1000 LIVES O FYWYDAU

GIG CYMRU NHS WALES | Iechyd Cyhoeddus Cymru Public Health Wales

What changes can we make that will result in improvement? The evidence…

Philip Banfield

The Telegraph

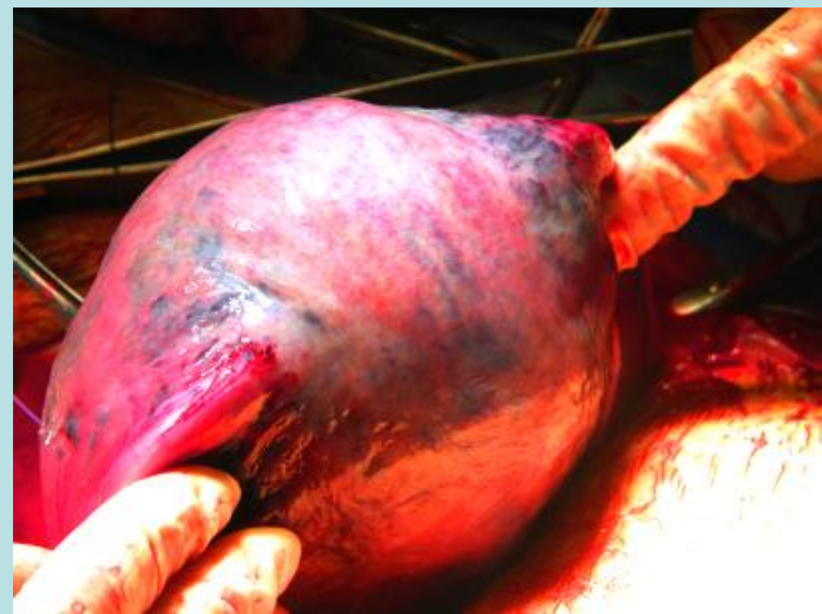
Home News World Sport Finance Comment Blogs Culture Travel Life Women

Health

Health News

Infections after caesarean birth 'higher' than other operations

One in ten women who give birth by caesarean section develop an infection, a study has found, much higher than similar operations.



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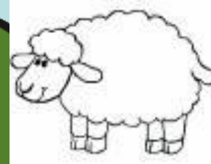
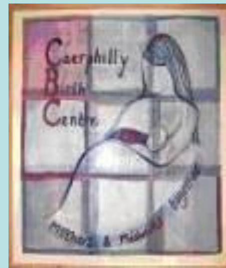
Making patient safety a priority

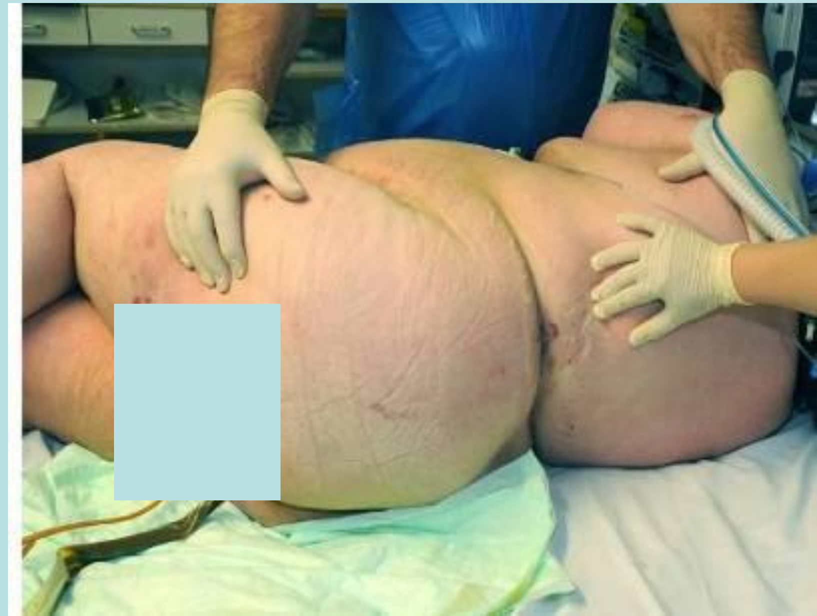



Royal College of Obstetricians and Gynaecologists
Setting standards to improve women's health

