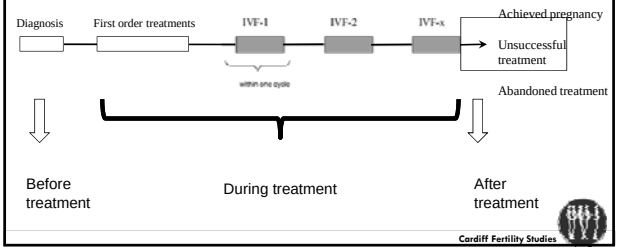
Recommendations focus on

- Which **characteristics of the fertility staff and clinic** are associated with patients' satisfaction with care provided?
- Which characteristics of fertility staff and clinic are associated with patients' adjustment /wellbeing?
- Which **psychosocial care components (methods, techniques) are valued** by infertility patients?
- What are the **specific psychosocial needs of patients** before/during/after the treatment period?
- **How can fertility staff detect the needs** of patients before/during/after the treatment?
- **How should staff address the psychosocial needs** of patients before/during/after fertility treatment?

Cardiff Fertility Studies

Horizontal time-line

- Supporting the infertile patient (individual, couple) along ALL treatment stages



Cardiff Fertility Studies

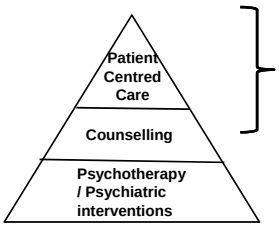
Vertical approach

- Tailoring support to patient characteristics & needs
  - Adjustment
    - mental health, partnership, social relationships and work;
  - Awareness/knowledge about infertility & treatment
  - Concerns/worries about infertility & treatment
  - Behaviour related to infertility & treatment
    - e.g., compliance to treatment, smoking.

Cardiff Fertility Studies

Vertical approach

- Tailoring support to patient characteristics



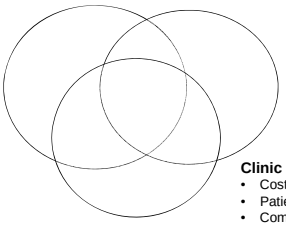
ALL STAFF
doctors, nurses, embryologists, administrative personnel

Mental Health Professionals (MHPs)
counsellors, social workers, psychologists, psychiatrists

Cardiff Fertility Studies

Enhancing care for everyone

Patient
- Pregnancy
- Distress
- Quality of life
- Satisfaction with care
- …



Staff
- Quality of life
- Job satisfaction
- Burnout
- …

Clinic
- Cost-efficiency
- Patient satisfaction
- Compliance
- …

Cardiff Fertility Studies

(More) Team work within clinics

- Patients want to receive emotional support
  - From doctors and nurses during daily care
  - From specialized staff at emotional emergencies

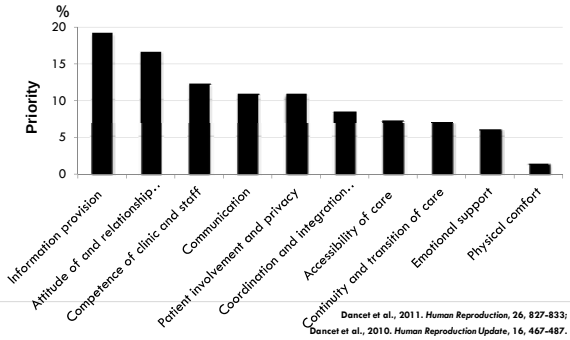
Dancet et al., 2011. *Human Reproduction*, 26, 827-833.

⇩

1. Educate about psychosocial issues
2. Develop information & educational materials
3. Offer training and provide feedback
4. Define responsibility limits of non MHP staff

Cardiff Fertility Studies

Increase awareness about patients preferences



Dancet et al., 2011. *Human Reproduction*, 26, 827-833;
Dancet et al., 2010. *Human Reproduction Update*, 16, 467-487.

Increase awareness about psychosocial issues

- Distressful aspects of treatment
  - e.g., disclosing intimate info

Benyamini et al., 2005. Fertility & sterility, 83, 275-283

- Emotional reactions during treatment
  - e.g., the two week waiting period

Boivin et al., 1998. Human Reproduction, 13, 3262-3267.

- Patient reasons for discontinuing treatment

Gameiro et al., 2012. Human Reproduction Update,18, 652-669.

- How and when should treatment feedback be provided to patients and the potential impact of negative feedback

Boivin, 2000. Proceedings of Social Science Research on Childlessness in a Global Perspective.

- Challenges of dealing with specific patient populations

Nachtigall et al., 2009. Fertility & Sterility, 92, 116-123.

Cardiff Fertility Studies

Develop information & educational materials

- Only 48% of patients receive information about emotional support that is stipulated in national guidelines

  Mourad et al., 2009. *Human Reproduction*, 24, 1420-1426.

- Information aspects identified by patients as important and problematic
  - Written information
  - Information on treatment alternatives
  - Information on helping themselves
  - Known plan for the future
  - Information on emotional aspects of treatment

  Dancet et al., 2010. *Human Reproduction Update*, 16, 467-487.

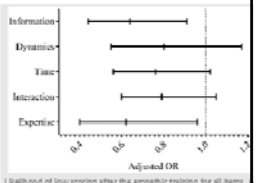
Cardiff Fertility Studies

Offer training in communication & interaction skills

Training in empathic skills improves the patient-physician relationship during the first consultation in a fertility clinic

Bérénice García, B.S.,[a] Olga Bautista, B.S.,[a] Laura Vanesco, B.S.,[a] Oriol Coll, M.D., Ph.D.,[a] Rita Vassena, D.V.M., Ph.D.,[a] and Valeria Vernaeve, M.D., Ph.D.[a,b]
[a] Fundació EUGIN and Departments of [a] Clinical Psychology and [b] Assisted Reproduction, Clínica EUGIN, Barcelona, Spain

- 13 physicians evaluated by 2146 patients
- Training:
  - 2 days = 14 hours
  - Theoretic classes, audio visual materials & practical workshops
  - Empathy, emotional intelligence, verbal and nonverbal communication, active listening, and behavioural styles



Likelihood of low scoring after the empathic training for all items ... axis: adjusted odds ratio (OR) for low scoring; y axis: items in the questionnaire. OR (95% CI): Information: 0.64 (0.44-0.93); Dynamics: 0.8 (0.55-1.17); Time: 0.76 (0.56-1.17); Interaction: 0.79 (0.6-1.05); Expertise: 0.62 (0.4-0.98).

García et al., 2013. *Fertility & Sterility*.

Implement feedback procedures

- Visual feedback: tables, graphics, pictures
- As specific as possible: to the clinic, to the individual

  '*I would prefer to receive real and concrete examples. For instance, patients state that they want to have an overview of all their treatments . . . then you [researcher] can provide us with a good overview that we can use immediately.*'
- Support with practical translation: improvement plan and execution

  '*They should visit the clinics after they've received the feedback report and provide them with the most efficient ways of improving the level of patient-centeredness. I would even pay for that service.*'
- Remarks from patients are useful

Huppelschoten et al., in press. *Fertility & Sterility*.

Define responsibility limits of non MHP staff

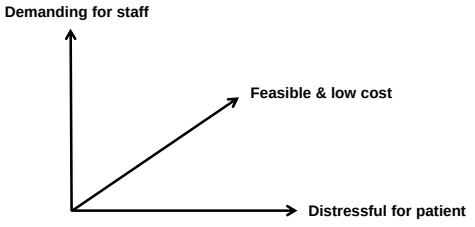
- Implement screening & referral criteria
  - Educate staff on how to use screening tools
  - Provide staff with a list of criteria for referral
- Facilitate access to MHPs
  - Provide clear instructions easily accessible for all patients
    - e.g., brochures/posters within the clinic or on website.
  - Assure the simplicity and privacy of the referral procedure
    - e.g., eliminate intermediaries
  - Establish early contact with patients
    - e.g., include meeting with MHP on first consultation

Cardiff Fertility Studies

Develop new forms of intervention

1. Promote consensus about priorities for intervention
2. Develop feasible interventions tailored to patient & treatment stage
3. Investigate barriers to implementation of psychosocial support

Promote consensus about priorities for intervention



- E.g., communicating/receiving negative treatment results

Cardiff Fertility Studies

Develop **feasible** interventions tailored to patient & treatment stage

- Expert & patient consultancy
  - Multimedia psychosocial support program
    - *What is the viability of a CD-ROM at your setting?*
    - *What psychological issues are the most relevant and can be addressed by a CD-ROM?*

Cousineau et al., 2004. *Fertility & Sterility*, 81, 532-538.

- Compare with other 'appropriate alternative' interventions
  - PRCI – A Positive Reappraisal Coping Intervention for the pregnancy waiting period

Lancastle & Boivin, 2008. *Human Reproduction*, 23, 2299-2307.

- Usability & acceptance testing
  - SCREEN-IVF

Van Dongen et al., 2012. *Human Reproduction*, 27, 3493-3501.

Cardiff Fertility Studies

Investigate staff needs (speaker Boivin)

- Staff underestimate the importance patients attribute to Patient Centre Care

Van Empel et al., 2011. *Human Reproduction*, 26, 584-593.

- Staff & patients evaluations of care differ

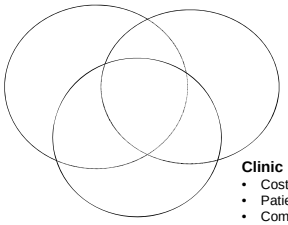
Aarts et al., 2011. *Human Reproduction*, 26, 1119-1127.

- Staff perceive many constraints to the implementation of psychosocial support
  - Barriers: lack of time, pressure, change of regime, financial support…
  - Facilitators: committed team, own efforts lead to more PCC

Huppelschoten et al., 2013. Fertility & Sterility.

Enhancing care for everyone

Patient
- Pregnancy
- Distress
- Quality of life
- Satisfaction with care
- …



Staff
- Quality of life
- Job satisfaction
- Burnout
- …

Clinic
- Cost-efficiency
- Patient satisfaction
- Compliance
- …

1. Evaluate costs and benefits of change

Evaluate costs and benefits of change

- Higher focus on staff outcomes
  - Quality of life, job satisfaction, burnout, time
- Investigate associations between patient, staff & clinic outcomes
- Benchmarking

  'Transparency about clinics' performance is important . . . How is a clinic certificated? What are their results? We have to develop a quality label and put that on a clinic when it meets the criteria.'

Huppelschoten et al., in press. *Fertility & Sterility*

Cardiff Fertility Studies

Conclusion

- The new Guidelines aim to provide best advice on how to incorporate psychosocial care in routine infertility care
- MHPs can support other clinic staff in the provision of psychosocial care
  - Provide training &consultancy on how to implement care
  - Develop feasible interventions to be delivered by any member of staff
  - Address barriers to the implementation of psychosocial care
  - Consider how changes in the deliverance of care may affect everyone (patients, staff and clinic)

Cardiff Fertility Studies

Additional information

Please email Sofia Gameiro

gameiros@cardiff.ac.uk

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

School of Psychology

Cardiff Fertility Studies

References 1/2

- Aarts JWM, Faber MJ, van Empel IWH, Scheenjes ES, Nelen WL, Kremer JAM. Professionals' perceptions of their patients' experiences with fertility care. Human Reproduction 2011;26(5):1119-1127.
- Aarts, J. W. M., Huppelschoten, A. G., van Empel, I. W. H., Boivin, J., Verhaak, C. M., Kremer, J. A. M., & Nelen, W. L. (2012). How patient-centred care relates to patients' quality of life and distress: A study in 427 women experiencing infertility. Human Reproduction, 27, 488-495.
- Benyamini Y, Gozlan M, Kokia E. Variability in the difficulties experienced by women undergoing infertility treatments. Fertility and Sterility 2005;83:275-283.
- Boivin J, Andersson L, Skoog-Svanberg A, Hjelmstedt A, Collins A, Bergh T. Psychological reactions during in-vitro fertilization: Similar response pattern in husbands and wives. Human Reproduction 1998;13:3262-3267.
- Boivin J. Patient-staff communication and its effect on reactions to treatment and treatment failure. In: van Balen F, Gerrits T, Inhorn M, editors. Proceedings of Social Science Research on Childlessness in a Global Perspective. Amsterdam, The Netherlands: SCO-Kohnstam Instituut; 2000.
- Boivin, J., Griffiths, E., & Venetis, C. A. (2011). Emotional distress in infertile women and failure of assisted reproductive technologies: meta-analysis of prospective psychosocial studies. British Medical Journal, 342(d223).
- Boivin J, Takefman J, Braverman A. The Fertility Quality of Life (FertiQoL) tool: Development and general psychometric properties. Human Reproduction 2011;26(8):2084-2091.
- Cousineau TM, Lord SE, Seibring AR, Corsini EA, Viders JC, Lakhani SR. A multimedia psychosocial support program for couples receiving infertility treatment: A feasibility study. Fertility and Sterility 2004;81(3):532-538.
- Dancet EAF, Nelen WLDM, Sermeus W, De Leeuw I, Kremer JAM, D'Hooghe TM. The patients' perspective on fertility care: A systematic review. Human Reproduction Update 2010;16:467-487.
- Dancet EAF, van Empel IWH, Rober P, Nelen WLDM, Kremer JAM, D'Hooghe T. Patient-centred infertility care: A qualitative study to listen to the patient's voice. Human Reproduction 2011;26(4):827-833.
- Gameiro S, Boivin J, Peronace LA, Verhaak CM. Why do patients discontinue fertility treatment? A systematic review of reasons and predictors of discontinuation in fertility treatment. Human Reproduction Update 2012;18(6):652-669.

References 2/2

- Gameiro S, Verhaak CM, Kremer JAM, Boivin J. Why we should talk about compliance with Assisted Reproductive Technologies (ART): a Systematic Review and Meta-Analysis of ART compliance rates. Human Reproduction Update 2013;19(2):124-135.
- Garcia D, Bautista O, Venereo L, Coll O, Vassena R, Vernaeve V. Training in empathic skills improves the patient physician relationship during the first consultation in a fertility clinic. Fertility and Sterility 2013.
- Huppelschoten AG, Johanna WMA, van Empel IWH, Cohlen BJ, Kremer JAM, Nelen WL. Feedback to professionals on patient-centered fertility care is insufficient for improvement: a mixed-method study. Fertility and Sterility in press.
- Lancastle D, Boivin J. A feasibility study of a brief coping intervention (PRCI) for the waiting period before a pregnancy test during fertility treatment. Human Reproduction 2008;23:2299-2307.
- Mourad SM, Hermens RPMG, Cox-Witbraad T, Grol RPTM, Nelen WLDM, Kremer JAM. Information provision in fertility care: A call for improvement. Human Reproduction 2009;24(6):1420-1426.
- Nachtigall RD, Castrillo M, Shah N, Turner D, Harrington J, Jackson R. The challenge of improving infertility services to a low-income immigrant Latino population. Fertility and Sterility 2009;92(1):116-123.
- Pook M, Krause W. Stress reduction in male infertility patients: A randomized, controlled trial. Fertility and Sterility 2005;83:68-73.
- Van Dongen AJCM, Kremer JAM, Van Sluisveld N, Verhaak CM, Nelen WL. Feasibility of screening patients for emotional risk factors before in vitro fertilization in daily clinical practice: a process evaluation. Human Reproduction 2012;27(12):3493-3501.
- van Empel IWH, Aarts JWM, Cohlen BJ, Huppelschoten DA, Laven JSE, Nelen WLDM, et al. Measuring patient-centredness, the neglected outcome in fertility care: a random multicentre validation study. Human Reproduction 2010;25(10):2516-2526.
- van Empel IWH, Dancet EAF, Koolman XHE, Nelen WLDM, Stolk EA, Sermeus W, et al. Physicians underestimate the importance of patient-centredness to patients: A discrite choice experiment in fertility care. Human Reproduction 2011;26(3):584-593.

How could doctors implement psychosocial care?

Christos A. Venetis, MD, MSc

Unit for Human Reproduction, 1st Dept. of OB/Gyn
Medical School, Aristotle University of
Thessaloniki, Greece

Disclosure of potential conflicts of interest

- Honoraria and travel grants from Merck Serono S.A.
- Honoraria and consultation fees from IPSEN
- Travel grants from Merck, Sharp & Dome, Ferring S.A.

Learning objectives

- Understand the relationship between doctors and psychosocial care in modern practice
- Discuss the importance of psychosocial care in IVF
- Depict the problems of current practice in terms of delivering psychosocial care
- Explore the ways that doctors could provide psychosocial care to patients
- Describe the potential problems of implementing psychosocial care from a doctor's perspective

Doctors vs. Psychosocial care

Doctors vs. Psychosocial care

Common "misconceptions"…

Doctor = Physician ⟹ *"A person licensed to practice medicine; a medical doctor"*

Physical ⟹ *"Of or relating to the body as distinguished from the mind or spirit"*

www.thefreedictionary.com

Treat the organ/disease/condition

vs.

Treat the actual person

Doctors vs. Psychosocial care

…& other reasons

- Training in psychosocial care has been introduced in Medical School curricula relatively recently – Limited experience in this field

  Novack et al., 1993

- Many doctors do not have a good understanding of the term "psychosocial care" and what it entails

- Psychosocial care vs. Psychological care · ıld be provided upon request by others ar ɔctors (psychologists, psychiatrists, social workers

What is “psychosocial care”?

The care that aims to cover the psychosocial needs of the patients:

- Emotional (stress, anxiety, depression)
- Social (spouse-partner, friends & family, work)
- Awareness/Knowledge (disease, treatment)
- Concerns/ worries (disease, treatment)
- Patient behaviour (lifestyle, exercise, nutrition etc.)

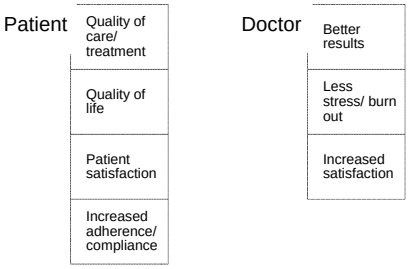
Is “psychosocial care” an integral part of medical care?

Quality of care

- ***effective***, delivering health care that is adherent to an evidence base and results in improved health outcomes for individuals and communities, based on need;
- ***efficient***, delivering health care in a manner which maximizes resource use and avoids waste;
- ***accessible***, delivering health care that is timely, geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need;
- ***acceptable/patient-centered***, delivering health care which takes into account the preferences and aspirations of individual service users and the cultures of their communities;
- ***equitable***, delivering health care which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status;
- ***safe***, delivering health care which minimizes risks and harm to service users.

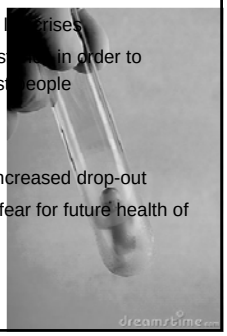
WHO, 2013

How important is “psychosocial care”?



"Psychosocial care" in IVF: challenges

- Infertility: one of the most traumatic life crises
- The notion of needing medical assistance in order to achieve what is only natural for most people
- Not one patient, but two !
- Costly, lengthy treatments
- High probability of cycle failure → increased drop-out
- High-tech treatment: Intimidating – fear for future health of self and offspring
- Ethical/ spiritual issues



Is there a deficit of psychosocial care in modern IVF practice?

Ask the experts

- Patients
- Subspecialists

Is psychosocial care in modern IVF practice important for patients?

- Systematic review of 51 studies in ART

Patients' satisfaction, experience and preference is also largely dependent on other aspects of treatment

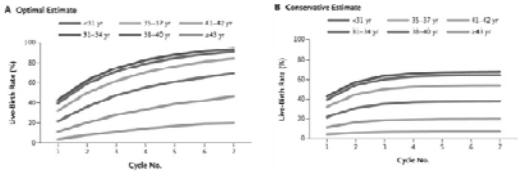
1) Access to care
2) Respect for patient's values, preferences, needs
3) Coordination and organization of care/ Continuity
4) Information, communication and education
5) Emotional support
6) Partner involvement
7) Physical comfort
8) Attitude of fertility clinic staff

These aspects were considered important and often problematic

Dancet et al., 2010

Is psychosocial care in modern IVF practice important for patients?

2004-2009: 471,028 ART cycles

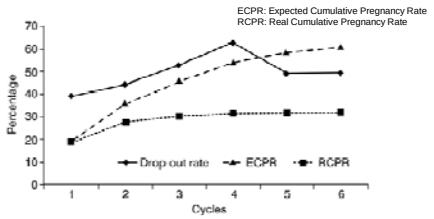


Adherence to the treatment plan maximizes live birth potential

Luke et al., 2012

Is psychosocial care in modern IVF practice important for patients?

4,102 ART cycles

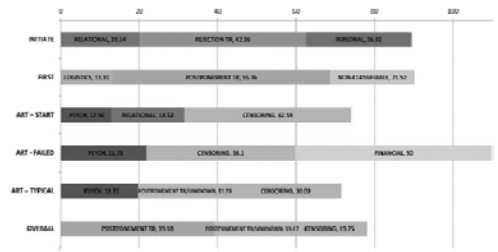


Dropping out has a substantial cost in terms of CPR

Schröder et al., 2004

Is psychosocial care in modern IVF practice important for patients?

Solving the riddle of drop-outs



Gameiro et al., 2012

Is psychosocial care in modern IVF practice important for patients?

Solving the riddle of drop-outs

Table I Factors cited by patients as contributing to their decision to end treatment

Patient (individual, couple)	Clinic (team, environment)	Treatment
Fear and negative treatment attitudes	Sub-optimal organisational care	Physical burden
• Unfavourable attitudes to treatment (e.g. fear about health of baby, perceiving treatment to be unnatural, perceived costs)	• Stressful care (disorganized, assembly-line treatment, different staff on clinic visits)	• Worry about physical burden, physical symptoms and discomfort
• Values (ethical, moral) and preferences incompatible with treatment	• Insufficient information on alternatives, inadequate co-ordination	• Injection protocols and adherence to treatment
• Idiosyncratic barriers	• Depersonalisation (poor coordinated follow-up, results at work and without partner present)	• Cycle monitoring
Psychological and emotional factors	• Lack of continuity of care and negative doctor attributes	• Disruption of work and daily activities
• Pre-ART psychological profile	• Overly bureaucratic procedures	• Worry about cost
• Difficulty in tolerating negative emotions for extended time periods	Negative staff–patient interactions	Handling of poor prognosis
• Uncertainty	• Lack of empathy, poor listening skills, insufficient care of the man, insufficient time for questions	• Loss of hope for success (cycle number dependent)
• Strain of repeated ART cycles		
Relational strain		
• Fear that ART will negatively impact relationship		
• Perceived and actual asymmetry in treatment focus between partners (particularly prevalent in early phases of medical involvement)		

Boivin et al., 2012

Is psychosocial care in modern IVF practice important?