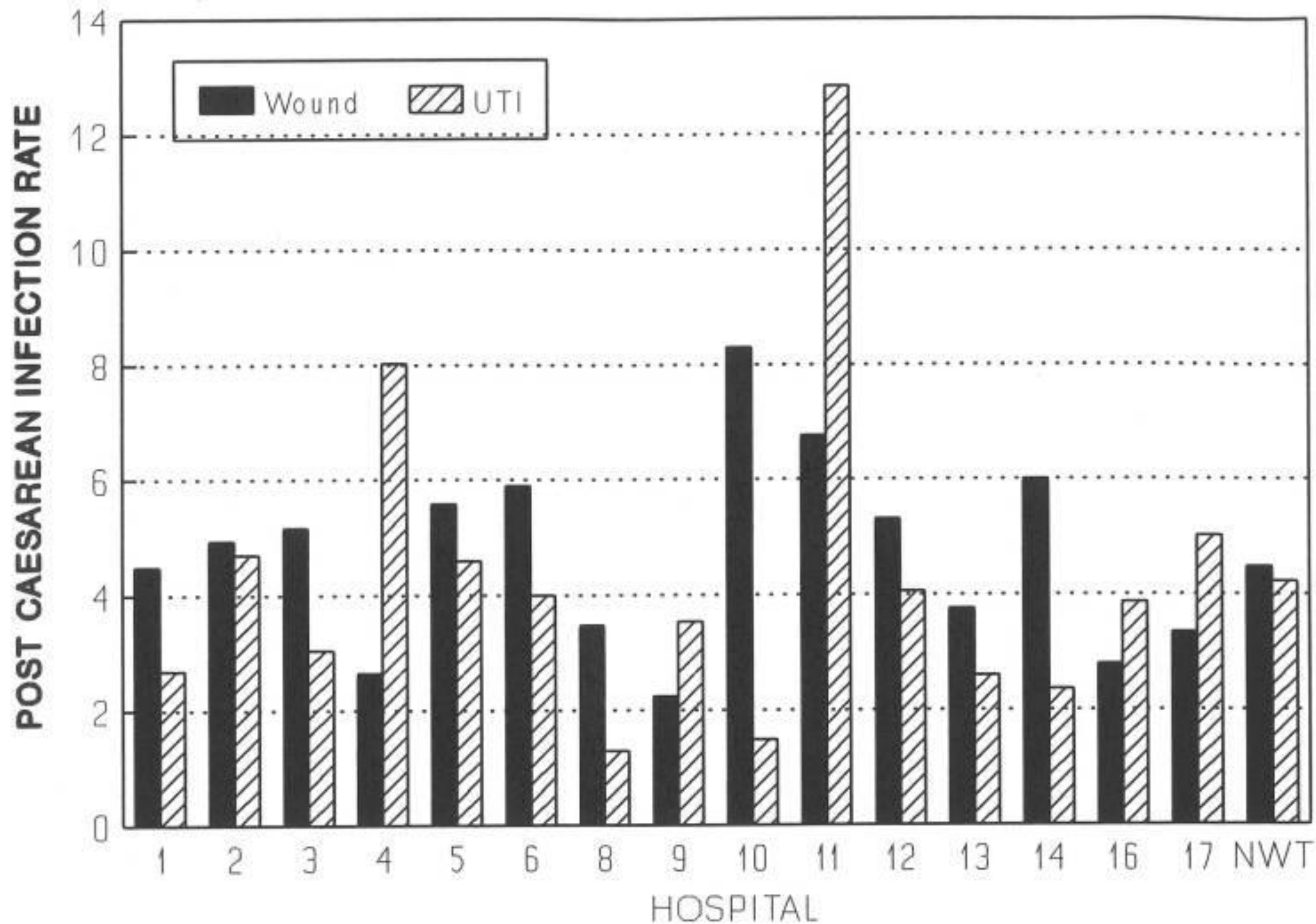
Transforming Maternity Services mini-collaborative – everyone and anyone in maternity services in Wales

The world of buts…

- But, infections are inevitable
- But, my women are higher risk
- But, it’s about surgical technique
- But, it’s since LMWH came in
- But, it’s not mine
- But…
- But…



Variations in practice



But it matters…

- Increased LOS
- Increased cost
- Stress / distress
- Morbidity / mortality

Before you start, what are your ‘top tips’ to prevent infection?

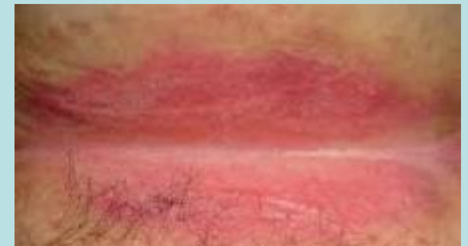
- Write yours here!

Before you start, what are your 'top tips' to prevent infection? Mine were…

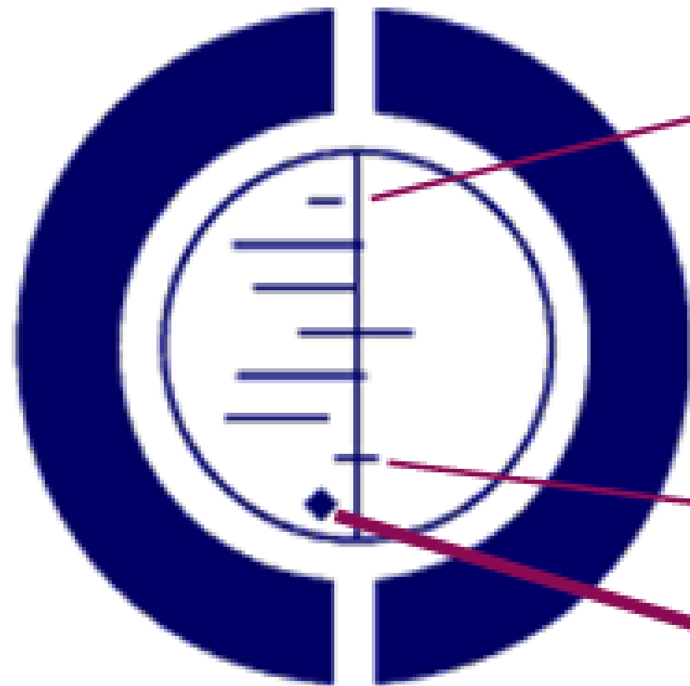
- Avoid a caesarean section
- Surgical technique
- Post-op wound care

But what do we do that is wrong?

- Cause abrasions during shaving?
- Don’t wait for skin prep to dry before wiping it off?
- Cut exactly where it is hot and sweaty?
- Rip and ignore bleeding vessels?
- Leave juniors unsupervised?
- Pay lip service to ‘meticulous’?
- Let wounds fester in moist skin creases?
- No ownership of wounds



Knowing what is right: an obstetrician and evidence?



1972 First RCT

1991

Prevention of prenatal death by antenatal corticosteroid therapy for fetal maturation

Meta-analysis:

Steroïds lower death risk with 30-50%!!

Serious Problems with Chemo-Therapy

Chemotherapy is a barbaric medical procedure. It's based on injecting highly toxic chemicals into patients and hoping the chemicals kill the cancer cells before they kill the patient.

But even when it's a "success," it only destroys the patient's immune system, leading to further development of cancer in the years ahead, all while utterly ignoring the root cause of the cancer in the first place.