TOWARDS A PATIENT-CENTERED CARE IN REPRODUCTIVE MEDICINE

Are fertility specialists aware of their patients' psychosocial needs?

Human Reproduction, Vol.26, No.1 pp. 181–193, 2011
Advanced Access publication on January 12, 2011 doi:10.1093/humrep/deq389

human reproduction ORIGINAL ARTICLE *Infertility*

Physicians underestimate the importance of patient-centredness to patients: a discrete choice experiment in fertility care

Inge W.H. van Empel[1,4,†], Eline A.F. Dancet[1,2,3,†], Xander H.E. Koolman[4], Willianne L.D.M. Nelen[1], Elly A. Stolk[5], Walter Sermeus[3], Thomas M. D'Hooghe[2], and Jan A.M. Kremer[1]

Are fertility specialists aware of their patients' psychosocial needs?

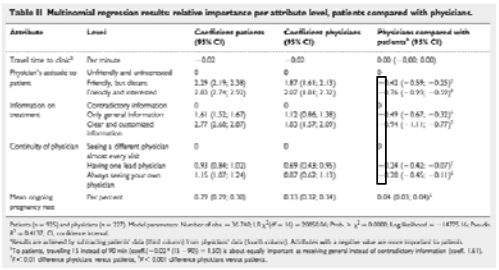


Table II Multinomial regression results: relative importance per attribute level, patients compared with physicians.

Attribute	Level	Coefficient patients (95% CI)	Coefficient physicians (95% CI)	Physicians compared with patients[a] (95% CI)
Travel time to clinic[b]	Per minute	−0.02	−0.02	0.00 (−0.00; 0.00)
Physician's attitude to patient	Unfriendly and uninterested	0	0	0
	Friendly, but distant	2.29 (2.19; 2.38)	1.87 (1.61; 2.13)	−0.42 (−0.59; −0.25)[c]
	Friendly and interested	2.83 (2.74; 2.92)	2.07 (1.84; 2.32)	−0.76 (−0.93; −0.59)[c]
Information on treatment	Contradictory information	0	0	0
	Only general information	1.61 (1.52; 1.67)	1.12 (0.86; 1.38)	−0.49 (−0.67; −0.33)[c]
	Clear and customized information	2.77 (2.68; 2.87)	1.83 (1.57; 2.09)	−0.94 (−1.11; −0.77)[c]
Continuity of physician	Seeing a different physician almost every visit	0	0	0
	Having one lead physician	0.93 (0.84; 1.02)	0.69 (0.43; 0.95)	−0.24 (−0.42; −0.07)[c]
	Always seeing your own physician	1.15 (1.07; 1.24)	0.87 (0.62; 1.11)	−0.28 (−0.45; −0.11)[c]
Mean ongoing pregnancy rate	Per percent	0.29 (0.29; 0.30)	0.33 (0.32; 0.34)	0.04 (0.03; 0.04)[c]

Patients (n = 925) and physicians (n = 227). Model parameters: Number of obs. = 36 760; LR χ^2(df = 16) = 36950.56; Prob. > χ^2 = 0.0000; Log likelihood = −14795.16; Pseudo R^2 = 0.4137. CI, confidence interval.
[a]Results are achieved by subtracting patients' data (third column) from physicians' data (fourth column). Attributes with a negative value are more important to patients.
[b]To patients, travelling 15 instead of 90 min (coeff.[−0.02] * (15 − 90) = 1.50) is about equally important as receiving general instead of contradictory information (coeff. 1.61).
[c]$P < 0.01$ difference physicians versus patients, [d]$P < 0.001$ difference physicians versus patients.

925 patients – 227 physicians

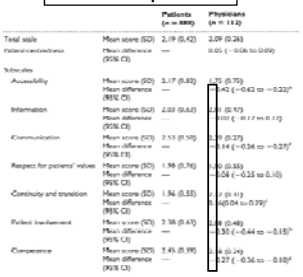
Van Empel et al., 2011

Are fertility specialists aware of their patients' psychosocial needs?

Doctor vs. patients

N=1189 couples

N=194 physicians



Aarts et al., 2011

How can doctors offer psychosocial care to their patients?

By addressing their psychosocial needs

- Emotional (stress, anxiety, depression)
- Social (spouse-partner, friends & family, work)
- Awareness/Knowledge (disease, treatment)
- Concerns/ worries
- Patient behaviour (lifestyle, exercise, nutrition etc.)

Emotional needs of couples undergoing ART treatment

Not all patients have the same emotional needs

These emotional needs are different in the various stages of treatment

Emotional needs of couples undergoing ART treatment

Not all patients have the same emotional needs

- Most women seem to be able to deal effectively the burden of successive cycles
- Most women seem to adjust well, even to unsuccessful treatment, but still a considerable number develops **clinical relevant emotional problems** as a result of ineffective IVF

Emotional needs are different in the various stages of treatment

- Usually there is a lack of enhanced anxiety or depression before treatment
- The use of fertility drugs (injections) is a stressful period for women
- The 2-week period of waiting before the pregnancy test is probably the most stressful period for the patients
- The stress of the treatment is predominantly determined by the threat of failure
- IVF that results in pregnancy→ negative emotions disappear

Verhaak et al., 2007

How can doctors offer psychosocial care to their patients?

Addressing emotional needs

- Communication skills are important !
- Listen to your patients! Encourage them to express their feelings!
- Empathy *(Garcia et al., 2013)*
- Actively screen for emotional maladjustment
- Use validated tools (SCREENIVF) and refer patients at high risk to specialists *(Verhaak et al., 2010)*

How can doctors offer psychosocial care to their patients?

Tips for good communication

- Greet the patient
- Introduce yourself
- Ask patient's name/ use patient's name
- Show approval or agreement
- Elicit feelings
- Do not interrupt/ encourage the woman to speak/ to keep talking
- Use good eye contact
- Used open posture

Leite et al., 2005

How can doctors offer psychosocial care to their patients?

Reducing stress/ anxiety

- **Use patient-friendly treatment regimens**

1) Facilitate and/or reduce number of injections

- *Pre-filled pen*
- *GnRH-antagonist protocols (Devroey et al., 2009a)*
- *Corifollitropin-alfa (Devroey et al., 2009b)*
- *Non-injectable luteal phase support (van der Linder et al., 2011)*

2) Use less drugs

- *Mild stimulation protocols (Fauser et al., 2010)*

How can doctors offer psychosocial care to their patients?

Reducing stress

Tailor the treatment protocol to each specific patient

How can doctors offer psychosocial care to their patients?

Relational strain/ Social consequences

- Build a monitoring/ treatment plan with minimal disruption of everyday activities
- Try to involve the partner as much as possible !
- Screen and treat the partner – Not only in male factor infertility !
- Offer counseling/ peer group support

How can doctors offer psychosocial care to their patients?

Addressing information needs

Type of information

- General information
- Information on diagnosis
- Information on treatment alternatives
- Treatment plan (including plan B in case of failure)
- Information on risks/ adverse events
- Information on helping themselves
- Information on emotional aspects of treatment (know what to expect)

Provision of information

- Written information (leaflets etc)/ Other media (video, animation etc)
- Avoid scientific jargon/ use layman's terms
- The right information for the right patient
- Sufficient time for discussion

Dancet et al., 2010

How can doctors offer psychosocial care to their patients?

Addressing concerns/worries

Allow patients to "digest" all the information provided

Give time

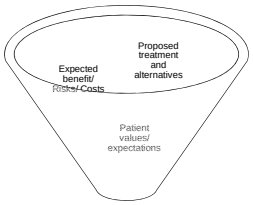
Ask patients

Ask them to bring forward any concerns/ worries regarding any aspect of the treatment

Provide answers

Address their concerns/worries in a sensitive manner and provide information/ offer contact with peers that could help

How can doctors offer psychosocial care to their patients?



Informed-Decision Making

Stewart et al., 2001

How can doctors offer psychosocial care to their patients?

Behavioural changes

Describe the importance of:

- Having a normal body-weight
- Not smoking
- Reducing alcohol consumption
- Exercising regularly
- Periconceptual folic acid uptake
- Complementary therapy/ Alternative treatments

NICE, 2004

Offer interventions/ programs that will help patients achieve their goals

How can doctors improve the psychosocial care offered to their patients?

Review

Audit

Request for feedback/ Questionnaires

So, why doctors
do not offer the level of psychosocial care
their patients expect them to?

A doctor's perspective

- Not all doctors have been trained to incorporate psychosocial care in their practice
- Most doctors do not acknowledge a deficit in psychosocial care
- Not all doctors have the same interest in providing psychosocial care to their patients
- Not all doctors have the same communication skills
- Not enough time/ Workload
- The structure/ organization of the clinic does not ensure continuity of care and does not facilitate the provision of proper psychosocial care
- The view that "the patients ask too much/ are never happy"

Summary

- Many doctors do not quite understand what is psychosocial care
- Psychosocial support is a fundamental aspect of quality of care
- Infertility and IVF are characterized by specific challenges when it comes to implementing psychosocial care
- Most IVF doctors tend to underestimate their patients' psychosocial needs

Summary

- Doctors should try to address the emotional needs of their patients and facilitate their adjustment to infertility and IVF
- Actively screening emotional maladjustment and having a good communication with the patient is crucial
- Offering patient-tailored and patient friendly treatment regimens and allow the patient to make informed decisions
- Involve the couple – Not just the woman

Summary

- Address the patients' information needs by providing information regarding treatment, complications etc.
- Written information/ or use of other media in order to enhance understanding is advised
- Always ask patients to express their worries/ concerns and try to address them
- Ensure that the patient is making informed decisions
- Try to assist the patients in making behavioral changes that will help them achieve their goals

Summary

- Each and every practice should be evaluated for effectiveness and acceptability in regular intervals

- Review
- Audit
- Patient feedback

- Proper training of physicians might allow them to detect their patients' psychosocial needs and facilitate provision of psychosocial care

References

1. Aarts JW, Faber MJ, van Empel IW, Scheenjes E, Nelen WL, Kremer JA. Professionals' perceptions of their patients' experiences with fertility care. Human reproduction. 2011 May;26(5):1119-27. PubMed PMID: 21393300.
2. Aarts JW, van Empel IW, Boivin J, Nelen WL, Kremer JA, Verhaak CM. Relationship between quality of life and distress in infertility: a validation study of the Dutch FertiQoL. Human reproduction. 2011 May;26(5):1112-8. PubMed PMID: 21372046.
3. Boivin J, Domar AD, Shapiro DB, Wischmann TH, Fauser BC, Verhaak C. Tackling burden in ART: an integrated approach for medical staff. Human reproduction. 2012 Apr;27(4):941-50. PubMed PMID: 22258661.
4. Dancet EA, Nelen WL, Sermeus W, De Leeuw L, Kremer JA, D'Hooghe TM. The patients' perspective on fertility care: a systematic review. Human reproduction update. 2010 Sep-Oct;16(5):467-87. PubMed PMID: 20223789.
5. Devroey P, Aboulghar M, Garcia-Velasco J, Griesinger G, Humaidan P, Kolibianakis E, et al. Improving the patient's experience of IVF/ICSI: a proposal for an ovarian stimulation protocol with GnRH antagonist co-treatment. Human reproduction. 2009 Apr;24(4):764-74. PubMed PMID: 19153090.
6. Devroey P, Boostanfar R, Koper NP, Mannaerts BM, Ijzerman-Boon PC, Fauser BC, et al. A double-blind, non-inferiority RCT comparing corifollitropin alfa and recombinant FSH during the first seven days of ovarian stimulation using a GnRH antagonist protocol. Human reproduction. 2009 Dec;24(12):3063-72. PubMed PMID: 19684043. Pubmed Central PMCID: 2777786.
7. Fauser BC, Nargund G, Andersen AN, Norman R, Tarlatzis B, Boivin J, et al. Mild ovarian stimulation for IVF: 10 years later. Human reproduction. 2010 Nov;25(11):2678-84. PubMed PMID: 20858698.
8. Gameiro S, Boivin J, Peronace L, Verhaak CM. Why do patients discontinue fertility treatment? A systematic review of reasons and predictors of discontinuation in fertility treatment. Human reproduction update. 2012 Nov-Dec;18(6):652-69. PubMed PMID: 22869759. Pubmed Central PMCID: 3461967.
9. Gameiro S, Verhaak CM, Kremer JA, Boivin J. Why we should talk about compliance with assisted reproductive technologies (ART): a systematic review and meta-analysis of ART compliance rates. Human reproduction update. 2013 Mar-Apr;19(2):124-35. PubMed PMID: 23178304. Pubmed Central PMCID: 3576003.
10. Garcia D, Bautista O, Venereo L, Coll O, Vassena R, Vernaeve V. Training in empathic skills improves the patient-physician relationship during the first consultation in a fertility clinic. Fertility and sterility. 2013 Apr;99(5):1413-8 e1. PubMed PMID: 23294674.

References

11. Leite RC, Makuch MY, Petta CA, Morais SS. Women's satisfaction with physicians' communication skills during an infertility consultation. Patient education and counseling. 2005 Oct;59(1):38-45. PubMed PMID: 16198217.
12. Luke B, Brown MB, Wantman E, Lederman A, Gibbons W, Schattman GL, et al. Cumulative birth rates with linked assisted reproductive technology cycles. The New England journal of medicine. 2012 Jun 28;366(26):2483-91. PubMed PMID: 22738098. Pubmed Central PMCID: 3623697.
13. NICE N. Fertility: assessment and treatment for people with fertility problems. Clinical Guideline. 2004;11.
14. Novack DH, Volk G, Drossman DA, Lipkin M, Jr. Medical interviewing and interpersonal skills teaching in US medical schools. Progress, problems, and promise. JAMA : the journal of the American Medical Association. 1993 Apr 28;269(16):2101-5. PubMed PMID: 8468764.
15. Schroder AK, Katalinic A, Diedrich K, Ludwig M. Cumulative pregnancy rates and drop-out rates in a German IVF programme: 4102 cycles in 2130 patients. Reproductive biomedicine online. 2004 May;8(5):600-6. PubMed PMID: 15151731.
16. Stewart DE, Rosen B, Irvine J, Ritvo P, Shapiro H, Murphy J, et al. The disconnect: infertility patients' information and the role they wish to play in decision making. Medscape women's health. 2001 Aug;6(4):1. PubMed PMID: 11547268.
17. van der Linden M, Buckingham K, Farquhar C, Kremer JA, Metwally M. Luteal phase support for assisted reproduction cycles. Cochrane database of systematic reviews. 2011 (10):CD009154. PubMed PMID: 21975790.
18. van Empel IW, Dancet EA, Koolman XH, Nelen WL, Stolk EA, Sermeus W, et al. Physicians underestimate the importance of patient-centredness to patients: a discrete choice experiment in fertility care. Human reproduction. 2011 Mar;26(3):584-93. PubMed PMID: 21227936.
19. van Empel IW, Nelen WL, Tepe ET, van Laarhoven EA, Verhaak CM, Kremer JA. Weaknesses, strengths and needs in fertility care according to patients. Human reproduction. 2010 Jan;25(1):142-9. PubMed PMID: 19861329.
20. Verhaak CM, Lintsen AM, Evers AW, Braat DD. Who is at risk of emotional problems and how do you know? Screening of women going for IVF treatment. Human reproduction. 2010 May;25(5):1234-40. PubMed PMID: 20228392.
21. Verhaak CM, Smeenk JM, Evers AW, Kremer JA, Kraaimaat FW, Braat DD. Women's emotional adjustment to IVF: a systematic review of 25 years of research. Human reproduction update. 2007 Jan-Feb;13(1):27-36. PubMed PMID: 16940360.
22. World Health Organization. Quality of care: a process for making strategic choices in Health Systems 2006 [cited 2013]. Available from: http://www.who.int/management/quality/assurance/QualityCare_B.Def.pdf.

How could doctors implement psychosocial care?

Christos A. Venetis, MD, MSc

Unit for Human Reproduction, 1st Dept. of OB/Gyn
Medical School, Aristotle University of
Thessaloniki, Greece

How to support patients in the waiting period?

Deborah Lancastle, PhD CPsychol
Registered Psychologist

Acknowledgment: Professor Jacky Boivin

University of Glamorgan

Conflict of interest

- I have no commercial relationships or other associations that could be perceived as a conflict of interest

University of Glamorgan

Learning Objectives

1. To learn about the psychology of waiting and its impact on psychological well-being
2. To understand the necessity to tailor interventions to the specific practical and psychological requirements of the situation
3. To explain the principles of coping theory, and illustrate how coping interventions may best serve the specific needs of patients during the waiting period

University of Glamorgan

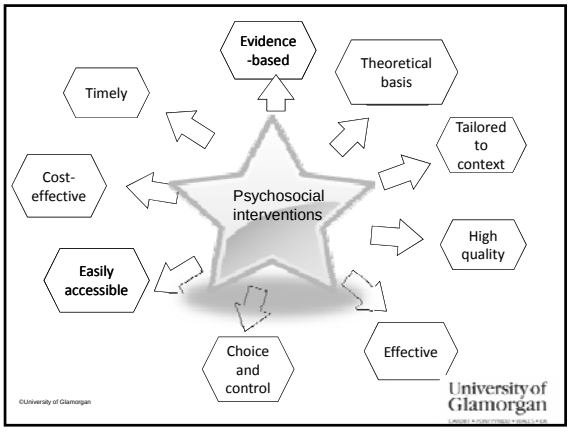
Gold Standards for Psychosocial Intervention

eshre European Society of Human Reproduction and Embryology

Guideline on the implementation of psychosocial care by healthcare professionals in infertility and medically assisted reproduction

MRC Medical Research Council 100 years of life-changing discoveries

Framework for the design and evaluation of complex interventions (Campbell et al., 2005)



Important questions

- Why are medical waiting periods difficult?
- What are the psychological effects of waiting?
- What do we know about how people naturally manage during stressful events?
- Are some ways of coping likely to be more helpful than others?
- Can we promote or support ways of coping during medical waiting periods?

- *Should we be proactive rather than reactive when we know an experience will be difficult?*
- *Should a selection of early, self-help interventions be routinely available for all?*
- *Should people be introduced to new ways of coping during a difficult experience?*

University of Glamorgan

Medical waiting periods

- Waiting is a typical requirement of many medical encounters!
  - Waiting lists
    - Waiting to be put on a waiting list!
  - Waiting in a clinic waiting room for a consultation
  - 'Watchful waiting'
  - Waiting for a period of time before a test to see if a condition has been cured/is in remission
  - Waiting for the results of a diagnostic test

University of Glamorgan

Waiting and Stress

- Lazarus & Folkman (1984) propose a number of situation properties which can influence the experience of stress during *any* experience
- 3 apply particularly to medical waiting periods

1. Uncertainty
   - Outcome, temporal
2. Uncontrollability
   - Can the outcome be changed or controlled?
3. Meaningfulness
   - The personal significance of the experience

University of Glamorgan

1. Uncertainty

- Waiting is characterised by uncertainty
- Uncertainty has an outcome dimension with anticipated emotional consequences
  - Positive outcome: Relief, joy, happiness, satisfaction
  - Negative outcome: Grief, bitterness, disappointment, anger, depression

Will I get the outcome I want?

- Uncertainty has a temporal dimension with associated emotional consequences
  - Until you know: Worry, anxiety, pessimism, optimism, eagerness, excitement

When will I know?

- Even within the context of infertility there are different temporal dimensions of waiting:

University of Glamorgan

Chronic uncertainty

- Uncertainty for infertile individuals can continue for a considerable period of time (e.g., will I ever conceive?)
- At some point they'll know the answer to this question
- For infertile women the final answer to the question is provided by the menopause
- An ongoing and unresolved stressor lasting perhaps 30 years

University of Glamorgan

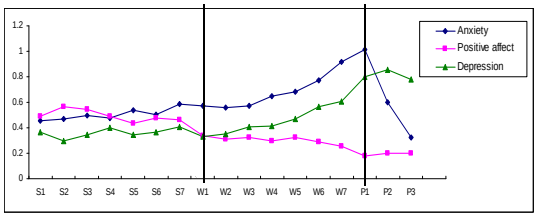
Acute uncertainty

- Uncertainty can be discrete and time-limited (e.g., waiting for a pregnancy test after fertility treatment)
- You know the date when you will find out the outcome of a test or procedure
  - The waiting period is a 'countdown' to that day
- An expectable trajectory of emotional reactions as the day of the pregnancy test approaches:

University of Glamorgan

Psychological effects of uncertainty

Boivin & Lancastle (2010)



Stimulation phase | Waiting period | Pregnancy test +

9 of 61 women had a positive pregnancy test at P1 (14.75%)

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

University of Glamorgan

Psychological effects of uncertainty

- 'Bracing' for the possibility of a negative result
  - One strategy is to alter expectations downwards (e.g., Shepperd et al. 2006).
- Rumination over possibilities
  - Experience of actual and anticipated emotions associated with those possibilities
- Anticipating an imminent test result increased cognitive distraction and reduced recall of information about a medical test (Portnoy, 2010)
- Uncertainty is demanding, confusing and anxiety provoking
  - Can interfere with the cognitive processing needed to evaluate and employ effective ways of coping (Lazarus & Folkman, 1984).

University of Glamorgan

2. Uncontrollability

- The extent to which one can control an outcome in medical waiting periods depends on the relationship between the onset of the wait and the relevant biological processes
  - When waiting for surgery for coronary heart disease, action can be taken to improve the future outcome
  - After a breast biopsy for suspected breast cancer nothing can be done to change the test result as the disease is (not) already present in the sample
  - Embryo transfer is followed hopefully by implantation but the woman cannot control this. Should she
    - Rest?
    - Carry on as usual?