Not everyone has the same interpretation of the data or the same extrapolation of the consequences…

There are two sides to every argument

Truth is in the eye of the beholder

"One person's truth is another person's hypothesis": *Philip Banfield* BMJ

The Pollard Phenomenon:

"Yeah but no but yeah but no…….":

Vicky Pollard

Standing still – paralysis of inaction

"You don't need to get it right, you just need to get it going"

Kanya King

CEO MOBO

Information and audit (and surveillance)

"Data, data, data. You cannot make bricks without clay":

Sherlock Holmes

Banfield: The audit spiral

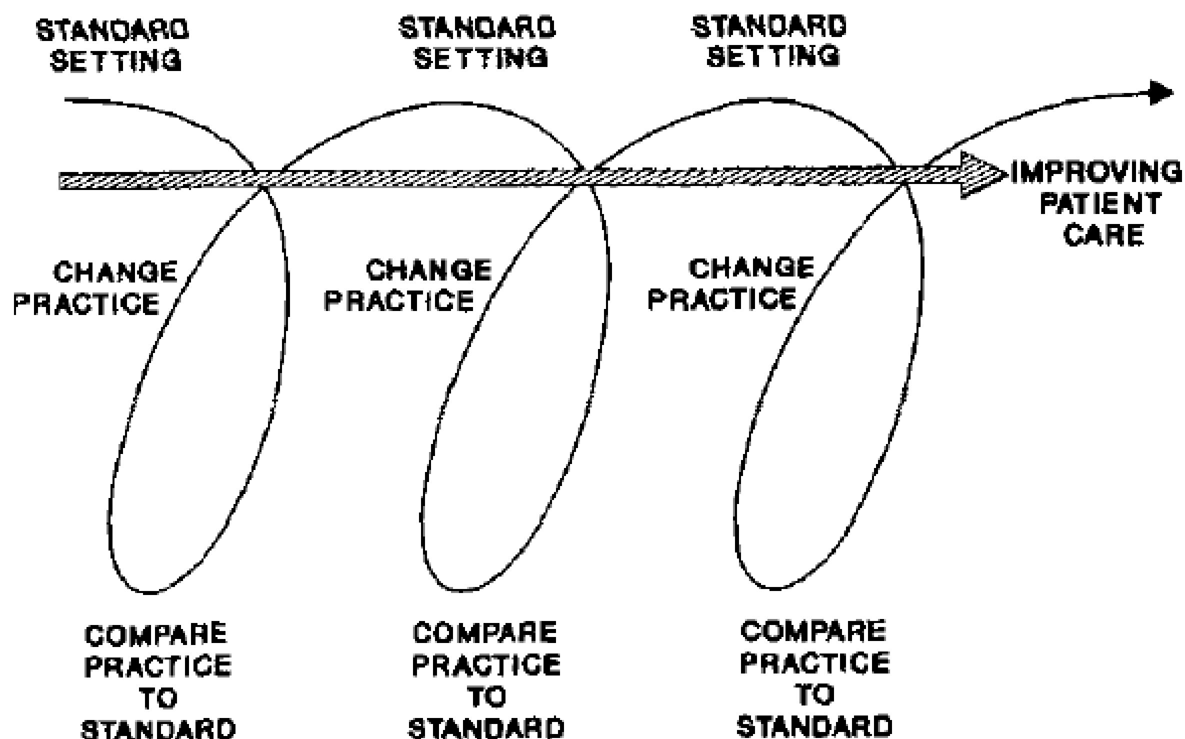


Figure 2. The audit spiral

▪ ▪ ▪ ▪ ▪ and research findings to be incorporated (or rejected after proper consideration) into local standard setting. It overcomes local objections to recommended standards, because it invites the testing of appropriateness by repeated passage around the basic audit cycle.

The evidence?

- Pre-op
- Intra-op
- Post-op

Pre-op

- Screening and decolonisation
- Showering / washing
- Shaving and clipping

Screening and decolonisation

Meticillin

- MRSA screening reduces MRSA infections
- Scottish Pathfinder Programme
- CMO – Clinical Risk Assessment
- CRA as effective as universal screening for a fraction of the cost, ONLY when CRA ≥ 90%
- Obstetrics not a high-impact specialty (unless transferred in or out)

ITU
Orthopaedics
Renal medicine
Cardiovascular / vascular surgery

MRSA - CRA

- Previous MRSA?
- Care home – OR TRANSFERRED FROM ANOTHER HOSPITAL
- Wound / ulcer or invasive device present before admission – ANYTHING THAT BREAKS SKIN (IVIs)?
- How / where to manage?
- Role of decolonisation?