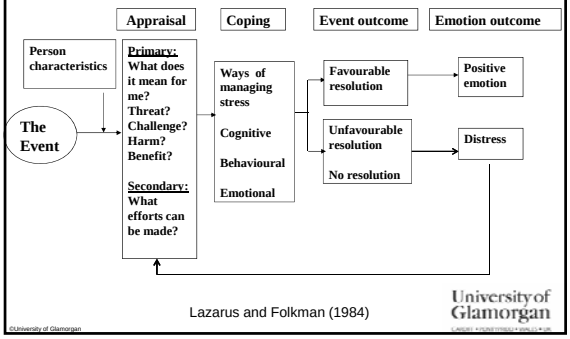
University of Glamorgan

3. Meaningfulness

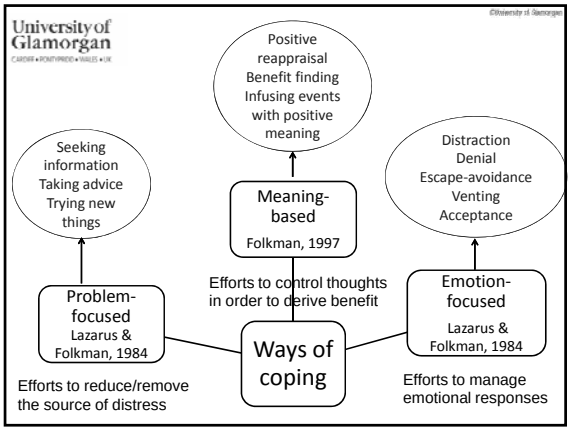
- The majority of medical waiting periods relate to a condition and/or outcome that is important to the individual
- Fertility treatment demands considerable investment
  - Physical
  - Financial
  - Time
  - Emotional
  - Relationship
- The costs are definite and can be considerable
- A poor outcome is distressing because of the personal significance
  - Repeated attempts are undertaken with prior knowledge of emotions associated with failed attempts

University of Glamorgan

Theoretical model of stress, appraisal, and coping



Lazarus and Folkman (1984)

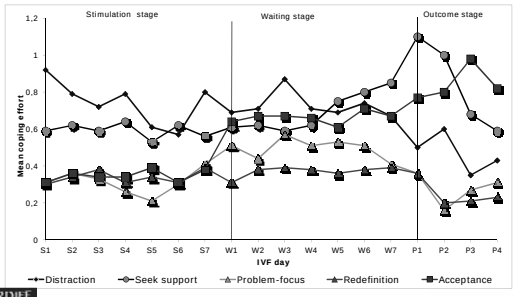


Coping effectiveness

Problem-Focused, Emotion-Focused, Meaning-Based: Which is best?

1. Depends on the nature of the stressful event, whether constructive action is actually possible
   - The effectiveness is constrained by the situation (Goodness of Fit).
   - You cannot change or control every situation!
2. The strategies can work together
   - Emotion-focused coping can relieve negative emotions in the short term, freeing up the resources needed to act
   - Problem-focused strategies can reduce negative emotions by removing the source of distress
   - Meaning-based strategies can reduce the emotional consequences of ruminating about negative possibilities

Coping across stages of IVF



Boivin and Lancastle (2010)

Daily coping strategies occurring naturally during the IVF waiting period

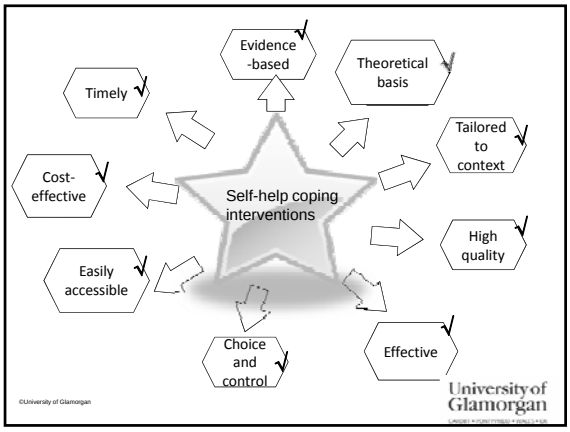
- **Distraction** – used the most until around the time of the pregnancy test
- **Social support** – increased towards the end of the waiting period and peaked on pregnancy test day
- **Positive reappraisal** – consistently low, despite evidence suggesting that it is beneficial

- Can we intervene to support/alter coping to make the waiting period more tolerable?

Interventions

- Interventions for infertility have some benefits (Boivin, 2003)
  - Counselling (e.g., psychotherapy, infertility counselling)
  - Educational programmes focusing on individual or combined skills training (e.g., coping training, sex therapy, information provision)

- But the practicalities must be considered
  - Some are time intensive (e.g., 4-12 sessions of 45 minutes +)
  - Some take place in clinics (time off work and a special trip to clinic)
  - Administered by a trained professional (costly for NHS or patient)
  - Only 10-15% of infertile patients used the counselling provided by fertility clinics (Boivin et al., 1999)



The PRCI (Positive Reappraisal Coping Intervention) (Lancastle & Boivin, 2008)

- Ten statements on a card
- Small, cheap to produce, and easily accessible
- Not prescriptive
- Focus on any positive aspects of a situation to minimise dwelling on possibilities
- Theoretically based; Items from validated coping instruments
- Well received by women (Lancastle & Boivin, 2008)

During this experience I will:
Try to do something that makes me feel good
See things positively
Look on the bright side of things
Make the best of the situation
Discover what is important in life
Focus on the positive aspects of the situation
Find something good in what is happening
Try to do something meaningful
Focus on the benefits and not just the difficulties
Learn from the experience

Distraction-based coping intervention (Phelps, Bennett et al., 2006)

- Self-help distraction-based coping leaflet for waiting periods in cancer genetic risk assessment
- Think of your own techniques too and allow specific times to think about worries
- Cost-effective, easy to provide, simple to use, validated using MRC framework
- Effects moderated by distress; the highly distressed on referral reported significantly lower distress a month later (Bennett et al. 2007)

Distraction techniques included in the coping leaflet
Things you can think
Counting to 50, while imaging the numbers in your head
Thinking of a calm or favourite place
Thinking of a holiday or other enjoyable times or plans
Things you can do
Talk to someone about anything other than the worry in your mind
Absorb yourself in something interesting or fun to do

Online infertility support groups

FertilityFriends.co.uk
Infertility and Fertility Support

infertilitynetwork UK

http://www.infertilitynetworkuk.com/acebabes

FertilityZone.co.uk
fertility community

http://www.fertilethoughts.com/

Valuable social support from people living through similar experiences (see Malik & Coulson, 2008, 2010)

Social support via online facilities

- Support from others 'in the same boat' is the philosophy behind group interventions
- Online support is easily accessible and cheaply available to many
- Benefits: better relationship with partner, reduced isolation, greater knowledge and sense of control
  - Some negatives if very happy or sad news was shared (Malik & Coulson, 2008)

Self-help mechanisms in the 2-week wait	
Empathy	35.6%
Sharing personal experiences	48.4%
Sharing information and advice	19.8%
Gratitude	11%
Friendship	10.6%
Chatting	4.4%
Seeking information and advice	12.6%
"Universality": Not being alone	1.6%
Negative statements	0.3%
Creative expression	0%

Malik & Coulson (2010)

Discussion questions

- Should we be proactive rather than reactive when we know an experience will be difficult?
- Should a selection of early, self-help interventions be routinely available for all people during fertility treatment?
- Should people be introduced to new ways of coping during a difficult experience?

Bibliography

- Bennett P, Phelps C, Brain K, Hood K, Gray J. (2007). A randomized controlled trial of a brief self-help coping intervention designed to reduce distress when awaiting genetic risk information. *Journal of Psychosomatic Research, 63*, 59–64.
- Boivin, J., Scanlan, L., & Walker, S.M. (1999). Why are infertile patients not using psychosocial counselling? *Human Reproduction, 14,* 1384–1391.
- Boivin J. (2003). A review of psychosocial interventions in infertility. *Social Science and Medicine, 57,* 2325–2341.
- Boivin, J., & Lancastle, D. (2010). Medical waiting periods: Imminence, emotions and coping. *Women's Health, 6,* 51-59.
- Campbell M., Fitzpatric, R., Haines, A., Kinmonth, A.L., Sandercock, P., Spiegelhalter, D., Tyrer, P. (2000). Framework for design and evaluation of complex interventions to improve health. *BMJ, 321*, 694–696.
- .

University of Glamorgan

- Carver, C. S., & Scheier, M. F. (1994). Situational coping and coping dispositions in a stressful transaction. Journal of Personality and Social Psychology, 66, 184–195
- Department of Health. (2011). *No Health Without Mental Health: A Cross-Government Mental Health Outcomes Strategy for People of All Ages.* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/135457/dh_124058.pdf.pdf
- Folkman, S. (1997). Positive psychological states and coping with severe stress. Social Science and Medicine, 45, 1207-1221.
- Lancastle, D., & Boivin, J. (2008). A feasibility study of a brief coping intervention (PRCI) for the waiting period before a pregnancy test during fertility treatment. Human Reproduction, 23, 2299-2307.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.

University of Glamorgan

- Malik, S.H., & Coulson, N.S. (2008). Computer-mediated infertility support groups: An exploratory study of online experience. Patient Education and Counselling, 73, 105-113
- Malik, S.H., & Coulson, N.S. (2010). Coping with infertility online: An examination of self-help mechanisms in an online infertility support group. Patient Education and Counselling, 81, 315-318.
- Park, C.L., & Folkman, S. (1997). The role of meaning in the context of stress and coping. General Review of Psychology, 2, 115-144.
- Phelps, C., Bennett, P., Iredale, R., Anstey, S., & Gray, J. (2006). The development of a distraction-based coping intervention for women waiting for genetic risk information: A phase 1 qualitative study. Psycho-oncology, 15, 169-173.
- Portnoy, D.B. (2010). Waiting is the hardest part: Anticipating medical test results affects processing and recall of important information. *Social Science and Medicine, 71,* 421-428.
- Shepperd, J. A., Findley-Klein, C., Kwavnick, K. D., Walker, D., & Perez, S. (2000). Bracing for loss. *Journal of Personality and Social Psychology, 78,* 620–634.