Showering / washing

- NICE – shower or bath
- Little evidence that reduces infections?
- Do you agree?

Shaving and clipping

- Shaving near to surgery is probably bad
- When is there a need to clip or shave?
- What if women shaved at 37 weeks?
- And what about ‘self grooming’?

Intra-operative

- Skin prep
- Antibiotics
- Temperature control
- Avoidance of hyperglycaemia

Skin prep

- The type of skin prep doesn’t seem to make much difference, but alcohol base to evaporate
- To be effective, it must stay in contact with the skin for a period of time (probably at least 30s)
- What say you?

Antibiotics

- Prophylaxis reduces infection
- Better before skin incision
- Baby (probably) unaffected
- Local cost effectiveness varies (unless you don’t want it to)
- Single dose unless…. (major blood loss)

Normothermia

- If < 36° then increased oxygen requirements, increased acidosis and poorer healing
- Obstetric theatres are warm, but core temp may be low if vasodilated?
- Discuss…can warm fluids routinely / ambient temp. / cost effectiveness of aids to support core temperature?
- And anyway, it’s good theatre practice

Glycaemic control

- Diabetics need glucose <11mmol/l

Post op

- Dressings
- Hand hygeine

Dressings

- Interactive vs passive
- Most clinical staff (doctors) don’t seem to know the difference so a big educational push needed here

Hand hygiene

- Aseptic technique
- Patients – before and after toilet
- Considered very high impact, but done badly
- Something we can improve on immediateley for no cost.

Others to consider?

- Antiseptic drapes ? Cost- effectiveness

But what will you do?

- Agree?
- Disagree?
- Does it matter?
- Are there minimum standards?
- Are there limits?

Perhaps, if you overall rate isn’t zero, there is room for improvement!

This is about supporting a need to improve your own practice and be shown to do so. Wales has shown it can do this.

Recognition and treatment of sepsis – success in Wales

Obstetric SEPSIS Screening Tool

SEPSIS SIX ** Plus Two Bundle

Obstetric Sepsis / Severe Sepsis Screening Tool

Does the woman have 2 Signs and Symptoms of Infection?

Temperature <36 or >38 °c		Respiratory rate > 20bpm	
Heart rate >100 bpm (AN & Intrapartum) > 90bpm (PN)		Acutely altered mental state	
WCC >12 or <4 x10^9/l (higher threshold in labour)		Hyperglycaemia (Blood sugar >7.7) in the absence of diabetes	

If YES

Does the woman have a history or signs of a new infection o infective source ?

Prolonged ruptured membranes or offensive liquor		Breast redness and / or tenderness mastitis
Unexplained fetal tachycardia in the absence of a maternal tachycardia		Fetal demise
Recent delivery / offensive lochia		Cough / sputum / chest pain
Catheter or Dysuria		Abdominal pain distension/diarrhoe
Line infection		Cellulitis/wound infection/septic art
Headache with neck stiffness		Other
Endocarditis		

If Yes the woman has SEPSIS

Does the woman have any signs of organ dysfunction ?

SBP < 90 or MAP <70 mmHg		Lactate > 2mmols/l
Urine output<0.5 ml/kg/hr for 2 hours		New need for Oxygen to keep SaO_2>90%
Platelets < 100 x 10^9/l		INR > 1.5 or aPTT > 60s
Creatinine rise of > 44.2mmol/l or level of >177 mmol/l		Bilirubin > 70μmol/l

NO | YES

If NO, treat for SEPSIS:

Start Sepsis Six**Plus Two

- Oxygen
- Blood cultures
- Lactate
- IV antibiotics
- Fluid therapy
- Fluid balance and catheter
- **Consideration of delivery & VTE prophylaxis

If YES, the woman has SEVERE SE

Start Sepsis Six**Plus T

- Start the clock.........
- Refer the woman to Critical Care.
- Give IV Antibiotics within 1 hour Start with Stat Dose

SBAR Reporting

S Situation	Date Time Drs name My name is From Ward/Dept I am calling about The problem is
B Background	The woman was admitted with on ...../...../..... Gravida: Para: EDD: Gestation: Past med/obs history
A Assessment	The MEOWS is Clinical Impression/Actions/observations Other relevant factors, e.g. Sepsis screening, blood results, urine output
R Recommendation	I request you review this woman within the next ....hrs/mins Document any initial instructions Patient reviewed by Dr at

All handovers and reporting should use the SBAR format.