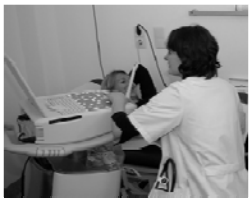
University of Glamorgan

UMC St Radboud

Screening on distress in ART patients; theoretical background and practical implications

Angelique J.C.M. van Dongen, MD
Radboud University Medical Centre, the Netherlands
7 July 2013

- Angelique van Dongen
  - Gynecologist, fertility specialist
  - PhD project: psychosocial care in IVF
- No conflict of interest



Learning objectives

Participants will learn:

- **Why** we should screen on emotional maladjustment
- **How** we could screen on emotional maladjustment
- What patients think about psychosocial screening
- Other implications of psycosocial screening
- The next step after screening for emotional maladjustment

UMC St Radboud

Content

- Screening on distress in ART
- SCREENIVF
- Practical implications
- Future research
- Learning objectives

4

UMC St Radboud

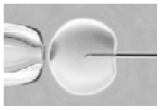
Screening on distress in ART

UMC St Radboud

Screening on distress in ART

- Involuntary childlessness
  - Worldwide 72-80 million people
  - 1 out of 6 couples

- IVF
  - In vitro fertilization
  - The Netherlands: 16.000 IVF cycles
  - 1 out of 38 children



6

UMC St Radboud

Screening on distress in ART

- IVF

Complex, time consuming, stressful[1]

- 30% drop out because of psychological burden[2]
- 6 months after last unsuccessful IVF: ~20% of the women suffer from anxiety/depression[3]

1. Brandes et al. 2009; Boivin et al. 2011
2. Olivius et al. 2004; Rajkhowa et al. 2006; Brandes et al. 2009; Domar et al. 2010; Bovin et al. 2011
3. Verhaak et al. 2005

7

UMC St Radboud

Screening on distress in ART

- Screening
  - Emotional problems
  - In time
- Goal[1]
  - Offering additional psychosocial care
  - Anticipate to emotional vulnerability in consultation
  - Prevention of problems
  - Asset to standard care

1. Schmidt 2006; Verhaak et al. 2010

8

UMC St Radboud

SCREENIVF

SCREENIVF

- SCREENIVF[1]
- Introduced in September 2009

- Five risk factors:
  - Pre-treatment anxiety
  - Pre-treatment depression
  - Helplessness regarding fertility problems
  - Less acceptance regarding fertility problems
  - Lack of social support

1. Verhaak et al. 2010

10

SCREENIVF

Risk factors	Questionnaire	Cut-off
Anxiety	HADS: 7 items	>8
Depression	HADS: 7 items	>8
Helplessness	ICQ: 6 items	>12
Acceptance	ICQ: 6 items	<10
Social support	ISI: 5 items	<15

11

SCREENIVF

- Identify **women** at risk for emotional maladjustment before starting IVF

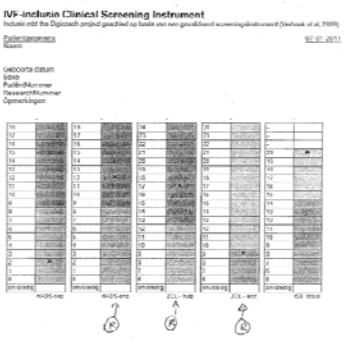
- Sensitivity: 69%[1]
- Specificity: 77%[1]

- Response rate: 78-80%[2]
- 1/3 at risk[1,2]
- 48% clinical relevant psychosocial problems[1]

1. Verhaak et al. 2010
2. Van Dongen et al. 2012

12

UMC St Radboud


IVF-inclusie Clinical Screening Instrument

13

UMC St Radboud

Practical implications

- Process analysis
- Screening for dropout

14

UMC St Radboud

Practical Implications - Process analysis

- Aim
- Methods
- Results
- Conclusion

15

Process analysis - Aim

- Process analysis
  - Uptake rate
  - Experiences of the people exposed
  - Action following the results
  - Non responders
- Optimise the use of SCREENIVF

16

Process analysis - Aim

- Process analysis[1]:
  - To assess the level of adherence to a new intervention
  - Optimise the implementation of a new intervention
- Process analysis[2]:
  - Key processes
  - Outcome
  - Mechanisms that will lead to improved outcome
  - Identify barriers

1. Hulscher et al. 2003
2. Campbell et al. 2007

17

Process analysis - Methods

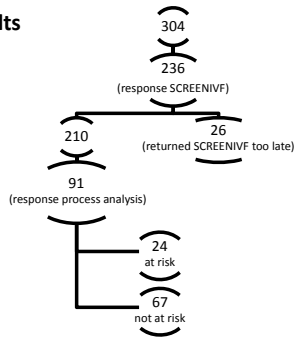
- All patients that started IVF between December 2009 and February 2010
- Tertiary IVF clinic
- 304 patients
- Additional process analysis questionnaire
- Telephone survey: non responder assessment

Screening Stress en IVF:
Wat vindt de patiënt?

18

Process analysis - Results

- **Uptake rate**
  - 78%
  - 1/3 at risk
  - 43% completed process analysis questionnaire (n=91)



19

Process analysis - Results

- **Non responders**
  - 41% 'no actual need for psychological help'
  - 19% forgot to complete the screening

20

Process analysis - Results

- **Experiences of patients**

Experiences	percentage
Screening useful	91%
Completing SCREENIVF not unpleasant	95%
Satisfied with explanation SCREENIVF	97%
Instructions understandable	91%
Neutral or positive about lenght of SCREENIVF	89%
Recognition in risk profile	98%

21

UMC St Radboud

Process analysis - Results

- **Action of patients**
  - 29% (women at risk) planned to seek professional help

Actions	At risk (n=24)	Not at risk (n=67)
	agree	**agree**
Generally speaking, psychosocial help is useful.	67%	78%
I would benefit from psychosocial help.	62%	57%
My family would support me if I would seek help.	100%	100%
My friends would support me if I would seek help.	100%	100%
My job is an obstacle when seeking help.	0%	9%
Travelling distance is an obstacle.	46%	48%
I don't know if my insurance covers psychosocial help.	79%	61%

22

UMC St Radboud

Process analysis - Conclusion

- Screening for emotional risk factors is feasible
  - High uptake rate
    - Improvement via reminders, other language
  - High acceptance, and high acceptability of the risk profile
  - Low percentage in help seeking behaviour
    - Barrier: travelling distance
    - Psychosocial care offered by Internet

23

UMC St Radboud

Practical Implications - Screening for dropout

- Aim
- Methods
- Results
- Conclusion

24

UMC St Radboud

Dropout - Aim

- Dropout often due to psychosocial reasons:
  - 34% due to emotional distress after start IVF[1]
  - Main reason in standardized interview: psychological burden (Likert scale: x=5.96)[2]
  - Prospective cohortstudy: 28%: physical or psychological burden[3]
  - Unsuccesful treatment and psychological distress most important in desicion to stop treatment[4]

1. Brandes et al. 2009
2. Van den Broeck et al. 2009
3. Verberg et al. 2008
4. Rajkhowa et al. 2006

25

UMC St Radboud

Dropout - Aim

- Gameiro (2012)[1:]
  "Psychological burden of treatment was a main reason for discontinuing treatment at all stages, especially during ART"
- Boivin (2012)[2:]
  "Identify the highly distressed patient entering treatment"
- Prevent burden of treatment and its related dropout
- Can SCREENIVF predict dropout?

1. Gameiro et al. 2012
2. Boivin et al. 2012

26

UMC St Radboud

Dropout - Methods

- Retrospective cohort study
- Couples placed on IVF-waiting list between November 2009 and November 2010
- One year later: follow-up
  - Local IVF registry
  - Medical chart
  - Telephonic survey
- Assess:
  - Results SCREENIVF men and women
  - Dropout due to personal reasons
  - Pregnancy rate

27

Dropout - Results

- 679 couples, 12 (1.8%) exclusion
- Analysis with 667 couples
- 86 (12.9%) discontinued
  - 9 (10.4%) clinic factors
  - 37 (43.0%) stop on medical advise (passive censoring)
  - 40 (46.5%) dropout due to personal reasons

28

Dropout - Results

Patient characteristics

Patient characteristics	Continued treatment	Dropout	p-value
Age of woman *years, mean (SD)*	33.12 (4.17)	31.98 (4.73)	0.64
Duration of infertility *months, mean (SD)*	28.70 (25.09)	38.53 (23.51)	0.74
Diagnosis *number (%)*			
-male factor	211 (63.7)	24 (60.0)	0.89
-female factor	50 (15.2)	4 (10.0)	0.44
-both male and female factor	8 (2.4)	1 (2.5)	0.94
-unknown	59 (18.0)	9 (16.1)	0.39
-missing	3 (0.9)	2 (5.0)	**0.03**

29

Dropout - Results

- SCREENIVF:
  - Uptake rate:76.6%
  - At risk: 38.0% women; 30.7% men
- Pregnancy rate:
  - 68.6% pregnant after one or more IVF cycles
    - 82.1% continuous pregnancy
      - 12.0% multiple pregnancy
    - 17.1% miscarriage
    - 0.8% extra uterine gravidity

30

UMC St Radboud

Dropout - Results

Relation between SCREENIVF and patients who discontinued before or after one treatment cycle

Women at risk	Odss ratio	95% CI
Overall at risk score	1.44	0.65 – 3.18
Depression	0.96	0.80 – 1.14
Anxiety	1.06	0.94 – 1.20
Helplessness	0.92	0.81 – 1.05
Acceptance	**1.13**	1.03 – 1.24
Social support	**0.83**	0.72 – 0.95
Men at risk		
Overall at risk score	0.54	0.20 – 1.46
Depression	1.02	0.84 – 1.24
Anxiety	0.95	0.80 – 1.12
Helplessness	1.01	0.90 – 1.13
Acceptance	**1.25**	1.10 – 1.42
Social support	1.04	0.92 – 1.16

31

UMC St Radboud

Dropout - Conclusion

SCREENIVF with its current cut-off values cannot predict dropout due to personal reasons

- Lower social support in women pretreatment is related with dropout
- Higher acceptance of the infertility in men and women is related with dropout

32

UMC St Radboud

Dropout - Conclusion

- Developing modified tools or combination of tools
  - FertiQol
  - Relational questionnaire
- Information about reasons for dropout
  - Exit interview
- Tailored psychosocial care
- Adjust for dropout we should prevent:
  - "Positive choice to dropout" in couples with higher acceptance?

33

UMC St Radboud

Future research

UMC St Radboud

Future research

- Digital coaching
- Predicting of dropout
- Validation

UMC St Radboud

Future research – digital coaching

- Digital coaching: psychosocial care offered by Internet
- 60% of patients in Western Europe use Internet for health-related questions[1]
- E-health:
  - Efficiency and costs
  - Accessibility
  - Free communication
  - Effective in e.g. Post Traumatic Stress Disorder, headache

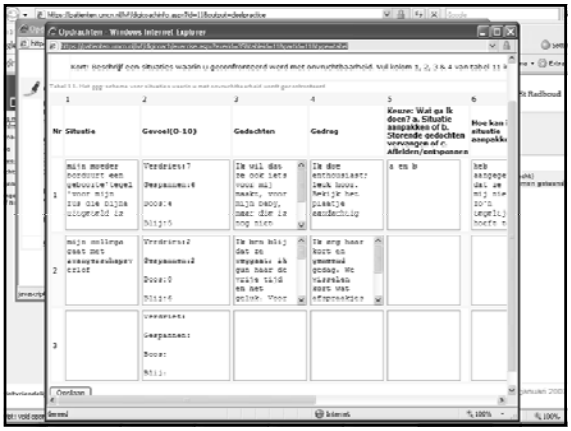
1. Atkinson et al. 2009

Future research – digital coaching

- Digital coaching: psychosocial care offered by Internet
- Internet and IVF
  - Search for information
  - Support groups
- Psycho-education and cognitive behavioural therapy seems most successful in IVF patients with emotional problems[1]

37

38



UMC St Radboud

Future research – digital coaching

- 2006 pilot:
  - 5 women:
    - "user friendly"
    - "reduction anxiety scores"
    - "less rise in depression scores"
- Next step:
  - Randomized controlled trial
  - Women with coaching vs. women with regular treatment
  - Outcome: scores on anxiety and depression

40

UMC St Radboud

Future research – dropout

- Modify SCREENIVF to predict dropout
  - Combination of tools (FertiQol, relational questionnaire)
  - Other cut-off values specific for dropout

41

UMC St Radboud

Future research – validation

- Validation SCREENIVF for men and couples
- Tailor psychosocial care

42

UMC St Radboud

Learning objectives

UMC St Radboud

Learning objectives

- SCREENIVF is a validated screening instrument to identify women at risk for emotional maladjustment before starting IVF
- Screening patients is feasible, and can be implemented in your clinic
- SCREENIVF can be helpful in tailoring psychosocial care

44

UMC St Radboud

Learning objectives

- Digital coaching can be helpful in overcoming barriers for helpseeking behaviour
- SCREENIVF can be helpful in predicting dropout due to personal reasons
- Future research should focus on validation of SCREENIVF for men, and on validation of SCREENIVF for dropout

45

References

- Atkinson NL, Saperstein SL, Pleis J. Using the internet for health-related activities: findings from a national probability sample. J Med Internet Res 2009. 11(1): e4
- Bovin J, Griffiths E, Venetis CA. Emotional distress in infertile women and failure of assisted reproductive technologies: meta-analysis of prospective psychosocial studies. BMJ 2011. 342: d223
- Brandes M, Van der Steen JO, Bokdam SB, Hamilton CJ, De Bruin JP, Nelen WL, Kremer JA. When and why do subfertile couples discontinue their fertility care? A longitudinal cohort study in a secondary care subfertility population. Hum Reprod 2009. 24(12): 3127-3135
- Campbell NC, Murray E, Darbyshire J, Emery J, Farmer A, Griffiths F, Guthrie B, Lester H, Wilson P, Kinmonth AL. Designing and evaluating complex interventions to improve health care. BMJ 2007. 334: 455-459
- Domar AD, Smith K, Conboy L, Iannone M, Alper M. A prospective investigation into the reasons why insured United States patients drop out of in vitro fertilization treatment. Fertil Steril 2010. 94 (4): 1457-9

References

- Hulscher MEJL, Laurant MGH, Grol RPTM. Process evaluation on quality improvement interventions. Qual Saf Health Care 2003. 12: 40-46
- Olivius C, Friden B, Borg G, Bergh C. Psychological aspects of discontinuation of in vitro fertilization treatment. Fertil Steril 2004. 81(2): 276
- Rajkhowa M, McConnell A, Thomas GE. Reasons for discontinuation of IVF treatment: a questionnaire study. Hum Reprod 2006. 21(2): 358-363
- Schmidt L. Infertility and assisted reproduction in Denmark. Epidemiology and psychosocial consequences. Dan Med Bull 2006. 53 (4): 390-417
- Van den Broeck U, Holvoet L, Enzlin P, Bakelantes E, Demyttenaere K, D'Hooghe T. Reasons for dropout in infertility treatment. Gynaecol Obstet Invest 2009. 68(1): 58-64

UMC St Radboud

References

- Van Dongen AJ, Kremer JA, Van Sluisveld N, Verhaak CM, Nelen WL. Feasibility of screening patients for emotional risk factors before in vitro fertilization in daily clinical practice: a process evaluation. Hum Reprod 2012. 27(12): 3493-501
- Verhaak CM, Smeenk JM, Van Minnen A, Kremer JA, Kraaimaat FW. A longitudinal, prospective study on emotional adjustment before, during and after consecutive fertility treatment cycles. Hum Reprod 2005. 20(8): 2253-60
- Verhaak CM, Lintsen, AM, Evers AW, Braat DD. Who is at risk of emotional problems and how do you know? Screening of women going for IVF treatment. Hum Reprod 2010; 25(5): 1234-1240

Supporting patients in changing lifestyle

Rotterdam Lifestyle interventions

Geranne Jiskoot
PhD-student
Dept. Reproductive Medicine
&
Section Medical Psychology and Psychotherapy
Erasmus MC

Commercial Relations:
Mrace Grand Erasmus MC & MSD

Learning objectives

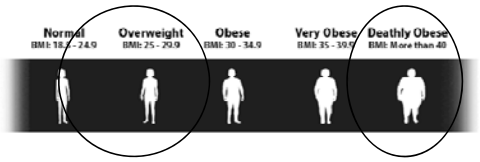
Participants will:

- Be aware of the impact of obesity on reproductive outcomes
- Understand what the problems are when implementing a guideline for overweight and obese women
- Know what we can do as a fertility clinic for obese patients

Fatness and flabbiness are to blame.
The womb is unable to receive the semen and they menstruate infrequently…

Hippocrates
Essay to Scynthians 4th century B.C.

When we think of obesity…



We forget:

Subfertility is elevated above 23.9 kg/m2

(Nurses Health Study) Rich-edwards, et al 1994

- Obese women are more prone to anovulation
  (Pasquali et al., 2007)
- Complications during pregnancy
- Higher maternal and neonatal morbidity and mortality
- Increased costs

(Sebire et al.,2001; Cedergren, 2004; Linne´, 2004; Weiss et al., 2004; Usha Kiran et al., 2005).

Impact of overweight/obesity on ART

In 2007:

Women with a BMI >25 kg/m2 have:

- lower chance of pregnancy following IVF
- require higher dose of hormones
- increased miscarriage rate

→ Insufficient evidence of impact BMI on live birth, cycle cancellation, oocyte recovery and ovarian hyperstimulation syndrome.

(Maheshwari et al., 2007)

Doctors couldn't believe…

In 2012:

- No evidence of overweight or obesity increasing the risk of complications following ART
- Obesity marginally reduces the success rates
- But inform women health and obstetic risks and slightly lower success rates of ART
- Overweight and obesity itself should not be a reason to withhold ART

(Koning., et al 2012)

ESHRE Task Force on Ethics and Law (2010)

If there is a high risk of serious harm for the future child is anticipated, fertility treatment should be denied

Note:

- Although this risk is obvious for alcohol consumption and smoking, it is unclear whether this recommendation can be applied in daily clinical practice with respect to adipose subfertile women.

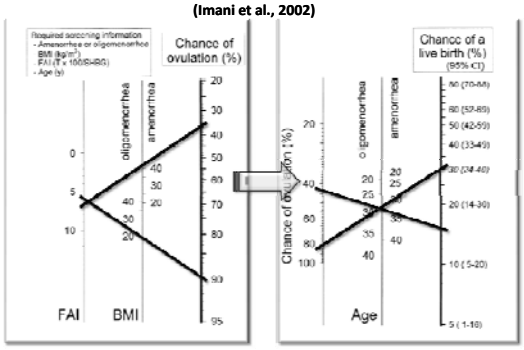
But…

Modest weight loss improves reproductive outcome for many obese women

(Clark et al., 1995, 1998; Glazer et al., 2004).

Ovulation & Live Birth Rate in PCOS

(Imani et al., 2002)



Knowledge among infertile women

Obesity increases the risk of:

- *infertility (82.7%)*
- *irregular periods (70.0%)*
- *miscarriage (60.7%)*
- *cesarean section (48.7%)*
- *birth defects (29.3%)*
- *stillbirth (22.7%)*

Conclusion:

Limited knowledge of reproductive outcomes affected by obesity

(Cordoza., et al 2012)

Do we agree?

Women undergoing fertility treatment are **motivated** for reproductive success and may be **uniquely receptive** to obesity education and weight loss intervention.

(Cordozo,. Et al 2012)

Or do we think…

"Subfertility was not
the gleaming teachable moment
to change lifestyle as I had hoped"

' 'Is this supposed to be my job?'

(Calhoun, 2013)

Need for national recommendations:
hesistant to develop BMI restrictions for fear that they will be considered discriminatory
(Harris., et al 2011)

Something strange…

Providers avoid this topic in fear
of causing emotional harm,
making the patient angry,
or stigmatizing the patient
with a diagnosis of obesity
(Phelan, 2010)

What if we ask the patient…

Counsel patients about:

- The positive effects on their chance of pregnancy of the elimination of a harmful lifestyle

And provide:

- Information on the negative consequences for achieving a pregnancy in case of a high BMI

(Den breejen,. Et al 2013)

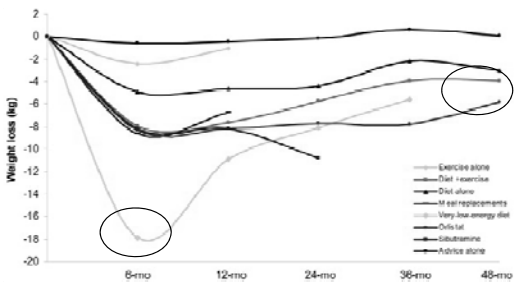
It helps….

"Patients who are counseled to lose weight are nearly three times more likely to try, underscoring the role of the healthcare provider as the impetus for change"

(Galuska,. Et al 1999)

How to lose weight?

Franz., et al 2007



How can we help…

Cognitive-behavioural interventions appear to be the most effective interventions especially when combined with dieting and exercise
(Shaw, 2005)

But…

"A major problem with my free group was attendance. I naïvely believed that improved fertility would be sufficient motivation"

(Calhoun, 2013)

That's true!

- Poor rates of compliance (Moran et al., 2003)
- Lifestyle programs are perceived to be too slow for women who are competing against their biological clocks (Palomba et al., 2008).
- Maybe E-Health can help (Appel, 2011)
- Drop-out is a big problem

Drop-out

- Dropout rates have been reported up to 77% (Davis and Addis, 1999; Honas et al., 2003; Inelmen et al., 2005; Finley et al., 2007).
- Drop out is an important limiting factor in the success it is related to little weight change (Finley et al., 2007).

Special lifestyle programs

- 24% drop out rate in lifestyle programs for overweight and obese infertile women
- Women who dropout lose less weight and have lower spontaneous pregnancy chances
- Intervention- or patient-related factors associated with dropout not found yet.