Obstetric Sepsis Care Pathway First Hour Care Duties

Name

Address

Hospital number

Date...................

Ward..................

Could this woman have Sepsis? → NO

→ Negative → Reassess the woman Apply appropriate management plan

**Plus Two	Time	Initial	Reason not done
non-rebreathe mask.			
one set prior to antibiotics. ecautions. FBC, U+E, LFT, clotting,			
of organ dysfunction			
ines and			
sive give boluses of 0:9% (x3) to a max of 60 ml/Kg threshold for invasive critical care.			
alance & record hourly			
C			

ompleted and the woman reviewed within one hour?

All steps done?	YES		NO	
	Sign:			
	Bleep:			

1000 LIVES + 0 FYWYDAU

Sepsis Bag

Before Opening This Bag Does The Woman Have?

<u>Signs and Symptoms of Sepsis(SSI)</u>

Temperature < 36 or > 38°C

Heart rate > 100 bpm (AN & Intrapartum)>90bpm (PN)

Respiratory rate > 20/min

WCC > 12 or < 4 x 10^9/ l

Acutely altered mental state

Hyperglycaemia (>7.7 mmol/ l)

2 or more of the above criteria present
plus
history or signs of new infection

This woman has SEPSIS. Open this bag and start SEPSIS SIX

The contents of this bag are designed to be used with the first hour of a Sepsis diagnosis.
A separate box containing appropriate 1st line antibiotics is also kept on the ward. Guidelines can be found within the bag.

Any patient with a raised lactate and or signs of organ dysfunction should be referred to Critical Care.

The Sepsis proforma is to be kept in the womans medical notes.
Please complete the audit form and return the bag to xxxx, where it will be restocked and returned to the ward.

If assistance is required please call Outreach ______ or ITU On Call ______.

If you would like copies of this documentation contact __________

DRAFT

Sepsis Card prompt / aide memoir

Obstetric Prompt

Could this woman have sepsis?

Signs and Symptoms of Sepsis

- Temperature < 36°C or > 38°C
- Heart rate > 100 bpm (AN & Intrapartum) >90bpm (PN)
- Respiratory rate > 20/min
- WCC > 12 or < 4 x 109/ l (higher threshold in labour)
- Acutely altered mental state
- Hyperglycaemia (>7.7 mmol/ l)

Two or more of the above plus a history or signs of new infection:
Start Sepsis Six**Plus Two

Obstetric Sepsis Six **Plus Two

- Oxygen
- Blood cultures
- Lactate
- IV antibiotics
- Fluid therapy
- Fluid balance and catheter

Re-assess hourly for severe sepsis

- ** Consider delivery or ERPC
- ** VTE Prophylaxis

It works because there is a large mechanism supporting you supporting patients. What do you need to do the job?

Patients

Clinical teams from all Health Boards

Web Ex calls	Learning sessions	Site visits and 'catch up' calls

How to Guide, Policy Exemplar Guides

Full time programme manager – Cath Roberts	Steering group	Faculty lead

NSAG / HOMAG / RCOG / Welsh Obstetrics and Gynaecology Society / RCM / OAA / AWMSG / RCGP / Welsh Risk Pool

All Health Boards / CMO Wales / CNO Wales / Welsh Government / Health Minister for Wales / Welsh Risk Pool

Make a change for the next woman you meet and encourage two others to do the same – go on. Now!

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Questions?

- If we can improve
- care for **one woman**,
- then we can do it for **ten**.
- If we can do it for ten,
- then we can do it for a **100**.
- If we can do it for a 100,
- we can do it for a **1000**
- And if we can do it for a 1000,
- we can do it for **every woman in Wales.**

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