(Mutsaerts., et al 2013)

New Zealand, 2000

- New Zealand: clinical priority access criteria (CPAC)
- Treatment for women with a BMI 18-32 kg/m2
- For couples who where most in need but balanced by those who would benefit most from treatment (Gillett., et al 1997)

England, 2004

- National institute for clinical excellence (NICE)
- Providers are encouraged to provide patients with lifestyle advice
- Women with a BMI above 29 kg/m2 should be informed about their lower pregnancy chances

USA, 2011

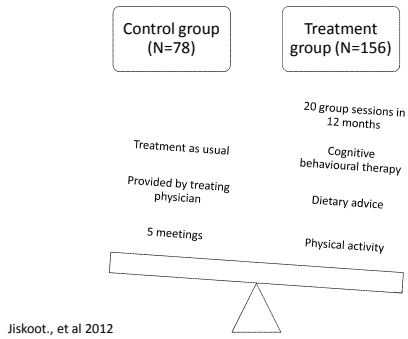
Do you have a cutoff?
→ 42,9% for ovarian stimulatio or IUI
→ 54,8% for IVF

Should there be a BMI cutoff?
→ 73,2% for ovarian stimulatio or IUI
→ 82,9% for IVF

What is your cutoff right now?
30-55 kg/m2 (mean 40 kg/m2) (Harris., et al 2011)

Rotterdam lifestyle intervention(s)

- Started in 2009
- Especially for PCOS women
- All women with a BMI> 25 kg/m2 have to participate
- In 2012 the same program started for obese women, men and children (Centre for healthy weight)



Jiskoot., et al 2012

The intervention

- Multidisciplinairy team
- Intensive 1 year program
- 20 groupssessions
  - 3 partner meetings
- 5 individual sessions
- Combined with a maintenance program via Short Message Service (SMS)

Psychology

- Cognitive behavior therapy

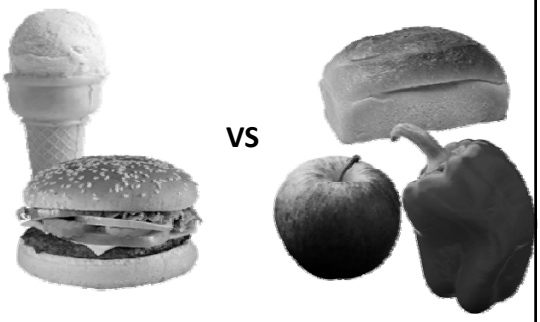
→*" I can't live without chocolate"*

- Problem solving therapy

→*My partner bought a lot of candy*

- Pro active coping

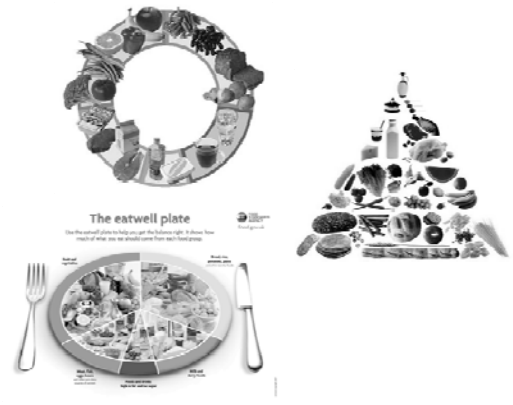
→*I'll eat healthy this week*



Diet

- “Carbohydrates are bad for you”
- “I should be able to eat chips now and then”
- I don’t eat that much!
- First food diary: 900-1300 kcal

→ NO (crash) DIET



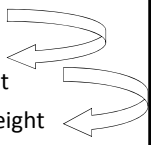
Physical activity

- The gym is not a favorite place
- How to exercise if your overweight or obese
- "I didn't know I could do this"
- Feeling confident

→ Making exercise possible and fun

Goals

- BMI > 30 kg/m2 Obesity
- BMI 25 - 29.9 kg/m2 Overweight
- BMI 24.9 - 18.5 kg/m2 Healthy weight



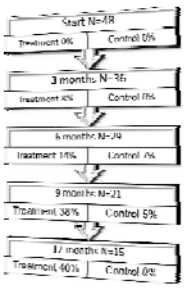
- BMI > 35 kg/m2 - 5 / 10 %

What happend?

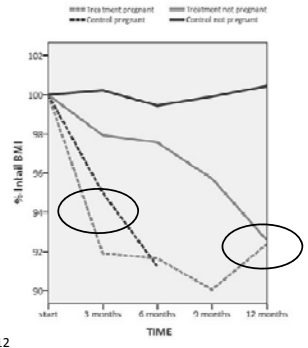
Dutch internet forum

"I would go to the Maxima Medical Centre or the Catharina Hospital because they don't have that weird BMI cutoff"

(Ir)regular cycle



Jiskoot., et al 2012



Jiskoot., et al 2012

References

- Appel LJ, Clark JM, Yeh HC, Wang NY, Coughlin JW, Daumit G, Miller ER 3rd, Dalcin A, Jerome GJ, Geller S, Noronha G, Pozefsky T, Charleston J, Reynolds JB, Durkin N, Rubin RR, Louis TA, Brancati FL, Comparative effectiveness of weight-loss interventions in clinical practice, N Engl J Med. 2011 Nov 24;365(21):1959-68. doi: 10.1056/NEJMoa1108660. Epub 2011 Nov 15.
- Calhoun KC, Fat and fertility: facts, failures, and the future, South Med J. 2012 Nov;105(11):624. doi: 10.1097/SMJ.0b013e31826ef95a.
- Cardozo ER, Neff LM, Brocks ME, BA; Ekpo GE, Dune TJ, Barnes RB, Marsh EE, Infertility patients' knowledge of the effects of obesity on reproductive health outcomes, American Journal of Obstetrics & Gynecology , December 2012
- Cedergren MI. Maternal morbid obesity and the risk of adverse pregnancy outcome. Obstet Gynecol 2004;103:219–224.
- Clark AM, Ledger W, Galletly C, Tomlinson L, Blaney F, Wang X, Norman RJ, Weight loss results in significant improvement in pregnancy and ovulation rates in anovulatory obese women, Hum Reprod. 1995 Oct;10(10):2705-12.
- Clark AM, Thornley B, Tomlinson L, Galletley C, Norman RJ, Weight loss in obese infertile women results in improvement in reproductive outcome for all forms of fertility treatment, Hum Reprod. 1998 Jun;13(6):1502-5.
- den Breejen EM, Nelen WL, Schol SF, Kremer JA, Hermens RP, Development of guideline-based indicators for patient-centredness in fertility care: what patients add, Hum Reprod. 2013 Apr;28(4):987-96. doi: 10.1093/humrep/det010. Epub 2013 Feb 14.

- Franz MJ, VanWormer JJ, Crain AL, Boucher JL, Histon T, Caplan W, Bowman JD, Pronk NP, Weight-loss outcomes: a systematic review and meta-analysis of weight-loss clinical trials with a minimum 1-year follow-up, J Am Diet Assoc. 2007 Oct;107(10):1755-67.
- Davis MJ, Addis ME. Predictors of attrition from behavioral medicine treatments. Ann Behav Med 1999;21:339–349.
- Finley CE, Barlow CE, Greenway FL, Rock CL, Rolls BJ, Blair SN. Retention rates and weight loss in a commercial weight loss program. Int J Obes 2007;31:292 – 298.
- Galuska DA, Will JC, Serdula MK, Ford ES, Are health care professionals advising obese patients to lose weight?, JAMA. 1999 Oct 27;282(16):1576-8.
- Gillett WR, Farquhar CM, Prioritising for fertility treatments--should a high BMI exclude treatment?, BJOG. 2006 Oct;113(10):1107-9.
- Glazer NL, Hendrickson AF, Schellenbaum GD, Mueller BA, Weight change and the risk of gestational diabetes in obese women, Epidemiology. 2004 Nov;15(6):733-7.
- Harris ID, Python J, Roth L, Alvero R, Murray S, Schlaff WD, Physicians' perspectives and practices regarding the fertility management of obese patients, Fertil Steril. 2011 Oct;96(4):991-2. doi: 10.1016/j.fertnstert.2011.07.1111. Epub 2011 Aug 15.
- Honas J, Early J, Frederickson D, O'Brien M. Predictors of attrition in a large clinic-based weight-loss program. Obes Res 2003;11:888–894.
- Imani B, Eijkemans MJ, Faessen GH, Bouchard P, Giudice LC, Fauser BC.Prediction of the individual follicle-stimulating hormone threshold for gonadotropin induction of ovulation in normogonadotropic anovulatory infertility: an approach to increase safety and efficiency, Fertil Steril. 2002 Jan;77(1):83-90.
- Inelmen EM, Toffanello ED, Enzi G, Gasparini G, Miotto F, Sergi G, Busetto L. Predictors of dropout in overweight and obese outpatients. Int J Obes 2005;29:122–128.

- Koning AMH, Mutsaerts MAQ, Kuchenbecher WKH, Broekmans FJ, Land JA, Mol BW, Hoek A, Complications and outcome of assisted reproduction technologies in overweight and obese women, Human Reproduction, 2012, Vol.27, No.2 pp. 457–467
- Linné Y. Effects of obesity on women's reproduction and complications during pregnancy. Obes Rev 2004;5:137–143.
- Maheshwari A, Stofberg L, Bhattacharya S. Effect of overweight and obesity on assisted reproductive technology a systematic review. Hum Reprod Update 2007;13:433–444.
- Moran LJ, Norman RJ, The obese patient with infertility: a practical approach to diagnosis and treatment, Nutr Clin Care. 2002 Nov-Dec;5(6):290-7.
- Palomba S, Giallauria F, Falbo A, Russo T, Oppedisano R, Tolino A, Colao A, Vigorito C, Zullo F, Orio F, Structured exercise training programme versus hypocaloric hyperproteic diet in obese polycystic ovary syndrome patients with anovulatory infertility: a 24-week pilot study, Hum Reprod. 2008 Mar;23(3):642-50. Epub 2007 Dec 23.
- Mutsaerts MA, Kuchenbecker WK, Mol BW, Land JA, Hoek A, Dropout is a problem in lifestyle intervention programs for overweight and obese infertile women: a systematic review, Hum Reprod. 2013 Apr;28(4):979-86. doi: 10.1093/humrep/det026. Epub 2013 Feb 20.
- Pasquali R, Patton L, Gambineri A, Obesity and infertility, Curr Opin Endocrinol Diabetes Obes. 2007 Dec;14(6):482-7.
- Phelan S, Pregnancy: a "teachable moment" for weight control and obesity prevention, Am J Obstet Gynecol. 2010 Feb;202(2):135.e1-8. doi: 10.1016/j.ajog.2009.06.008. Epub 2009 Aug 15.
- Rich-Edwards JW, Goldman MB, Willett WC, Hunter DJ, Stampfer MJ, Colditz GA, Manson JE, Adolescent body mass index and infertility caused by ovulatory disorder, Am J Obstet Gynecol. 1994 Jul;171(1):171-7.
- Sebire NJ, Jolly M, Harris JP, Wadsworth J, Joffe M, Beard RW, Regan L, Robinson S. Maternal obesity and pregnancy outcome: a study of 287.213 pregnancies in London. Int J Relat Metab Dis 2001; 25:1175 – 1182.

- Shaw K, O'Rourke P, Del Mar C, Kenardy J, Psychological interventions for overweight or obesity, Cochrane Database Syst Rev. 2005 Apr 18;(2):CD003818.
- Weiss JL, Malone FD, Emig D, Ball RH, Nyberg DA, Comstock CH, Saade G, Eddleman K, Carter SM, Craigo SD et al. Obesity, obstetric complications and cesarean delivery rate—a population-based screening study. Am J Obstet Gynecol 2004;190:1091–1097.

You can now register for these upcoming ESHRE Campus events:

- Application and challenges of emerging technologies in preimplantation and prenatal diagnosis
  12-13 September 2013 - Prague, Czech Republic
- Female genital tract congenital malformations: new insights in an old problem
  27-28 September 2013 - Thessaloniki, Greece
- Introducing new techniques into the lab
  4-5 October 2013 - Barcelona, Spain
- Polycystic ovary syndrome: A new look at an old subject
  25-26 October 2013 - Rome, Italy
- Infections from conception to birth: role of ART
  7-8 November 2013 - Berlin, Germany
- Endoscopy in reproductive medicine
  20-22 November 2013 - Leuven, Belgium
- From early implantation to later in life
  28-29 November 2013 - Brussels, Belgium

Mark your calendar for:

- Premature ovarian insufficiency
  6-7 December 2013 - Utrecht, The Netherlands

www.eshre.eu
(see "Calendar")

Contact us at info@eshre.eu

eshre
SCIENCE MOVING
PEOPLE
MOVING SCIENCE

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES